



Board of Directors

Meeting Date

October 23, 2020



Board of Directors

Lonnie Reed

Chair

Binu Chandy

Deputy Director
DECD

Michael Li

Connecticut Department of Energy and
Environmental Protection (DEEP)

Shawn Wooden

Treasurer
State of Connecticut

Thomas Flynn

Managing Member
Coral Drive Partners

Matthew Ranelli

Partner
Shipman & Goodwin

Eric Brown

Vice President
CT Business and Industry Association

Kevin Walsh

Senior Operating Partner
Stonepeak Infrastructure Partners

John Harrity

Chair
CT Roundtable on Climate and Jobs

Brenda Watson

Executive Director
Operation Fuel

October 16, 2020

Dear Connecticut Green Bank Board of Directors:

We have a meeting of the Board of Directors scheduled for **Friday, October 23, 2020 from 9:00-11:00 a.m.**, and then an **Ethics Training with the Office of State Ethics from 11:00 a.m. to 12:00 p.m.**

Please take note that this will be an online meeting only! Given the need to continue to maintain “social distancing” in the face of COVID-19, we are holding this meeting online only.

For the agenda, we have the following:

- **Consent Agenda** – we have a number of items on the consent agenda, including, resolutions for:
 1. Approval of Meeting Minutes for September 23, 2020,
 2. Final FY 2020 Progress to Target Memos for Incentive and Financing Programs,
 3. 2021 Regular Board and Committee Meeting Schedules,
 4. Revised Position Description for Selya Price (i.e., Senior Advisor to the President and CEO), and
 5. Investment approvals under \$500,000 and no more in aggregate than \$1,000,000.

We also have some general report-outs, including:

- Loan Loss Decision Framework Report for FY 2020,
 - Restructurings and write-offs under \$100,000 and no more in aggregate than \$500,000,
 - FY 2019 IPC progress to target memo, and
 - FY 2021 Progress to Target Update Memo for Q1
- **Committee Updates and Recommendations** – the Audit, Compliance and Governance Committee will be recommending the review and approval of the FY 2020 Comprehensive Annual Financial Report (CAFR) [Note, the final draft will be provided by the COB on Monday, October 19th], and reporting out on the Board of Director meeting attendance for FY 2020.
- **Incentive Programs Updates and Recommendations** – as a follow-up to the September 23rd Board of Directors approval of the Residential Solar Investment Program Extension (RSIP-E) to stabilize the local solar industry from the impacts of COVID-19, the staff is recommending incentives levels for Steps 16 and 17 that will further reduce the risk to cost recovery.
- **Financing Programs Recommendation** – we are bringing a C-PACE project forward for Mystic Aquarium to collaborate with the State of Connecticut (i.e., DECD) in supporting one of our most treasured destinations.

- **Investment Updates and Recommendations** – we have several investment recommendations and updates including an expansion of our commercial solar financing facility with Skyview Ventures, a participation in a 2nd lien facility and new warrant coverage in our PosiGen investment, and an update on the C-PACE Cargill Falls project.
- **Other Business** – you may recall a Research & Development project supported by the Board of Directors several years back to study the energy, transportation, and housing burden on low-to-moderate income families. We will be presenting some findings to this research from our partner VEIC.
- **Mandatory Ethics Training** – for those of you that have not had your annual ethics training, the Office of State Ethics will be leading a one-hour session with the Board and Staff.

As you can see, we have a packed agenda with a lot of different matters to address.

If you have any questions, comments or concerns, please feel free to contact me at any time.

Until then, continue to be safe, be well, and enjoy the upcoming weekend!

Sincerely,

A handwritten signature in black ink, appearing to be 'Bryan Garcia', with a long horizontal stroke extending to the right.

Bryan Garcia
President and CEO



AGENDA

Board of Directors of the
Connecticut Green Bank
845 Brook Street
Rocky Hill, CT 06067

Friday, October 23, 2020
9:00 a.m.– 12:00 p.m.

Dial (786) 535-3211
Access Code: 365-634-349

Staff Invited: Sergio Carrillo, Mackey Dykes, Brian Farnen, Bryan Garcia, Bert Hunter, Jane Murphy, Selya Price, and Eric Shrago

1. Call to order
2. Public Comments – 5 minutes
3. Consent Agenda – 5 minutes
 - a. Meeting Minutes of September 23, 2020
 - b. Connecticut Green Bank Progress to Targets for FY 2020 (Final)
 - c. Board of Directors and Committees – Regular Meeting Schedule for 2021
 - d. Position Description – Senior Advisor to the President and CEO
 - e. Under \$500,000 and No More in Aggregate than \$1,000,000 in Approvals
 - f. Other Documents
4. Committee Updates and Recommendations – 15 minutes
 - a. Audit, Compliance and Governance Committee
 - i. FY 2020 Comprehensive Annual Financial Report
 - ii. Board of Director Meeting Attendance
5. Incentive Programs Updates and Recommendations – 10 minutes
 - a. Residential Solar Investment Program – Steps 16 and 17
6. Financing Programs Updates and Recommendations – 15 minutes
 - a. Mystic Aquarium C-PACE Project
7. Investment Updates and Recommendations – 30 minutes

- a. Skyview Commercial Solar Financing Facility Increase
 - b. PosiGen
 - c. Cargill Falls Update
8. Other Business – 45 minutes
 - a. Mapping Household Energy & Transportation Affordability in Connecticut – 45 minutes
 - b. Other Business
9. Mandatory Ethics Training – 60 minutes
10. Adjourn

Join the meeting online at <https://global.gotomeeting.com/join/365634349>

Or call in using your telephone:
Dial (786) 535-3211
Access Code: 365-634-349

Next Regular Meeting: Friday, December 18, 2020 from 9:00-11:00 a.m.
Connecticut Green Bank, 845 Brook Street, Rocky Hill, CT



RESOLUTIONS

Board of Directors of the
Connecticut Green Bank
845 Brook Street
Rocky Hill, CT 06067

Friday, October 23, 2020
9:00 a.m.– 12:00 p.m.

Dial (786) 535-3211
Access Code: 365-634-349

Staff Invited: Sergio Carrillo, Mackey Dykes, Brian Farnen, Bryan Garcia, Bert Hunter, Jane Murphy, Selya Price, and Eric Shrago

1. Call to order
2. Public Comments – 5 minutes
3. Consent Agenda – 5 minutes
 - a. Meeting Minutes of September 23, 2020

Resolution #1

Motion to approve the meeting minutes of the Board of Directors for September 23, 2020.

- b. Connecticut Green Bank Progress to Targets for FY 2020 (Final)

Resolution #2

WHEREAS, in July of 2011, the Connecticut General Assembly passed Public Act 11-80 (the Act), "AN ACT CONCERNING THE ESTABLISHMENT OF THE DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION AND PLANNING FOR CONNECTICUT'S ENERGY FUTURE," which created the Connecticut Green Bank (the "Green Bank") to develop programs to finance and otherwise support clean energy investment per the definition of clean energy in Connecticut General Statutes Section 16-245n(a);

WHEREAS, the Act directs the Green Bank to develop a comprehensive plan to foster the growth, development and commercialization of clean energy sources, related enterprises and stimulate demand clean energy and deployment of clean energy sources that serve end use customers in this state;

WHEREAS, on July 18, 2019, the Board of Directors of the Connecticut Green Bank approved a Comprehensive Plan for FY 2020 and Beyond called Green Bonds US, including an annual budget and targets for FY 2020, which was approved on July 18, 2019 and revised on January 21, 2020;

WHEREAS, on July 24, 2020, the Board of Directors of the Connecticut Green Bank approved of the draft Program Performance towards Targets for FY 2020 memos for the Incentive Programs and Financing Programs.

NOW, therefore be it:

RESOLVED, that Board has reviewed and approved the restated Program Performance towards Targets for FY 2020 memos dated October 23, 2020, which provide an overview of the performance of the Incentive Programs and Financing Programs with respect to their FY 2020 targets.

RESOLVED, that Board has also reviewed and approved the Investment and Public Benefit Performance memo dated October 23, 2020.

c. Board of Directors and Committees – Regular Meeting Schedule for 2021

Resolution #3

Motion to approve the Regular Meeting Schedules for 2021 for the Board of Directors, ACG Committee, BOC Committee, and Deployment Committee.

d. Position Description – Senior Advisor to the President and CEO

Resolution #4

Motion to approve the position descriptions for Senior Advisor to the President and CEO

e. Under \$500,000 and No More in Aggregate than \$1,000,000 in Approvals

Resolution #5

WHEREAS, on January 18, 2013, the Connecticut Green Bank (the “Green Bank”) Board of Directors (the “Board”) authorized the Green Bank staff to evaluate and approve funding requests less than \$300,000 which are pursuant to an established formal approval process requiring the signature of a Green Bank officer, consistent with the Green Bank Comprehensive Plan, approved within Green Bank’s fiscal budget and in an aggregate amount not to exceed \$500,000 from the date of the last Deployment Committee meeting, on July 18, 2014 the Board increased the aggregate not to exceed limit to \$1,000,000 (“Staff Approval Policy for Projects Under \$300,000”), on October 20, 2017 the Board increased the finding requests to less than \$500,000 (“Staff Approval Policy for Projects Under \$500,000”); and

WHEREAS, Green Bank staff seeks Board review and approval of the funding requests listed in the Memo to the Board dated October 23, 2020 which were approved by Green Bank staff since the last Deployment Committee meeting and which are consistent with the Staff Approval Policy for Projects Under \$500,000;

NOW, therefore be it:

RESOLVED, that the Board approves the funding requests listed in the Memo to the Board dated October 23, 2020 which were approved by Green Bank staff since the last Deployment Committee meeting. The Board authorizes Green Bank staff to approve funding requests in accordance with the Staff Approval Policy for Projects Under \$500,000 in an aggregate amount to exceed \$1,000,000 from the date of this Board meeting until the next Deployment Committee meeting.

f. Other Documents

- Loan Loss Decision Framework Report for FY 2020
- Under \$100,000 and No More in Aggregate than \$500,000 in Restructurings/Write-Offs
- IPC Progress to Targets for FY 2020
- Connecticut Green Bank Progress to Targets – Q1 of FY 2021

4. Committee Updates and Recommendations – 15 minutes

a. Audit, Compliance and Governance Committee

i. FY 2020 Comprehensive Annual Financial Report

Resolution #6

WHEREAS, Article V, Section 5.3.1(ii) of the Connecticut Green Bank (“Green Bank”) Operating Procedures requires the Audit, Compliance, and the Governance Committee (the “Committee”) to meet with the auditors to review the annual audit and formulation of an appropriate report and recommendations to the Board of Directors of the Green Bank (the “Board”) with respect to the approval of the audit report;

WHEREAS, the Committee met on October 15, 2020 and recommends to the Board the approval of the proposed draft Comprehensive Annual Financial Report (CAFR) contingent upon no further adjustments to the financial statements or additional required disclosures which would materially change the financial position of the Green Bank as presented.

NOW, therefore be it:

RESOLVED, that the Board approves of the proposed draft Comprehensive Annual Financial Report (CAFR) contingent upon no further adjustments to the financial statements or additional required disclosures which would materially change the financial position of the Green Bank as presented.

ii. Board of Director Meeting Attendance

5. Incentive Programs Updates and Recommendations – 10 minutes

a. Residential Solar Investment Program – Steps 16 and 17

Resolution #7

WHEREAS, Public Act 19-35, “An Act Concerning a Green Economy and Environmental Protection” (the “Act”) updates Connecticut General Statutes 16-245ff and 16-245gg to require

the Connecticut Green Bank (“Green Bank”) to design and implement a Residential Solar Photovoltaic (“PV”) Investment Program (“Program”) that results in no more than three hundred and fifty (350) megawatts of new residential PV installation in Connecticut on or before December 31, 2022 and extends through December 31, 2022 or after deployment of 350 MW the ability to create Solar Home Renewable Energy Credits (“SHRECs”) that the electric distribution companies are required to purchase through 15-year contracts;

WHEREAS, as of October 12, 2020, the Program has thus far resulted in nearly three hundred and forty-seven (346.5) megawatts of new residential PV installation application approvals and nearly three hundred and nine (308.6) MW of completed projects in Connecticut;

WHEREAS, at the September 23, 2020 special meeting, the Green Bank Board of Directors approved up to 32 MW of total additional capacity to be approved for incentives beyond RSIP’s statutory 350 MW target, including up to 10 MW to account for RSIP cancellations, and an additional 22 MW, to support the residential solar PV industry toward achieving sustained, orderly development in the context of COVID-19 impacts. The Green Bank will therefore approve up to a total of 382 MW, to be cost recovered through REC sales as described in this memo.

WHEREAS, at the September 23, 2020 special meeting, the Green Bank Board of Directors requested that the Staff return with a recommendation at a future meeting for review and approval of the incentive level for RSIP beyond 350 MW (e.g., reducing the residential solar PV incentives beyond the current Step 15 levels of the RSIP).

NOW, therefore be it:

RESOLVED, that the Board, including the Department of Energy and Environmental Protection through its Board designee, approves of the RSIP Schedule of Incentives set forth in Tables 2 through 4 in the memo “Residential Solar Investment Program – Steps 16 and 17 Recommendations” dated October 23, 2020, reflecting the following incentive reductions for RSIP Step 17 as compared to Step 16:

- 20% for EPBB overall (consisting of a 16% reduction for capacity ≤10 kW and an 37% reduction for capacity >10 kW)
- 10% for LMI PBI

6. Financing Programs Updates and Recommendations – 15 minutes

a. Mystic Aquarium C-PACE Project

Resolution #8

WHEREAS, pursuant to Section 157 of Public Act No. 12-2 of the June 12, 2012 Special Session of the Connecticut General Assembly and as amended (the “Act”), the Connecticut Green Bank (Green Bank) is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy (“C-PACE”);

WHEREAS, the Green Bank Board of Directors (the “Board”) has approved a \$40,000,000 C-PACE construction and term loan program;

WHEREAS, the Green Bank Deployment Committee in September of 2019 approved a

\$1,285,872 construction and term loan under the C-PACE program to Sea Research Foundation, Inc., the building owner of 55 Coogan Blvd, Mystic, Connecticut, to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

WHEREAS, the Green Bank, subject to a revised scope of work seeks to provide a **\$1,259,862** construction and term loan under the C-PACE program at a concessional rate to Sea Research Foundation, Inc., the building owner of 55 Coogan Blvd, Mystic, Connecticut (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan as more fully explained in a memorandum submitted to the Board dated October 16, 2020 (the "Memorandum"); and

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the Memorandum, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 180 days from the date of authorization by the Board of Directors;

RESOLVED, that before executing the Loan, the President of the Green Bank and any other duly authorized officer of the Green Bank shall receive confirmation that the C-PACE transaction meets the statutory obligations of the Act, including but not limited to the savings to investment ratio and lender consent requirements; and

RESOLVED, that the proper the Green Bank officers are authorized and empowered to do all other acts and execute and deliver all other documents and instruments as they shall deem necessary and desirable to effect the above-mentioned legal instruments.

7. Investment Updates and Recommendations – 30 minutes
 - a. Skyview Commercial Solar Financing Facility Increase

Resolution #9

WHEREAS, the Connecticut Green Bank ("Green Bank") has significant experience in the development and financing of commercial solar PPA projects in Connecticut;

WHEREAS, the Green Bank continually seeks new ways to work with private sector partners to meet the demonstrated need for flexible capital to continue expanding access to financing for commercial-scale customers looking to access solar and savings via a PPA;

WHEREAS, the Green Bank has established a working relationship with a private sector Connecticut solar developer, Skyview Ventures ("Skyview"), and through that relationship the Green Bank has an opportunity to deploy capital for the development of clean energy in Connecticut, and specifically toward commercial solar PPA projects developed by Skyview in Connecticut ("Skyview PPA Projects");

WHEREAS, the Green Bank is implementing a Sustainability Plan that invests in various clean energy projects and products to generate a return to support its sustainability in the coming years

WHEREAS, based on diligence of Green Bank staff of the proposed senior secured loan facility (“Term Loan”) the Green Bank Deployment Committee (the “Deployment Committee”) passed resolutions at its meeting held on February 27, 2020 to recommend to the Green Bank Board of Directors (the “Board”) the approval of the Term Loan transaction in an amount not to exceed \$2.3M as a Strategic Selection and Award pursuant to the Green Bank Operating Procedures Section XII;

WHEREAS, the Board passed resolutions at its meeting held on March 25, 2020 to approve the Term Loan transaction in an amount not to exceed \$2.3M as a Strategic Selection and Award pursuant to the Green Bank Operating Procedures Section XII given the special capabilities, uniqueness, strategic importance, urgency and timeliness, and multi-phase characteristics of the Term Loan transaction;

WHEREAS, the Board passed resolutions at its meeting held on April 24, 2020 to expand the approved the Term Loan transaction to an amount not to exceed \$3.5M; and

WHEREAS, based on an expanding pipeline of Skyview PPA Projects and diligence of Green Bank staff, Green Bank staff proposes the Term Loan be increased.

NOW, therefore be it:

RESOLVED, that the Board hereby amends and restates its approval of the Term Loan transaction as described in the Project Qualification Memo submitted by the staff to the Board and dated October 14, 2020 (the “Memorandum”) to increase the amount of the Term Loan from \$3.5 million to \$7.0 million and on terms and conditions substantially consistent with those described in the Memorandum as a Strategic Selection and Award pursuant to the Green Bank Operating Procedures Section XII given the special capabilities, uniqueness, strategic importance, urgency and timeliness, and multi-phase characteristics of the Term Loan transaction; and

RESOLVED, that the proper Green Bank officers are authorized and empowered to do all other acts and execute and deliver all other documents as they shall deem necessary and desirable to effect this Resolution.

b. PosiGen

Resolution #10

WHEREAS, the Connecticut Green Bank (“Green Bank”) has an existing partnership with PosiGen, Inc. (together with its affiliates and subsidiaries, “PosiGen”) to support PosiGen in delivering a solar lease and energy efficiency financing offering to LMI households in Connecticut;

WHEREAS, the Green Bank Board of Directors (“Board”) previously authorized and later amended the Green Bank’s participation in a 2nd lien credit facility (the “BL Facility”) encompassing all of PosiGen’s solar PV system and energy efficiency leases in the United States as part of the company’s strategic growth plan, so long as Green Bank’s retained risk did not to exceed \$14 million;

WHEREAS, PosiGen is currently finalizing an equity round projected to raise approximately \$40 million;

WHEREAS, the Candide Group (“Candide”) would like to participate in the Green Bank’s BL Facility in an amount not-to-exceed \$5 million, such that the overall facility would be capped at \$19 million with the Green Bank’s retained risk not exceeding \$14 million as more fully explained in a memorandum submitted to the Board October 16, 2020 (the “Memorandum”);

WHEREAS, the Green Bank has warrants in PosiGen that require restructuring for PosiGen to complete its equity round but nonetheless provide the Green Bank a meaningful opportunity to participate in the company’s equity upside if renegotiated as explained in the Memorandum.

NOW, therefore be it:

RESOLVED, that the Board authorizes the Green Bank to enable Candide to participate in the BL Facility, subject to PosiGen closing its upcoming equity round, such that the BL Facility would be capped at \$20 million with the Green Bank’s retained risk not exceeding \$14 million and a participation by Candide in the BL Facility not to exceed \$5 million;

Deleted: 19

RESOLVED, that the Board authorizes the Green Bank to renegotiate its existing warrant agreement with PosiGen to facilitate the closing of that round, so long as the Green Bank’s anticipated return profile is preserved in accordance with the Memorandum; and

RESOLVED, that the proper Green Bank officers are authorized and empowered to do all other acts and negotiate and deliver all other documents and instruments as they shall deem necessary and desirable to effect the above-mentioned legal instruments.

- c. Cargill Falls Update
- 8. Other Business – 45 minutes
 - a. Mapping Household Energy & Transportation Affordability in Connecticut – 45 minutes
- 9. Mandatory Ethics Training – 60 minutes
- 10. Adjourn

Join the meeting online at <https://global.gotomeeting.com/join/365634349>

Or call in using your telephone:
Dial (786) 535-3211
Access Code: 365-634-349

Next Regular Meeting: Friday, December 18, 2020 from 9:00-11:00 a.m.
Connecticut Green Bank, 845 Brook Street, Rocky Hill, CT

ANNOUNCEMENTS

- **Mute Microphone** – in order to prevent background noise that disturbs the meeting, if you aren't talking, please mute your microphone or phone.
- **Chat Box** – if you aren't being heard, please use the chat box to raise your hand and ask a question.
- **Recording Meeting** – per Executive Order 7B (i.e., suspension of in-person open meeting requirements), we need to record and post this board meeting.
- **State Your Name** – for those talking, please state your name for the record.



CONNECTICUT
GREEN BANK SM

Board of Directors Meeting

October 23, 2020

Online Meeting

Board of Directors

Agenda Item #1

Call to Order

Board of Directors

Agenda Item #2

Public Comments

Board of Directors
Agenda Item #3
Consent Agenda

Consent Agenda

Resolutions #1 through #5



1. **Meeting Minutes** – approve meeting minutes of September 23, 2020
2. **FY 2020 Progress to Targets** – final approval of year performance
3. **CY 2021 Meeting Schedule** – dates and times for Board and Committee regular meetings
4. **Position Description** – Senior Advisor to President and CEO
5. **Under \$500,000 and No More in Aggregate than \$1,000,000** –staff approvals of transactions
 - **Loan Loss Decision Framework** – FY 2020 Update
 - **Under \$100,000 and No more in Aggregate than \$500,000** – staff restructurings and write-offs
 - **FY 2020 IPC Progress to Targets** – year performance
 - **FY 2021 Q1 Progress to Targets** – update of performance to date

Board of Directors

Agenda Item #4ai

Committee Updates and Recommendations

Audit, Compliance, and Governance Committee

FY 2020 CAFR

FY 2020 CAFR

Audit Results



Audit of financial statements, notes and required supplementary information preformed by Blum Shapiro.

- GAAS - Unmodified “clean” audit opinion will be issued.
- GAGAS - Report on internal control and compliance at the Financial Statement level will be issued to the Board.
 - ✓ Internal Controls - No material weaknesses or significant deficiencies in internal controls were identified.
 - ✓ Compliance - No instances of noncompliance with internal controls over financial reporting were identified.

FY 2020 CAFR

Audit Results (continued)



A report will be issued to the Board with required Auditor Communications.

- No transactions were entered into during the year for which there is a lack of authoritative guidance or consensus.
- All significant transactions have been recognized in the financial statements in the proper period.

Significant management estimates included in the financial statements:

- ✓ Loan Loss Reserves
- ✓ Swap fair value calculation
- ✓ Net pension and OPEB liabilities
- ✓ Asset retirement obligation for solar facilities under lease

FY 2020 CAFR

Audit Results (continued)



- Blum Shapiro informed the ACG Committee that they did not encounter significant difficulties in dealing with management in performing and completing the audit.
- No uncorrected misstatements were identified in connection with the audit of the financial statements for the fiscal year ended June 30, 2020.
- No disagreements between the auditors and management regarding financial accounting, reporting or auditing that would be significant to the financial statements were encountered.
- Blum Shapiro did not inform the ACG of any other audit findings or issues that required their attention.

FY 2020 CAFR

Audit Team Contact Information



Ronald W. Nossek, CPA – Engagement Partner

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Jessica Aniskoff, CPA – Engagement Manager

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Resolution #6



NOW, therefore be it:

RESOLVED, that the Board approves of the proposed draft Comprehensive Annual Financial Report (CAFR) contingent upon no further adjustments to the financial statements or additional required disclosures which would materially change the financial position of the Green Bank as presented.

Board of Directors

Agenda Item #4aii

Committee Updates and Recommendations

Audit, Compliance, and Governance Committee

Board of Director Meeting Attendance

ACG Committee

Report Out

- BOD Member Term Updates and Attendance review
- Yearly Attendance Letters to be sent to all members.
- Annual Review of Governance Documents – no new revisions since Bylaw changes earlier this year
- Legislative Update – Utility Accountability Bill

ACG Meeting dealt with house cleaning items with majority of focus on the CAFR Review



Board of Directors

Agenda Item #5a

Incentive Programs Updates and Recommendations

Residential Solar Investment Program

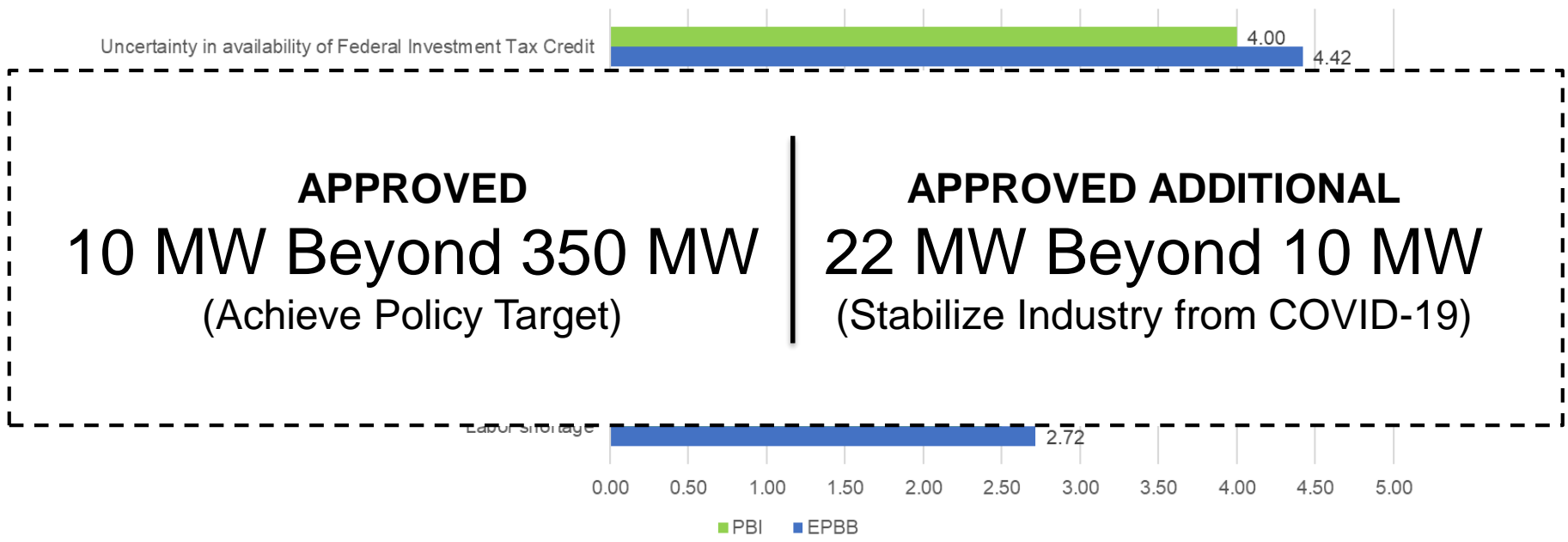
Steps 16 and 17

COVID-19 Impact

Destabilizing Local Solar Industry



How would you rate the following barriers to greater customer adoption of residential solar PV in Connecticut (please rate from 1 to 5, with 5 presenting the greatest barrier)



Across all measurements – unemployment claims, industry surveys, program data, and recent polling data – **local solar industry is unstable due to COVID-19.**

Cost Recovery Mechanisms

Updates



1. **REC Aggregation** – received a Motion Ruling from PURA on October 15, 2020 in support of the Green Bank’s request to continue to allow residential aggregation;
2. **Class I REC Price Target** – set cost recovery target of \$20; spoke with EDCs on September 30, 2020 and subsequently provided them on October 16, 2020 a “right of first refusal” about long-term REC purchase offer (i.e., \$30, \$25, and \$20); and Class I RECs training at more than \$35 in 2022 through 2024
3. **Steps 16 and 17 Incentive Levels** – request for this meeting to further reduce the risk of cost recovery

Steady progress reducing risks of cost recovery!

REFERENCES

Class I REC prices provided by the Green Bank’s brokers on October 16, 2020

Steps 16 and 17 Incentives Recommendations



RSIP Incentive Step	Estimated Start Date	EPBB (\$/W)		PBI (\$/kWh)		LMI PBI (\$/kWh)	
		≤10 kW	>10kW	≤10 kW	>10 kW	≤10 kW	>10 kW
14	9/24/2018	\$0.463	\$0.400	\$0.035		\$0.090	\$0.045
15	1/15/2020	\$0.426	\$0.328	\$0.030		\$0.081	\$0.041
<i>Proposed 16</i>	10/28/2020	\$0.426	\$0.328	\$0.030		\$0.081	\$0.041
<i>Proposed 17</i>	12/15/2020	\$0.358	\$0.207	\$0.030		\$0.073	\$0.036

- 20% for EPBB overall (a 16% reduction for capacity ≤10 kW and a 37% reduction for capacity >10 kW)
- 10% for LMI PBI
- No change for PBI - already at lowest level among the incentive types

Step 17 ZREC_{EQ} price for PBI is \$15, compared to \$35 for LMI-PBI and \$20-\$25 for EPBB

Resolution #7



NOW, therefore be it:

RESOLVED, that the Board approves of the RSIP Schedule of Incentives set forth in Tables 2 through 4 in the memo “Residential Solar Investment Program – Steps 16 and 17 Recommendations” dated October 23, 2020, reflecting the following incentive reductions for RSIP Step 17 as compared to Step 16:

- 20% for EPBB overall (consisting of a 16% reduction for capacity ≤ 10 kW and an 37% reduction for capacity > 10 kW)
- 10% for LMI PBI

Board of Directors
Agenda Item #6a
Financing Program Recommendations
C-PACE Project – Mystic Aquarium

Mystic Aquarium

55 Coogan Blvd, Stonington



- Deployment Committee approved a \$1,285,872 C-PACE loan to the Aquarium in September of 2019 for LED lighting, HVAC equipment, VFDs, and a building energy management system
- The project was put on hold due to lender consent issues and then by COVID-19, which caused the Aquarium to shut-down
- Due to financial issues caused by COVID-19, private donors and the State of Connecticut provided financial assistance. The State is providing a \$7m 20 year loan with a 3% interest rate.
- Staff proposal is to refresh the approval on the C-PACE financing with adjustments made to reflect project changes, primarily the addition of solar and increased incentives from Eversource. The amount has decreased to \$1,259,862.
- New C-PACE financing terms would mirror the state assistance with an interest rate of 3%

Resolution #8



NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the Memorandum , and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 180 days from the date of authorization by the Board of Directors;

RESOLVED, that before executing the Loan, the President of the Green Bank and any other duly authorized officer of the Green Bank shall receive confirmation that the C-PACE transaction meets the statutory obligations of the Act, including but not limited to the savings to investment ratio and lender consent requirements; and

RESOLVED, that the proper the Green Bank officers are authorized and empowered to do all other acts and execute and deliver all other documents and instruments as they shall deem necessary and desirable to effect the above-mentioned legal instruments.

Board of Directors

Agenda Item #7a

Investment Updates and Recommendations
Skyview Commercial Solar Financing Facility

Expansion of Secured Term Loan



Opportunity to finance more commercial solar in CT

- **Board approved Term Loan in April 2020** – So far, \$2.1M of a \$3.5M approved facility has been advanced; 21 projects financed
- **Prompt payer, good performance** – Borrower pays promptly and projects securing the Term Loan perform in line with expectations
- **Strong 2020 and 2021 pipeline** – Borrower has financeable project pipeline of 4.2 MW through 2021: request to expand facility size to **\$7.0M** on same economic terms

Opportunity to deploy more capital, secured by quality solar projects with credit-worthy counterparties, on terms that contribute to CGB sustainability goals

Resolution #9



NOW, therefore be it:

RESOLVED, that the Board hereby amends and restates its approval of the Term Loan transaction as described in the Project Qualification Memo submitted by the staff to the Board and dated October 14, 2020 (the “Memorandum”) to increase the amount of the Term Loan from \$3.5 million to \$7.0 million and on terms and conditions substantially consistent with those described in the Memorandum as a Strategic Selection and Award pursuant to the Green Bank Operating Procedures Section XII given the special capabilities, uniqueness, strategic importance, urgency and timeliness, and multi-phase characteristics of the Term Loan transaction; and

RESOLVED, that the proper Green Bank officers are authorized and empowered to do all other acts and execute and deliver all other documents as they shall deem necessary and desirable to effect this Resolution.

Board of Directors

Agenda Item #7b

Investment Updates and Recommendations

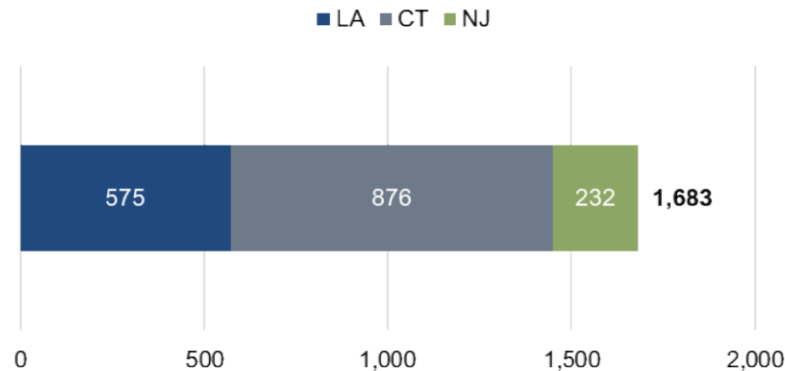
PosiGen

Strong Performance in spite of COVID

Year To Date Sales Performance

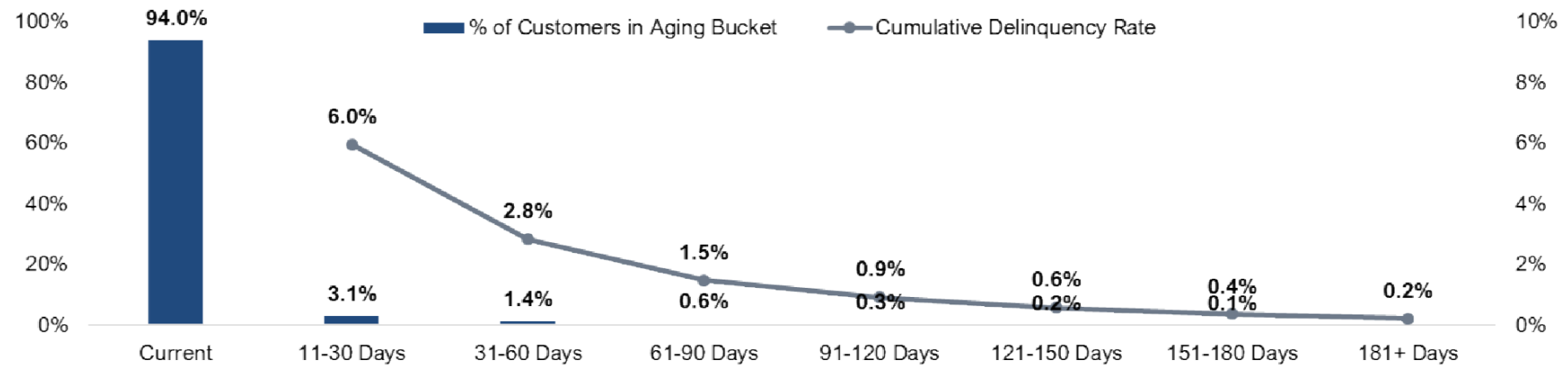
Month		LA	CT	NJ	Deco	Total
January	Final	77	110	23	18	228
February	Final	108	89	34	12	243
March	Final	86	90	35	14	225
April	Final	144	142	21	13	320
May	Final	143	151	45	16	355
June	Final	176	164	63	9	412
July	Final	197	200	51	15	463
August	Final	192	240	80	14	526
September	Preliminary	153	229	71	11	464
Year-to-Date		1,276	1,415	423	122	3,236

Installation Backlog



Strong Performance in spite of COVID - 2

Cumulative % of Customers by Aging Bucket in September 2020



PosiGen Financing Facility

Background

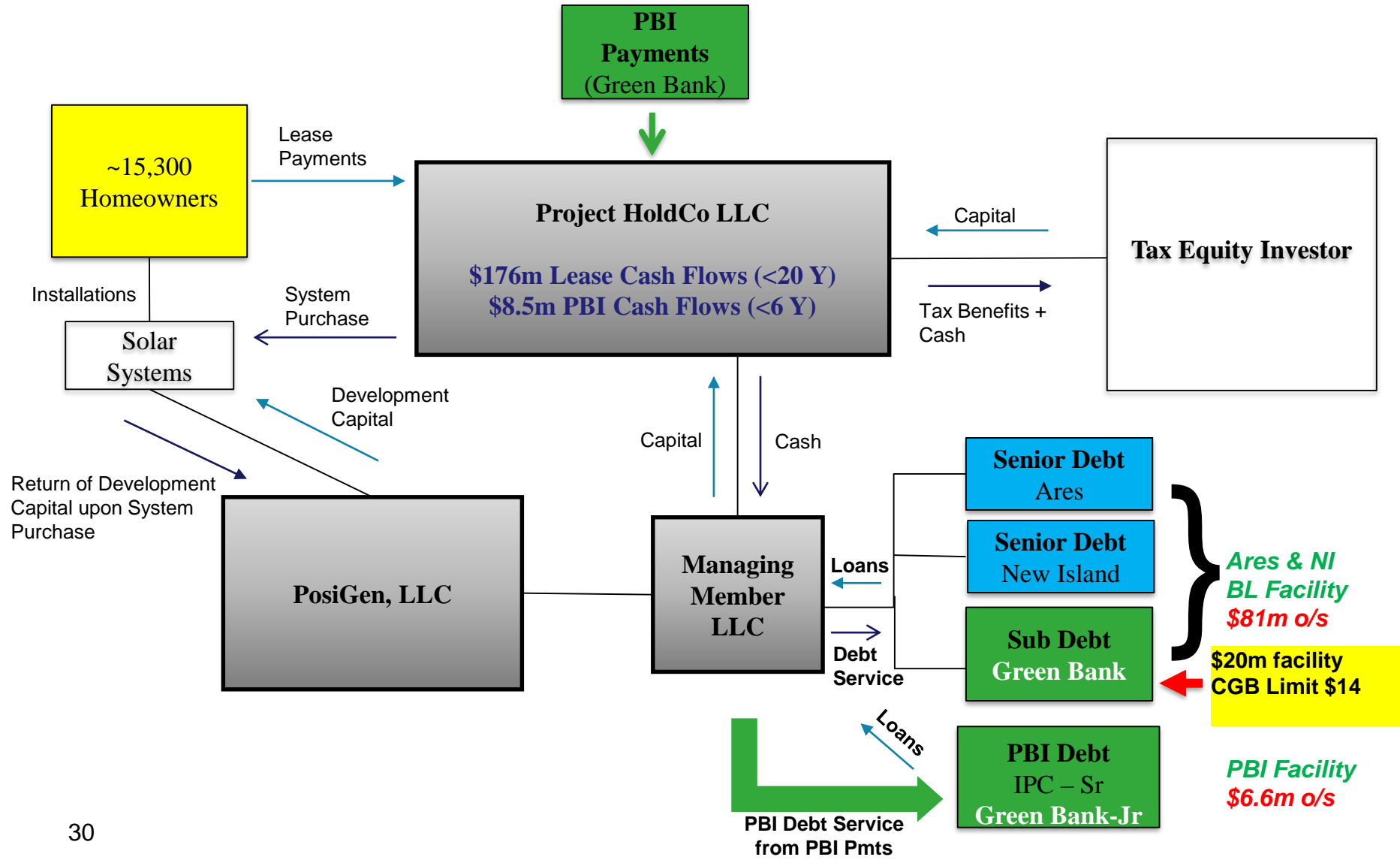


▪ Brief History / Existing Board Authorization

- **Strategic Partner to Green Bank** – Residential Solar Financing RFP (Dec 2014), PosiGen responded with a comprehensive proposal to deliver solar PV and energy efficiency financing to low and moderate income (“LMI”) households in CT
- **“Back Leverage” current support** – “not-to-exceed \$14 million(*)” limit for PosiGen global back-leverage facility subordinated to Ares Capital (\$65 m) and New Island Capital (~\$5.4 m)
 - **CGB – w/Ares exposure: \$12.7m** (Ares: \$62.1m) - \$163m gross CF (~14.2k sys)
 - **CGB – w/New Island exposure: \$ 1.3m** (New Island: \$5.4m) - \$ 13m gross CF (~1.1k sys)
- **PBI Financing Facility**
 - “not-to-exceed \$8 million” limit (underwritten by Green Bank (\$5m max) with IPC participation)
 - IPC Participation currently \$2.4m (senior)
 - CGB Participation (approved Dec 2019) currently \$4.2m (junior)
 - \$6.6m total (CGB + IPC) backed by \$8.5m gross CF (3,100 systems)
- **Collateral for \$14m Back-Leverage Facility** – collateralized by solar lease and energy efficiency financing agreement cash flows; intentionally excluded PBI cash flows
- **Collateral for \$8m PBI / LMI-PBI Facility** –
 - collateralized by PBI and LMI-PBI cash flows paid by Green Bank to Project Hold Co (and are carved out from the regular lease cashflows supporting the back-leverage facility)
 - PBI cash flows subject to production risk but not the credit risk of the underlying homeowners

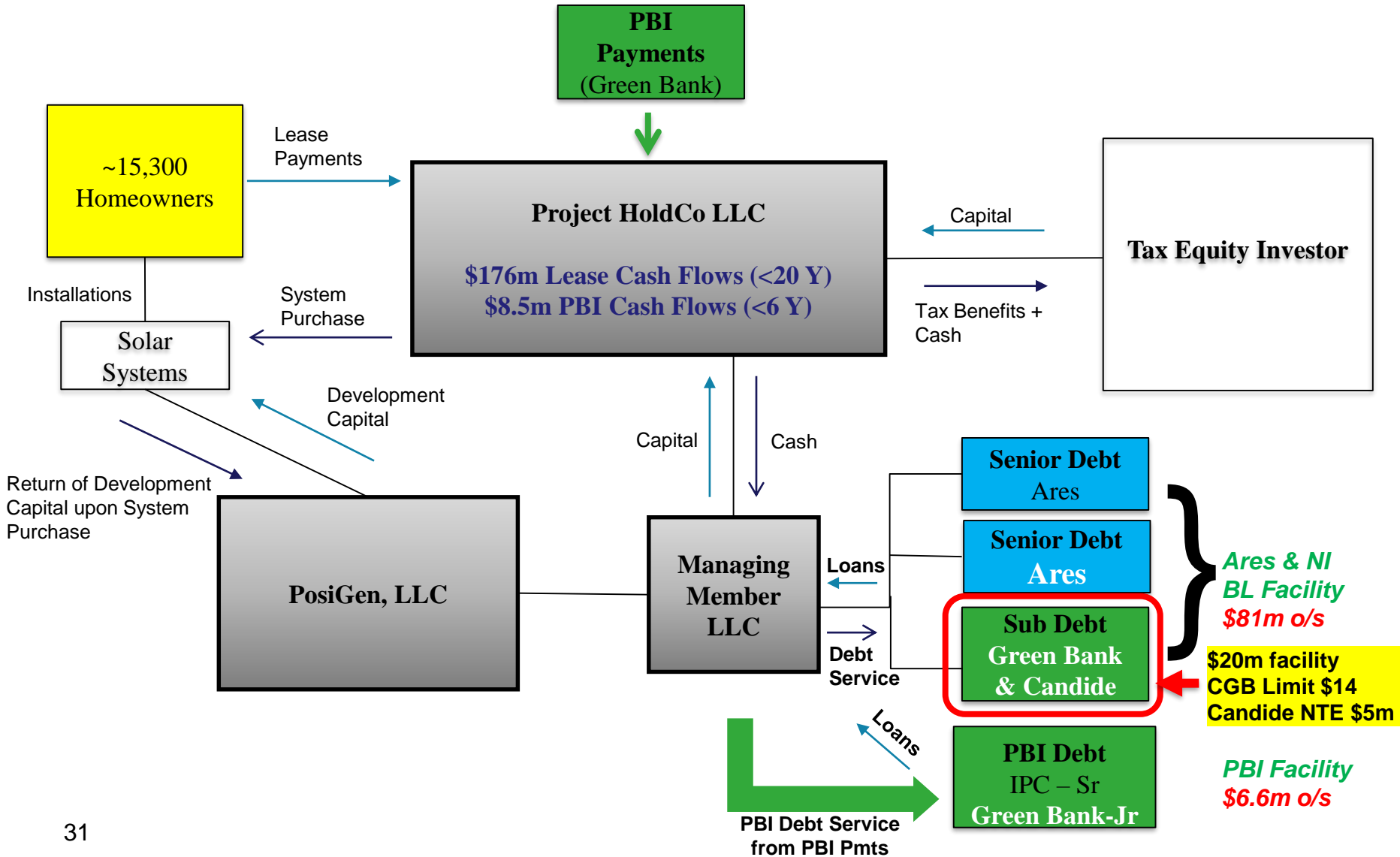
PosiGen Facilities

Back Leverage Facility & PBI Facility Diagram



PosiGen Facilities

Back Leverage Facility & PBI Facility Diagram



PosiGen

Re-Cap Plan



- **\$40 million New Equity – Series D Round**
- **Preferred & Debt Holders take a haircut / convert**
- **Ares 1st Lien Facility increases from \$65m to \$75m and replaces New Island Capital**
- **New Participant (Candide) in the 2nd Lien (CGB) Facility – up to \$5m pari passu with CGB**
- **No change in advance rates**
- **Tax Equity Committed for 2021**
- **“Bring Current” of CGB position as part of Re-Cap**
- **Post Re-Cap – will be looking to replace CGB in an expanded 2nd Lien Facility (our position of \$14m would be repaid ... circa Q2-22)**

CGB Arrearages to be Brought Current & Trade Warrant for Late Fees (+ 15bps margin)

PosiGen Arrearages

Facility Stats				
Payment Period	CGB Non-PBI	CGB Portion of PBI		Past Due
	Balance	Beg. Balance	CGB Balance O/S	
May 2020	\$13,990,727	\$5,071,960	\$19,062,687	\$220,681
June 2020	\$13,990,727	\$4,948,099	\$18,938,825	\$284,090
July 2020	\$13,990,727	\$4,886,672	\$18,877,398	\$490,014
August 2020	\$13,990,727	\$4,886,672	\$18,877,398	\$762,784
September 2020	\$13,990,727	\$4,886,672	\$18,877,398	\$581,207

- **Warrant NTE \$250,000**
- Would be exchanged for **Late Fees (\$205k) + temporary margin reduction** for balance of FY21 (\$45k = 15 bps ... 7.35% v 7.50%) ... “cashless” exercise ... “COVID relief”
- Staff sees trade at substantial discount attractive (potential for 6x ROI at exit in 4 years)

Value	110,000,000	115,000,000	200,000,000	250,000,000	300,000,000	350,000,000	400,000,000
Warrants - CTGB Warrants	\$232,636	\$245,000	\$485,803	\$797,245	\$1,044,142	\$1,284,052	\$1,521,154

Resolution #10



NOW, therefore be it:

RESOLVED, that the Board authorizes the Green Bank to enable Candide to participate in the BL Facility, subject to PosiGen closing its upcoming equity round, such that the BL Facility would be capped at \$20 million with the Green Bank's retained risk not exceeding \$14 million and a participation by Candide in the BL Facility not to exceed \$5 million;

RESOLVED, that the Board authorizes the Green Bank to renegotiate its existing warrant agreement with PosiGen to facilitate the closing of that round, so long as the Green Bank's anticipated return profile is preserved in accordance with the Memorandum; and

RESOLVED, that the proper Green Bank officers are authorized and empowered to do all other acts and negotiate and deliver all other documents and instruments as they shall deem necessary and desirable to effect the above-mentioned legal instruments.

Board of Directors

Agenda Item #7c

Investment Updates and Recommendations

Cargill Falls Update

Historic Cargill Falls Mill Redevelopment Project Update



■ Background

- **Project:** mill redevelopment into mixed-use residential and commercial space, 2 hydro electric turbines (~900 kW total capacity) and energy conservation measures
- **Current Capital Stack:** 31.8M of approved funding.
 - \$6.2M from Green Bank through C-PACE loan
 - remainder of funds from Connecticut Department of Housing, Urban Act funds, state and historic tax credit equity investors, and developer equity.

■ Project Update:

- Certificate of Occupancy received on August 20, 2020
- Residential occupancy at 75%
- Slow uptake in commercial lease-up
- Hydro for smaller turbine not completed. Pending approval of permit from Department of Transportation for bifurcation work
- \$3.1M (~10%) in cost overruns. Project team and funders exploring funding alternatives based on final cash flow projects. A \$1.85M request already submitted for Urban Act Funds



BEFORE: Damaged and neglected interiors

AFTER: Completed interiors



AFTER: Completed interiors



BEFORE:
Building
facades and
exteriors.
Broken
windows and
neglected
landscaping



BEFORE: Building facades and exteriors. Broken windows and neglected landscaping



AFTER:
Completed
facades and
exterior buildings

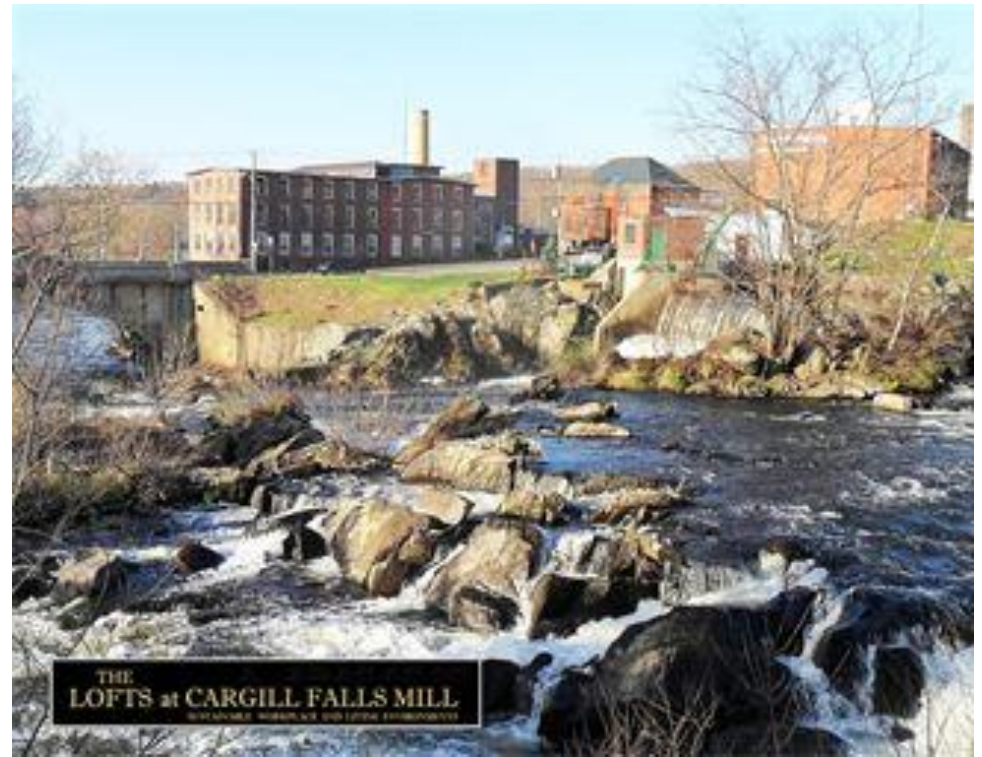




AFTER: Completed facades and exterior buildings

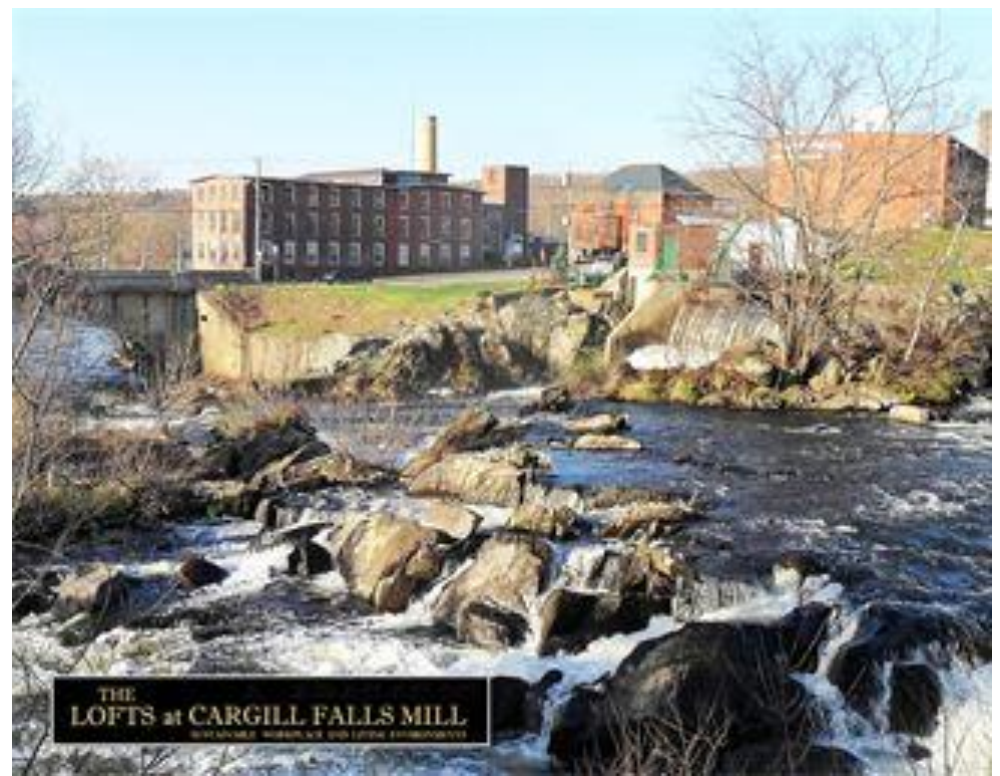


**Unique setting
and views**





Bifurcation of Water Flow



THE
LOFTS at CARGILL FALLS MILL
RECYCLED BRICKS AND LOCAL EMPLOYMENT

Board of Directors

Agenda Item #8

Other Business

Mapping Household Energy & Transportation

Affordability in Connecticut

Board of Directors

Agenda Item #9

Mandatory Ethics Training

Board of Directors
Agenda Item #10
Adjourn



**BOARD OF DIRECTORS OF THE
CONNECTICUT GREEN BANK**
Special Meeting Minutes

Wednesday, September 23, 2020
2:00 p.m. – 3:00 p.m.

A special meeting of the Board of Directors of the **Connecticut Green Bank (the “Green Bank”)** was held on September 23, 2020.

Due to COVID-19, all participants joined via the conference call.

Board Members Present: Eric Brown, Binu Chandy, John Harrity, Michael Li, Steve Meier, Matthew Ranelli, Lonnie Reed, Brenda Watson

Board Members Absent: Thomas Flynn, Kevin Walsh

Staff Attending: Sergio Carrillo, Mackey Dykes, Brian Farnen, Bryan Garcia, Bert Hunter, Jane Murphy, Cheryl Samuels, Eric Shrago, Ariel Schneider, Michael Yu, Nicholas Zuba, Selya Price

Others present: None

1. Call to Order

- Lonnie Reed called the meeting to order at 2:06 pm.

2. Public Comments

- No public comments.

3. Consent Agenda

- a. Meeting Minutes of July 24, 2020

Resolution #1

Motion to approve the meeting minute of the Board of Directors for July 24, 2020.

Upon a motion made by John Harrity and seconded by Brenda Watson, the Board of Directors voted to approve Resolution 1. None opposed or abstained. Motion approved unanimously.

Subject to Changes and Deletions

b. USDA RUS RESP Loan Application

- Bryan Garcia gave a brief background of the process of the application to the Rural Energy Savings Program.

Resolution #2

WHEREAS, consistent with its Comprehensive Plans, the Connecticut Green Bank (“Green Bank”) has been seeking opportunities over the past five (5) years to access low-cost and long-term federal funding from the United States Department of Agriculture (“USDA”), United States Department of Energy (“DOE”), and other agencies to support its mission;

WHEREAS, on April 2, 2020, the Rural Utilities Service (“RUS”) of the USDA issued within the Federal Register (Vol. 85, No. 64), an “Announcement of Funding Availability, Loan Application Procedures, and Deadlines for the Rural Energy Savings Program (“RESP”);

WHEREAS, on April 29, 2020, the American Green Bank Consortium, a membership organization for green banks, informed the Green Bank of the RESP, and provided technical assistance resources to the Green Bank through the Environmental and Energy Study Institute;

WHEREAS, on May 14, 2020, the Green Bank filed a Letter of Intent (“LOI”) with the RUS for a RESP Loan, including an overview of the organization, proposed program descriptions consistent with its Comprehensive Plan, evaluation, measurement, and verification framework, balance sheet, eligible Connecticut towns, and performance measures and indicators; and

WHEREAS, on July 1, 2020 the USDA notified the Green Bank that it had received and reviewed its LOI, and invited it to proceed with a full application for a \$10 million RESP Loan; and

WHEREAS, on July 24, 2020 the Green Bank Board of Directors (the “Board”) approved a resolution to empower staff to approve and submit to USDA application documents as needed in pursuit of a RESP Loan USDA; and

WHEREAS, on September 11, 2020 the Connecticut Green Bank submitted to USDA ahead of USDA’s September 28, 2020 deadline a full RESP Loan application package.

NOW, therefore be it:

RESOLVED, that the Board of the Green Bank, pursuant to the information provided by the Staff in a memo dated September 15, 2020, has determined that for the purpose of Code of Federal Regulations Secs. 1719.5(b)(3)(E), the financial forecast submitted to USDA by the Green Bank as part of its RESP Loan application package is deemed approved; and

RESOLVED, that the Board of the Green Bank, pursuant to the information provided by the Staff in a memo dated September 15, 2020, has determined that for the purpose of Code of Federal Regulations Secs. 1719.5(b)(3)(F), the implementation plan submitted to USDA by Green Bank as part of its RESP Loan application package is deemed approved.

Upon a motion made by Matthew Ranelli and seconded by John Harrity, the Board of

Subject to Changes and Deletions

Directors voted to approve Resolution 2. None opposed or abstained. Motion approved unanimously.

- Bryan Garcia introduced Sergio Carrillo, who is replacing Selya Price as the Director of the Incentive Programs. Selya Price will be transitioned to the position of Special Advisor to the CEO.

4. Investment Updates and Recommendations

a. C-PACE Project Acquisitions(s) – Clean Fund

- Bert Hunter summarized how the enactment of Executive Order 7S affected the Green Bank's portfolio, specifically part of private securitizations with the Clean Fund. Discussions internally lead to the realization that a restructure would be the best way to handle the challenges to the transactions within the program due to COVID-19 and requested deferments by borrowers.
- Michael Yu discussed the Clean Fund bond structure and history in more detail. Due to COVID-19 and economic uncertainty, many borrowers requested deferrals which clash with the restrictions currently in place under the bond structure which was compounded by a follow-on securitization of the bonds, and as more CPACE borrowers under this structure are anticipated to defer, restructuring will become an increasingly time intensive and costly process. So, by bringing the transactions back to the Green Bank – managing such restructured finance agreements will be easier to manage – particularly if property owners miss additional payments. Starting with Tranche 1, all 9 borrowers have agreed to restructure the \$5.6 million current outstanding BAL. It would effectively move one payment from now until the end of the term which has minimal impact to the interest rate.
- Michael Yu reviewed the illustrative BAL restructuring to give more clarity to the economic impact breakdown. He explained the general process and flow of the restructuring.
 - Lonnie Reed asked how the Clean Fund responded to the process changes. Bert Hunter answered that for Tranche 1, since the portfolio is contained within another securitization, they would not be able to do an accelerated transaction. Tranche 1 would have to be handled transaction-by-transaction and would require lender consent to be received.
 - Matthew Ranelli asked, per the memo, that most of the borrowers are amenable to refinancing, however if there is a borrower who is not amenable who may hold the process up, is there anything in place to incentivize them. Bert Hunter clarified that since the writing of the memo, all the borrowers within Tranche 1 have agreed to the terms.
 - Matthew Ranelli also asked if there is anything that can be done within the bond agreement to cover the pre-payment premiums. Bert Hunter answered that unfortunately there is no way around that fee, though it was researched extensively.
 - Steve Meier asked if a 6-months deferral (1 payment) will be enough for the borrowers. Bert Hunter said it has been the practice so far to agree to a 1 payment deferral for C-PACE, typically 6 months, and staff would keep in touch with customers to monitor their progress.

Resolution #3

Subject to Changes and Deletions

WHEREAS, pursuant to Section 16a-40g of the Connecticut General Statutes (as amended, the “Act”), the Connecticut Green Bank (“Green Bank”) established a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy (“C-PACE”);

WHEREAS, pursuant to the Act and its Bylaws, Green Bank previously entered into certain C-PACE financing agreements (the “Financing Agreements”), more particularly described in that certain memorandum to the Green Bank Board of Directors (the “Board”) dated September 15, 2020 (the “Memo”);

WHEREAS, the Financing Agreements were securitized through a private-placement bond issuance, which structure included assignment of the Financing Agreements to a trustee under a master indenture of trust and Green Bank retaining a subordinated portion of the bonds which were issued;

WHEREAS, on June 13, 2018 the Board approved a Loan Loss Decision Framework and Process, as amended on April 24, 2020 to address the impacts of COVID-19 (the “Loss Process”), which established the process of dealing with provisional loss reserves, restructurings, and write-offs for assets on Green Bank’s balance sheet; and

WHEREAS, in accordance with the Loss Process, Green Bank staff seeks Board approval to restructure the Financing Agreements (collectively the “Restructured Financing Agreements”), as more particularly described in the Memo.

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Restructured Financing Agreements, with terms and conditions consistent with the Memo, as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of this Board meeting; and

RESOLVED, that the proper Green Bank officers are authorized and empowered to do all other acts and execute and deliver all other documents and instruments as they shall deem necessary and desirable to affect the above-mentioned legal instruments.

Upon a motion made by Matthew Ranelli and seconded by Brenda Watson, the Board of Directors voted to approve Resolution 3. None opposed or abstained. Motion approved unanimously.

5. Financing Programs Recommendations
 - a. C-PACE Transaction - Cheshire
 - Mackey Dykes summarized the C-PACE project in Cheshire, CT. He reviewed the history of the owning company and project details. He noted the significant delay in the current ZREC auction results, which are expected within the next 2 weeks but stated that this project would need a large ZREC, and so it would not close until that ZREC has been awarded. Mackey Dykes clarified that Board approval would be contingent on the ZREC award.

Subject to Changes and Deletions

- Steve Meier asked if there are specific minimum target rates for the Savings Investment Ratio. Mackey Dykes answered that the program and statute require that it be 1 or greater.
- Lonnie Reed noted the company does not even have a mortgage on the property and is financially healthy, which Mackey Dykes confirmed. Michael Yu added that the company has a large push for sustainable goals and setting a good example.
- Binu Chandy asked about the Feasibility Study Loan within the Resolution. Mackey Dykes answered that it is template wording which has been used in C-PACE related Resolutions, so it can be stricken from the Resolution if need be. Brian Farnen stated we can remove reference to the feasibility study.
- Matthew Ranelli asked if the award of the ZREC needs to be added to the Resolution. Mackey Dykes agreed that the amendment should be included.

Resolution #4

WHEREAS, pursuant to Section 157 of Public Act No. 12-2 of the June 12, 2012 Special Session of the Connecticut General Assembly and as amended (the "Act"), the Connecticut Green Bank (Green Bank) is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

WHEREAS, the Green Bank Board of Directors (the "Board") has approved a \$40,000,000 C-PACE construction and term loan program;

WHEREAS, the Green Bank seeks to provide a **\$2,034,623** construction and (potentially) term loan under the C-PACE program to The Lane Construction Corporation., the building owner of 90 Fieldstone Ct, Cheshire, Connecticut (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated September 23, 2020, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

RESOLVED, that before executing the Loan, the President of the Green Bank and any other duly authorized officer of the Green Bank shall receive confirmation that the C-PACE transaction meets the statutory obligations of the Act, including but not limited to the savings to investment ratio and lender consent requirements; and

RESOLVED, that the proper Green Bank officers are authorized and empowered to do all other acts and execute and deliver all other documents and instruments as they shall deem necessary and desirable to affect the above-mentioned legal instruments.

Upon a motion made by Brenda Watson and seconded by Steve Meier, the Board of Directors voted to approve Resolution 4. None opposed or abstained. Motion approved

Subject to Changes and Deletions

unanimously.

b. C-PACE Program Guidelines – Proposed Revisions

- Mackey Dykes explained the changes to the C-PACE program guidelines which includes the creation of new defined terms and changes in relation to an exception to the Effective Useful Life for restructurings.
- Matthew Ranelli asked if the wording of the definition of “restructuring” is a loophole to get around restructuring versus refinancing. He also noted his discomfort with the language about Useful Life, as it seems open ended, and asked if a limit has been considered beyond the end of the Useful Life. Thirdly, Matthew Ranelli asked if there was a way to protect against someone who has taken all the depreciation and tax credits and subsequently sells the property with a C-PACE assessment on it that is “underwater”...
 - Bert Hunter asked Matthew Ranelli to further explain the possibility of the wording being used as a loophole. Matthew Ranelli clarified, and Bert Hunter answered that the definition of “refinanced” is to protect the original capital providers, to avoid providers trying to aggressively fight each other for refinancings after the original capital provider has invested considerable effort in originating the transaction. However, if an existing capital provider wants to change the terms, lower the interest, etc., then they are able to do so (as a restructuring). The group discussed the issue further.
 - Matthew Ranelli expressed his concern with the Useful Life extension possibilities. Mackey Dykes explained the 25 year limit currently in place which still affect restructurings under the changes. Matthew Ranelli clarified the potential issue with the useful life when a restructuring happens, and Bert Hunter and Mackey Dykes understood and discussed rewording the useful life limits to begin in relation to the most appropriate date based on the original agreement. Matthew Ranelli gave more feedback to possible new wording to clarify the issue. The group discussed the issue at length. They eventually agreed on a term restriction on restructuring of the lesser of 25 years or the EUL plus 30 months.
 - Brenda Watson, Michael Li, and Eric Brown had to leave the Board Meeting before the Resolution went to vote. Eric Brown returned – reestablishing quorum for Resolution #5 – and received a summary of the proposed changes. He then added his vote to the other directors’ votes.

Resolution #5

WHEREAS, Conn. Gen. Stat. Section 16a-40g (the “Authorizing Statute”) authorizes the Commercial Property Assessed Clean Energy Program (“C-PACE”) and designates the Connecticut Green Bank (“Green Bank”) as the state-wide administrator of the program; and

WHEREAS, the Authorizing Statute charges Green Bank to develop program guidelines governing the terms and conditions under which state and third-party financing may be made available to C-PACE.

NOW, therefore be it:

RESOLVED, the Green Bank Board of Directors (the “Board”) approves the updated C-PACE program guidelines (the “Program Guidelines”), substantially in the form of attached to

Subject to Changes and Deletions

that certain memo to the Board dated September 16, 2020. The Program Guidelines shall then go through a thirty-day public comment period in accordance with Conn. Gen. Stat. Section 1-120 et seq.

RESOLVED, If, after the expiration of public comment period, Green Bank staff considers that significant changes are needed to the Program Guidelines as currently drafted, then Green Bank staff will seek an updated approval from the Board. If no significant changes result from the public comment process, then the final form of the Program Guidelines, as may be edited by Green Bank staff, shall be deemed approved by the Board and Green Bank staff will proceed with implementation of such Program Guidelines.

RESOLVED, that the proper Green Bank officers are authorized and empowered to do all other acts and execute and deliver all other documents and instruments as they shall deem necessary and desirable to affect the above-mentioned Program Guidelines.

Upon a motion made by Matthew Ranelli and seconded by John Harrity, the Board of Directors voted to approve Resolution 5 with an added limitation that the term of restructurings could not exceed the lesser of EUL plus 30 months or 25 years. Brenda Watson and Michael Li were unable to attend for the vote. None opposed or abstained. Motion approved.

6. Incentive Programs Updates and Recommendations
 - a. Residential Solar Investment Program – Towards 350 MW and Sustained Orderly Development of Local Solar Industry
 - Bryan Garcia explained the status of the RSIP and its public policy goals. As well, the data shows that the local solar industry is unstable due to COVID-19. Bryan Garcia further explained the proposed changes to the RSIP with the goals of stabilizing the industry and meeting targets.

Resolution #6

WHEREAS, the Connecticut Green Bank (Green Bank), per CGS Section 16-245ff, is responsible for implementing the Residential Solar Investment Program (RSIP) to administer a declining incentive schedule that supports the deployment of no more than three-hundred and fifty megawatts of new residential solar PV, while fostering the sustained orderly development of a local solar industry;

WHEREAS, on April 24, 2020, the Board of Directors of the Green Bank supported the Staff recommendation to propose a legislative increase in the RSIP to the Governor's Office and the leaders of the Energy & Technology Committee in order to revitalize, recover and stabilize the local solar industry from the impact of COVID-19 prior to the market transition from net metering to a tariff, which the Staff has proposed, but as of the date of this memo, no legislation extending the RSIP has been brought forth; and

WHEREAS, the RSIP is approaching the three-hundred and fifty megawatt public policy target during a time when COVID-19 has had extreme deleterious impacts on public health and the destabilization of the economy, including the residential solar PV industry in Connecticut.

NOW, therefore be it:

Subject to Changes and Deletions

RESOLVED, that the Board of Directors directs the Staff of the Green Bank to seek out support from Public Utilities Regulatory Authority (PURA) to allow the Green Bank to continue to aggregate residential end-use customers installing solar PV systems beyond the current RSIP goal (Residential Aggregation);

RESOLVED, that given the estimate of cancellations based on an analysis of recent RSIP application approval activity, the Board of Directors supports the Staff recommendation to approve up to an additional 10 MW of RSIP applications beyond the RSIP policy target of 350 MW for a total of 360 MW, in order to achieve the RSIP policy target of 350 MW – any projects approved and completed beyond the 350 MW, would have to seek cost recovery from a source other than the current RSIP policy;

RESOLVED, that the Board of Directors acknowledges the significant adverse impacts COVID-19 has had on the stability of the local solar industry, and contingent on PURA's approval of the Residential Aggregation, the Board of Directors approves up to an additional 32 MW of incentives beyond the 350 MW RSIP goal from the Green Bank for residential end-use customers installing solar PV (Incentive Extension);

RESOLVED, that should the Board of Directors approve of the Incentive Extension, that the Staff of the Green Bank pursue any and all strategies to cost recover the Incentive Extension through a future extension to the RSIP policy, sale of RECs to the utilities through long-term procurement contracts, or other spot market or future contract sales into the Class I RPS markets in New England in a manner consistent with this memorandum; and

RESOLVED, that the Board of Directors requests that the Staff return with a recommendation at a future meeting for review and approval of the incentive level for RSIP beyond 350 MW (e.g., reducing the residential solar PV incentives beyond the current Step 15 levels of the RSIP).

Upon a motion made by John Harrity and seconded by Matthew Ranelli, the Board of Directors voted to approve Resolution 6. None opposed or abstained. Motion approved unanimously. Brenda Watson and Michael Li were unable to attend for the vote. None opposed or abstained. Motion approved.

7. Adjourn

Upon a motion made by John Harrity and seconded by Binu Chandy, the Board of Directors Meeting adjourned at 3:38 pm.

Respectfully submitted,

Lonnie Reed, Chairperson

Memo

To: Board of Directors of the Connecticut Green Bank
From: Lucy Charpentier, Bryan Garcia, Selya Price, and Eric Shrago
Cc: Mackey Dykes, Brian Farnen, and Bert Hunter
Date: October 23, 2020
Re: Incentive Programs – Program Performance towards Targets for FY 2020 – Restated

Overview

As reflected in the Connecticut Green Bank's (the Green Bank) Comprehensive Plan for FY 2020 and Beyond¹, the Green Bank updated its organizational structure to reflect two business units: Incentive Programs and Financing Programs. The Incentive Programs business unit includes programs previously included under the former Infrastructure Sector Programs and Residential Financing Programs, namely the Residential Solar Investment Program (RSIP), Smart-E and Solar for All.

The former Infrastructure Sector and Residential Financing Programs took direction from Public Act 11-80 (PA 11-80), *An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut's Energy Future*, subsequent legislation expanding RSIP and creating the Solar Homeowner Renewable Energy Credit (SHREC)², and the Comprehensive Energy Strategy (CES) released by the Department of Energy and Environmental Protection (DEEP) with the goal of delivering cleaner, cheaper and more reliable sources of energy through the deployment of in-state renewable energy sources.³

With respect to infrastructure, PA 11-80 requires that the Green Bank develop and implement several programs to support the deployment of solar photovoltaic (PV), combined heat and power (CHP), and anaerobic digester (AD) technologies. Due to the Connecticut General Assembly's reappropriation of monies from the Clean Energy Fund and RGGI to the General Fund, affecting FY 2018-2019, the Green Bank scaled back its programs including the termination of the CHP and AD pilots. With respect to residential financing, PA 11-80 requires that the Green Bank develop and implement several programs to finance and otherwise support clean energy investment in residential projects to promote deep energy efficiency retrofits, renewable energy deployment, and fuel and equipment conversions in single-family and multifamily homes across the state.

FY 2020 Incentive Program targets and performance are focused on the Residential Solar Investment Program (RSIP) and related activities, and residential financing activities associated with the single-family market, including Smart-E and Solar for All. These programs are grant or

¹ https://ctgreenbank.com/wp-content/uploads/2020/06/Green-Bank_Revised-Comprehensive-Plan_062620.pdf

² PA 15-194, PA 16-212 and PA 19-35, amended Connecticut General Statute (CGS) Section 16-245ff to require that not more than 350 MW (updated from 300 MW) of new residential solar PV be deployed in Connecticut on or before December 31, 2022, and enabled cost-recovery of RSIP administrative costs through the sale of SHRECs to the EDCs.

³ <https://portal.ct.gov/DEEP/Energy/Comprehensive-Energy-Plan/Comprehensive-Energy-Strategy>

subsidy program(s) (including credit enhancements – interest rate buydowns and loan loss reserves) that deploy clean energy, while at the same time cost recovering the expenses associated with these programs within the business unit – including, but not limited to, incentives, administrative expenses, and financing expenses, as well as loan loss reserves on the balance sheet.

For program descriptions and information on the Total Addressable Market and Serviceable Addressable Market (SAM), please see the FY 2020 and Beyond Comprehensive Plan⁴.

Performance Targets and Progress

With respect to the Comprehensive Plan approved by the Board of Directors of the Green Bank on July 18, 2019 and revised on January 24, 2020,⁵ the following are the performance targets for FY 2020 and progress made to targets for the Incentive Programs (see Table 1) as of June 30, 2020.

Table 1. Program Performance Targets and Progress Made to the Comprehensive Plan for FY 2020

Key Metrics	Program Performance Revised Targets (as of 1/24/2020)	Program Progress ⁶	% of Goal
Capital Deployed ⁷	\$220,032,000	\$243,405,041	111%
Investment at Risk ⁸		\$23,912,641	
Private Capital ⁹		\$222,783,554	
Deployed (MW)	61.5	66.9	109%
# of Loans/Projects	7,545	8,658	115%
Leverage Ratio		10.3	

In summary, for Incentive Programs in FY 2020, there were 8,658 projects (achieving 115% of the goal) requiring \$243M of investment (achieving 111% of the goal) that led to the deployment of 66.9 MW of clean energy (achieving 109% of the goal), that delivered a leverage ratio of 10.3 for private to public funds invested.

Executive Summary for the Incentive Programs

⁴ See the FY2020 and Beyond Comprehensive Plan [click here](#)

⁵ For mid-year revisions to budget and targets, see “Q2 Progress to Targets” memo of January 24, 2020 [click here](#)

⁶ Includes only closed transactions

⁷ Capital Deployed is used to measure Investment actuals to targets and it includes fees related to financing costs and adjustments for Fair Market Value which are not included in the Gross System Cost. It represents: the Fair Market Value for Commercial/Residential Leases, the Amount Financed or Gross System Cost (whichever is greater) for CPACE, the Amount Financed for Residential financing products and the Gross System Cost for all other programs.

⁸ Includes funds from the Clean Energy Fund, RGGI allowance revenue, and other resources that are managed by the Connecticut Green Bank that are committed and invested in subsidies, credit enhancements, and loans and leases

⁹ Private Investment is based on the Gross System Cost and includes adjustments related to financing costs or Fair Market Value.

Residential Solar Investment Program (RSIP)

- Despite slower than usual spring months due to the COVID pandemic shut down, hence lower than usual volume in Q4 2020, project volume and capacity in FY20 were high enough through Q3 FY20 to finish at levels comparable to FY19, the highest volume fiscal years since inception of RSIP in FY12. See Figure 1 and Table 3 for annual RSIP deployment by fiscal year.
- Overall RSIP milestones as of the end of FY20 are:
 - Approximately 332 MW or 41,570 projects have been approved through RSIP since FY12, with over 297 MW or 37,343 projects completed, or approximately 95% approved and 85% completed toward the 350 MW public policy target. RSIP is estimated to reach 350 MW of approved projects in October 2020.
 - Approved projects since FY12 to date are approximately 25% EPBB and 75% PBI.
 - Total investment in RSIP has reached \$1.25 billion, with Green Bank leveraging \$1.1 billion in private capital by investing nearly \$144 million, a leverage ratio of over 8.7 for the program through FY20.
- The Green Bank team provided input on residential solar PV and battery storage benefits and costs and study design into docket 19-06-29, the DEEP and PURA Joint Proceedings on the Value of Distributed Energy Resources (DER), pursuant to PA 19-35, which required a study on the value of DER to be initiated by DEEP and PURA by July 2019 and completed by July 2020.
- With support from an EM&V partner, Guidehouse (formerly Navigant Consulting), the team has been working on a program proposal (due July 31, 2020) in response to the Request for Program Design Proposals (RFPD) under PURA's Distribution System Planning Docket, 17-12-03RE03, for a battery storage incentive program to complement deployment of residential solar PV and to contribute to the state's peak load reduction goals.
- The Green Bank continues solar PV soft cost reduction efforts through its leadership in Sustainable CT as well as in collaboration with SolarConnecticut (SolarConn), the state's solar PV industry trade group. SolarConn has led the effort to encourage solutions such as remote permitting applications and virtual/video inspections that would enable municipalities to continue operations during the pandemic while continuing these developments post-pandemic.
- The federal Department of Energy (DOE) grant, "State Strategies for Solar Adoption in Low-and-Moderate Income Communities," led by the Clean Energy States Alliance (CESA), awarded in FY18 for three years, has continued to support Green Bank efforts to encourage adoption of solar PV among LMI households and communities of color. The grant received a no-cost extension through December 2020.
- A second DOE-funded grant, "Bringing LMI Solar Financing Models to Scale", also led by CESA, began in FY20 and will provide funding for three years to help accelerate widespread adoption of a residential rooftop solar PV deployment model among LMI single-family homes throughout the country – the Green Bank in partnership with Inclusive Prosperity Capital (IPC) will provide advisory support on this project.

Energize CT Smart-E Loan

- The Smart-E Loan exceeded its targets for FY20, in large part due to steady, high volume from the HVAC industry. Solar volume continued to be low as the market now has numerous solar loans and alternate financing options; however, one contractor continued a partnership with a Smart-E lender to offer interest rate buydowns, which resulted in dozens of projects throughout the year.
- In partnership with Michigan Saves, Inclusive Prosperity Capital (“IPC”) completed the development of a new financing web platform called the National Green Energy Network, or “NGEN.” CT Green Bank’s Smart-E Loan was the first financing program to go live on the platform in July 2019, with Michigan’s program launching in Fall 2019. IPC has been working with another state energy office who plans to become the first non-CT or Michigan program on the platform in FY21. Green Bank contributed budget to the development of the platform and will share in any eventual license fee revenue on a pro rata basis.
- In September 2019, two new measures were added to the list of 40+ improvements that can be financed using a Smart-E Loan: asbestos and mold removal. Homeowners can finance up to \$25,000 to address these measures, considered health and safety barriers for completing deeper energy saving projects, as long as a nexus to energy was proven (e.g., completing a home energy assessment or financing a second qualifying measure). Two “health and safety” Smart-E Loans closed in FY20, one loan for asbestos removal only, another for asbestos removal paired with an HVAC upgrade.
- The number of credit-challenged Smart-E loans remains low due to COVID-19 stalling efforts for contractor engagement.
- COVID-19 impacts on Smart-E volume were noticeable, with a 43% drop in closed loan volume between February and March 2020 being the most significant. Volume between March – June ran about 27% below the same period last year. While lower than normal, HVAC projects were submitted steadily, as the industry was deemed essential and did not experience the same negative effects as the home performance industry. Closed loan volume rebounded exponentially in June 2020, with 91 closed loans – the highest volume month of FY20.
- The April 1st launch of a special 2.99% financing offer for heat pumps, battery storage and electric vehicle charging stations was postponed due to COVID-19. Following guidance from the Governor’s Office, public health officials and DEEP, the launch was rescheduled for July 1st to support the re-opening of the state’s clean energy economy and getting contractors back to work.

PosiGen Solar for All

- The PosiGen Solar for All partnership successfully adjusted sales, staff, and operations in response to the COVID pandemic, avoiding the loss of sales and staff incurred by many other companies. Despite major industry delays, the program reached the fiscal year target for closed projects. The addition of a fourth system size of 3.7 kW enabled smaller project homes to participate in the program and capture solar savings and likely resulted in the slight shortfall in capital deployed and MW targets.

The following are brief descriptions of the progress made under the last comprehensive plan for the Incentive Programs:

Residential Solar Investment Program (RSIP)

\$16.4 million in subsidies¹⁰ from the Green Bank has attracted \$212.2 million of funds from other sources.

Table 2. RSIP Overview for FY 2020

Program Data	Submitted but not Closed ¹¹	Closed ¹²	Total
Projects	285	7,921	8,206
Installed Capacity (MW)	2.3	66.3	68.6
Lifetime Clean Energy Produced (MWh)	65,432	1,886,744	1,952,176
Annual Combined Energy Generated & Saved (MMBtu)	8,930	257,503	266,433
Subsidies (\$'s)	\$631,795	\$16,849,620	\$17,481,415
Credit Enhancement (\$'s)	\$0	\$0	\$0
Loans or Leases (\$'s)	\$0	\$0	\$0
Total Green Bank Investment (\$'s)	\$631,795	\$16,849,620	\$17,481,415
Private Capital (\$'s)	\$8,325,454	\$218,655,740	\$226,981,194
Direct Job Years	35	843	878
Indirect & Induced Job Years	46	1,102	1,148
Lifetime Tons of CO2 Emissions	36,166	1,042,858	1,079,024

Figure 1 provides historical perspective on Connecticut’s residential solar PV market from fiscal year (FY) 2005 through FY 2020, based on projects incentivized through RSIP from FY 2012 through FY 2020 and before that through the Connecticut Clean Energy Fund (CCEF), the Green Bank’s predecessor organization. The average RSIP incentive was reduced steeply as shown by the lower/green portion of the bars in the chart, while the average net cost to the customer shown in the upper/black portion of the bars has stayed roughly stable, between \$3.00-3.30/W from FY17-FY20, increasing slightly each year due to several factors (e.g., federal tariffs on equipment, rising customer acquisition costs, rising costs of doing business). Similarly, installed costs have remained stable from FY17-FY20, between \$3.48-3.55/W (see Table 3). Comparing FY 2005 to FY 2020, the average installed cost decreased 56% from \$8.09/W to \$3.55/W and the average RSIP incentive decreased 94% from \$4.47/W to \$0.26/W, while deployment increased over 50,000% from 122 kW in FY 2005 to 61.5 MW in FY 2020. Incentives were reduced most steeply with the inception of the Green Bank in FY 2012, 84% from \$1.67/W in FY 2012 to \$0.26/W in FY 2020 (as compared to 51% from FY 2005 to FY 2011). As a percentage of installed cost, incentives have decreased from 32% on average in FY12 to 7.3% in FY20. Since FY 2012, installed costs have decreased 32% from \$5.20/W to \$3.55/W and deployment grew over 2100% from 2.8 MW in FY 2012 to 61.5 MW in FY 2020.

¹⁰ Note the distribution of EPBB and PBI and the 6-year payout of the PBI.

¹¹ This represents projects that are currently approved but not closed. It does not include projects that were approved but have since closed.

¹² Approximately 85% of projects approved result in project completions.

Figure 1. RSIP Historical Installed Costs, Incentives, Net Customer Cost, Installed Capacity, FY 2005-2020



Table 3. RSIP Historical Installed Costs, Incentives, Net Customer Cost, Installed Capacity, FY 2005-2020

YearFiscal	CGB Investment with Exclusions divided by Watts with Exclusions	Private Investment with Exclusions divided by Watts with Exclusions	Total Investment with Exclusions divided by Watts with Exclusions	Project Counter	kW STC
2012	\$1.73	\$3.40	\$5.13	288	1,940.23
2013	\$1.44	\$2.87	\$4.32	1,109	7,889.85
2014	\$1.15	\$2.92	\$4.07	2,382	17,125.11
2015	\$0.70	\$3.21	\$3.91	6,382	48,646.84
2016	\$0.37	\$3.05	\$3.41	6,780	53,161.25
2017	\$0.30	\$3.02	\$3.33	4,431	34,504.68
2018	\$0.28	\$3.13	\$3.41	5,149	41,766.57
2019	\$0.26	\$3.19	\$3.45	6,521	55,424.80
2020	\$0.24	\$3.23	\$3.48	7,469	62,699.07

Project approvals were strong in FY20 overall, but in particular through Q3 FY20 (until the market was impacted by the COVID pandemic). Despite significant impacts to the market starting in March 2020 and into Q4 FY20, the following factors contributed to high overall project volume in FY20 for the solar PV market.

- RSIP incentive levels were reduced with the approval of Step 15 by the Board of Directors in July 2019, but not steeply enough to impact project volume. Step 15 levels represented 10%, 15%, and 10% reductions for EPBB, PBI, and LMI PBI projects respectively, with no further reductions in FY20, thereby providing market continuity.
- The anticipated end of net metering, which had been scheduled to take place at the end of RSIP, but which was delayed until December 31, 2021 by PA 19-35.

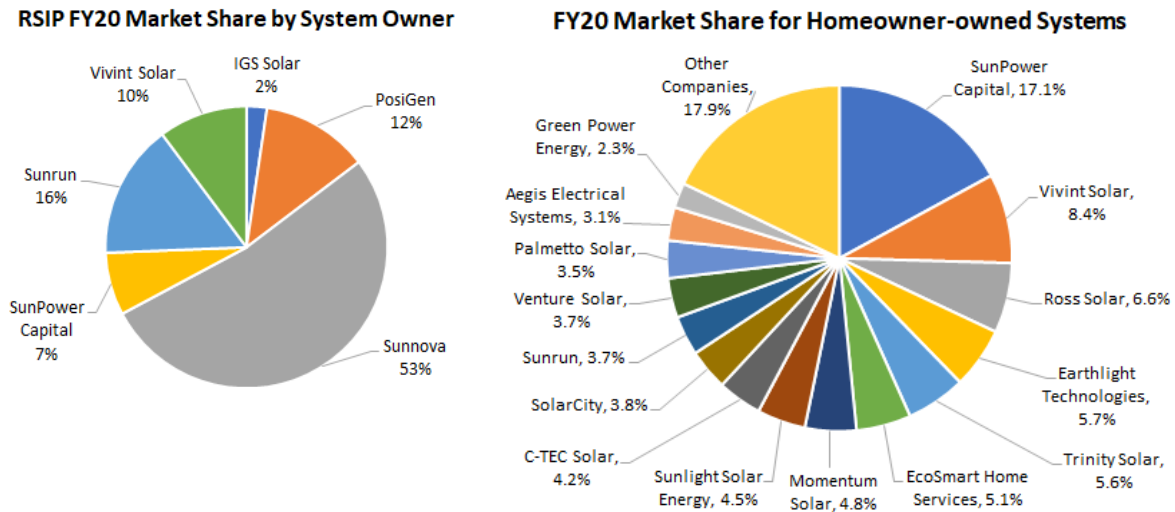
- The scheduled step-down in the Federal Investment Tax Credit (ITC) from 30% to 26% starting in 2020, which will be followed by a step down to 22% in 2021, and a final step down to 0% for homeowner-owned projects and 10% for third-party owned projects in 2022.
- Another mild winter allowing for higher industry activity.
- Continued growth in the strength and number of local and national solar PV companies in Connecticut through Q3 FY20.
- Despite significant COVID impacts, the residential solar industry began adapting its sales and installation practices to allow for continued operation during the pandemic, albeit at a reduced level compared to usual spring and summer volume.
- Growth in the residential battery storage industry in New England and nationwide, helping to create new buzz for clean energy technology deployment.

RSIP is estimated to reach 350 MW possibly as early as October of 2020, after which time only net metering (and the federal ITC) would be available to support the solar PV market through December 31, 2021, unless an RSIP extension is considered and approved by the CT General Assembly, as proposed by staff and approved by the Green Bank Board of Directors at its April 24, 2020 Board meeting¹³. Beginning in 2022, a production based (per kWh) tariff compensation is anticipated to be offered to solar PV customers, based on the requirements stipulated by Section 7 in PA 18-50, amended by PA 19-35, and as developed and determined by PURA and stakeholders through continued docket processes.

Nearly 80% of FY20 RSIP projects are third party owned (TPO), led by Sunnova with approximately 53% of RSIP market share, following by Sunrun (16 %), PosiGen (12%), Vivint (10%), SunPower (7%), and IGS Solar (2%), as shown in Figure 2. The highest volume Installers of homeowner-owned projects collectively deployed approximately 20% of RSIP volume in FY20, with the top 15 deploying 82% of homeowner-owned projects, including SunPower, Vivint, Ross Solar (a ConEd Solutions Company), Earthlight, Trinity Solar, EcoSmart, Momentum Solar, Sunlight Solar, C-TEC Solar, SolarCity, Sunrun, and others Aegis, and Green Power Energy. Trinity Solar was RSIP's highest volume participant in FY20, having installed nearly 43% of RSIP projects in FY20, of which nearly 98% using third party financing and 2.5% were homeowner owned.

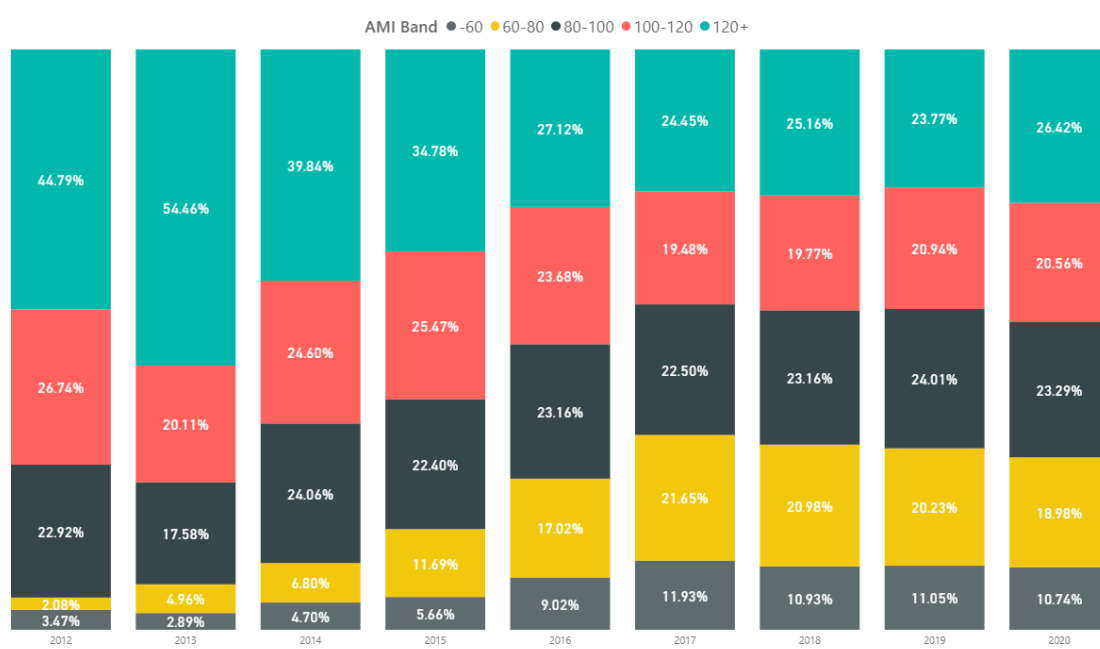
¹³ https://ctgreenbank.com/wp-content/uploads/2020/05/board-of-directors-of-the-connecticut-green-bank_042420_redacted.pdf

Figure 2. FY 2020 RSIP Market Share by Third Party System Owner and by Installer (by project volume)



The RSIP continues to be successful in reaching low-and-moderate income (LMI) households. Adoption has largely been driven by the Green Bank’s Solar for All partnership with PosiGen and complemented by efforts supported by a Department of Energy grant, “State Strategies for Solar Adoption in Low-and-Moderate Income Communities.” Of the nearly 41,570 projects approved under RSIP through FY20, the Green Bank has in recent years made progress with respect to increased distribution of RSIP projects in LMI census tracts. Figure 3 shows approved RSIP projects by FY and Metropolitan Statistical Area (MSA) Area Median Income (AMI) Band. Nearly 50% of RSIP projects in FY17-20 were deployed in low-to-moderate income (LMI) census tracts (AMI<100%), having increased from just over 20% in FY12.

Figure 3. Distribution of Approved RSIP Projects by FY and by Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands



For a breakdown of RSIP project volume and investment by census tracts categorized by Area Median Income (AMI) bands and Distressed Communities as designated by DECD, see Tables 4 and 5, respectively. It should be noted that RSIP is not an income targeted program.

Table 4 illustrates that RSIP was slightly below parity with respect to deployment among LMI census tracts. For example, while the <60% AMI Band represents 11% of 1-4 unit owner-occupied households (OOH), the <60% AMI Band represents 9% of approved RSIP projects. Similarly, 17% of RSIP projects are deployed in the 60-80% AMI Band while 19% of OOH are in the 60-80% band. The 80-100% AMI Band has about 23% of projects, and 23% of OOH. The 100-120% AMI Band and highest income band, 120%+, are both slightly overrepresented in RSIP versus OOH. Table 5 shows that RSIP deployment is under-represented in distressed communities in which 25% of all RSIP projects are installed, while distressed communities account for 33% of OOH.

Table 4. RSIP Closed Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands

MSA AMI Band	FY 2020 Project Units	% of Total	FY 2020 Investment	% of Total	Cumulative Project Units	% of Total	Cumulative Investment	% of Total
<60%	862	11%	\$20,489,009	9%	3,864	9%	\$96,182,706	8%
60%-80%	1,526	19%	\$40,068,857	17%	7,125	17%	\$191,698,606	15%
80%-100%	1,824	23%	\$53,681,079	23%	9,547	23%	\$285,157,217	22%
100%-120%	1,578	20%	\$48,358,598	21%	9,055	22%	\$285,042,847	22%
>120%	2,131	27%	\$72,907,817	31%	11,932	29%	\$409,835,298	32%
Total	7,921	100%	\$235,505,360	100%	41,523	100%	\$1,267,916,674	100%

Table 5. RSIP Closed Activity in Distressed Communities

Distressed Designation	FY 2020 Project Units	% of Total	FY 2020 Investment	% of Total	Cumulative Project Units	% of Total	Cumulative Investment	% of Total
Distressed	2,569	33%	\$66,985,281	29%	10,556	25%	\$289,651,601	23%
Not Distressed	5,333	67%	\$168,012,162	71%	30,948	75%	\$977,757,155	77%
Total	7,902	100%	\$234,997,443	100%	41,504	100%	\$1,267,408,757	100%

While the RSIP has been effective in reaching LMI households, Green Bank has also investigated whether the RSIP has been successful in reaching communities of color (i.e., Black and Hispanic households). When examining solar deployment by the racial and ethnic makeup of the census tract, the analysis demonstrated that RSIP has been very successful in reaching communities of color. As of the study conducted in FY19, on a per OOH basis, there were 86% more RSIP installations in majority Black neighborhoods, 18% more in majority Hispanic neighborhoods, and 20% more in No Majority race neighborhoods as compared to majority White neighborhoods – see Table 4 to compare % OOH vs % of RSIP for AMI Bands of <100%.

A report on this analysis titled “Sharing Solar Benefits” was published in May 2019.¹⁴

Table 6. Owner-Occupied Housing and RSIP Distribution by Race/Ethnicity and Income

Census Tract Income Level (AMI Band)	Majority Hispanic		Majority Black		Majority White		No Majority Race	
	% of OO Homes	% of RSIP	% of OO Homes	% of RSIP	% of OO Homes	% of RSIP	% of OO Homes	% of RSIP
<60%	30.3%	24.91%	12.8%	22.41%	18.8%	14.58%	38.0%	38.09%
60%-80%	10.8%	13.04%	5.7%	7.68%	62.7%	56.04%	20.7%	23.24%
80%-100%	1.2%	1.57%	2.9%	4.48%	89.7%	87.94%	6.3%	6.01%
100%-120%	--	--	--	--	95.0%	95.04%	5.0%	4.96%
>120%	--	--	--	--	96.1%	95.14%	3.9%	4.86%
Grand Total	3.6%	4.11%	2.1%	3.77%	85.3%	81.81%	9.0%	10.31%

An emerging market is residential battery storage installed with solar PV. Approximately 226 RSIP projects have included battery storage through FY20, about 29% in FY20 and almost all in the past three fiscal years. The majority of projects use Tesla PowerWall battery storage equipment, though other technology equipment is beginning to gain traction. As previously noted, the Green Bank will be submitting a proposal under the PURA Distribution System Planning docket, 17-12-03RE03, for a battery storage incentive program.

As a requirement to receive the RSIP incentive, all residential solar PV customers must have an energy audit performed on their home to encourage adoption of energy efficiency measures along with solar PV, preferably the utility-administered Home Energy Solutions (HES) audit, but with other options if needed.¹⁵ RSIP-wide, an estimated 90% of audits performed were either HES audits or DOE Home Energy Scores (HES). In FY20, 95% of audits were either HES or DOE HES. In FY20, the COVID pandemic resulted in a shutdown of HES services for several months; allowance was provided in RSIP for customers to sign a form that would allow them to have the energy audit performed within six months of HES resuming services.

An area of ongoing importance is increasing the access and inclusivity of clean energy. Building off of work conducted under several U.S. Department of Energy (DOE) funding opportunities over the past eight years, the Green Bank continues to be active in initiatives that expand solar PV access in underserved communities. Under two DOE grants, the Green Bank is working to increase the state’s low-and-moderate (LMI) solar market and scale up strategies that increase affordability for LMI households. Under the first grant to expand the state LMI market, the Green Bank is developing a model to integrate housing, health, and energy service delivery to address in-home health threats and reduce energy burdens through solar plus energy efficiency. In addition, the Green Bank is actively participating in PURA docket 19-07-01 (“Statewide Share Clean Energy Facility Program”) to develop a strong, statewide shared solar program to expand

¹⁴ ctgreenbank.com/wp-content/uploads/2019/05/Sharing-Solar-Benefits-May2019.pdf

¹⁵ Non-HES audits may be performed by Building Performance Institute (BPI) certified auditors, Home Energy Rating System (HERS) raters, other certified energy managers or were exempt due to being new construction or having a health and safety exemption.

access. Lastly, the Green Bank continues to support and expand the Solar for All program to bring solar and energy efficiency to LMI communities

Under the second grant to scale up strategies that increase affordability, the Green Bank supports a public-sector learning network in replicating the Solar for All program in additional LMI markets. The model will accelerate the adoption of solar and energy efficiency solutions for single-family LMI homes by providing financing templates, market insights, and development guidance.

Energize CT Smart-E Loan

A credit enhancement program that uses a loan loss reserve to attract private capital from local credit unions and community banks. The product provides low interest (i.e. 4.49-6.99%) unsecured loans at long terms (i.e. between 5 to 20 years) for technologies that are consistent with the goals of the Comprehensive Energy Strategy.

Table 7. Energize CT Smart-E Loan Overview for FY 2020

Program Data	Approved ¹⁶	Closed	Total
Projects	210	737	947
Installed Capacity (MW)	0.0	1.0	1.0
Lifetime Clean Energy Produced (MWh)	678	178,628	179,306
Annual Combined Energy Generated & Saved (MMBtu)	107	27,697	27,804
Subsidies (\$'s)	\$0	\$0	\$0
Credit Enhancement (\$'s)	\$0	\$0	\$0
Loans or Leases (\$'s)	\$0	\$0	\$0
Total Green Bank Investment (\$'s)	\$0	\$0	\$0
Private Capital (\$'s)	\$2,858,375	\$11,544,201	\$14,402,576
Direct Job Years	1	59	60
Indirect & Induced Job Years	1	77	78
Lifetime Tons of CO2 Emissions	343	93,434	93,777

Table 8. Energize CT Smart-E Loans by Channel

Smart-E Loan Channel	Closed	% of All Loans
EV	0	0%
Home Performance	55	7%
HVAC	572	78%
Solar	94	13%
Unknown ¹⁷	15	2%
Total	737	100%

Table 9 Energize CT Smart-E Credit Scores

Credit Ranges									
Unknown	580-599	600-639	640-679	680-699	700-719	720-739	740-779	780+	Grand Total
2	8	32	70	87	86	78	190	184	737
0%	1%	4%	9%	12%	12%	11%	26%	25%	100%

¹⁶ This represents projects that are currently approved but not closed. It does not include projects that were approved but have since closed.

¹⁷ Channel not known due to trailing documentation/timing of data pull.

For a breakdown of Smart-E loan volume and investment by census tracts categorized by Area Median Income (AMI) bands and Distressed Communities as designated by DECD, see Tables 10 and 11. It should be noted that Smart-E is not an income targeted program and only in the second half of FY18 began offering the expanded credit-challenged version of the program, opening new opportunities to partner with mission-oriented lenders focused on reaching consumers in underserved lower income markets.

Table 10. Smart-E Loan Closed Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands

MSA AMI Band	FY 2020 Project Units	% of Total	FY 2020 Investment	% of Total	Cumulative Project Units	% of Total	Cumulative Investment	% of Total
<60%	60	8%	\$789,436	7%	318	7%	\$4,436,203	5%
60%-80%	76	10%	\$911,265	8%	513	11%	\$7,606,010	9%
80%-100%	107	15%	\$1,514,380	13%	691	15%	\$11,311,149	13%
100%-120%	206	28%	\$3,362,082	29%	1,073	24%	\$21,133,724	25%
>120%	284	39%	\$4,927,569	43%	1,886	42%	\$39,646,161	47%
Total	733	100%	\$11,504,734	100%	4,481	100%	\$84,133,248	100%

Table 11. Smart-E Loan Closed Activity in Distressed Communities

Distressed Designation	FY 2020 Project Units	% of Total	FY 2020 Investment	% of Total	Cumulative Project Units	% of Total	Cumulative Investment	% of Total
Distressed	158	21%	\$2,078,508	18%	657	15%	\$10,341,714	12%
Not Distressed	577	79%	\$9,451,392	82%	3,826	85%	\$73,816,700	88%
Total	735	100%	\$11,529,900	100%	4,483	100%	\$84,158,414	100%

PosiGen Solar for All

A solar PV lease and energy efficiency financing program that focuses on the low to moderate income (LMI) market segment. Supported by \$15 million subordinated debt investment from the Green Bank, into a total fund of \$90 million to support over 3,066 homes, 620 homes in FY20 alone, with a focus on the low-to-moderate income market segment utilizing alternative underwriting approaches that examine factors such as bill payment history and bad debt and bank databases (see Table 9). In May 2019, the program updated their offering to combine the solar lease and optional energy efficiency agreement into a single agreement that provides solar installations and energy efficiency services to all customers. With the energy efficiency services no longer optional, more customers are receiving deeper efficiency work, ensuring overall savings. The Solar for All program has been successful at reaching the LMI market segment with 54% of homes verified as low incomes.

Table 12. PosiGen Solar for All Overview for FY 2020

Program Data	Approved¹⁸	Closed	Total
Projects	351	807	1,158
Installed Capacity (MW)	2.2	5.1	7.3
Lifetime Clean Energy Produced (MWh)	100,581	232,878	333,459
Annual Combined Energy Generated & Saved (MMBtu) ¹⁹	14,809	34,055	48,864
Subsidies (\$'s)	\$0	\$0	\$0
Credit Enhancement (\$'s)	\$0	\$0	\$0
Loans or Leases (\$'s)	\$3,159,000	\$7,263,000	\$10,422,000
Total Green Bank Investment (\$'s)	\$3,159,000	\$7,263,000	\$10,422,000
Private Capital (\$'s)	\$5,157,913	\$13,186,252	\$18,344,165
Direct Job Years	33	79	112
Indirect & Induced Job Years	43	105	148
Lifetime Tons of CO2 Emissions	55,594	128,705	184,299

For a breakdown of PosiGen Solar for All volume and investment by census tracts categorized by Area Median Income bands and Distressed Communities as designated by DECD, see Tables 13 and 14. As an income-targeted program, this table illustrates the degree to which the goal of serving consumers in lower income communities is being met.

Table 13. PosiGen Solar for All Closed Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands

MSA AMI Band	FY 2020 Project Units	% of Total	FY 2020 Investment	% of Total	Cumulative Project Units	% of Total	Cumulative Investment	% of Total
<60%	208	26%	\$4,681,545	23%	1,022	31%	\$26,458,587	29%
60%-80%	182	23%	\$4,454,580	22%	804	24%	\$21,776,096	24%
80%-100%	160	20%	\$4,026,590	20%	590	18%	\$16,253,520	18%
100%-120%	118	15%	\$3,204,181	16%	448	13%	\$13,191,781	14%
>120%	137	17%	\$4,036,147	20%	462	14%	\$14,085,044	15%
Total	805	100%	\$20,403,044	100%	3,326	100%	\$91,765,028	100%

Table 14. PosiGen Solar for All Closed Activity in Distressed Communities

Distressed Designation	FY 2020 Project Units	% of Total	FY 2020 Investment	% of Total	Cumulative Project Units	% of Total	Cumulative Investment	% of Total
Distressed	445	57%	\$10,710,177	54%	1,467	44%	\$38,823,395	43%
Not Distressed	338	43%	\$9,124,754	46%	1,837	56%	\$52,373,519	57%
Total	783	100%	\$19,834,930	100%	3,304	100%	\$91,196,914	100%

¹⁸ This represents projects that are currently approved but not closed. It does not include projects that were approved but have since closed.

¹⁹ Includes an additional 15.0 MMBtu for each project for the HES audit.

For a breakdown of the use of the Green Bank resources for Incentive Programs, see table 15 below.

Table 15. Distribution of Green Bank Funds Invested in Projects and Programs through Subsidies, Credit Enhancements, and Loans and Leases for FY 2020

Program	Subsidies		Credit Enhancements		Loans and Leases		Total ²⁰
RSIP	\$16,849,620	100%	\$0	0%	\$0	0%	\$16,849,620
Smart-E Loan	\$0	0%	\$0	0%	\$0	0%	\$0
PosiGen	\$0	0%	\$0	0%	\$7,263,000	100%	\$7,263,000
Total	\$16,649,641	70%	\$0	0%	\$7,263,000	30%	\$23,912,641

Of these programs, the following is a breakdown of their contributions made thus far towards the performance target and the human resources required to implement them (see Table 16):

Table 16. Program Progress Made in FY 2020²¹

Key Metrics	RSIP	Smart-E	PosiGen	Total Program Progress ²²
Date of Program Approval	Feb-2012	Nov 2012	Jun 2015	
Date of Program Launch	Mar-2012	Nov 2013	Jul 2015	
Ratepayer Capital at Risk	\$16,849,620	\$0	\$7,263,000	\$23,912,641
Private Capital	\$218,655,740	\$11,544,201	\$13,186,252	\$222,783,554
Deployed (MW)	66.3	1.0	5.1	66.9
# of Loans/Installations	7,921	737	807	8,658
Lifetime Production (MWh)	1,886,744	178,628	232,878	2,144,313
Annual Combined Energy Generated & Saved (MMBtu)	257,503	27,697	34,055	298,246

“Top 5” Headlines

The following are the “Top 5” headlines for the Incentive Programs:

Residential Solar Investment Program (RSIP)

1. [Green bonds are on the rise – but are they as green as they seem?](#)

The Fifth Estate (August 20, 2019)

For example the Connecticut Green Bank used “solar home renewable energy credits” backed by a Residential Solar Investment Program that were sold by homeowners to two energy utilities to finance solar installations.

The bank issued AU\$57 million of investment-grade rated ABS bonds to support about 14,000 of these residential solar photovoltaic systems capable of generating rated at around 105 MW.

2. [Green Bonds Can Solve Our Climate Crisis](#)

Forbes (August 28, 2019)

While not a utility, the Connecticut Green Bank completed an issuance of \$38mm for Connecticut’s Residential Solar Investment Program (RSIP) in May. RSIP provides homeowners with a rebate of \$0.46 cents per watt of solar installed in order to help offset the costs of installing residential solar power.

²⁰ Totals are adjusted to remove projects that overlap programs.

²¹ Includes only closed transactions

²² Totals are adjusted to remove projects that overlap programs.

3. [Connecticut Green Bank expands clean energy investment](#)
The Bond Buyer (April 23, 2020)
Bryan Garcia and Eric Shrago of the Connecticut Green Bank, explain how ‘Green Liberty Bonds’ will expand clean energy investment. The small-denomination munis for retail, modeled after the World War II Series E bonds, are independently certified to fight climate change. Chip Barnett hosts.
4. [New England business groups make case to suspend energy efficiency surcharges](#)
Energy Central (June 9, 2020)
At least a half dozen agencies and organizations have filed objections to the motion, including the Connecticut Green Bank, which administers the state’s Clean Energy Fund. The bank argued that, contrary to the coalition’s assertions, some clean energy projects are continuing to move forward amid the pandemic.
5. [Indiana’s just transition away from coal](#)
Nuvo (June 21, 2020)
For example, the state could prioritize coal impacted communities in scaled-up jobs training programs and use fiduciary incentives through a green bank to channel investments and clean energy development into such communities. Additionally, it could emulate the Connecticut Green Bank’s Residential Solar Investment Program by providing these “homeowners with rebates and performance-based incentives designed to lower initial out-of-pocket costs” of rooftop solar installations.

Energize CT Smart-E Loan

1. [Smart-E Lenders Eligible to Support the Paycheck Protection Program “Step Up” for Connecticut’s Clean Energy Industry](#)
Four Smart-E lenders (two community banks and two credit unions) offered support to program contractors with applying for PPP loans.
2. [Smart-E Loan Top Performers for 2019 Honored](#)
18 Smart-E contractors were honored as “Top Performers” for 2019. Local press coverage highlighting contractors including:
 - [Duncklee Inc.](#)
 - [Ryan F. Murphy Heating & Cooling LLC](#)
 - [EcoSmart Home Services](#)
3. [Connecticut Green Bank offers financing for remediation of health and safety issues that prevent energy upgrades](#)
Two new healthy measures were added to the list of Smart-E eligible measures: asbestos and mold removal.
4. [Loan Loss Reserves for EE Financing Programs](#)
Overview of loan loss reserves from the American Council for an Energy-Efficient Economy
5. [Inclusive Prosperity Capital, Inc. Raises \\$25 Million for Clean Energy Investment in Underserved Markets](#)
IPC closed a \$25M transaction with New York Green Bank, enabling IPC to deploy capital into underserved clean energy and energy efficiency markets across its entire portfolio of products.

PosiGen Solar for All

1. [US Senate introduces legislation for National Climate Bank](#)
SmartCitiesWorld (July 9, 2019)
With initiatives like the Solar for All program, the Connecticut Green Bank has increased solar adoption by more than 187 per cent in under-invested neighborhoods, showing clean energy investments can drive equity and inclusivity for those that need it most.

2. Clean Energy Beyond 'Trickle-Down Environmentalism
Next City (August 1, 2019)
Connecticut's Solar For All program targets solar and energy efficiency efforts in disadvantaged neighborhoods. A CT Green Bank report has shown the program is shrinking income and racial disparities in solar.
 3. The Case For a US Federal Green Bank
UCL Institute for Innovation and Public Purpose (August 28, 2019)
Green investment banks can drive credit growth in markets that can make financing more inclusive — supporting renewable energy and energy efficiency products for lower and middle income housing, for example, as Connecticut Green Bank has done. They are a fiscally responsible mechanism for Green New Deal-style public mobilization.
 4. Ares Infrastructure and Power Supports Growth of Provider of Low-Income Residential Solar Power
ABL Advisor (March 6, 2020)
PosiGen announced a new debt facility originated by the Ares Infrastructure and Power team and provided by Ares-managed funds and accounts. Along with the Connecticut Green Bank, the combined \$100-million facility will increase PosiGen's ability to provide solar systems and energy efficiency upgrades to low-to-moderate income homeowners in Connecticut and New Jersey, while also building upon the company's success in its home state of Louisiana. Additionally, this debt facility will provide support for PosiGen's anticipated expansion into new states, including Illinois, Mississippi, Nevada, and California.
 5. A prescription for a post-COVID economy: A national climate bank
Salon (June 28, 2020)
To address the gap, Connecticut Green Bank partnered with the solar company PosiGen to develop more accessible financing models and deploy sales teams in underserved areas, including majority black and brown neighborhoods. Today new solar installations are more evenly divided among zip codes above and below the state's median income.
-

Lessons Learned

Based on the implementation of the Incentive Programs thus far, the following are the key lessons learned:

Residential Solar Investment Program (RSIP)

- **The COVID pandemic has taught us that change can happen suddenly and unexpectedly.** The pandemic has created tremendous uncertainty in the near term for the U.S. (and global) economy, and certainly for the clean energy industry. It will be important for the industry to continue to adapt to mitigate impacts as well as accelerate innovation where possible, such as with remote sales, use of satellite and drone technology for site assessment, and remote permitting and virtual/video inspection at the municipal level. While the industry continues to adjust, the Green Bank has provided accommodation on the timing of energy audit and project completion submission requirements and is working to affect policy changes that could support the industry.
- **The policy and regulatory landscape in Connecticut has continued to be dynamic** in FY20 as in the past fiscal year and will continue to evolve over the near term as results from the DEEP/PURA value of DER study are finalized, as the PURA distribution system planning docket progresses including decisions on battery storage incentive programs, as it is seen whether an RSIP extension is considered by the legislature, as the Shared Clean Energy Facilities program develops (to support community solar

projects), as the federal ITC continues to decrease, and as the industry approaches year 2022 when the tariff is slated to replace net metering. The Green Bank can continue to focus on the levers it has to provide sustained orderly development for residential solar PV, while continuing to provide informed input into legislative and regulatory forums that provide the opportunity to communicate the benefits of clean energy to the state of Connecticut – in particular grid benefits such as peak load reduction, reliability benefits, greenhouse gas emissions reduction and local economic development benefits.

- **With RSIP estimated to reach 350 MW of approved projects as early as October 2020, the Green Bank will need to focus on strategies that could help support the sustained orderly development of the residential solar PV industry, especially given the impact from COVID.**
 - a. The Green Bank changed its position on whether an RSIP extension is needed because of the COVID crisis and has sought support from its Board of Directors and policymakers to provide a 100 MW extension to help the industry recover.
 - b. The Green Bank has put significant effort into development of a battery storage incentive program proposal to be submitted to PURA in early FY21. Deployment of battery storage technology is critical for long term grid integration of solar PV, socializing the benefits of solar PV among all ratepayers, providing the grid reliability in demand from customers, and supporting the development of businesses that are well-positioned to deploy battery storage in combination with solar PV, as well as technology innovators and providers that are contributing to a growing clean energy economy.
 - c. Continued support for deployment of clean energy among LMI customers through the Solar for All program, work on federal grants, development of SCEF projects, and other strategies to support the LMI market.
 - d. Continued support for soft cost reductions through Sustainable CT, partnership with SolarConn, and collaboration with the state building office.
- **Working closely with RSIP contractors and system owners, SolarConn, and technology providers has been valuable in FY20 and will continue to be important over the coming transition years.** With respect to solar PV and battery storage policy, regulation, development and administration of incentive programs and in supporting the solar PV industry through ongoing market transitions, it will continue to be critical to have dialogue with and input from solar companies as to how best support the industry.
- **The RSIP team will continue to collaborate with the Green Bank Operations team and consultants in FY20 to improve and standardize administrative processes.** Ongoing collaboration with operations, finance and accounting on REC monetization processes will continue to be critical.
- **Staff growth and hiring will continue to be important as programs evolve and develop.** Staff flexibility and growth, as well as hiring of new team members will be important to facilitate program transition and close-out in FY20 and beyond, as well as development of new programs.

Energize CT Smart-E Loan

- **Despite competition in the market, contractors continued using Smart-E.**
 - The solar financing market has blossomed in the last few years which has drawn local solar installers away from local products like the Smart-E Loan and to bigger national financing options. Some solar contractors still preferred the

Smart-E Loan due to the contractor funded IRB option, no additional contractor fees, and the timeliness and transparency on payments they are owed. HVAC and home performance contractors and their customers prefer that Smart-E has no down payment requirement and that the loan has flexibility in eligible measures and underwriting criteria.

- **COVID-19 had varying impacts on Smart-E**
 - Smart-E’s volume dropped over the past few months, but it was buoyed by the HVAC industry which remained operational in the colder winter and spring months, despite the pandemic stopping or significantly scaling back work like insulation, windows and even some solar. We continued to see a decreased, but steady, submission of traditional heating systems (boilers and furnaces) throughout the March – May timeframe. The re-opening of nearly all industries in June resulted in the highest month of closed loan volume for the fiscal year. Loan performance also stayed consistent with slight changes in delinquency and default rates and with only about 1% of loans requesting deferrals.

PosiGen Solar for All

- **PosiGen’s successful transition to remote sales and project development keeps solar solutions available to combat COVID energy bills.** According to a Green Bank survey, almost half of the solar companies in the state furloughed employees and 40% laid employees off due to COVID. PosiGen transitioned all field staff to virtual sales with increased technology support, regular trainings, and full utilization of an online sales platform. PosiGen avoided staff losses and even continued hiring sales staff to meet the increased interest in energy saving solutions.

Incentive Programs FY 2021 Targets

Of programs being implemented in the Financing Programs, the following is a breakdown of the key targets:

Table 17. Number of Projects, Capital Deployed, and Clean Energy Deployed (MW)

Program	# of Projects	Capital Deployed	Clean Energy Deployed (MW)
RSIP	2,824	\$85,920,000	24.0
Battery Storage	400	\$3,540,000	2.0
Smart-E Loan	270	\$3,564,000	0.3
PosiGen Solar for All	177	\$3,564,000	1.2
Total²³	3,462	\$92,596,320	26.0

For the Incentive Programs, there are 18.34 full time equivalent staff members supporting four (4) different products and programs.

²³ Totals are adjusted to remove projects that overlap programs.

Memo

To: Board of Directors of the Connecticut Green Bank

From: Lucy Charpentier, Mackey Dykes, Bryan Garcia, Eric Shrago, and Nicholas Zuba

Cc: Brian Farnen and Bert Hunter

Date: October 23, 2020

Re: Financing Programs – Program Performance towards Targets for FY 2020 – Restated

Overview

Pursuant to Public Act 12-2, the Connecticut Green Bank (“Green Bank”) launched the Commercial and Industrial Property Assessed Clean Energy (C-PACE) program in January 2013. C-PACE is a statutorily mandated program that was the primary commercial and industrial (C&I) financing product in the Green Bonds US Comprehensive Plan and the accompanying budgets. In addition to C-PACE, the Green Bank invests in and helps develop solar Power Purchase Agreement projects and, this year, sourced capital to enable the utility-run, Small Business Energy Advantage program to operate at a lower cost to ratepayers.

Public Act 11-80 (PA 11-80), *An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut’s Energy Future*, requires that the Connecticut Green Bank (Green Bank) develop and implement several programs to finance and otherwise support clean energy investment in residential projects to promote deep energy efficiency retrofits, renewable energy deployment, and fuel and equipment conversions in single-family and multifamily homes across the state.

For program descriptions and information on the Total Addressable Market and Serviceable Addressable Market (SAM), please see the FY 2020 and Beyond Comprehensive Plan.¹

Performance Targets and Progress

With respect to the Comprehensive Plan approved by the Board of Directors of the Green Bank on July 18, 2019 and revised on January 24, 2020,² the following are the performance targets for FY 2020 and progress made to targets for the Financing Programs (see Table 1) as of June 30, 2020.

¹ See the FY2020 and Beyond Comprehensive Plan [click here](#)

² For mid-year revisions to budget and targets, see “Q2 Progress to Targets” memo of January 24, 2020 [click here](#)

Table 1. Program Performance Targets and Progress Made to the Comprehensive Plan for FY 2020

Key Metrics	Program Performance Revised Targets (as of 1/24/2020)	Program Progress ³	% of Goal
Capital Deployed ⁴	\$69,378,000	\$65,775,165	95%
Investment at Risk ⁵		\$12,840,898	
Private Capital ⁶		\$52,934,267	
Deployed (MW)	17.6	14.7	84%
# of Loans/Projects	1,082	677	63%
Leverage Ratio		5.1	

In summary, for Financing Programs in FY 2020, there were 677 projects (achieving 63% of the goal) requiring \$65.7M of investment (achieving 95% of the goal) that led to the deployment of 14.7 MW of clean energy (achieving 84% of the goal), that delivered a leverage ratio of 6:1 for private to public funds invested.

Executive Summary for the Financing Programs

C-PACE and C-PACE-backed Commercial Solar PPA

- C-PACE Program introduced improvements to its project diligence process to improve the experience for C-PACE Borrowers and contractors alike. This included prequalification services, a streamlined application and project development tools to help contractors manage and develop C-PACE financeable projects better.
- Developed and distributed a survey to 3rd party capital providers to determine ways the C-PACE Program can help better serve their needs to get more projects completed in the future. Some of their suggestions have been implemented in the latest changes to the Program Guidelines.
- Introduced a new C-PACE marketing campaign (ChargeUp CT) to help increase the number of C-PACE projects that include energy efficiency improvements and support state policy goals around increasing the adoption of alternative fuel vehicles.
- For second straight fiscal year, surpassed the Green Bank capital deployed goal for C-PACE. Continuing to meet this goal and build revenue-producing assets for Green Bank is a key component of the sustainability goal. This and previous fiscal years' work helped program achieve an operating profit for the first time in the program's history.

Commercial Solar PPA

³ Includes only closed transactions

⁴ Capital Deployed is used to measure Investment actuals to targets and it includes fees related to financing costs and adjustments for Fair Market Value which are not included in the Gross System Cost. It represents: the Fair Market Value for Commercial/Residential Leases, the Amount Financed or Gross System Cost (whichever is greater) for C-PACE, the Amount Financed for Residential financing products and the Gross System Cost for all other programs.

⁵ Includes funds from the Clean Energy Fund, RGGI allowance revenue, repurposed ARRA-SEP funds, and other resources that are managed by the Connecticut Green Bank that are committed and invested in subsidies, credit enhancements, and loans and leases.

⁶ Private Investment is based on the Gross System Cost and includes adjustments related to financing costs or Fair Market Value.

- Built upon our relationship with Sunwealth, started in FY19, by selling eight more commercial solar PPA projects to them in FY20, against which \$1M of secured debt was also deployed.
- Started a new relationship with an asset owner called Skyview Ventures, resulting in the sale of seven commercial solar PPA projects to them in FY20, against which \$1.5M of secured debt was deployed.
- Launched a new commercial solar secured lending product which allows CGB to deploy both construction and long term debt financing secured by projects that are developed by third parties, such as Skyview and Sunwealth. Having established this new product, CGB closed a \$3M term lending facility with Skyview which would enable CGB to deploy capital against 27 commercial solar PPA projects in CT.
- By the end of FY20, CGB had reached very advanced stage negotiations with Inclusive Prosperity Capital to set up an on-going, sustainable platform to develop commercial solar PPA projects in CT that would see IPC has the long term asset owner and CGB as lender.
- CGB made steady progress in FY20 on the Lead by Example program to develop on-site solar for state entities:
 - Through a competitive tender process, CGB selected two contractors to install over 11 MW of projects across the CT Department of Corrections, Department of Administrative Services, and Department of Energy and Environmental Protection property portfolios. This is the culmination of over two years work with the state.
 - The next step, which is to run a competitive process for the *ownership* of the first tranche of LBE state solar projects, will be completed in FY21.
 - By establishing a precedential development process, CGB built on the first 11 MW of projects and identified a second tranche of 14 MW of projects across the CT Department of Transport and Technical Education and Career Systems portfolios. Renewable Energy Credit (REC) bids were submitted for the second tranche in July 2020.
- Leveraging the development experience of commercial solar and state solar, CGB has created the Solar Municipal Assistance Program (SolarMAP) to bring PPA projects to CT municipalities.
- In FY20, seven municipalities signed letters of intent to allow CGB to develop 5.4 MW of solar across 25 separate projects in CT. REC bids were submitted for SolarMAP projects in July 2020.

Small Business Energy Advantage (SBEA)

- Expanded the availability of capital for state and municipal customers, with projects limits increased to \$1 million and no overall cap on how much the state can borrow through the program.

Multifamily Affordable Housing

- Funded and provided technical assistance to a mixed set of projects including 6 follow-on investments in previously funded projects. Projects included a mix of technologies including energy efficiency upgrades, solar, and a fuel cell (at the Cherry Street Lofts in Bridgeport).
- The follow-on investments have been for high impact projects that are being stabilized and preserved as affordable housing by funding energy and health and safety improvements. The CT Green Bank and our funding partners play a critical role as lenders of last resort in these projects.

- FY'20 had a strong showing of CPACE funded projects including 5 solar loans to a single portfolio owner as well as a 3rd advance for energy efficiency measures to the Cargill Falls Mill affordable housing project in Putnam, where CGB has previously funded the small-hydro installation running through this property.
- Four (4) of the funded properties were condo's or coops, sectors where CGB continues to provide significant funding and TA support, because of challenges securing condo and coop funding from other lenders.
- Closed one (1) health and safety loan in the amount of \$47K, but were unable to use the EnergizeCT Health and Safety Revolving Loan Fund from DEEP. (Restrictions tied to existing debt made it too complicated to use the DEEP funds, so MacArthur PRI funds, administered by CGB partner Housing Development Fund (HDF) were used instead.)
- Funded two (2) solar PPA projects, which is a drop in count from previous years. Partnership with and support from CHFA and DOH in marketing this program has been the key to success in previous years. Because of leadership transitions, the necessary collaboration and support from CHFA and DOH was not available in FY'20.
- COVID-19 has strongly impacted Multifamily Program activity starting in the Feb/Mar timeframe. With many property owners and managers stretched thin dealing with this health crisis as well as uncertainty about rental incomes and financial stability, folks have retreated.
- Financial risks associated with COVID-19, specifically concern about non-payment of rents, also halted announcement and deployment of the expanded Loans Improving Multifamily Energy (LIME) Loan program to serve **ALL** multifamily properties in CT, including market rate properties and those with tenant paid utilities. This program is administered by partner Capital for Change (C4C) and is capitalized by CGB and other investors.

The following are brief descriptions of the progress made under the last comprehensive plan for the Financing Programs:

C-PACE and C-PACE-backed Commercial Solar PPA

Commercial Property Assessed Clean Energy (C-PACE) is an innovative financing program that is helping commercial, industrial and multi-family property owners access affordable, long-term financing for smart energy upgrades to their buildings.

Table 2. C-PACE and C-PACE-backed Commercial Solar PPA Overview for FY 2020

Program Data	Approved⁷	Closed	Total
Projects	14	45	59
Installed Capacity (MW)	2.1	6.1	8.2
Lifetime Clean Energy Produced (MWh)	57,310	246,312	303,622
Annual Combined Energy Generated & Saved (MMBtu)	12,027	23,744	35,771
Subsidies (\$'s)	\$0	\$0	\$0
Credit Enhancement (\$'s)	\$0	\$0	\$0
Loans or Leases (\$'s)	\$4,132,379	\$4,747,067	\$8,879,446
Total Green Bank Investment (\$'s)	\$4,132,379	\$4,747,067	\$8,879,446
Private Capital (\$'s)	\$8,937,162	\$22,755,713	\$31,692,875
Direct Job Years	51	104	155

⁷ This represents projects that are currently approved but not closed. It does not include projects that were approved but have since closed.

Indirect & Induced Job Years	66	141	207
Lifetime Tons of CO2 Emissions	14	132,929	132,943

C-PACE has been used to fund projects in economically diverse locations across the state as reflected by Table 3 for Metropolitan Statistical Area (MSA) Area Median Income (AMI) and Table 4 for Distressed Communities as designated by DECD. It should be noted that C-PACE is not an income targeted program.

Table 3. C-PACE and C-PACE-backed Commercial Solar PPA Closed Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands

MSA AMI Band	FY 2020 Project Units	% of Total	FY 2020 Investment	% of Total	Cumulative Project Units	% of Total	Cumulative Investment	% of Total
<60%	12	27%	\$9,030,644	33%	76	25%	\$41,928,438	23%
60%-80%	8	18%	\$6,581,407	24%	44	14%	\$23,445,569	13%
80%-100%	6	14%	\$2,318,096	9%	49	16%	\$35,787,216	20%
100%-120%	4	9%	\$2,815,444	10%	57	19%	\$31,454,117	17%
>120%	14	32%	\$6,419,737	24%	82	27%	\$47,196,496	26%
Total	44	100%	\$27,165,328	100%	308	100%	\$179,811,836	100%

Table 4. C-PACE and C-PACE-backed Commercial Solar PPA Closed Activity in Distressed Communities

Distressed Designation	FY 2020 Project Units	% of Total	FY 2020 Investment	% of Total	Cumulative Project Units	% of Total	Cumulative Investment	% of Total
Distressed	18	40%	\$6,871,727	25%	101	32%	\$69,488,757	38%
Not Distressed	27	60%	\$20,631,053	75%	214	68%	\$115,473,445	62%
Total	45	100%	\$27,502,780	100%	315	100%	\$184,962,202	100%

Commercial Solar PPA

A third-party ownership offering that combines public and private funding through the Connecticut Solar Lease Program to provide Power Purchase Agreements (PPAs) for solar PV to creditworthy commercial and industrial, as well as nonprofit, municipal, and multifamily housing, end-users of electricity. This program supports solar PV projects between 50 kW - 2 MW in size – with an average size of 200 kW. Following a strategic decision not to enter into a new tax equity funding structure after the CT Solar Lease 3 fund closed in September 2018, Green Bank will continue to serve the market with our PPA product through Inclusive Prosperity Capital.

Table 5. Commercial Solar PPA Overview for FY 2020

Program Data	Approved ⁸	Closed	Total
Projects	-	6	6
Installed Capacity (MW)	-	0.8	0.8

⁸ This represents projects that are currently approved but not closed. It does not include projects that were approved but have since closed.

Lifetime Clean Energy Produced (MWh)	-	23,820	23,820
Annual Combined Energy Generated & Saved (MMBtu)	-	1,620	1,620
Subsidies (\$'s)	\$0	\$0	\$0
Credit Enhancement (\$'s)	\$0	\$0	\$0
PPAs (\$'s)	\$0	\$329,908	\$329,908
Total Green Bank Investment (\$'s)	\$0	\$329,908	\$329,908
Private Capital (\$'s)	\$0	\$2,389,238	\$2,389,238
Direct Job Years	-	8	8
Indirect & Induced Job Years	-	11	11
Lifetime Tons of CO2 Emissions	-	13,166	13,166

The Commercial Solar PPA program has been used to fund projects in economically diverse locations across the state as reflected by Table 6 for Metropolitan Statistical Area (MSA) Area Median Income (AMI) and Table 7 for Distressed Communities as designated by DECD. It should be noted that Commercial Solar PPA is not an income targeted program.

Table 6. Commercial Solar PPA Closed Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands

MSA AMI Band	FY 2020 Project Units	% of Total	FY 2020 Investment	% of Total	Cumulative Project Units	% of Total	Cumulative Investment	% of Total
<60%	1	17%	\$281,548	10%	15	12%	\$10,066,885	10%
60%-80%	1	17%	\$743,925	27%	15	12%	\$14,990,853	15%
80%-100%	1	17%	\$329,908	12%	19	15%	\$17,337,406	17%
100%-120%	1	17%	\$411,840	15%	29	23%	\$21,415,016	21%
>120%	2	33%	\$951,925	35%	49	39%	\$38,743,286	38%
Total	6	100%	\$2,719,145	100%	127	100%	\$102,553,445	100%

Table 7. Commercial Solar PPA Closed Activity in Distressed Communities

Distressed Designation	FY 2020 Project Units	% of Total	FY 2020 Investment	% of Total	Cumulative Project Units	% of Total	Cumulative Investment	% of Total
Distressed	1	17%	\$329,908	12%	20	16%	\$22,809,319	22%
Not Distressed	5	83%	\$2,389,238	88%	107	84%	\$79,744,127	78%
Total	6	100%	\$2,719,145	100%	127	100%	\$102,553,445	100%

Small Business Energy Advantage (SBEA)

The Green Bank has partnered with Eversource to provide capital for their lending through their SBEA program. SBEA provides audits, incentives and financing for energy efficiency projects at small businesses and municipal and state buildings. The customers get up to 4 year (7 in the case of the state) loans at 0% and they are repaid on their electricity bill.

Table 8. SBEA Overview for FY 2020

Program Data	Approved	Closed	Total
Projects	0	617	617
Installed Capacity (MW)	\$0	0.0	0.0

Lifetime Clean Energy Produced (MWh)	\$0	208,258	208,258
Annual Combined Energy Generated & Saved (MMBtu)	0	0	0
Subsidies (\$'s)	\$0	\$0	\$0
Credit Enhancement (\$'s)	\$0	\$0	\$0
Loans or Leases (\$'s)	\$0	\$1,011,807	\$1,011,807
Total Green Bank Investment (\$'s)	\$0	\$1,011,807	\$1,011,807
Private Capital (\$'s) ⁹	\$0	\$9,901,072	\$9,901,072
Direct Job Years	0	58	58
Indirect & Induced Job Years	0	74	74
Lifetime Tons of CO2 Emissions	0	112,907	112,907

Multifamily

Offerings for both the affordable and market rate multifamily segments include pre-development and term loan programs that enable property owners to assess, design, fund and implement energy measures and remediate related health and safety measures. Pre-development loan programs were funded by the \$5 million program-related investment from the MacArthur Foundation through the Housing Development Fund (HDF), backed by a Green Bank repayment guaranty. Term loan programs include the Loans Improving Multifamily Energy (LIME) loan, Solar PPA program, and the ECT Health & Safety Revolving Loan program (ECT H&S RLF). LIME is offered by Capital for Change and supported by a FY'20 capital commitment of \$3,000,000 from CGB as well as previous \$3,500,000 of seed capital and \$625,000 of ARRA-SEP and Green Bank funds for a loss reserve. Solar PPA options leverage the C&I sector programs. The ECT H&S RLF is supported by a \$1.5MM grant from DEEP. During FY19 the DEEP H&S funds were transferred from Green Bank to IPC where this program is now administered. Limited Catalyst Loan Funds for flexible gap financing to support term loans using MacArthur Foundation funds, administered by Housing Development Fund are also available.

Table 9. Multifamily Term Financing Overview for FY 2020

Program Data	Approved¹⁰	Closed	Total
Projects	6	14	20
Installed Capacity (MW)	0.1	2	2.1
Lifetime Clean Energy Produced (MWh)	3,473	149,920	153,393
Annual Combined Energy Generated & Saved (MMBtu)	9,125	7,575	16,700
Subsidies (\$'s)	\$0	\$0	\$0
Credit Enhancement (\$'s)	\$0	\$0	\$0
Loans or Leases (\$'s)	\$0	\$1,829,908	\$1,829,908
Total Green Bank Investment (\$'s)	\$0	\$1,829,908	\$1,829,908
Private Capital (\$'s) ¹¹	\$26,002	\$6,262,506	\$6,288,508
Direct Job Years	21	30	51
Indirect & Induced Job Years	28	44	72
Lifetime Tons of CO2 Emissions	1,920	62,823	20

Table 10. Multifamily Pre-Development Financing Overview for FY 2020

Program Data	Approved	Closed	Total
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⁹ This number includes energy and health and safety capital deployed.

¹⁰ This represents projects that are currently approved but not closed. It does not include projects that were approved but have since closed.

¹¹ This number includes energy and health and safety capital deployed.

Projects	2	4	6
Installed Capacity (MW)	-	-	-
Lifetime Clean Energy Produced (MWh)	-	-	-
Annual Combined Energy Generated & Saved (MMBtu)	-	-	-
Subsidies (\$'s)	\$0	\$0	\$0
Credit Enhancement (\$'s)	\$0	\$0	\$0
Loans or Leases (\$'s)	\$0	\$13,615	\$13,615
Total Green Bank Investment (\$'s)	\$0	\$13,615	\$13,615
Private Capital (\$'s)	\$0	\$984,421	\$984,421
Direct Job Years	-	5	5
Indirect & Induced Job Years	-	7	7
Lifetime Tons of CO2 Emissions	-	-	-

Table 11. Multifamily Number of Units

	Approved ¹²	Closed	Total
Affordable	577	1,170	1,747
Market Rate	170	114	284
Total # of Units	747	1,284	2,031

The CT Green Bank's Multifamily Program is predominantly focused on properties that serve low-to-moderate income (LMI) residents. The program is equally focused on multifamily properties serving low-and moderate-income residents in the more affluent communities of opportunity as it is on multifamily properties in lower income census tracts. This is aligned with the State of Connecticut's goals to encourage and support housing opportunities for low- and moderate-income residents in communities of opportunity. (Connecticut is the most geographically segregated state in the nation, with most LMI and people of color concentrated in low-income urban communities.)

Strategic Investments

Table 12. Strategic Investment Financing Overview for FY 2020

Program Data	Approved ¹³	Closed	Total
Projects	0	2	2
Installed Capacity (MW)	\$0	7.7	7.7
Lifetime Clean Energy Produced (MWh)	\$0	614,952	614,952
Annual Combined Energy Generated & Saved (MMBtu)	0	29,919	29,919
Subsidies (\$'s)	\$0	\$0	\$0
Credit Enhancement (\$'s)	\$0	\$0	\$0
Loans or Leases (\$'s)	\$0	\$6,723,188	\$6,723,188
Total Green Bank Investment (\$'s)	\$0	\$6,723,188	\$6,723,188
Private Capital (\$'s) ¹⁴	\$0	\$14,015,514	\$14,015,514
Direct Job Years	0	75	75
Indirect & Induced Job Years	0	111	111

¹² This represents projects that are currently approved but not closed. It does not include projects that were approved but have since closed.

¹³ This represents projects that are currently approved but not closed. It does not include projects that were approved but have since closed.

¹⁴ This number includes energy and health and safety capital deployed.

Program Data	Approved ¹³	Closed	Total
Lifetime Tons of CO2 Emissions	0	39,381	39,381

For a breakdown of the use of the Green Bank resources for Commercial, Industrial and Institutional Programs, see table 13 below.

Table 13. Distribution of Green Bank Funds Invested in Projects and Programs through Subsidies, Credit Enhancements, and Loans and Leases for FY 2020

Program	Subsidies		Credit Enhancements		Loans and Leases		Total ¹⁵
	\$	%	\$	%	\$	%	
Commercial Lease	\$0	0%	\$0	0%	\$329,908	100%	\$329,908
C-SPACE	\$0	0%	\$0	0%	\$4,762,380	100%	\$4,762,380
SBEA	\$0	0%	\$0	0%	\$1,011,807	100%	\$1,011,807
Multi-Family Health & Safety		0%		0%		0%	\$0
Multi-Family Pre-Dev	\$0	0%	\$0	0%	\$13,615	100%	\$13,615
Multi-Family Term	\$0	0%	\$0	0%	\$1,829,908	100%	\$1,829,908
Strategic Investments	\$0	0%	\$0	0%	\$6,723,188	100%	\$6,723,188
Total	\$0	0%	\$0	0%	\$12,840,898	100%	\$12,840,898

Of these programs, the following is a breakdown of their contributions made thus far towards the performance target and the human resources required to implement them (see Table 14):

Table 14. Program Progress Made in FY 2020¹⁶

Key Metrics	C-PACE	Commercial Lease	SBEA	Multifamily Term ¹⁷	Multifamily Pre-Dev	Strategic	Total Program Progress ¹⁸
Date of Program Approval	Sep-2012	Jun-2013	-	Oct 2013 – Jan 2017	Oct 2013 – Oct 2015		
Date of Program Launch	Jan-2013	Sep-2013	-	Oct 2013 – Jan 2017	Oct 2013 – Oct 2015		
Ratepayer Capital at Risk	\$4,747,067	\$329,908	\$1,011,807	\$1,829,908	\$13,615	\$6,723,188	\$7,932,305
Private Capital	\$22,755,713	\$2,389,238	\$9,901,072	\$6,262,506	\$984,421	\$14,015,514	\$40,929,185
Deployed (MW)	6.1	0.8	-	2.0	-	7.7	7
# of Loans/Installations	45	6	617	14	4	2	675
Lifetime Production (MWh)	246,312	23,820	-	149,920	-	614,952	292,875
Annual Combined Energy Generated & Saved (MMBtu)	23,744	1,620	-	7,575	-	29,919	26,088

¹⁵ Totals are adjusted to remove projects that overlap programs.

¹⁶ Includes only closed transactions

¹⁷ Multifamily is a collection of individual programs, each with their own approval and launch dates.

¹⁸ Totals are adjusted to remove projects that overlap programs.

“Top 5” Headlines

The following are the “Top 5” headlines for the Financing Programs:

C-PACE and C-PACE-backed Commercial Solar PPA

1. [Connecticut's C-PACE Program Reached \\$163 Million in Clean Energy Financing for 2019](#)
ENVIRONMENT + ENERGY LEADER
Connecticut's Commercial Property Assessed Clean Energy (C-PACE) program surpassed 300 closed projects at the end of 2019, reaching a total of more than \$163 million in clean energy financing investment in local businesses. PACENation, the non-profit industry group that promotes Property Assessed Clean Energy (PACE) financing, says only California and Ohio beat out Connecticut with total investment deployed through the end of 2019 using C-PACE.
2. [C-PACE financing brings solar to repurposed properties](#)
SOLAR POWER WORLD
What do a former Phillips Milk of Magnesia factory, an unused warehouse and an outdated engineering plant in Southern Connecticut have in common? All three properties were given a new lease on life thanks to a savvy developer, a solar company and a unique clean energy financing tool.
3. [CT Green Bank Presents PACEsetter Awards](#)
PATCH
The Connecticut Green Bank has announced the winners of the 2019 PACEsetter Awards. The Connecticut Green Bank created the PACEsetter Awards to acknowledge contractors, building owners and other stakeholders who are advancing the green energy movement through C-PACE, and whose leadership establishes a "pace" for others in their field to follow. The award winners are a driving force behind the success of the Green Bank's Commercial Property Assessed Clean Energy (C-PACE) program. These are the fifth annual PACEsetter Awards.
4. [Want EV charging stations at your business? New program can help](#)
NEW HAVEN BIZ
For drivers of electric vehicles, having a place to recharge while out shopping, commuting or running errands is an important convenience. Commercial property owners who want to offer charging stations to their customers now have a chance to do so for free through a new program.
5. [Stencil Ease of Old Saybrook Goes Green Using C-PACE Financing](#)
ZIP06
Old Saybrook-based Stencil Ease, the largest specialty stencil manufacturing company in the U.S., will soon generate more than 90 percent of its electricity needs from a solar photovoltaic (PV) rooftop system.

Multifamily Affordable Housing

1. [Co-Op Rises From The Brink](#)
New Haven Independent
Green Bank's financing helps keep Seabury Co-op in New Haven moving forward, preserving an important affordable housing complex.
2. [Connecticut Green Bank Multifamily Housing Program Surpasses 100 Project Milestone](#)
The Connecticut Green Bank is proud to announce that its Multifamily Housing Program has provided financing and technical assistance to more than 100 funded multifamily projects since the program's inception in 2014.

3. [Connecticut Green Bank offers financing for remediation of health and safety issues that prevent energy upgrades](#)
Single and multifamily properties can benefit from low interest rate loans to remove mold, asbestos and other issues.

Lessons Learned

Based on the implementation of the Financing Programs thus far, the following are the key lessons learned:

C-PACE and C-PACE-backed Commercial Solar PPA

- **Anticipate Everything** - Existential threats to the Green Bank and C-PACE Program could come at any point to affect funding energy-saving projects. Though an existential threat like the COVID-19 pandemic was hard to anticipate, we should recognize that threats like these could become more prevalent in the future. As such, the C-PACE Program is developing and testing plans to better guard against a future downturn in the interest to do energy-saving projects during this pandemic and its associated economic recession. The plans we are developing and using today can help better position us to ward off the effects existential challenges can have on the C-PACE Program's ability to meet its fiscal year goals. It will help our program be on offense, rather than defense, to guard against countervailing trends that could affect funding energy-saving projects in the future.
- **Contractors continue to be essential in the C-PACE Program's success**– As demonstrated in past years, the clean energy contractor community continued to play a vital role in C-PACE project development. In order to continue nurturing and supporting contractors, the Financing Programs team began developing tools based on feedback from previous focus groups and many one-on-one conversations. The need to further “streamline” the technical review process for contractors was heard loud and clear, and we began developing a virtual project tracking platform called “Salesforce Communities” through CGB's existing Salesforce instance in the second half of FY20. The Contractor Community in Salesforce will allow contractors to log in and track their projects in real-time as they move through the C-PACE pipeline while also allowing them to submit required documentation, request additional technical support, and make updates to project information. By including contractors in the development process and incorporating their feedback into the platform design, we hope to continue to encourage them to use the C-PACE program as a tool to help grow their businesses and deploy more clean energy in Connecticut. The Salesforce Contractor Community will be launched in FY21 with training sessions for contractors on how to use the platform.
- **Open Market** – Connecticut's open market platform continued to attract capital providers to Connecticut, setting a new single fiscal year record in the growth of new lenders added to the program (six capital providers registered in FY20). The influx of new capital providers in the program builds a foundation to scale up and grow the C-PACE Program in FY21 and beyond. Although the addition of new capital providers remains a positive development for the program, it shouldn't be assumed that it will translate into an influx of new projects right away. New capital providers signaled they were joining the program to be prepared for future project opportunities, but not immediate plans to develop new projects. In an effort to also improve the program's financial sustainability, a new capital provider fee structure was created in FY19 and implemented in FY20 to better recover Green Bank-incurred costs on third party capital provider-funded projects.

Commercial Solar PPA

- Concerted efforts in asset management have been shown to be effective in FY20, with like-for-like year on year improvements of 7% production across the portfolio of CGB-owned assets. However, this remains an area where consistent staff focus and resources are required: with such a diverse portfolio of 19.5 MW assets under management, ranging in size from 10kW to over 1,000kW, swift action is needed to address equipment issues.
- We have now entered the annual step-down period for the investment tax credit, which has a material effect on the economics of commercial solar PPA projects. A key lesson learned by CGB during the attempt to safe harbor the 2019 30% tax credit was the need for a taxable entity to sign PPA and Engineering, Procurement and Construction contracts in the year in which CGB intends to safe harbor the tax credit.
- The development role CGB has taken with state projects has been successful when applied to municipalities. Through the SolarMAP program, CGB is able to unlock small to medium size projects in municipalities that faced too many barriers in getting them to market themselves.

Small Business Energy Advantage (SBEA)

- Low to no interest paired with the on-bill repayment mechanism is extremely attractive to customers. Contractors who are accustomed to using this product in the small business market aren't as successful selling less attractive/subsidized financing in other markets. CGB is now working with Eversource to expand this approach to larger business through the Business Energy Advantage (BEA) program.

Multifamily Affordable Housing

- **Steady (and significant) progress continues to be made against heavy trade winds...** Despite the challenges of this sector, since inception in 2014, the Green Bank's multifamily loan programs have touched about 4.2% of all multifamily units in CT that serve low- and moderate-income residents (approx. 7,800 units of 183,800 LMI multifamily units).
- **FY'20 Has Been Another Year of Transition & Evolution.** FY'19 was a year of transition and evolution for the multifamily team. In response to the deep budget cuts at Green Bank in response to the legislative sweeps, we sought to find more effective ways to juggle the dynamic tension between delivering "inclusive prosperity" to the low-income multifamily sector that requires: subsidized debt/ low returns, costly technical assistance, and high risk while ensuring that our programs evolve to become financially sustainable in the next 3 to 4 years. (This is because the low- and deeply low-income residents we seek to serve cannot afford high rent payments.) During FY'19 we critically evaluated how we run the business, our customers' experience (through in-depth surveys) as well as what is working well and what is not. In FY'20 we responded by recapitalizing the C4C LIME Loan program with \$6.5 Million revolving facility. Previously, there was no financial return to CGB for building and supporting this program with C4C. Further, high risk pre-development loans are no longer forgivable, and we are more conservative in our underwriting. We are focusing marketing efforts on solar PPA programs, which are a revenue generator for CGB. However, program administration and implementation costs remain high because of the deep need for technical assistance in this sector as well as long lead times from project inquiry to funding (often several years), and the sheer complexity of this sector.
- **COVID-19 Has Slowed the Multifamily Program.** This health crisis impacted Multifamily Program activity starting in the Feb/Mar timeframe. With many property owners and managers stretched thin dealing with this crisis as well as uncertainty about

rental incomes and financial stability, folks have retreated. We are seeing some activity; however, our ability to close loans and deploy funds remains uncertain in FY'20. That said, we continue to strategically market our programs and support viable projects in getting to closing.

- **Products Continue to Evolve Based on Customer and Other Market Feedback.** At the request of the utility companies and others, we expanded the LIME Loan program to serve all multifamily properties in CT including market rate properties as well as properties with tenant paid utilities. Adjustments have been made to the underwriting process that specifically address the split incentive issues presented by properties with tenant paid utilities. Unfortunately, this launch was put on hold because of financial risks associated with COVID-19; it will be resumed once Capital for Change feels comfortable with the stability of the multifamily market.

Financing Programs FY 2021 Targets

Of programs being implemented in the Financing Programs, the following is a breakdown of the key targets:

Table 15. Number of Projects, Capital Deployed, and Clean Energy Deployed (MW)

Program	# of Projects	Capital Deployed	Clean Energy Deployed (MW)
C-PACE	33	\$15,200,000	5.3
CT Solar Lease	31	\$4,150,000	6.3
SBEA	1,203	\$20,440,000	-
Multifamily Term Loans	2	\$225,000	0.1
Multifamily Predevelopment Loans	-	-	-
Multifamily Health & Safety	-	-	-
Strategic	3	\$7,750,000	-
Total¹⁹	1,267	\$46,115,000	10.9

For the Financing Programs, there are 16.6 full time equivalent staff members supporting five (5) different programs.

¹⁹ Totals are adjusted to remove projects that overlap programs.



Memo

To: Connecticut Green Bank Board of Directors
From: Eric Shrago, Managing Director of Operations
CC: Bryan Garcia, President and CEO
Date: October 23, 2020
Re: Fiscal Year 2020 Progress to Targets through Q4 - Restated

The following memo outlines Connecticut Green Bank (CGB) progress to targets for Fiscal Year (FY) 2020 as of June 30, 2020¹.

Table 1. Incentive Programs FY 2020 Progress to Targets

Product/Program	Projects			Capital Deployed			Capacity (MW)		
	Closed	Target	% to Target	Closed	Target	% to Target	Closed	Target	% to Target
RSIP	7,921	7,059	112%	\$235,505,360	\$214,200,000	110%	66.3	60.0	110%
Smart-E	737	540	136%	\$10,007,846	\$7,182,000	139%	1.0	0.5	192%
Solar for All	807	615	131%	\$20,449,252	\$17,202,165	119%	5.1	4.2	121%
Total	8,658	7,545	115%	\$243,405,041	\$220,032,000	111%	66.9	60.0	109%

Table 2. Smart-E Channels

Smart-E Loan Channels	Closed	% of Loans
EV	0	0%
Home Performance	55	7%
HVAC	572	78%
Solar	94	13%
(blank)	15	2%
Total	737	100%

Table 3. Financing Programs FY 2020 Progress to Targets

Product/Program	Projects			Capital Deployed			Capacity (MW)		
	Closed	Target	% to Target	Closed	Target	% to Target	Closed	Target	% to Target

¹ Power BI data source: <https://app.powerbi.com/groups/289235dd-d77d-4043-8dae-d232a51a116a/reports/b24ec66b-a2c1-49f0-9a62-3f7443077b3f/ReportSection13c15e79a907a30b650e>

Commercial Solar PPA	3	18	17%	\$1,355,380	\$23,460,000	6%	0.4	10.6	4%
CPACE	42	41	102%	\$26,154,328	\$20,500,000	128%	5.7	5.0	114%
CPACE backed Commercial Solar PPA	3	15	20%	\$1,363,765	\$4,500,000	30%	0.4	2.0	21%
SBEA	617	1,000	62%	\$10,912,879	\$20,000,000	55%	-	-	-
Multi-Family H&S	-	2	-	-	\$110,000	-	-	0	-
Multi-Family Pre-Dev.	4	2	200%	\$998,036	\$140,000	713%	-	0	-
Multi-Family Term	14	8	175%	\$8,307,662	\$1,328,000	626%	2	0.2	1000%
Strategic Investments	2	2	100%	\$20,738,702	\$7,500,000	277%	7.7	-	-
Total	677	1,082	63%	\$65,775,165	\$69,378,000	95%	14.7	17.6	84%

Table 4. Multi-Family Units

MFH # of Units	Closed
Affordable	1,170
Market Rate	114
Total	1,284

Table 5. CGB Totals FY 2020 Progress to Targets

Segment	Projects			Capital Deployed			Capacity (MW)		
	Closed	Target	% to Target	Closed	Target	% to Target	Closed	Target	% to Target
Incentive Programs	8,658	7,599	114%	\$243,405,041	\$221,382,000	110%	66.9	60.5	111%
Financing Programs	677	1,086	62%	\$65,775,165	\$70,038,000	94%	14.7	17.8	83%
Total	9,335	8,629	108%	\$309,180,206	\$296,910,000	104%	81.6	77.6	105%



BOARD OF DIRECTORS

REGULAR MEETING SCHEDULE FOR 2021

The following is a list of dates and times for regular meetings of the Connecticut Green Bank Board of Directors through 2021.

- Friday, January 22, 2021 – Regular Meeting from 9:00 to 11:00 a.m.
- Friday, March 26, 2021 – Regular Meeting from 9:00 to 11:00 a.m.
- Friday, April 23, 2021 – Regular Meeting from 9:00 to 11:00 a.m.
- Friday, June 25, 2021 – Regular Meeting from 9:00 to 11:00 a.m.
- Friday, July 23, 2021 – Regular Meeting from 9:00 to 11:00 a.m.
- Friday, October 22, 2021 – Regular Meeting from 9:00 to 11:00 a.m.
- Friday, December 17, 2021 – Regular Meeting from 9:00 to 11:00 a.m.

Should a special meeting need to be convened for the Connecticut Green Bank board of Directors to review staff proposals or to address other issues that arise, a meeting will be scheduled accordingly.

All regular and special meetings will take place at the:

Connecticut Green Bank
845 Brook Street, Building #2
Albert Pope Board Room
Rocky Hill, CT 06067



AUDIT, COMPLIANCE AND GOVERNANCE COMMITTEE

REGULAR MEETING SCHEDULE FOR 2021

The following is a list of dates and times for **regular meetings** of the Connecticut Green Bank Audit, Compliance and Governance Committee through 2021.

- Tuesday, May 18, 2021 – Regular Meeting from 8:30am - 9:30am
- Tuesday, October 12, 2021 – Regular Meeting from 8:30am - 9:30am

Should a **special meeting** need to be convened for the Connecticut Green Bank board of Directors to review staff proposals or to address other issues that arise, a meeting will be scheduled accordingly.

All regular meetings will take place at:

Connecticut Green Bank
845 Brook Street, Building #2
Albert Pope Board Room
Rocky Hill, CT 06067



BUDGET, OPERATIONS AND COMPENSATION COMMITTEE

REGULAR MEETING SCHEDULE FOR 2021

The following is a list of dates and times for **regular meetings** of the Connecticut Green Bank Budget, Operations and Compensation Committee through 2021.

- Wednesday, January 13, 2021 – Regular Meeting from 2:00 to 3:30 p.m.
- Wednesday, May 12, 2021 – Regular Meeting from 2:00 to 3:30 p.m.
- Wednesday, June 9, 2021 – Regular Meeting from 2:00 to 3:30 p.m.
- Wednesday, June 16, 2021 – Regular Meeting from 2:00 to 3:30 p.m.

Should a **special meeting** need to be convened for the Connecticut Green Bank board of Directors to review staff proposals or to address other issues that arise, a meeting will be scheduled accordingly.

All regular meetings will take place at:

Connecticut Green Bank
845 Brook Street, Building #2
Albert Pope Board Room
Rocky Hill, CT 06067



DEPLOYMENT COMMITTEE

REGULAR MEETING SCHEDULE FOR 2021

The following is a list of dates and times for regular meetings of the Connecticut Green Bank Deployment Committee through 2021.

- Wednesday, February 24, 2021 – Regular Meeting from 2:00pm – 3:00pm
- Wednesday, May 26, 2021 – Regular Meeting from 2:00pm – 3:00pm
- Wednesday, September 22, 2021 – Regular Meeting from 2:00pm – 3:00pm
- Wednesday, November 17, 2021 – Regular Meeting from 2:00pm – 3:00pm

Should a special meeting need to be convened for the Connecticut Green Bank board of Directors to review staff proposals or to address other issues that arise, a meeting will be scheduled accordingly.

All regular meetings will take place at:

Connecticut Green Bank
845 Brook Street, Building #2
Albert Pope Board Room
Rocky Hill, CT 06067

CONNECTICUT GREEN BANK

SENIOR ADVISOR TO THE PRESIDENT AND CEO

Position Grade: 18

Direct Reports: As Assigned

Salary Range: \$104,617-\$167,388

Reports to: President and CEO

Wage Hour Class: Exempt

Hours Worked: 40

Effective Date: October 23, 2020

SUMMARY:

The Connecticut Green Bank (hereafter "CGB"), Senior Advisor to the President and CEO generally provides transitional assistance for the Incentive Programs, and specifically support for the Director of Incentive Programs. The Incentive Programs current programs include the Residential Solar Investment Program (RSIP) and the Smart-E Loan program. The Senior Advisor will be tasked with supporting the President and CEO and the transition to the new Director of Incentive Programs.

The Green Bank, a quasi-public authority, is the nation's first state "Green Bank," leveraging public and private funds to drive investment and scale up clean energy deployment in Connecticut. Working at the Green Bank means being part of a dynamic team of talented people who are passionate about implementing the new green bank model, stimulating the growth of clean energy in Connecticut, strengthening our economy, and protecting our environment.

EXAMPLES OF DUTIES:

- Supports the design of Connecticut Green Bank's Incentive Programs, including the Residential Solar PV Investment Program, the Energize Smart-E Loan Program, and others.
- Supports the Clean Energy Finance Team to attract private capital to support incentive programs (i.e., SHREC securitization);
- Supports the development and implementation of strategies to reduce the cost of residential solar PV systems and ratepayer incentives for the systems;
- Supports the Director of Incentive Programs to ensure that all operational (i.e. staff and policies) and organizational (i.e. contracting and reporting) requirements are being implemented and carried out;
- Supports the management and selection of consultants, where necessary, to support the program in areas where Connecticut Green Bank does not have specific in-house expertise;
- Contributes to training of new and existing staff on Incentive Program processes;
- Works in collaboration with the Green Bank Leadership to integrate comprehensive strategies to advance clean energy, including the smooth and orderly transition from incentives upon program completion;
- Works in coordination with the Director of Incentive Programs to ensure that renewable energy and energy efficiency are integrated across all sectors;

- Supports the President and CEO and Director of Incentive Programs to develop the Connecticut Green Bank's comprehensive plan with a particular emphasis on strategy related to incentive programs and projects; and
- Supports the President and CEO and Director of Incentive Programs with the development of clean energy programs and initiatives.

MINIMUM QUALIFICATIONS REQUIRED

KNOWLEDGE, SKILL AND ABILITY:

- Strong knowledge and experience in clean energy incentives and/or policy;
- Familiarity with the finance and energy industries;
- Considerable experience in program/project management;
- Ability to work in a team environment as a lead contributor, manager, and facilitator;
- Strong knowledge of business operations and general management including supervisory experience;
- Considerable ability to develop programs, manage stakeholder processes toward results, and interpret energy policy;
- Understanding of the interaction in clean energy markets between incentives, finance and demand;
- Demonstrated ability to understand various scientific and energy-related technological principles and applications, and integrate those concepts into the overall project, program, or CT Green Bank;
- Ability to work with external stakeholders including strong facilitation, negotiation, and coordination skills;
- Considerable interpersonal skills, as well as oral and written communications skills;
- Ability to market the benefits of clean energy incentives and financing products to potential customers;
- Knowledge of State and Federal energy policies and regulations that support clean energy finance; and

EXPERIENCE AND TRAINING:

General Experience:

A Bachelor's Degree (but a Master's degree is preferred) in environmental science, engineering, economics, political science, business administration, or related field. Seven (7) to ten (10) years of experience in energy policy and clean energy finance. Experience supervising staff and working across departments is preferred. Experience working with and facilitating collaborative outcomes with various stakeholder groups in energy policy design and project development.

Special Experience:

Two (2) years of the general experience must have been in supervising staff and with full responsibility for a program implementation.

Substitutions Allowed:

1. A Master's Degree in environmental science, engineering, economics, business administration or other related field may be substituted for one additional year of the general experience
2. A professional certification in a relevant field may substitute for one additional year of experience

Physical Requirements:

1. Frequent communications, verbal and written
2. Frequent use of math/calculations
3. Visually or otherwise identify, observe and assess
4. Repetitive use of hands and fingers -typing and/or writing

Physical Demands: The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions. While performing the duties of this job, the employee is frequently required to sit; use hands to finger, handle, or feel; reach with hands and arms and talk or hear. The employee is occasionally required to stand and walk. The employee must occasionally lift and/or move up to 20 pounds. Specific vision abilities required by this job include close vision.

Work Environment: The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions. The noise level in the work environment is usually moderate.



Memo

To: Board of Directors of the Connecticut Green Bank – Deployment Committee of the Connecticut Green Bank

From: Bryan Garcia (President and CEO)

Date: October 23, 2020

Re: Approval of Funding Requests below \$500,000 and No More in Aggregate than \$1,000,000 – Update

At the October 20, 2017 Board of Directors (BOD) meeting of the Connecticut Green Bank (“Green Bank”) it was resolved that the BOD approves the authorization of Green Bank staff to evaluate and approve funding requests less than \$500,000 which are pursuant to an established formal approval process requiring the signature of a Green Bank officer, consistent with the Comprehensive Plan, approved within Green Bank’s fiscal budget and in an aggregate amount not to exceed \$1,000,000 from the date of the last Deployment Committee meeting. This memo provides an update on funding requests below \$500,000 that were evaluated and approved at the staff level. During this period, 3 projects were evaluated and approved for funding in an aggregate amount of approximately \$556,909. If members of the board or committee would be interested in the internal documentation of the review and approval process Green Bank staff and officers go through, then please request it.

75 Crystal Ave.: A C-PACE Project in New London, CT

Address	75 Crystal Ave., New London, CT 06320	
Owner	Thames River Properties, LLC owned by John Johnson	
Proposed Assessment	\$161,526	
Term (years)	20	
Term Remaining (months)	Pending construction completion	
Annual Interest Rate	6.25%	
Annual C-PACE Assessment	\$14,380	
Savings-to-Investment Ratio	1.76	
Average DSCR	██████████	
Lien-to-Value	██████████	
Loan-to-Value	██████████	
Projected Energy Savings (mmBTU)	First year	273
	Over 25 Year EUL	6,432
Estimated Cost Savings (incl. ZRECs and tax benefits)	First year	\$63,698
	Over 25 Year EUL	\$507,173
Objective Function	39.8 kBTU / ratepayer dollar at risk	
Location	New London	
Type of Building	Commercial	
Year of Build	1965	
Building Size (sf)	35,500	
Year Acquired by Owner	1999	
As-Is Appraised Value¹	████████████████████	
Mortgage Outstanding	██████████	
Mortgage Lender Consent	██	
Proposed Project Description	69.9 kW rooftop solar PV	
Est. Date of Construction Completion	Pending closing	
Current Status	Awaiting Staff Approval	
Energy Contractor	██	

██

371 Box Mountain Rd: A C-PACE Project in Bolton, CT

Address	371 Box Mountain Rd, Bolton CT 06043			
Owner	Marcus Communications, LLC			
Proposed Assessment	\$181,692			
Term (years)	15			
Term Remaining (months)	Pending construction completion			
Annual Interest Rate ³	5.75%			
Annual C-PACE Assessment	\$18,336			
Savings-to-Investment Ratio	2.71			
Average DSCR	■■■■			
Lien-to-Value	■■■■			
Loan-to-Value	■■■■			
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year		383	383
	Over EUL		9,597	9,597
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year		\$29,650	\$29,650
	Over EUL		\$741,260	\$741,260
Objective Function	52.8 kBTU / ratepayer dollar at risk			
Location	Bolton			
Type of Building	Communications			
Year of Build	2001			
Building Size (sf)	450 feet (tower)			
Year Acquired by Owner	2001			
As-Complete Appraised Value ⁴	■■■■			
Mortgage Lender Consent	■■■■			
Proposed Project Description	90.85-kW solar PV system			
Est. Date of Construction Completion	Pending closing			
Notes				

■■■■
■■■■

Resolution

WHEREAS, on January 18, 2013, the Connecticut Green Bank (the “Green Bank”) Board of Directors (the “Board”) authorized the Green Bank staff to evaluate and approve funding requests less than \$300,000 which are pursuant to an established formal approval process requiring the signature of a Green Bank officer, consistent with the Green Bank Comprehensive Plan, approved within Green Bank’s fiscal budget and in an aggregate amount not to exceed \$500,000 from the date of the last Deployment Committee meeting, on July 18, 2014 the Board increased the aggregate not to exceed limit to \$1,000,000 (“Staff Approval Policy for Projects Under \$300,000”), on October 20, 2017 the Board increased the finding requests to less than \$500,000 (“Staff Approval Policy for Projects Under \$500,000”); and

WHEREAS, Green Bank staff seeks Board review and approval of the funding requests listed in the Memo to the Board dated October 23, 2020 which were approved by Green Bank staff since the last Deployment Committee meeting and which are consistent with the Staff Approval Policy for Projects Under \$500,000;

NOW, therefore be it:

RESOLVED, that the Board approves the funding requests listed in the Memo to the Board dated October 23, 2020 which were approved by Green Bank staff since the last Deployment Committee meeting. The Board authorizes Green Bank staff to approve funding requests in accordance with the Staff Approval Policy for Projects Under \$500,000 in an aggregate amount to exceed \$1,000,000 from the date of this Board meeting until the next Deployment Committee meeting.

Connecticut Green Bank
 CPACE and Program Loans - Loan Loss Reserve
 As of 6/30/2020

Loan Program	Asset GL Acct	LLR GL Acct	Dept	Program	ASSET BALANCE			LOAN LOSS RESERVE BALANCES					Investment Carrying Value	Comments	
					Unadjusted Asset Balance	June Close Entries DR / (CR)	Adjusted Asset Balance	Reserve @ 6/30/2019	FY20 YTD Entries Booked DR / (CR)	Unadjusted Reserve @ 6/30/2020	Proposed New Reserve	8942XX June Close Entry DR / (CR)			Reserve as a % of Asset Balance
CPACE Program (see CPACE tab)	127200 127225	127250	CI&I	51800-C&I CPACE	\$ 47,101,094.28		\$ 47,101,094.28	\$ (4,347,117.10)	\$ (584,375.00)	\$ (4,931,492.10)	\$ (7,342,921.89)	\$ (2,411,429.79)	15.6%	\$ 39,758,172.39	See CPACE Loan Tab - Reserve estimated 10% consistent with prior year and budget. Additional reserve for COVID based on potential losses due to deferrals and possible restructures.
Fuel Cell Project Financing	127100	127150	Other Pgms	51600-Loans Commercial	\$ 5,242,961.77		\$ 5,242,961.77	\$ (1,183,750.06)	\$ -	\$ (1,183,750.06)	\$ (524,296.18)	\$ 659,453.88	10.0%	\$ 4,718,665.59	Loan with Fuel Cell Energy, Inc. Loan has begun amortizing. Payments are timely and loan is amortizing. Move reserve percentage to 10%.
	127100	127150	Other Pgms	51600-Loans Commercial	\$ 1,800,000.00		\$ 1,800,000.00	\$ (180,000.00)	\$ -	\$ (180,000.00)	\$ (180,000.00)	\$ -	10.0%	\$ 1,620,000.00	Dominion Bridgeport Fuel Cell Bridge Loan 5/19/19 - Interest only. Payments are timely. Reserve estimated at 10%.
	127100	127150	Other Pgms	51600-Loans Commercial	\$ 3,000,000.00		\$ 3,000,000.00	\$ -	\$ -	\$ -	\$ (300,000.00)	\$ (300,000.00)	10.0%	\$ 2,700,000.00	Dominion Bridgeport Fuel Cell - Interest only - \$5m credit facility closed 12/20/19 with \$3m draw at closing. Payments have been timely. Reserve estimated at 10%.
CHP Pilot Program Financing	127100	127150	SI	51300-MicroGrid / CHP Prgs	\$ 447,391.02		\$ 447,391.02	\$ (46,845.47)	\$ -	\$ (46,845.47)	\$ (22,369.55)	\$ 24,475.92	5.0%	\$ 425,021.47	Bridgeport MicroGrid - Making regular payments timely. Move reserve to 5%.
Anaerobic Digester Financing	127100	127150	SI	51200-Anaerobic Digester Pilot	\$ 1,520,245.76		\$ 1,520,245.76	\$ (166,450.26)	\$ -	\$ (166,450.26)	\$ (76,012.29)	\$ 90,437.97	5.0%	\$ 1,444,233.47	Loan to Quantum BioPower. Funding of 1/9/15 Loan Agreement occurred on 9/29/16. Have been receiving timely monthly principle and interest payments since Oct-2016. Reserve of 5% is recommended.
	127100	127150	SI	51200-Anaerobic Digester Pilot	\$ 61,609.52		\$ 61,609.52	\$ -	\$ -	\$ -	\$ (3,080.48)	\$ (3,080.48)	5.0%	\$ 58,529.04	Fort Hill Ag-Grid LLC - Farm AD project (with Live Oak Lending). Loan is disbursing. 5% reserve.
Other Loans - Misc.	127100	127150	Other Pgms	50800-Grid-Tied R.E. Projects	\$ 265,697.53		\$ 265,697.53	\$ (265,696.53)	\$ -	\$ (265,696.53)	\$ (265,696.53)	\$ -	100.0%	\$ 1.00	Loan to NuPower Thermal to develop the Bridgeport District Energy System in the amount of \$155,205. Due to the uncertainty of when and if the project will attain commercial success, a reserve of 100% is considered appropriate for principal advanced and accrued interest.
	127100	127150	CI&I	51810-C&I New Product Develop.	\$ 89,000.00		\$ 89,000.00	\$ (8,900.00)	\$ -	\$ (8,900.00)	\$ (8,900.00)	\$ -	10.0%	\$ 80,100.00	Terrace Heights Condo Association EE improvements loan, a 10% reserve which is consistent with prior year.
	127100	127150	CI&I	51800-C&I CPACE	\$ 2,000,000.00		\$ 2,000,000.00	\$ -	\$ -	\$ -	\$ (200,000.00)	\$ (200,000.00)	10.0%	\$ 1,800,000.00	CPACE Lending Facility with Greenworks - Interest only now, first semi-annual payment due 12/31/20.
	127100	127150	CI&I	51810-C&I New Product Develop.	\$ -		\$ -	\$ -	\$ (318,750.00)	\$ (318,750.00)	\$ -	\$ 318,750.00	0.0%	\$ -	ESAs with State of CT - Projects not yet in development, reverse reserve.
	127100	127150	Finance	52200-Clean Energy Fin Pr	\$ -		\$ -	\$ -	\$ (949,218.75)	\$ (949,218.75)	\$ -	\$ 949,218.75	0.0%	\$ -	Subordinated Debt into IPC Loan Fund - Fund not created until FY21, reverse reserve.
Multifamily / Affordable Housing / Credit Challenged / LMI	127100 (C4C)	127150	Multi	52230-CHIF Multifamily PEL	\$ 4,402,120.42		\$ 4,402,120.42	\$ (348,952.56)	\$ (255,000.00)	\$ (603,952.56)	\$ (440,212.04)	\$ 163,740.52	10.0%	\$ 3,961,908.38	Capital for Change - Standalone loans and \$6.5m facility with Amalgamated. Reserve is estimated at 10%. Payments have been timely on all loans.
	127100 (CEEFCo)	127150	Multi	52250-Multifamily Programs	\$ 2,556,000.00		\$ 2,556,000.00	\$ -	\$ -	\$ -	\$ (255,600.00)	\$ (255,600.00)	10.0%	\$ 2,300,400.00	CEEFCo - Loan facility with Amalgamated, CGB share \$5m. \$3.006m draw at closing. Currently interest only. Payment are timely. Principal prepayments have occurred with business slowdown due to COVID.
	127100 (Pre-Dev)	127150	Multi	52250-Multifamily Programs	\$ 316,067.44		\$ 316,067.44	\$ (45,177.84)	\$ -	\$ (45,177.84)	\$ (63,213.49)	\$ (18,035.65)	20.0%	\$ 252,853.95	Pre-development loans - reserve is estimated at 20%. Smaller loan amounts have slightly higher risk.
	127155 (Posigen)	127160	Resi	52220-LMI Programs	\$ 18,877,398.36		\$ 18,877,398.36	\$ (1,294,448.08)	\$ -	\$ (1,294,448.08)	\$ (2,265,287.80)	\$ (970,839.72)	12.0%	\$ 16,612,110.56	Posigen loan facility - reserve is estimated at 12%.
Energy Efficiency Financing	127100	127150	Other Pgms	51910-Campus Efficiency NOW	\$ -		\$ -	\$ (5,077.45)	\$ -	\$ (5,077.45)	\$ -	\$ 5,077.45	0.0%	\$ -	Loans fully repaid. Reverse LLR.
	127100	127150	CI&I	51810-C&I New Product Develop.	\$ 130,000.00		\$ 130,000.00	\$ (13,000.00)	\$ -	\$ (13,000.00)	\$ (13,000.00)	\$ -	10.0%	\$ 117,000.00	Bridgeport International Academy - Funding of Energy Savings agreement. Prudent to move to 10% reserve. Consistent with prior year.
Alpha Program	127100	127150	Other Pgms	50100-Alpha Program	\$ 150,000.00		\$ 150,000.00	\$ (75,000.00)	\$ -	\$ (75,000.00)	\$ (75,000.00)	\$ -	50.0%	\$ 75,000.00	Loan is with Anchor Science to test new technologies. Company dependent on obtaining further funding to repay loan. Prudent to maintain 50% reserve (consistent with prior year) based upon Board approved budget.
Op Demo Program - 2013 forward	127100	127150	Other Pgms	50200-Op Demo Program	\$ 500,000.00		\$ 500,000.00	\$ (499,999.00)	\$ -	\$ (499,999.00)	\$ (499,999.00)	\$ -	100.0%	\$ 1.00	Repayments on loan balance to begin upon the attainment of commercial success, defined as annual revenues of \$10,000,000 within 10 years of March 1, 2013. Due to the uncertainty of if and when this will occur, it is prudent to maintain a reserve of 100% of the loan balance.
Wind Financing	127100	127150	Other Pgms	50800-Grid-Tied R.E. Projects	\$ 1,673,690.61		\$ 1,673,690.61	\$ (234,534.05)	\$ -	\$ (234,534.05)	\$ (167,369.06)	\$ 67,164.99	10.0%	\$ 1,506,321.55	Wind Colebrook South loans closed Dec-2014. Commenced operations in Fall 2015. Prudent to maintain a 10% reserve. Payments up to date at year end and Working Capital LOC is paid in full.
Hydro Projects	127100	127150	Finance	52305-Hydro Projects	\$ 1,170,157.00		\$ 1,170,157.00	\$ (55,482.70)	\$ -	\$ (55,482.70)	\$ (58,507.85)	\$ (3,025.15)	5.0%	\$ 1,111,649.15	Canton Hydro - new project still disbursing. No payment yet. Reserve @ 5%
Sunwealth Note	127600	127620	Finance	52200-Clean Energy Fin Pr	\$ 943,382.89		\$ 943,382.89	\$ (98,796.00)	\$ -	\$ (98,796.00)	\$ (47,169.14)	\$ 51,626.86	5.0%	\$ 896,213.75	Loan taken back for Solar Projects developed by CEFIA Holdings. Low risk, PPA payments fund the loan payments.
Total:					\$ 92,246,816.60	\$ -	\$ 92,246,816.60	\$ (8,869,227.10)	\$ (2,107,343.75)	\$ (10,976,570.85)	\$ (12,808,635.30)	\$ (1,832,064.45)	13.9%	\$ 79,438,181.30	
GL Acct:	127200/25	127250	CPACE:		\$ 47,101,094.28	\$ -	\$ 47,101,094.28	\$ (4,347,117.10)	\$ (584,375.00)	\$ (4,931,492.10)	\$ (7,342,921.89)	\$ (2,411,429.79)	15.6%	\$ 39,758,172.39	
GL Acct:	127600	127620	Sunwealth:		\$ 943,382.89	\$ -	\$ 943,382.89	\$ (98,796.00)	\$ -	\$ (98,796.00)	\$ (47,169.14)	\$ 51,626.86	5.0%	\$ 896,213.75	
GL Acct:	127155	127155	Posigen:		\$ 18,877,398.36	\$ -	\$ 18,877,398.36	\$ (1,294,448.08)	\$ -	\$ (1,294,448.08)	\$ (2,265,287.80)	\$ (970,839.72)	12.0%	\$ 16,612,110.56	
GL Acct:	127100	127150	Project Loans:		\$ 25,324,941.07	\$ -	\$ 25,324,941.07	\$ (3,128,865.92)	\$ (1,522,968.75)	\$ (4,651,834.67)	\$ (3,153,256.47)	\$ 1,498,578.20	12.5%	\$ 22,171,684.60	
Total:					\$ 92,246,816.60	\$ -	\$ 92,246,816.60	\$ (8,869,227.10)	\$ (2,107,343.75)	\$ (10,976,570.85)	\$ (12,808,635.30)	\$ (1,832,064.45)	13.9%	\$ 79,438,181.30	

Connecticut Green Bank
Special Purpose Entities
Program Loans - Proposed Loan Loss Reserve
As of 6/30/2020

Legal Entity	Loan Program	Asset GL Acct	LLR GL Acct	Dept	Program	ASSET BALANCE			LOAN LOSS RESERVE BALANCES					Investment Carrying Value	Comments	
						Unadjusted Asset Balance	June Close Entries DR / (CR)	Adjusted Asset Balance	Reserve @ 6/30/2019	FY20 YTD Entries Booked DR / (CR)	Unadjusted Reserve @ 6/30/2020	Proposed New Reserve	8942XX June Close Entry DR / (CR)			Reserve as a % of Asset Balance
CEFIA Holdings	Sunwealth Note	127600	127620	Finance	52200-Clean Energy Fin Pr	\$ 882,376.00		\$ 882,376.00	\$ -	\$ -	\$ -	\$ (44,118.80)	\$ (44,118.80)	5.0%	\$ 838,257.20	Loan taken back for Solar Projects developed by CEFIA Holdings. Low risk, PPA payments fund the loan payments. 5% reserve consistent with CGB.
CEFIA Holdings	Skyview Note	127630	127635	Finance	52200-Clean Energy Fin Pr	\$ 3,697,376.15		\$ 3,697,376.15	\$ -	\$ -	\$ -	\$ (184,868.81)	\$ (184,868.81)	5.0%	\$ 3,512,507.34	Loan taken back for Solar Projects developed by CEFIA Holdings. Low risk, PPA payments fund the loan payments. 5% reserve consistent with CGB.
CEFIA Holdings	SBEA Loans	125200	125205	CI&I	53002-SBEA	\$ 3,061,072.09		\$ 3,061,072.09	\$ -	\$ (366,200.00)	\$ (366,200.00)	\$ (366,200.00)	\$ -	12.0%	\$ 2,694,872.09	Although SBEA Loans LLR supported by CEEF, payment deferrals will result in CHOL fronting money for Amalgamated. CEEF reimbursements are likely to lag with COVID.
CT Solar Loan 1	Solar Loans	127400	127410	LoanOps	52100-Solar Loan I Pgm-Residential	\$ 1,941,793.05		\$ 1,941,793.05	\$ -	\$ (48,914.00)	\$ (48,914.00)	\$ (48,914.00)	\$ -	2.5%	\$ 1,892,879.05	Reserve calculated as 3 months expected cash which is the COVID payment deferral policy.
CT Solar Lease 1	Solar Lease Notes	125100	125150	SI	51100-RSIP	\$ 1,941,793.05		\$ 1,941,793.05	\$ -	\$ (382,471.31)	\$ (382,471.31)	\$ (382,471.31)	\$ -	19.7%	\$ 1,559,321.74	Reserve calculated as 3 months expected cash which is the COVID payment deferral policy.
Total:						\$ 11,524,410.34	\$ -	\$ 11,524,410.34	\$ -	\$ (797,585.31)	\$ (797,585.31)	\$ (1,026,572.92)	\$ (228,987.61)	8.9%	\$ 10,497,837.42	



Memo

To: Board of Directors of the Connecticut Green Bank – Deployment Committee of the Connecticut Green Bank

From: Bryan Garcia (President and CEO)

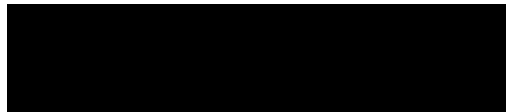
Date: October 23, 2020

Re: Approval of Restructure/Write-Offs Requests below \$100,000 and No More in Aggregate than \$500,000 – Update

At the June 13, 2018 Board of Directors (BOD) meeting of the Connecticut Green Bank (“Green Bank”) it was resolved that the BOD approves the authorization of Green Bank staff to evaluate and approve loan loss restructurings or write-offs for transactions less than \$100,000 which are pursuant to an established formal approval process in an aggregate amount not to exceed \$500,000 from the date of the last Deployment Committee meeting. At the April 24, 2020 BOD meeting of the Green Bank, it was resolved that the BOD approves the authorization of Green Bank staff to evaluate and approve a semi-annual (or two quarterly periods) repayment modification of various transaction types in light of the COVID-19 pandemic.¹ And at the June 26, 2020 BOD meeting of the Green Bank, it was resolved that the BOD approves of the framework applying to subsidiaries of the Green Bank.

During this period, 1 project was evaluated and approved for payment restructure in an aggregate amount of approximately \$10,134. If members of the board or committee would be interested in the internal documentation of the review and approval process Green Bank staff and officers go through, then please request it.

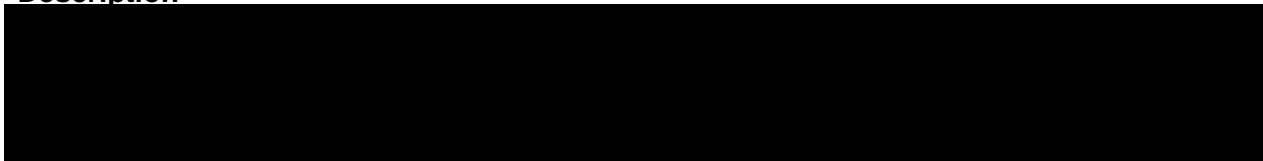
Project Name:



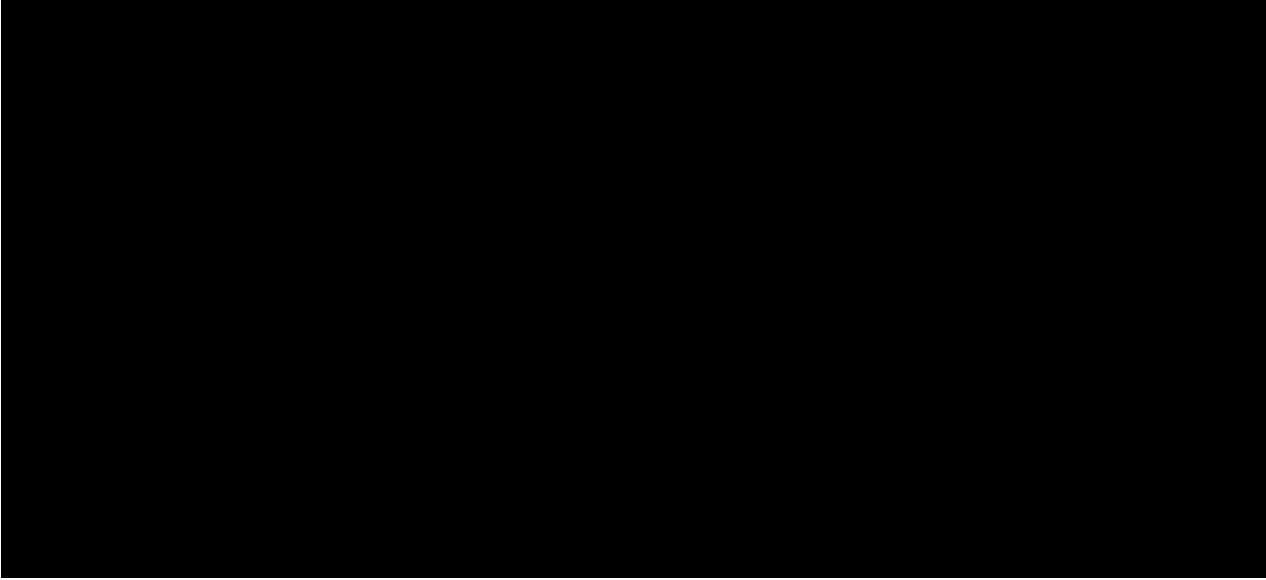
Repayment Amount:

Comprehensive Plan: CPACE COVID-19 Restructure

Description



¹ The Board also approved accommodation for one year for C-PACE transactions in certain towns where C-PACE assessments are collected annually.



Memo

To: Bryan Garcia, Eric Shrago, Bert Hunter, Mackey Dykes, Selya Price - Connecticut Green Bank

From: Inclusive Prosperity Capital Staff

Date: August 26, 2020

Re: IPC Quarterly Reporting – Q4 FY20 (April 1, 2020 – June 30, 2020)

Progress to targets for Fiscal Year 2020, as of 6/30/2020 ¹

Product	Number Projects of Total Projects	Number of Target Projects	% to goal	Total Financed Amount	Financed Target	% to goal	MW Installed	MW Target	% to goal
Smart-E Loan	737	540	136%	\$9,998,818	\$7,182,000	139%	0.9	0.5	180%
Multifamily Pre-Development	4	2	200%	\$998,036	\$140,000	713%	n/a	n/a	n/a
Multifamily Term	14	8	175%	\$8,092,414 ²	\$1,328,000	609%	2	0.2	1000%
Solar PPA	3	18	17%	\$1,355,380	\$23,460,000	6%	0.4	10.6	4%
Low income single family (PosiGen)	625	615	106%	\$15,693,551	\$17,202,165	91%	3.9	4.2	93%

(report continues next page)

¹ Source: "Fiscal Year 2020 Progress to Targets through Q4" memo to CGB Board (July 24, 2020)

² This figure represents energy financing only and excludes the \$13.3M in CT Solar Lease financing.

PSA 5410 – Smart-E Loan

- The Smart-E Loan exceeded its targets for FY20, in large part due to steady, high volume from the HVAC industry. Solar volume continued to be low as the market now has numerous solar loans and alternate financing options; however, one contractor continued a partnership with a Smart-E lender to offer interest rate buydowns, which resulted in dozens of projects throughout the year.
- COVID-19 impacts on Smart-E volume were noticeable, with a 43% drop in closed loan volume between February and March 2020 being the most significant. Volume between March – June ran about 27% below the same period last year. While lower than normal, HVAC projects were submitted steadily, as the industry was deemed essential and did not experience the same negative effects as the home performance industry. Closed loan volume rebounded exponentially in June 2020, with 91 closed loans – the highest volume month of FY20.
- The April 1st launch of a special 2.99% financing offer for heat pumps, battery storage and electric vehicle charging stations was postponed due to COVID-19. Following guidance from the Governor's Office, public health officials and DEEP, the launch was rescheduled for July 1st to support the re-opening of the state's clean energy economy and getting contractors back to work.

PSA 5411 – Multifamily

- Funded and provided technical assistance to a mixed set of projects including 6 follow-on investments in previously funded projects. Projects included a mix of technologies including energy efficiency upgrades, solar, and a fuel cell (at the Cherry Street Lofts in Bridgeport).
- The follow-on investments have been for high impact projects that are being stabilized and preserved as affordable housing by funding energy and health and safety improvements. The CT Green Bank and our funding partners play a critical role as lenders of last resort in these projects.
- FY20 had a strong showing of CPACE funded projects including 5 solar loans to a single portfolio owner as well as a 3rd advance for energy efficiency measures to the Cargill Falls Mill affordable housing project in Putnam, where CGB has previously funded the small-hydro installation running through this property.
- Four (4) of the funded properties were condos or coops, sectors where CGB continues to provide significant funding and TA support, because of challenges securing condo and coop funding from other lenders.
- Closed one (1) health and safety loan in the amount of \$47K but were unable to use the Energize CT Health and Safety Revolving Loan Fund from DEEP. (Restrictions tied to existing debt made it too complicated to use the DEEP funds, so MacArthur PRI funds, administered by CGB-partner Housing Development Fund (HDF) were used instead.)
- Funded two (2) solar PPA projects, which is a drop in count from previous years. Partnership with and support from CHFA and DOH in marketing this program has been the key to success in previous years. Because of leadership transitions, the necessary collaboration and support from CHFA and DOH was not available in FY'20.
- COVID-19 has strongly impacted Multifamily Program activity starting in the Feb/Mar timeframe. With many property owners and managers stretched thin dealing with this

health crisis as well as uncertainty about rental incomes and financial stability, folks have retreated.

- Financial risks associated with COVID-19, specifically concern about non-payment of rents, also halted announcement and deployment of the expanded Loans Improving Multifamily Energy (LIME) Loan program to serve **ALL** multifamily properties in CT, including market rate properties and those with tenant paid utilities. This program is administered by partner Capital for Change (C4C) and is capitalized by CGB and other investors.

PSA 5412 – Solar PPA

- The Green Bank Solar PPA is behind targets due to timing on state solar projects. These have been in development during the first half of the year and are expected to close in the coming year.
- Green Bank and IPC staff finalized and executed a Sourcing and Servicing Agreement formalizing the process by which IPC and CGB will co-develop solar PPA projects and by which IPC will compensate CGB for its development efforts.
- Negotiated definitive term loan facility documentation with CGB (subsequently executed early Q1 FY21)
- Negotiated tax equity partnership with Greenprint Capital and finalized partnership documentation (subsequently executed early Q1 FY21)
- Completed diligence on the acquisition of four construction-stage C-PACE projects from CGB, and received board approval for the acquisition
- Responded to PPA pricing requests received by CGB staff
- IPC staff and CGB began outreach to CT solar developers to discuss transition to IPC platform and source feedback on pricing and process with the Green Bank Solar PPA
- Began using IPC Salesforce Platform for some pricing requests with developers, targeting full migration Q1 FY21
- Contracted with ENCON (Stratford, CT) to be the Operations & Maintenance provider for solar PPA projects in Connecticut

PSA 5413 – Investment Management (LMI Solar and Green and Healthy Homes)

PosiGen Solar for All Program Management

- The PosiGen Solar for All partnership successfully adjusted sales, staff, and operations in response to the COVID pandemic, avoiding the loss of sales and staff incurred by many other companies. Despite major industry delays, the program reached the fiscal year target for closed projects. The addition of a fourth system size of 3.7 kW enabled smaller project homes to participate in the program and capture solar savings and likely resulted in the slight shortfall in capital deployed and MW targets.

Green and Healthy Homes Project

- The Department of Social Services (DSS) informed the project team that given limited budgets and organizational capacity constraints they are not able to fund the pilot in the upcoming fiscal year as the project team had expected. The earliest they would be able to fund the pilot would be in fiscal year 2022.
- DSS remains committed to the pilot model and the strong ROI the report demonstrated.

- The project team began drafting the final report on the CT Medicaid ROI analysis and pilot design, which is expected to be released in the next quarter.

Investment Management

IPC staff supported Green Bank staff on the following financings:

- PosiGen:
 - Ongoing portfolio monitoring, payment verification and processing, and diligence/analysis on a refinancing with a 3rd party capital source on Green Bank collateral which will result in additional 3rd party capital being driven into PosiGen investment structures (expected to close the first calendar quarter of 2020).
 - IPC continues to monitor, administer, and support the Green Bank's investment position in PosiGen through IPC's non-controlling participation in the Green Bank financing facility.
- Residential SL2 and CT Soar Loan:
 - An IPC staff member continued to assist with the management of CT Solar Lease 2 and CT Solar Loan tasks, though in an advisory role as many of the administrative tasks have been transitioned to a junior CGB employee.
 - The IPC staff member continued to assist with the management and training of the employee.
 - The IPC staff member continued to manage the relationship with Renew Financial and Assurant as both partners have new employees who need to be brought up to speed on the program servicing. The IPC staff member was also able to focus on larger SL2-related projects that had been put on hold, including tracking contractor holdback payments, Assurant invoices and PSA amendment, and UCC tracking/payments.
 - COVID-19: Program staff communicated with partners administering the CT Solar Loan and CT Solar Lease regarding allowing for 90-day deferrals for hardship upon request by customer and monitors weekly activity.

Use of DEEP Proceeds

Energize CT Health & Safety Revolving Loan Fund

- In Q1, funds for pilot asbestos remediation of 5 Success Village Association buildings were drawn equaling \$95,307.60 of an authorized \$165,000. Success Village has indicated that the remediation for these 5 buildings is complete and, in Q2, IPC converted the loan to in repayment.
- No new loan approvals and closings were affected through Q4. However, the IPC team is working to build pipeline and has received interest from several large projects, including the next phases of Success Village Association. These projects will take time to mature to the point where they are ready to submit applications, go through the underwriting process and close. Further, and in an effort to add resources to this challenging sector, we have brought on board an experienced housing development consultant to spearhead outreach and applicant support for the ECT H&S RLF.

\$5M Capital Grant

- In Q1, IPC's Board approved a \$1.2M investment in Capital for Change to provide liquidity under its successful LIME Loan program offered in partnership with the Connecticut Green Bank. Although the transaction was expected to close in February 2020 under a master facility construct with CGB, in the wake of the COVID-19 outbreak, CGB funded the entirety of the LIME recapitalization in IPC's stead. IPC will continue to monitor for favorable conditions for future investment.

General Updates

Below are updates for the fourth fiscal quarter of FY20:

- Capital raising:
 - Began to operationalize the \$25M credit facility with New York Green Bank, the first credit facility that will access the Kresge Guarantee
 - Continued diligence with the next set of capital providers, including impact investors and tax equity for the solar ownership platform.
 - IPC was accepted as a member of Confluency Philanthropy and attended their annual conference in May.
- Business/Product Development/Initiatives of interest to Connecticut:
 - Software licensing agreement for the NGEN platform
 - Colorado Energy Office in process with approval from state contracting agency – expected close fall 2020.
 - Working with Inclusiv (the member network of CDFI/community development credit unions) on a potential launch of a Smart-E program in New York State. NYSERDA would provide LLR and administrative support.
 - Continued to work with a number of green banks, local governments, etc. on leveraging IPC's products and financing strategies. Working to launch multifamily lending products to Philadelphia Energy Authority and SELF (executed MOU), working with Montgomery County Green Bank, DC Green Bank, Rhode Island Infrastructure Bank, and CGC on a variety of opportunities.
 - IPC has joined the following advisory councils/initiatives related to DOE grants or programs for expanded access to solar/solar financing:
 - Achieving Cooperative Community Equitable in Solar Sources (ACCESS) Stakeholder Group – National Rural Electric Cooperative Association (NRECA) is partnered with National Rural Utilities Cooperative Finance Corporation, CoBank and GRID Alternatives to make solar energy more affordable for LMI members of cooperatives. The project is engaging community and regional financial institutions.
 - NREL/NYSERDA Solar Finance Inclusion Initiative – focused on new financial products for solar energy. The financial products, described as flexible financial credit agreements (FFCAs), are focused on enabling greater participation in solar energy by LMI customers. The goal of the joint initiative is to devise ways to address persistent barriers by LMI customers solar such as income fluctuations, housing transitions or other issues.
 - Inclusive Shared Solar Initiative (ISSI) Advisory Board – the National Association of State Energy Officials (NASEO) and the National Energy Assistance Directors' Association (NEADA) seek to advance strategies that increase the scalability of LMI) community solar programs. The basis for

ISSI is the NYS Solar for All program, a pilot sponsored by the NYSEERDA, which improves access to community solar facilities for LMI households.

- National Community Solar Partnership – a learning network of over 300 devoted to the expansion of community solar across the US.
- Administrative:
 - IPC staff and its Board developed a statement on racial justice, climate justice and environmental justice and is now developing a policy statement on diversity, equity and inclusion with a particular focus on diversification of the staff.



Memo

To: Connecticut Green Bank Board of Directors
From: Eric Shrago, Managing Director of Operations
CC: Bryan Garcia, President and CEO
Date: October 23, 2020
Re: Fiscal Year 2021 Progress to Targets through Q1

The following memo outlines Connecticut Green Bank (CGB) progress to targets for Fiscal Year (FY) 2021 as of September 30, 2020¹.

Table 1. Incentive Programs FY 2020 Progress to Targets

Product/Program	Projects			Capital Deployed			Capacity (MW)		
	Closed	Target	% to Target	Closed	Target	% to Target	Closed	Target	% to Target
RSIP	2,416	2,824	86%	\$75,158,619	\$85,920,000	87%	21.0	24.0	88%
Battery Storage	0	400	0%	\$0	\$3,540,000	0%	0.0	2.0	0%
Smart-E	202	270	75%	\$2,794,036	\$3,564,000	78%	0.2	0.3	81%
Solar for All	257	177	145%	\$6,574,952	\$4,302,870	153%	1.7	1.2	144%
Total	2,536	3,462	73%	\$74,758,309	\$92,596,320	81%	20.7	26.0	80%

Table 2. Smart-E Channels

Smart-E Loan Channels	Closed	% of Loans
EV	0	0%
Home Performance	20	10%
HVAC	152	75%
Solar	20	10%
(blank)	0	0%
Total	202	100%

¹ Power BI data source: <https://app.powerbi.com/groups/289235dd-d77d-4043-8dae-d232a51a116a/reports/b24ec66b-a2c1-49f0-9a62-3f7443077b3f/ReportSection13c15e79a907a30b650e>

Table 3. Financing Programs FY 2020 Progress to Targets

Product/Program	Projects			Capital Deployed			Capacity (MW)		
	Closed	Target	% to Target	Closed	Target	% to Target	Closed	Target	% to Target
Commercial Solar PPA	0	27	0%	\$0	\$2,650,000	0%	0.0	5.6	0%
CPACE	9	29	31%	\$3,516,171	\$13,700,000	26%	1.0	4.6	22%
CPACE backed Commercial Solar PPA	1	4	25%	\$405,600	\$1,500,000	27%	0.1	0.7	18%
SBEA	0	1,203	0%	\$0	\$20,440,000	0%	0.0	0.0	0%
Multi-Family H&S	0	0	0%	\$0	\$0	0%	0.0	0.0	0%
Multi-Family Pre-Dev.	0	0	0%	\$0	\$0	0%	0.0	0.0	0%
Multi-Family Term	1	2	50%	\$113,991	\$225,000	51%	0.0	0.1	41%
Strategic Investments	0	3	0%	\$0	\$7,750,000	0%	0.0	0.0	0%
Total	10	1,267	1%	\$3,921,771	\$46,115,000	9%	1.1	10.9	10%

Table 4. Multi-Family Units

MFH # of Units	Closed
Affordable	0
Market Rate	0
Total	0

Table 5. CGB Totals FY 2020 Progress to Targets

Segment	Projects			Capital Deployed			Capacity (MW)		
	Closed	Target	% to Target	Closed	Target	% to Target	Closed	Target	% to Target
Incentive Programs	2,536	3,494	73%	\$74,758,309	\$93,024,000	80%	20.7	26.3	79%
Financing Programs	10	1,265	1%	\$3,921,771	\$38,515,000	10%	1.1	11.0	10%
Total	4,729	8,629	55%	\$78,680,080	\$138,711,320	57%	21.8	36.9	59%

CONNECTICUT GREEN BANK
(A COMPONENT UNIT OF THE STATE OF CONNECTICUT)

COMPREHENSIVE ANNUAL FINANCIAL REPORT

FISCAL YEAR ENDED JUNE 30, 2020

(With Summarized Totals as of and for Fiscal Year Ended June 30, 2019)

Department of Finance and Administration
845 Brook Street
Rocky Hill, Connecticut

CONNECTICUT GREEN BANK
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INTRODUCTORY SECTION

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FOR DISCUSSION PURPOSES ONLY



October 28, 2020

We are pleased to present a Comprehensive Annual Financial Report (CAFR) of the Connecticut Green Bank (Green Bank) for the fiscal year ending June 30, 2020 accompanied by summarized totals as of and for the fiscal year ended June 30, 2019.

Management assumes full responsibility for the completeness and reliability of the information contained in this report based upon a comprehensive framework of internal controls that it has established for this purpose. To provide a reasonable basis for making these representations, the management of Green Bank has established a comprehensive internal control framework that is designed both to protect the entity's assets from loss, theft, or misuse, and to compile sufficient reliable information for the preparation of Green Bank's financial statements in conformity with accounting principles generally accepted in the United States of America (GAAP). Because the cost of internal controls should not outweigh the benefits, Green Bank's comprehensive framework of internal controls has been designed to provide reasonable, rather than absolute assurance that the financial statements will be free from material misstatement. As such, management asserts that this financial report is complete and reliable in all material respects to the best of managements' knowledge and belief.

Blum, Shapiro & Company, P.C., has issued an unmodified opinion on the Green Bank's financial statements for the fiscal year ending June 30, 2020. The independent auditors' report is presented in the financial section of this report. This letter of transmittal is designed to complement the Management's Discussion and Analysis (MD&A) and should be read in conjunction with it. The Green Bank's MD&A can be found immediately following the report of the independent auditors. Kestrel Verifiers has issued an independent opinion that the metrics, data collection, calculation methodologies, and transparency for the social benefits supported by the Green Bank are sound and represent best practice. The independent opinion is presented in the non-financial statistics section of this report.

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Connecticut Green Bank for its comprehensive annual report for the fiscal years ending June 30, 2014 through June 30, 2019. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

Profile of the Connecticut Green Bank

The Green Bank¹ was established in a bipartisan manner by the Governor and Connecticut's General Assembly on July 1, 2011 through Public Act 11-80 as a quasi-public agency that supersedes the former Connecticut Clean Energy Fund. As the nation's first state green bank, the Connecticut Green Bank makes green energy more accessible and affordable for all Connecticut citizens and businesses by creating a thriving marketplace to accelerate the growth of green energy. We facilitate green energy deployment by leveraging a public-private financing model that uses limited public dollars to attract private capital investments. By partnering with the private sector, we create solutions that result in long-term, affordable financing to increase the number of green energy projects statewide.

As outlined in its Comprehensive Plan: Green Bonds Us,² the Green Bank's vision is a world empowered by the renewable energy of community. The Green Bank's mission is to confront climate change and provide all of society a healthier and more prosperous future by increasing and accelerating the flow of private capital into markets that energize the green economy.

To achieve its vision and mission, the Green Bank has established the following three goals:

1. To leverage limited public resources to scale-up and mobilize private capital investment in the green economy of Connecticut.
2. To strengthen Connecticut's communities by making the benefits of the green economy inclusive and accessible to all individuals, families, and businesses.
3. To pursue investment strategies that advance market transformation in green investing while supporting the organization's pursuit of financial sustainability.

These goals support the implementation of Connecticut's clean energy policies be they statutory (e.g., Public Act 11-80, Public Act 13-298, Public Act 15-194), planning (e.g., Comprehensive Energy Strategy, Integrated Resources Plan), or regulatory (e.g., Docket No. 17-12-03) in nature. The powers of the Green Bank are vested in and exercised by a Board of Directors that is comprised of eleven voting and one non-voting members each with knowledge and expertise in matters related to the purpose of the organization. The Board of Directors and Staff are governed through the statute, as well as an Ethics Statement and Ethical Conduct Policy, Resolutions of Purposes, Bylaws, and Comprehensive Plan.

¹ Public Act 11-80 repurposed the Connecticut Clean Energy Fund (CCEF) administered by Connecticut Innovations, into a separate quasi-public organization called the Clean Energy Finance and Investment Authority (CEFIA). Per Public Act 14-94, CEFIA was renamed to the Connecticut Green Bank.

² https://ctgreenbank.com/wp-content/uploads/2020/07/Green-Bank_Revised-Comprehensive-Plan_062620a.pdf

Initiatives and Results

Accelerate the Growth of Green Energy

The Green Bank makes green energy more accessible and affordable for all Connecticut citizens and businesses by creating a thriving marketplace to accelerate the growth of green energy. As a result of the efforts undertaken over the past nine years, we are deploying more green energy in our state than ever before (see Table 1).

Table 1. Project Investments between FY 2012 through FY 2020³

	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	Total
Total Investment (\$MM)	312.5	337.4	231.6	190.9	323.0	322.8	107.1	111.1	9.9	1,946.3
Green Bank Investment \$(MM)	36.8	40.3	33.1	33.1	40.0	57.6	31.8	18.5	3.4	394.2
Leverage Ratio	8.5	8.4	7.1	5.8	8.1	5.6	3.4	6.0	2.9	6.6
% of Funding as Grants	45%	40%	39%	38%	50%	57%	65%	67%	100%	44%
Installed Capacity (MW)	81.6	68.4	56.9	50.2	66.1	62.4	23.4	23.5	1.9	434.3

By using \$394.2 million of ratepayer funds, we have helped attract \$1,552.1 million of private investment in green energy for a total investment of \$1.9 billion in Connecticut's economy. In addition, \$96.7 million in estimated tax revenues have been generated from this investment. This is supporting the deployment of 434.3 MW of renewable energy, producing and saving an estimated 59.4 million MMBtu and 18.5 million MWh of green energy and reducing an estimated 9.0 million tons of CO₂ emissions over the life of the projects, while creating over 20,000 job-years, and improving public health benefits by \$232.7 to \$525.4 million as a result of cleaner air.

Responsible Public Investment in Green Energy

The Green Bank receives funding through a number of sources, including a Systems Benefit Charge (i.e., Clean Energy Fund), allowance proceeds from the Regional Greenhouse Gas Initiative (RGGI), renewable energy certificate (REC) sales, interest income from its loans, and the federal government. The Green Bank's predecessor organization's programs were all structured as grants, which meant the funds were spent with no expectation of return. This model put the organization at the mercy of these funding streams which, while reliable, are largely determined by activities outside of our control such as levels of state electricity use and RGGI allowance prices. With the transition to a new financing model, the Green Bank is able to invest its funds in activities that earn a return and begin to build revenue streams that can be reinvested in green energy in Connecticut while strengthening the financial position of the organization.

³ Includes closed transactions approved by the Board of Directors consistent with its Comprehensive Plan and Budget.

Acknowledgements

First and foremost, we would like to thank the Staff of the Connecticut Green Bank. Through their hard work, commitment and innovation, we are making progress towards \$2 billion of investment into Connecticut's economy and have built a model that is delivering results for our state and serving as a model across the country and around the world.

We are grateful to our independent auditors, Blum Shapiro & Company and Kestrel Verifiers, for their assistance and advice during the course of this audit and review, and for supporting our interests in continuing to disclose not only our financial position, but also the public benefits to society resulting from our public-private investments.

Finally, we thank the Board of Directors, Connecticut General Assembly, and the Governor for their continued leadership and guidance as we continue to prove that there is a new model for how government is able to play a part in deploying more green energy at a faster pace while using public resources responsibly.

Respectfully submitted,

Bryan T. Garcia
President and CEO

Jane J. Murphy
Vice President - Finance

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FOR DISCUSSION PURPOSES ONLY

Board of Directors

Connecticut Green Bank

Position	Status	Voting	Name	Organization
State Treasurer (or designee)	Ex Officio	Yes	Bettina Bronisz Steven Meier ⁴	Treasurer's Office
Commissioner of DEEP ⁵ (or designee)	Ex Officio	Yes	Mary Sotos Michael Li ⁶	DEEP
Commissioner of DECD ⁷ (or designee)	Ex Officio	Yes	Binu Chandy	DECD
Residential or Low-Income Group	Appointed	Yes	Betsy Crum Brenda Watson ⁸	Town of Snowmass Village Operation Fuel
Investment Fund Management	Appointed	Yes	(unfilled)	(unfilled)
Environmental Organization	Appointed	Yes	Matthew Ranelli ⁹	Shipman & Goodwin
Finance or Deployment	Appointed	Yes	Thomas Flynn	Alvarez & Marsal
Finance of Renewable Energy	Appointed	Yes	Eric Brown ¹⁰	Connecticut Business and Industry Association
Finance of Renewable Energy	Appointed	Yes	Kevin Walsh	GE Energy Financial Services
Labor Organization	Appointed	Yes	John Harrity ¹¹	IAM Connecticut
R&D or Manufacturing	Appointed	Yes	Lonnie Reed ¹²	Former Chair of E&T Committee
President of the Green Bank	Ex Officio	No	Bryan Garcia	Connecticut Green Bank

Discretely Presented Component Units

Position	Name
President	Bryan Garcia
Treasurer	Jane Murphy
Secretary	Brian Farnen
Chief Investment Officer	Roberto Hunter

⁴ Steven Meier replaced Bettina Bronisz as of 5/1/20

⁵ Department of Energy and Environmental Protection

⁶ Michael Li replaced Mary Sotos as of 10/21/19

⁷ Department of Economic and Community Development

⁸ Brenda Watson was appointed on 2/9/20 by the Speaker of the House after Betsy Crum resigned on 2/8/20

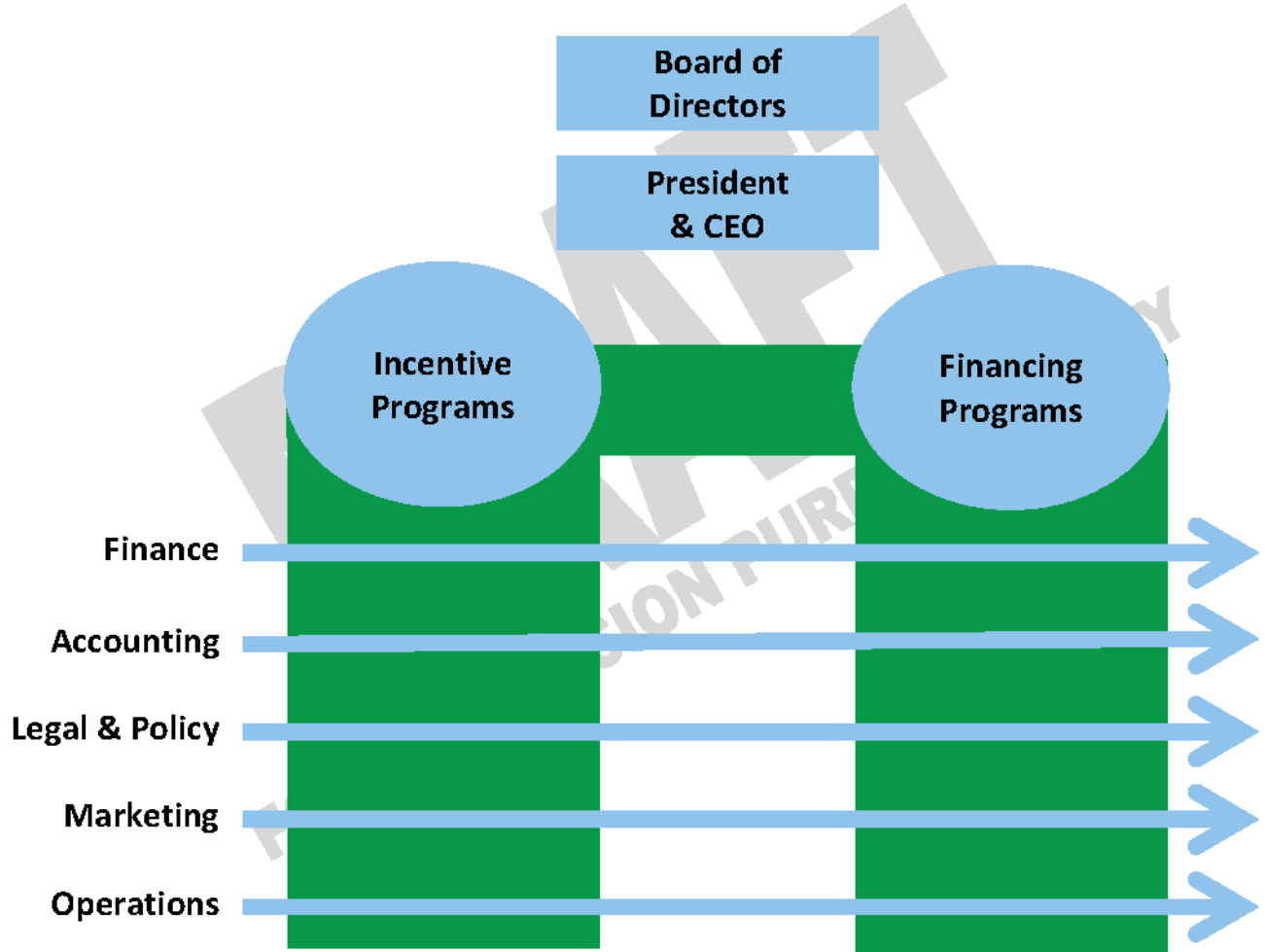
⁹ Secretary of the Board of Directors and Chairperson of the Audit, Compliance and Governance Committee

¹⁰ Chairperson of the joint committee of the EEB and CGB

¹¹ Chairperson of the Budget and Operations Committee

¹² Appointed by Governor Lamont and designated as Chair on 10/10/19

Organizational Chart





Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

Connecticut Green Bank

For its Comprehensive Annual
Financial Report
For the Fiscal Year Ended

June 30, 2019

Christopher P. Morill

Executive Director/CEO

FINANCIAL SECTION

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FOR DISCUSSION PURPOSES ONLY

Independent Auditors' Report

To the Board of Directors
Connecticut Green Bank
Rocky Hill, Connecticut

Report on the Financial Statements

We have audited the accompanying consolidating financial statements of the business-type activities and discretely presented component units of the Connecticut Green Bank (a component unit of the State of Connecticut) as of and for the fiscal year ended June 30, 2020, and the related notes to the consolidating financial statements, which collectively comprise the Green Bank's basic financial statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidating financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidating financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these consolidating financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidating financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidating financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidating financial statements whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and presentation of the consolidating financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidating financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the consolidating financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and the discretely presented component units of the Connecticut Green Bank as of June 30, 2020, and the respective changes in financial position and cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, and the pension and OPEB schedules, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the consolidating financial statements, and other knowledge we obtained during our audit of the consolidating financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the consolidating financial statements that collectively comprise Connecticut Green Bank's basic financial statements. The introductory section, financial statistical section and other statistical section are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The introductory section, financial statistical section and other statistical section have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

We also previously audited, in accordance with auditing standards generally accepted in the United States of America, the consolidating financial statements of the Connecticut Green Bank as of and for the year ended June 30, 2019 (not presented herein), and have issued our report thereon dated October 31, 2019, in which we expressed unmodified opinions on the respective consolidating financial statements of the business-type activities and the discretely presented component units. That audit was conducted for the purpose of forming an opinion on the consolidating financial statements as a whole. The accompanying summarized comparative information as of and for the year ended June 30, 2019 is presented for purposes of additional analysis and is not a required part of the consolidating financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the 2019 consolidating financial statements. The accompanying summarized comparative information has been subjected to the auditing procedures applied in the audit of the 2019 and 2020 consolidating financial statements and certain additional procedures including comparing and reconciling such information directly to the underlying accounting and other records used to prepare those consolidating financial statements or to those consolidating financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the summarized comparative information as of and for the year ended June 30, 2019 is fairly stated in all material respects in relation to the consolidating financial statements from which it has been derived.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated **October 31, 2020** on our consideration of the Connecticut Green Bank’s internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Connecticut Green Bank’s internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Connecticut Green Bank’s internal control over financial reporting and compliance.

West Hartford, Connecticut
October 31, 2020

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FOR DISCUSSION PURPOSES ONLY

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following Management's Discussion and Analysis (MD&A) provides an overview of the financial performance of the Connecticut Green Bank (the Green Bank), formerly known as the Clean Energy Finance and Investment Authority, (a component unit of the State of Connecticut) for the fiscal year ended June 30, 2020. The information contained in this MD&A should be considered in conjunction with the information contained in the financial statements and notes to the financial statements included in the "Basic Financial Statements" section of this report.

The Green Bank as a reporting entity is comprised of the primary government and three discretely presented component units as defined under Government Auditing Standards Board Statement ('GASB') No. 61: *The Financial Reporting Entity: Omnibus and Amendment of GASB Statements No. 14 and No. 34*.

This MD&A discusses financial performance of both the primary government, the Green Bank, and its discretely presented component units, CT Solar Lease 2 LLC, CT Solar Lease 3 LLC and CEFIA Solar Services Inc. We are including the performance of these component units in the consolidated data tables included in this analysis because they play an integral part in assisting the Green Bank in achieving its goal to deploy renewable energy in the State of Connecticut and to omit them from the analysis would not provide a complete picture of the Green Bank's activities. Where possible we have distinguished activity pertaining solely to a component unit or the primary government in the discussion that follows.

FINANCIAL STATEMENTS PRESENTED IN THIS REPORT

On June 6, 2014, Public Act 14-94 of the State of Connecticut changed the name of the Clean Energy Finance and Investment Authority to the Connecticut Green Bank.

The Green Bank is a quasi-public agency of the State of Connecticut established on July 1, 2011 by Section 16-245n of the Connecticut General Statutes ('CGS'), created for the purposes of, but not limited to: (1) implementing the Comprehensive Plan developed by the Green Bank pursuant to Section 16-245n(c) of the CGS, as amended; (2) developing programs to finance and otherwise support clean energy investment in residential, municipal, small business and larger commercial projects, and such others as the Green Bank may determine; (3) supporting financing or other expenditures that promote investment in clean energy sources to foster the growth, development and commercialization of clean energy resources and related enterprises; and (4) stimulating demand for clean energy and the deployment of clean energy sources within the state that serve end-use customers in the State. The Green Bank constitutes the successor agency to Connecticut Innovations for the purposes of administering the Connecticut Clean Energy Fund in accordance with section 4-38d of the CGS and therefore the net position of such fund was transferred to the newly created the Green Bank as of July 1, 2011.

The basic financial statements include: Statement of Net Position, Statement of Revenues, Expenses and Changes in Net Position, and the Statement of Cash Flows. The Statement of Net Position provides a measure of the Green Bank's economic resources. The Statement of Revenues, Expenses and Changes in Net Position measures the transactions for the periods presented and the impact of those transactions on the resources of the Green Bank. The Statement of Cash Flows reconciles the changes in cash and cash equivalents with the activities of the Green Bank for the period presented. The activities are classified as to operating, noncapital financing, capital and related financing, and investing activities.

Notes to the basic financial statements provide additional detailed information to supplement the basis for reporting and nature of key assets and liabilities.

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

FINANCIAL HIGHLIGHTS OF FISCAL 2020

NET POSITION

The Green Bank's net position, which is reflective of the reporting entity's overall financial position, increased year over year. Net position as of June 30, 2020 and 2019 was \$76.7 million and \$76.3 million, respectively, an increase of \$0.5 million. Unrestricted net position increased to \$(2.8) million as of June 30, 2020 as compared to \$(6.0) million as of June 30, 2019, an increase of \$3.2 million. Contributing to this increase was a \$3.2 million increase in SHREC AB1 1 LLC's net position due to lower bond obligations of \$2.2 million and a \$1.0 million increase in unrestricted cash from residual funds received after quarterly bond payments were satisfied. Nonexpendable restricted net position decreased to \$64.4 million as of June 30, 2020 as compared to \$66.9 million as of June 30, 2019, a decrease of \$2.5 million. Contributing to this decrease was a reduction in CT Solar Lease 2 LLC's tax equity partner's capital account of \$2.1 million driven by current year non-cash program losses. Net position restricted for energy programs decreased to \$10.6 million as of June 30, 2020 as compared to \$11.5 million as of June 30, 2019, a decrease of \$0.9 million. Contributing to this decrease was a reduction in the Green Bank's restricted cash due to payments from Clean Renewable Energy Bond proceeds of \$1.7 million to construct solar PV facilities on campuses in the State of Connecticut's system of colleges and universities ('CSCU') and a reduction of \$1.0 million for the transfer of the Kresge Foundation loan to a strategic partner. These decreases were partially offset by a \$2.0 million increase in SHREC receipts held in SHREC Warehouse 1 LLC as collateral for a Line of Credit. Note 18 Restricted Net Position provides a breakout by dollar amount of cash balances restricted for these programs.

Green Bank assets increased \$2.3 million in fiscal year 2020 to \$213.3 million. As of June 30, 2019, assets totaled \$211.0 million. Program Loans increased by \$17.1 million due to increases in Low- and Moderate-income lending of \$5.0 million, Commercial solar PV asset sale financing of \$4.1 million, Multifamily lending of \$2.7 million, Fuel Cell financing of \$2.3 million, CPACE lending facilities of \$1.8 million, CPACE benefit assessment financing of \$0.6 million and hydropower financing of \$0.6 million.

Unrestricted cash and cash equivalents decreased \$10.7 million to \$8.2 million as of June 30, 2020 compared to \$18.9 million as of June 30, 2019 and restricted cash and cash equivalents decreased \$1.7 million to \$15.0 million as of June 30, 2020 from \$16.7 million as of June 30, 2019. The net decrease in unrestricted cash was primarily the result of normal operating activities. The net decrease in restricted cash was driven by disbursements to contractors for construction of CSCU solar PV systems and the transfer of the \$1.0 million Kresge Loan to a strategic partner.

Investments in capital assets net of depreciation decreased \$0.5 million to \$80.0 million as of June 30, 2020 from \$80.5 million as of June 30, 2019. This decrease was due depreciation expense for the total reporting entity of \$3.1 million, partially offset by an increase to capital assets of \$2.6 million due to energizing the final CSCU solar PV system.

Green Bank liabilities increased by \$1.8 million in fiscal year 2020 to \$146.9 million as of June 30, 2020 from \$145.1 million as of June 30, 2019. Current liabilities, comprised of current maturities of long-term debt, accounts payable and accrued expenses, line of credit and custodial liabilities increased \$5.0 million to \$21.8 million as of June 30, 2020 compared to \$16.8 million as of June 30, 2019. Lines of credit increased by \$6.1 million due to draws on the \$14.0 million SHREC Warehouse 1 LLC Line of Credit with Webster Bank and Liberty Bank. Custodial liabilities decreased by \$1.0 million to \$1.7 million as of June 30, 2020 from \$2.7 million as of June 30, 2019 due to recognition of deferred payments to contractors for construction of the CSCU solar PV systems.

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

The Green Bank's allocation of the State of Connecticut State Employee Retirement System unfunded pension liability, as calculated under GASB statement 68 decreased \$0.6 million in to \$25.2 million as of June 30, 2020 compared to \$25.8 million as of June 30, 2019. The related Deferred Outflows of Resources, which represents timing differences in plan earnings, assumptions and Green Bank pension contributions decreased \$1.5 million to \$6.3 million as of June 30, 2020 compared to \$7.8 million as of June 30, 2019. Note 16 provides further detail regarding the pension plan. The primary government is responsible for this pension obligation.

The Green Bank's allocation of the State of Connecticut State Employee Retirement System unfunded retiree healthcare (OPEB) liability, as calculated under GASB statement 75 increased \$4.5 million to \$28.5 million as of June 30, 2020 compared to \$24.0 million as of June 30, 2019. The related Deferred Outflows of Resources, which represents timing differences in plan earnings, assumptions and Green Bank OPEB contributions increased \$3.5 million to \$5.2 million as of June 30, 2020 compared to \$1.7 million as of June 30, 2019. Note 17 provides further detail regarding the OPEB plan. The primary government is responsible for this OPEB obligation.

Long term debt decreased \$7.6 million to \$65.4 million as of June 30, 2020 as compared to \$73.0 million as of June 30, 2019. The decrease is due to Green Bank principal payments of \$2.2 million against the \$38.6 million SHREC Collateralized Notes issued during 2019, transfer of the \$1.0 million Kresge loan to a strategic partner, payoff of the Reinvestment Fund and Solar Mosaic notes totaling \$1.5 million and principal payments of \$0.6 million on the Meriden Hydro and CSCU Clean Renewable Energy Bonds ('CREBs'). An additional \$2.3 million decrease resulted from repayments of principal by CT Solar Lease 2 LLC of funds borrowed under its credit facility with Key Bank and Webster Bank.

As of June 30, 2020, the Green Bank's unfunded contingent grant and loan commitments, which are obligations of the primary government, the majority of which represent Performance Based Incentive ('PBI') payments to third party owners of solar facilities as described in Note 15, totaled \$64.2 million. These grant and loan commitments are expected to be funded over the next one to six years from current and future unrestricted cash balances.

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following table summarizes the net position of the reporting entity at June 30, 2020 and 2019:

	Discretely Presented			2020	Discretely Presented			2019	Discretely Presented			Increase (Decrease)
	Primary Government	Component Units	Eliminating Entries		Primary Government	Component Units	Eliminating Entries		Primary Government	Component Units	Eliminating Entries	
Cash and cash equivalents-unrestricted	\$ 5,473	\$ 2,683	\$ --	\$ 8,156	\$ 17,054	\$ 1,893	\$ --	\$ 18,947	\$ (1,581)	\$ 790	\$ --	\$ (10,791)
Cash and cash equivalents-restricted	10,857	4,053	--	14,910	11,925	4,743	--	16,668	(1,068)	(690)	--	(1,758)
Bonds receivable	3,081	--	--	3,081	3,289	--	--	3,289	(238)	--	--	(258)
Solar lease notes	4,948	--	--	4,948	6,303	--	--	6,303	(1,355)	--	--	(1,355)
Promissory notes	2,518	--	--	2,518	3,508	--	--	3,508	(990)	--	--	(990)
Program loans	85,682	--	--	85,682	68,557	--	--	68,557	17,125	--	--	17,125
Capital assets, net	14,169	74,780	(8,977)	79,972	12,496	77,346	(9,319)	80,523	1,673	(2,566)	342	(551)
Other assets	48,730	44,643	(7,934)	14,081	47,705	45,196	(79,668)	13,233	1,075	(553)	326	848
Total Assets	175,458	126,158	(88,319)	213,297	170,837	129,178	(88,987)	211,028	4,621	(3,020)	688	2,269
Deferred Outflows of Resources												
Deferred amount for pensions	6,266	--	--	6,266	7,756	--	--	7,756	(1,490)	--	--	(1,490)
Deferred amount for OPEB	5,189	--	--	5,189	1,732	--	--	1,732	3,457	--	--	3,457
Deferred amount for asset retirement obligations	--	2,658	--	2,658	--	2,828	--	2,828	--	(170)	--	(170)
Deferred payments to State of Connecticut	--	--	--	--	--	--	--	--	--	--	--	--
Total deferred outflows of resources	11,455	2,658	--	14,113	9,488	2,828	--	12,316	1,987	(170)	--	1,797
Current liabilities												
Unearned revenue	18,204	51,688	(48,078)	21,814	13,598	51,642	(48,404)	16,836	4,606	46	326	4,978
Pension liabilities	--	801	--	801	--	880	--	880	--	(79)	--	(79)
OPEB liabilities	25,174	--	--	25,174	25,805	--	--	25,805	(681)	--	--	(681)
Other long-term liabilities	28,485	--	--	28,485	24,000	--	--	24,000	4,485	--	--	4,485
Fair value of interest rate swap	--	4,108	--	4,108	--	4,012	--	4,012	--	96	--	96
Long term debt, less current maturities	--	1,164	--	1,164	--	523	--	523	--	641	--	641
Total liabilities	44,669	20,716	--	65,405	49,969	23,060	--	73,029	(5,280)	(2,344)	--	(7,624)
Deferred Inflows of Resources												
Deferred amount for pensions	1,380	--	--	1,380	81	--	--	81	1,299	--	--	1,299
Deferred amount for OPEB	2,336	--	--	2,336	1,895	--	--	1,895	441	--	--	441
Total deferred inflows of resources	3,716	--	--	3,716	1,976	--	--	1,976	1,740	--	--	1,740
Net investment in capital assets	2,894	1,798	(168)	4,529	2,512	1,451	(169)	3,794	382	347	6	735
Restricted Net Position:												
Non-spendable	--	73,202	(8,814)	64,388	--	76,052	(9,150)	66,902	--	(2,850)	336	(2,514)
Restricted - energy programs	10,462	123	--	10,585	11,408	129	--	11,537	(946)	(8)	--	(952)
Unrestricted	53,288	(24,784)	(31,264)	(2,760)	51,057	(25,744)	(31,264)	(5,951)	2,231	960	--	3,191
Total Net Position	\$ 66,644	\$ 50,839	(40,241)	\$ 76,742	\$ 64,977	\$ 51,888	(40,583)	\$ 76,282	\$ 1,667	\$ (1,549)	\$ 342	\$ 460

CHANGES IN NET POSITION

Operating revenues increased by \$7.7 million to \$53.3 million as of June 30, 2020 as compared to \$45.6 million as of June 30, 2019. Remittances to the primary government from utility companies representing the one mil per kilowatt hour charge to each end use customer of electric services in the State of Connecticut decreased \$1.2 million to \$24.9 million for the fiscal year ended June 30, 2020 as compared to \$26.1 million for the fiscal year ending June 30, 2019. Interest earned on promissory notes increased by \$2.2 million to \$6.1 million as compared to \$3.9 million in fiscal 2019 as a result of increased program and CPACE loans originated in the Green Bank's investment portfolio. Interest as a revenue source is expected to continue to increase in future years as the Green Bank expands its investment portfolio. Sales of energy systems increased \$1.2 million to \$4.0 million in 2020 compared to \$2.8 million in 2019. The increase is due to sales of commercial Power Purchase Agreements ('PPA') projects to third-party renewable energy companies. Sales of Renewable Energy Credits (RECs) increased \$2.8 million to \$9.3 million in 2020 compared to \$6.5 million in 2019 primarily as a result of the inclusion of sales of RECs for Tranche 3 systems to the two public utility companies in Connecticut. Fiscal year 2019 only included sales of RECs for Tranche 1 and 2 systems. Proceeds received by the primary government from quarterly Regional Greenhouse Gas Initiative (RGGI) auctions increased \$2.5 million year over year with proceeds of \$4.6 million in fiscal year 2020 compared to proceeds of \$2.1 million in fiscal year 2019. The increase in proceeds is due to diversion of \$2.3 million in proceeds earmarked for the Green Bank into the State of Connecticut's general fund to meet projected budget shortfalls during fiscal year 2019.

Provision for loan losses increased \$2.1 million to \$5.0 million in fiscal 2020 from \$2.9 million in fiscal 2019. The increase is due to higher reserves being provided for a larger program loan portfolio, as well as reserve increases due to anticipated loan payment deferrals as a result of COVID-19.

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

Total payments of grants and incentives to commercial, not for profit, municipal and residential owners by the primary government to install either solar PV systems or energy efficiency measures increased \$1.7 million to \$16.3 million in fiscal year 2020 compared to \$14.7 million for the fiscal year 2019. The increase is primarily due to higher PBI and Expected Performance-Based Buydown ('EPBB') solar PV payments under the Residential Solar Investment Program. PBI payments comprised the largest component of incentives paid out in both these fiscal years.

Program administration expenses decreased \$1.0 million to \$16.5 million in fiscal 2020 from \$17.5 million in fiscal 2019, a 6% decrease. General and administrative costs increased by \$1.2 million to \$6.9 million in fiscal year 2020 from \$5.7 million in fiscal year 2019, a 21% increase. Included in general and administrative costs for 2020 and 2019 is \$3.6 million and \$2.8 million respectively for the non-cash GASB 68 pension expense and GASB 75 OPEB expense allocated to the Green Bank by the State of Connecticut which is not an expense that is controllable by Green Bank management. General and Administrative expense excluding these non-cash charges for 2020 and 2019 were \$3.3 million and \$2.9 million, respectively.

Interest expense increased \$1.4 million to \$3.4 million from \$2.0 million due to interest on the SHREC Collateralized Notes. Debt issuance costs decreased \$1.7 million due to delay in issuing the Green Liberty Bonds due to COVID-19, see Note 21. Capital contributions decreased \$1.2 million to \$0.5 million from \$1.7 million due to final true-up contributions for the Solar Lease 3 program occurring in fiscal 2020. During fiscal 2019 a \$14.0 million payment was made to the State of Connecticut's general fund as a result of legislation enacted to meet projected budget shortfalls. No such payment was required to be made in fiscal 2020.

The following table summarizes the changes in net position between June 30, 2020 and 2019:

	Primary Government	Discretely Presented Component Units	Eliminating Entries	2020	Primary Government	Discretely Presented Component Units	Eliminating Entries	2019	Primary Government	Discretely Presented Component Units	Eliminating Entries	Increase (Decrease)
Revenues												
Utility remittances	\$ 24,854	\$ -	\$ -	\$ 24,854	\$ 26,095	\$ -	\$ -	\$ 26,095	\$ (1,241)	\$ -	\$ -	\$ (1,241)
Interest income-prormissory notes	6,105	0	-	6,105	3,908	2	-	3,910	2,197	(2)	-	2,196
Energy system sales	4,373	-	(367)	4,006	4,834	-	(2,038)	2,796	(461)	-	1,671	1,210
REC sales	7,975	1,231	-	9,256	5,349	1,141	-	6,490	2,626	140	-	2,766
Other revenues	6,267	3,943	(1,109)	9,101	3,651	3,754	(1,062)	6,343	2,616	189	(47)	2,758
Total revenues	49,576	5,224	(1,476)	53,324	43,837	4,897	(3,100)	45,634	5,739	327	1,624	7,690
Operating Expenses												
Cost of goods sold - energy systems	4,371	-	(365)	4,006	4,601	-	(1,724)	2,877	(230)	-	1,359	1,129
Provision for loan losses	4,962	-	-	4,962	2,909	-	-	2,909	2,053	-	-	2,053
Grants and incentive programs	17,314	-	(970)	16,344	15,598	-	(926)	14,672	1,716	-	(44)	1,672
Program administration expenses	12,334	4,472	(345)	16,461	13,586	4,254	(344)	17,496	(1,252)	218	(1)	(1,085)
General and administrative expenses	6,702	374	(139)	6,936	5,485	374	(136)	5,723	1,217	(0)	(3)	1,213
Total operating expenses	45,683	4,846	(1,819)	48,709	42,179	4,628	(3,130)	43,677	3,504	218	1,311	5,082
Operating Income	3,893	378	343	4,614	1,658	269	30	1,957	2,235	109	313	2,657
Non-Operating Revenues (Expenses)												
Interest earned	227	55	(116)	166	465	64	(113)	416	(238)	(9)	(3)	(250)
Interest expense	(2,327)	(1,184)	116	(3,395)	(773)	(1,324)	113	(1,984)	(1,554)	140	3	(1,411)
Investment loss	(107)	(13)	-	(120)	(104)	-	-	(104)	(3)	(13)	-	(16)
Debt issuance costs	(19)	-	-	(19)	(1,739)	-	-	(1,739)	1,720	-	-	1,720
Unrealized gain (loss) on interest rate swap	-	(641)	-	(641)	-	(665)	-	(665)	-	54	-	54
Capital contribution	-	453	-	453	-	2,855	(1,159)	1,696	-	(2,402)	1,159	(1,243)
Distribution to member	-	(597)	-	(597)	(1)	(589)	-	(590)	1	(8)	-	(7)
Payments to State of Connecticut	-	-	-	-	(14,000)	-	-	(14,000)	14,000	-	-	14,000
Net Change	1,667	(1,550)	343	460	(14,494)	580	(1,129)	(15,043)	16,161	(2,130)	1,472	15,503
Net Position Beginning of Year	64,977	51,889	(40,584)	76,282	79,471	51,309	(39,455)	91,325	(14,494)	580	(1,129)	(15,043)
Net Position at End of Year	\$ 66,644	\$ 50,339	\$ (40,241)	\$ 76,742	\$ 64,977	\$ 51,889	\$ (40,584)	\$ 76,282	\$ 1,667	\$ (1,550)	\$ 343	\$ 460

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

FINANCIAL HIGHLIGHTS OF FISCAL 2019

NET POSITION

The Green Bank's net position, which is reflective of the reporting entity's overall financial position, decreased year over year. Net position as of June 30, 2019 and 2018 was \$76.3 and \$91.3 million, respectively, a decrease of \$15.0 million. The Green Bank's net position as of June 30, 2018 was restated from \$89.4 million to \$91.3 million, an increase of \$1.9 million, to adjust net position for the proper reporting of prepaid warranty expenses in CT Solar Lease 2 LLC. The components of net position show that unrestricted net position decreased to (\$6.0) million as of June 30, 2019 as compared to \$3.3 million as of June 30, 2018, restated for warranty expenses, a decrease of \$9.3 million. Contributing to this decrease in unrestricted net position was a transfer of a portion of the primary government's available unrestricted cash balances into restricted cash balances to support the maintenance of loan loss reserves, interest rate buydowns, contractual obligations under the Clean Renewable Energy Bond and contractual obligations to maintain collateral accounts to support loan guarantees. This transfer is reflected in the component of net position designated as net position restricted for energy programs, which decreased \$7.7 million from \$19.3 million as of June 30, 2018 to \$11.5 million as of June 30, 2019. Restricted net position energy programs as of June 30, 2018 included \$9.1 million in proceeds received from the issuance of CREBs of which \$7.2 million was used in fiscal 2019 to construct solar PV facilities on campuses in the State of Connecticut's system of universities and colleges ('CSCU'). Restricted net position energy programs as of June 30, 2019 decreased by \$7.7 million due to construction payments issued for the CSCU Facilities. Note 18 Restricted Net Position provides a breakout by dollar amount of cash balances restricted for these programs. Also contributing to the decrease in unrestricted net position was payment of \$14.0 million to the State of Connecticut in fiscal 2019.

Green Bank assets increased \$25.0 million in fiscal year 2019 to \$211.0 million. As of June 30, 2018, assets totaled \$186.0 million. This was primarily the result of a \$18.0 million increase in CPACE loans, which includes \$14.4 million repurchase of assets previously sold to Hannon Armstrong, \$5.9 million in program loans made by the primary government to support renewable energy installations and energy efficiency upgrades for both residential and commercial property owners in Connecticut, and a \$3.5 million for purchases of SBEA promissory notes (see Note 8, SBEA Notes Receivable). These increases were partially offset by a \$1.7 decrease in CPACE sell down notes which were cancelled as a result of the Hannon Armstrong asset repurchase.

Investments in capital assets net of depreciation increased from \$73.4 million as of June 30, 2018 to \$80.5 million as of June 30, 2019, an increase of \$7.1 million. This increase was primarily due to energizing seven of the eight CSCU solar PV systems recorded on the Green Bank's books. The electricity generated by these facilities has been sold through power purchase agreements with CSCU. Revenues support payments of the CSCU CREBs bond.

Unrestricted cash and cash equivalents decreased \$0.9 million to \$18.9 million as of June 30, 2019 compared to \$19.8 million as of June 30, 2018 and restricted cash and cash equivalents decreased \$7.7 million to \$16.7 million as of June 30, 2019 from \$24.4 million as of June 30, 2018. The net decrease in unrestricted cash was primarily the result of normal operating activities. The net decrease in restricted cash was primarily the result of disbursements to contractors for construction of the CSCU solar PV systems.

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

Green Bank liabilities increased by \$23.4 million in fiscal year 2019 to \$145.1 million as of June 30, 2019 from \$121.7 million as of June 30, 2018. Current liabilities, comprised of current maturities of long-term debt, accounts payable and accrued expenses increased \$5.9 million to \$16.8 million as of June 30, 2019 compared to \$11.0 million as of June 30, 2018. Accounts payable and accrued expenses increased \$1.3 million from \$6.5 million in 2018 to \$7.8 million in 2019 primarily as a result of an increase in accrued performance-based incentives payable by the primary government to third party owners of PV systems at each respective year-end. The remaining increase of \$4.4 million resulted from an increase in the amount recorded for the current portion of long term debt maturing within a year in 2019 compared to 2018 primarily pertaining to SHREC Collateralized Notes, CT Solar Lease 2 LLC's debt facility used to finance its acquisition of Solar PV projects, and the CSCU CREBs bonds.

The Green Bank's allocation of the State of Connecticut State Employee Retirement System unfunded pension liability, as calculated under Government Accounting Standard Board (GASB) statement 68 increased \$1.2 million in fiscal year 2019 to \$25.8 million as of June 30, 2019 compared to \$24.6 million as of June 30, 2018. The related Deferred Outflows of Resources, which represents timing differences in plan earnings, assumptions and Green Bank pension contributions decreased \$1.0 million to \$7.8 million as of June 30, 2019 compared to \$8.8 million as of June 30, 2018. Note 16 provides further detail regarding the pension plan. The primary government is responsible for this pension obligation.

The Green Bank's allocation of the State of Connecticut State Employee Retirement System unfunded retiree healthcare (OPEB) liability, as calculated under Government Accounting Standard Board (GASB) statement 75 decreased \$0.9 million in fiscal year 2019 to \$24.0 million as of June 30, 2019 compared to \$24.9 million as of June 30, 2018. The related Deferred Outflows of Resources, which represents timing differences in plan earnings, assumptions and Green Bank OPEB contributions decreased \$0.3 million to \$1.7 million as of June 30, 2019 compared to \$2.0 million as of June 30, 2018. Note 17 provides further detail regarding the OPEB plan. The primary government is responsible for this OPEB obligation.

Long term debt increased \$34.5 million in fiscal year 2019 to \$73.0 million as of June 30, 2019 when compared to \$38.5 million as of June 30, 2018. During fiscal year 2019, the Green Bank issued \$38.6 million in SHREC Collateralized Notes, \$36.2 million of which is classified as long-term debt, and a \$1.0 million draw on the \$3.0 million Kresge loan facility. These increases in long term debt are partially offset by repayments of principal by CT Solar Lease 2 LLC of funds borrowed under its credit facility with KeyBank and Webster Bank, and reclassifications to current maturities of long-term debt for the Meriden Hydro and CSCU CREBs bonds.

As of June 30, 2019, the Green Bank's unfunded contingent grant and loan commitments, which are obligations of the primary government, the majority of which represent PBI payments to third party owners of solar facilities as described in Note 15, totaled \$76.6 million. These grant and loan commitments are expected to be funded over the next one to six years from current and future unrestricted cash balances.

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following table summarizes the net position of the reporting entity at June 30, 2019 and 2018:

	Primary Government	Discretely Presented Component Units	Eliminating Entries	2019	Primary Government	Discretely Presented Component Units	Eliminating Entries	2018	Primary Government	Discretely Presented Component Units	Eliminating Entries	Increase (Decrease)
Cash and cash equivalents-unrestricted	\$ 17,054	\$ 1,993	\$ -	\$ 18,947	\$ 17,126	\$ 2,704	\$ -	\$ 19,830	\$ (72)	\$ (811)	\$ -	\$ (883)
Cash and cash equivalents-restricted	11,925	4,743	-	16,668	19,857	4,511	-	24,368	(7,932)	232	-	(7,700)
Bonds receivable	3,289	-	-	3,289	3,329	-	-	3,329	(40)	-	-	(40)
Fair value of interest rate swaps	-	-	-	-	-	171	-	171	-	(171)	-	(171)
Solar lease notes	6,303	-	-	6,303	7,267	-	-	7,267	(964)	-	-	(964)
Promissory notes	3,508	-	-	3,508	-	-	-	-	3,508	-	-	3,508
Program loans	68,557	-	-	68,557	45,664	-	-	45,664	22,893	-	-	22,893
Capital assets, net	12,496	77,346	(9,319)	80,523	3,868	78,899	(9,850)	73,417	8,628	(1,553)	31	7,106
Other assets	47,705	45,196	(79,668)	13,233	47,273	44,055	(79,403)	11,925	432	1,141	(265)	1,308
Total Assets	170,837	129,178	(88,987)	211,028	144,384	130,340	(88,753)	185,971	26,453	(1,162)	(234)	25,057
Deferred Outflows of Resources												
Deferred amount for pensions	7,756	-	-	7,756	8,779	-	-	8,779	(1,023)	-	-	(1,023)
Deferred amount for OPEB	1,732	-	-	1,732	1,999	-	-	1,999	(267)	-	-	(267)
Deferred amount for asset retirement obligations	-	2,828	-	2,828	-	2,927	-	2,927	-	(99)	-	(99)
Deferred payments to State of Connecticut	-	-	-	-	14,000	-	-	14,000	(14,000)	-	-	(14,000)
Total deferred outflows of resources	9,488	2,828	-	12,316	24,778	2,927	-	27,705	(15,290)	(99)	-	(15,389)
Current liabilities	13,598	51,642	(48,404)	16,836	9,665	50,608	(49,298)	10,975	3,933	1,034	894	5,861
Unearned revenue	-	880	-	880	2,190	954	-	3,144	(2,190)	(74)	-	(2,264)
Pension liabilities	25,805	-	-	25,805	24,636	-	-	24,636	1,169	-	-	1,169
OPEB liabilities	24,000	-	-	24,000	24,876	-	-	24,876	(876)	-	-	(876)
Payment to State of Connecticut	-	-	-	-	14,000	-	-	14,000	(14,000)	-	-	(14,000)
Other long term liabilities	-	4,012	-	4,012	-	5,516	-	5,516	-	(1,504)	-	(1,504)
Fair value of interest rate swap	-	523	-	523	-	-	-	-	-	523	-	523
Long term debt, less current maturities	49,969	23,060	-	73,029	13,651	24,881	-	38,532	36,318	(1,821)	-	34,497
Total liabilities	113,372	80,117	(48,404)	145,085	89,018	81,959	(49,298)	121,679	24,354	(1,842)	894	23,406
Deferred Inflows of Resources												
Deferred amount for pensions	81	-	-	81	47	-	-	47	34	-	-	34
Deferred amount for OPEB	1,895	-	-	1,895	625	-	-	625	1,270	-	-	1,270
Total deferred inflows of resources	1,976	-	-	1,976	672	-	-	672	1,304	-	-	1,304
Net investment in capital assets	2,512	1,451	(169)	3,794	964	1,459	(172)	2,251	1,548	(8)	3	1,548
Restricted Net Position:												
Non-expendable	-	76,052	(9,150)	66,902	96	75,578	(9,178)	66,496	(96)	474	28	406
Restricted- energy programs	11,408	129	-	11,537	19,205	45	-	19,250	(7,797)	84	-	(7,713)
Unrestricted	51,057	(25,744)	(31,264)	(5,951)	59,207	(25,774)	(30,105)	3,328	(8,150)	30	(1,159)	(9,279)
Total Net Position	\$ 64,977	\$ 51,888	\$ (40,583)	\$ 76,282	\$ 79,472	\$ 51,308	\$ (39,455)	\$ 91,325	\$ (14,495)	\$ 580	\$ (1,128)	\$ (15,043)

CHANGES IN NET POSITION

Operating revenues increased by \$5.5 million to \$45.6 million as of June 30, 2019 as compared to \$40.2 million as of June 30, 2018. Remittances to the primary government from utility companies representing the one mil per kilowatt hour charge to each end use customer of electric services in the State of Connecticut increased \$0.2 million to \$26.1 million for the fiscal year ended June 30, 2019 as compared to \$25.9 million for the fiscal year ending June 30, 2018. Interest earned on promissory notes increased \$0.6 million in fiscal 2019 to \$3.9 million compared to \$3.3 million in fiscal 2018 as a result of increased loans made in the Green Bank's investment portfolio, including interest from the repurchase of the Hannon Armstrong portfolio. Interest as a revenue source is expected to continue to increase in future years as the Green Bank expands its investment portfolio. Sales of Renewable Energy Credits (RECs) increased \$2.8 million to \$6.5 million in 2019 compared to \$3.7 million in 2018 primarily as a result of the inclusion of sales of RECs for Tranche 2 systems to the two public utility companies in Connecticut. Fiscal year 2018 only included sales of RECs for Tranche 1 systems. Proceeds received by the primary government from quarterly Regional Greenhouse Gas Initiative (RGGI) auctions increased \$0.9 million year over year with proceeds of \$2.1 million in fiscal year 2019 compared to proceeds of \$1.3 million in fiscal year 2018. The increase in proceeds can primarily be attributed to increasing auction clearing prices, despite the continued diversion of proceeds earmarked for the Green Bank into the State of Connecticut's general fund to meet projected budget shortfalls. Other income increased \$1.8 million to \$6.3 million in 2019 compared to \$4.5 million in 2018 primarily due to commencing of PPA billings for CSCU solar PV systems as well as one-time development fees paid by a third-party system purchaser.

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

Provision for loan losses increased \$2.5 million to \$2.9 million in fiscal 2019 from \$0.4 million in fiscal 2018. The increase is due to a larger CPACE reserve required as a result of a larger portfolio, which includes the Hannon Armstrong repurchase, as well as increased program loan investments.

Total payments of grants and incentives to commercial, not for profit, municipal and residential owners by the primary government to install either solar PV systems or energy efficiency measures decreased \$3.2 million to \$14.7 million in fiscal year 2019 compared to \$17.9 million for the fiscal year 2018. The decrease is primarily due to lower interest rate buy downs related to the termination of the Smart-E buy down program. PBI payments comprised the largest component of incentives paid out in both these years.

Program administration expenses increased \$0.6 million to \$17.5 million in fiscal 2019 from \$16.9 million in fiscal 2018, a 1% increase. General and administrative costs increased by \$0.1 million to \$5.7 million in fiscal year 2019 from \$5.6 million in fiscal year 2018, a 1.6% increase. Included in general and administrative costs for 2019 and 2018 is \$2.8 million and \$2.2 million respectively for the non-cash GASB 68 pension expense and GASB 75 OPEB expense allocated to the Green Bank by the State of Connecticut which is not an expense that is controllable by Green Bank management. General and Administrative expense excluding these non-cash charges for 2019 and 2018 were \$2.9 million and \$3.4 million, respectively.

Interest expense increased \$0.6 million to \$2.0 million from \$1.4 million due to interest on the SHREC Collateralized Notes as well as the CREBs bonds. Unrealized gain/(loss) on interest rate swaps decreased \$1.4 million to \$(0.7) million in fiscal 2019 from \$0.7 million in fiscal 2018 due to fluctuations in interest rates.

The following table summarizes the changes in net position between June 30, 2019 and 2018:

	Primary Government	Discretely Presented Component Units	Eliminating Entries	2019	Primary Government	Discretely Presented Component Units	Eliminating Entries	2018	Primary Government	Discretely Presented Component Units	Eliminating Entries	Increase (Decrease)
Revenues												
Utility remittances	\$ 26,095	\$ -	\$ -	\$ 26,095	\$ 25,943	\$ -	\$ -	\$ 25,943	\$ 152	\$ -	\$ -	\$ 152
Interest income-promissory notes	3,908	2	-	3,910	3,292	2	-	3,294	616	-	-	616
Energy system sales	4,834	-	(2,038)	2,796	13,559	-	(10,777)	2,782	(8,725)	-	8,739	14
REC sales	5,349	1,141	-	6,490	2,823	832	-	3,660	2,521	309	-	2,830
Other revenues	3,651	3,754	(1,062)	6,343	2,151	3,481	(1,135)	4,497	1,500	273	73	1,846
Total revenues	43,837	4,897	(3,100)	45,634	47,773	4,315	(11,912)	40,176	(3,986)	582	8,812	5,458
Operating Expenses												
Cost of goods sold - energy systems	4,601	-	(1,724)	2,877	12,980	-	(9,982)	2,998	(8,379)	-	8,258	(121)
Provision for loan loss	2,909	-	-	2,909	362	-	-	362	2,547	-	-	2,547
Grants and incentive programs	15,598	-	(928)	14,672	18,933	-	(1,003)	17,930	(3,335)	-	77	(3,258)
Program administration expenses	13,586	4,254	(344)	17,496	13,206	4,003	(326)	16,883	380	251	(18)	613
General and administrative expenses	5,485	374	(138)	5,723	5,432	331	(132)	5,631	53	43	(4)	92
Total operating expenses	42,179	4,628	(3,130)	43,677	50,913	4,334	(11,443)	43,804	(8,734)	294	8,313	(127)
Operating Income	1,658	269	30	1,957	(3,140)	(19)	(469)	(3,628)	4,798	288	499	5,585
Non-Operating Revenues (Expenses)												
Interest earned	465	64	(113)	416	374	74	(110)	338	91	(10)	(3)	78
Interest expense	(773)	(1,324)	113	(1,984)	(173)	(1,326)	110	(1,389)	(600)	2	3	(555)
Investment loss	(104)	-	-	(104)	(510)	-	-	(510)	406	-	-	406
Debt issuance costs	(1,739)	-	-	(1,739)	-	-	-	-	(1,739)	-	-	(1,739)
Unrealized gain (loss) on interest rate swap	-	(695)	-	(695)	-	712	-	712	-	(1,407)	-	(1,407)
Capital contribution	-	2,855	(1,159)	1,696	-	9,599	(7,423)	2,176	-	(6,744)	6,264	(480)
Distribution to member	(1)	(589)	-	(590)	-	(540)	-	(540)	(1)	(49)	-	(50)
Payments to State of Connecticut	(14,000)	-	-	(14,000)	(14,000)	-	-	(14,000)	-	-	-	-
Net Change	(14,494)	580	(1,129)	(15,043)	(17,449)	8,500	(7,892)	(16,841)	2,955	(7,920)	6,763	1,798
Net Position Beginning of Year	79,471	51,309	(39,455)	91,325	96,919	42,810	(31,563)	108,166	(17,448)	8,499	(7,892)	(16,841)
Net Position at End of Year	\$ 64,977	\$ 51,889	\$ (40,584)	\$ 76,282	\$ 79,470	\$ 51,310	\$ (39,455)	\$ 91,325	\$ (14,493)	\$ 579	\$ (1,129)	\$ (15,043)

**BASIC FINANCIAL
STATEMENTS**

DRAFT
FOR DISCUSSION PURPOSES ONLY

CONNECTICUT GREEN BANK
CONSOLIDATING STATEMENT OF NET POSITION
JUNE 30, 2020
(with summarized totals for the year ended June 30, 2019)

	Discretely Presented Component Units					2020 Total Reporting Entity	2019 Total Reporting Entity
	Total Primary Government	CT Solar Lease 2 LLC	CEFIA Solar Services, Inc.	CT Solar Lease 3 LLC	Eliminating Entries		
Assets							
Current Assets							
Cash and cash equivalents	\$ 5,473,330	\$ 1,390,691	\$ 123,527	\$ 1,168,545	\$	\$ 8,156,093	\$ 18,947,214
Accounts receivable	3,127,093	90,264	1,059	32,352		3,250,768	1,774,990
Utility remittance receivable	2,214,775					2,214,775	1,893,965
Other receivables	1,449,996	532,185	2,600	313,254		2,298,035	3,004,780
Due from component units	40,099,971	305,079	7,672,744		(48,077,794)	-	-
Prepaid expenses and other assets	1,481,244	423,858		20,020		1,925,122	1,846,104
Current maturities of prepaid warranty management		259,148				259,148	259,148
Current portion of solar lease notes	967,530					967,530	942,056
Current portion of SBEA promissory notes	1,549,492					1,549,492	1,709,491
Current portion of program loans	4,396,615					4,396,615	3,756,932
Total current assets	60,760,046	3,001,225	7,799,930	1,534,171	(48,077,794)	25,017,578	34,134,680
Noncurrent Assets							
Portfolio investments	1					1	1
Bonds receivable	3,031,134					3,031,134	3,288,656
Prepaid warranty management, less current portion		3,725,735				3,725,735	3,984,883
Solar lease notes, less current portion	3,979,704					3,979,704	5,361,206
SBEA promissory notes, less current portion	968,608					968,608	1,799,007
Program loans, less current portion	81,285,206					81,285,206	64,800,014
Renewable energy credits	407,360					407,360	468,736
Investment in component units	100		31,264,299		(31,264,399)	-	-
Capital assets, net of depreciation and amortization	14,168,597	62,740,931	353,521	11,685,603	(8,976,656)	79,971,996	80,523,040
Restricted assets:							
Cash and cash equivalents	10,856,841	3,969,667	83,000			14,909,508	16,667,797
Total noncurrent assets	114,697,551	70,436,333	31,700,820	11,685,603	(40,241,055)	188,279,252	176,893,340
Total Assets	175,457,597	73,437,558	39,500,750	13,219,774	(88,318,849)	213,296,830	211,028,020
Deferred Outflows of Resources							
Deferred amount for pensions	6,265,821					6,265,821	7,756,235
Deferred amount for OPEB	5,189,388					5,189,388	1,732,147
Deferred amount for asset retirement obligations		2,111,306		548,837		2,658,143	2,828,461
Total Deferred Outflows of Resources	11,455,209	2,111,306	-	548,837	-	14,113,352	12,316,843

The accompanying notes are an integral part of the consolidating financial statements

CONNECTICUT GREEN BANK
CONSOLIDATING STATEMENT OF NET POSITION (CONTINUED)
JUNE 30, 2019
(with summarized totals for the year ended June 30, 2018)

	Discretely Presented Component Units					2020 Total Reporting Entity	2019 Total Reporting Entity
	Total Primary Government	CT Solar Lease 2 LLC	CEFIA Solar Services, Inc.	CT Solar Lease 3 LLC	Eliminating Entries		
Liabilities and Net Position							
Liabilities							
Current maturities of long-term debt	\$ 2,775,916	\$ 1,600,000	\$ 94,788	\$ -	\$ -	\$ 4,470,704	\$ 4,598,103
Current maturities of warranty management		1,669,539				1,669,539	1,669,539
Accounts payable and accrued expenses	7,349,085	388,959	126,508	32,835		7,897,387	7,873,645
Due to component units	302,575	10,411,419	37,360,662	3,138	(48,077,794)	-	-
Line of credit	6,100,000					6,100,000	-
Custodial liability	1,676,674					1,676,674	2,655,326
Unearned revenue		722,563		78,698		801,261	879,512
Total current liabilities	18,204,250	14,792,480	37,581,958	114,671	(48,077,794)	22,615,565	17,716,125
Asset retirement obligation		3,244,106		675,882		3,919,988	3,824,355
Long-term debt, less current maturities	44,689,065	19,254,240	1,461,353			65,404,658	73,026,810
Warranty management, less current maturities		187,934				187,934	187,934
Fair value of interest rate swap		1,164,356				1,164,356	523,224
Pension liability	25,174,453					25,174,453	25,805,346
OPEB liability	28,484,971					28,484,971	24,000,448
Total noncurrent liabilities	98,348,489	23,850,636	1,461,353	675,882	-	124,336,360	127,370,117
Total Liabilities	116,552,739	38,643,116	39,043,311	790,553	(48,077,794)	146,951,925	145,086,242
Deferred in flows of Resources							
Deferred amount for pensions	1,380,337					1,380,337	80,906
Deferred amount for OPEB	2,336,216					2,336,216	1,855,599
Total deferred inflows of resources	3,716,553	-	-	-	-	3,716,553	1,976,505
Net Position							
Net investment in capital assets	2,899,556	1,327,817	353,521	116,856	(162,823)	4,528,927	3,794,400
Restricted net position:							
Nonexpendable		57,242,757		15,959,161	(8,813,833)	64,388,085	66,901,619
Restricted for energy programs	10,462,456	39,697	83,000			10,585,153	11,537,185
Unrestricted (deficit)	53,287,502	(21,704,523)	20,918	(3,099,959)	(31,264,399)	(2,760,461)	(5,951,088)
Total Net Position	\$ 66,643,514	\$ 36,905,748	\$ 457,439	\$ 12,976,058	\$ (40,241,055)	\$ 76,741,704	\$ 76,282,116

The accompanying notes are an integral part of the consolidating financial statements

CONNECTICUT GREEN BANK
CONSOLIDATING STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
FOR THE YEAR ENDED JUNE 30, 2020
(with summarized totals for the year ended June 30, 2019)

	Discretely Presented Component Units					2020 Total Reporting Entity	2019 Total Reporting Entity
	Total Primary Government	CT Solar Lease 2 LLC	CEFIA Solar Services, Inc.	CT Solar Lease 3 LLC	Eliminations		
Operating Revenues							
Utility remittances	\$ 24,854,150	\$	\$	\$	\$	\$ 24,854,150	\$ 26,094,682
Interest income - promissory notes	6,105,290	323				6,105,613	3,909,456
Grant revenue	76,402					76,402	200,779
RGGI auction proceeds	4,581,628					4,581,628	2,130,255
Energy system sales	4,373,424				(367,029)	4,006,395	2,795,336
REC sales	7,975,361	746,721		534,086		9,256,168	6,489,479
Other income	1,609,430	3,293,950	258,245	390,667	(1,109,050)	4,443,242	4,012,334
Total operating revenues	49,575,685	4,040,994	258,245	924,753	(1,476,079)	53,323,598	45,632,360
Operating Expenses							
Cost of goods sold - energy systems	4,371,059				(364,665)	4,006,394	2,877,040
Provision for loan losses	4,962,343					4,962,343	2,908,974
Grants and incentive programs	17,313,711				(969,887)	16,343,824	14,671,750
Program administration expenses	12,333,764	3,599,905	321,005	551,135	(345,053)	16,460,756	17,505,206
General and administrative expenses	6,701,666	253,860	4,552	115,190	(139,163)	6,936,125	5,722,397
Total operating expenses	45,682,543	3,853,765	325,557	666,325	(1,818,768)	48,709,442	43,685,367
Operating Income (Loss)	3,893,142	187,209	(67,312)	258,428	342,689	4,614,156	1,946,993
Nonoperating Revenue (Expenses)							
Interest income - short-term cash deposits	160,505	4,454	133	478		165,570	41,625
Interest expense long-term debt	(2,327,367)	(1,027,865)	(39,990)			(3,395,242)	(1,983,502)
Interest income - component units	66,327		49,469			-	-
Interest expense - component units		(115,796)			115,796	-	(429)
Debt issuance costs	(18,800)					(18,800)	(1,738,746)
Payments to State of Connecticut						-	(14,000,000)
Distributions to member		(510,910)		(66,494)		(597,404)	(588,663)
Distributions to former member						-	(1,000)
Realized and unrealized loss on investments	(106,567)	(13,156)				(120,113)	(104,466)
Unrealized gain (loss) on interest rate swap		(641,133)				(641,133)	(694,702)
Total nonoperating revenue (expenses)	(2,226,312)	(2,304,406)	9,612	(66,016)	-	(4,607,122)	(18,695,250)
Change in Net Position before Capital Contributions	1,666,830	(2,117,197)	(57,700)	172,412	342,689	7,034	(16,748,257)
Capital Contributions				452,554		452,554	1,695,722
Change in Net Position	1,666,830	(2,117,197)	(57,700)	624,966	342,689	459,588	(15,052,535)
Net Position - Beginning of Year	64,976,664	39,022,945	515,139	12,351,092	(40,583,744)	76,282,116	91,334,651
Net Position - End of Year	\$ 66,643,514	\$ 36,905,748	\$ 457,439	\$ 12,976,058	\$ (40,241,055)	\$ 76,741,704	\$ 76,282,116

The accompanying notes are an integral part of the consolidating financial statements

CONNECTICUT GREEN BANK
CONSOLIDATING STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED JUNE 30, 2020
(with summarized totals for the year ended June 30, 2019)

	Discretely Presented Component Units					2020 Total Reporting Entity	2019 Total Reporting Entity
	Total Primary Government	CT Solar Lease 2 LLC	CEFIA Solar Services, Inc.	CT Solar Lease 3 LLC	Eliminating Entries		
Cash Flows from Operating Activities							
Sales of energy systems	\$ 4,514,823	\$	\$	\$ 439,446	\$ (143,765)	\$ 4,371,058	\$ 2,795,336
Sales of Renewable Energy Credits	7,330,760	734,721	2,883			8,507,810	6,344,856
Utility company remittances	24,533,339					24,533,339	26,577,782
Grants disbursed	59,221					59,221	(1,316,000)
RGGI auction proceeds	4,595,579					4,595,579	1,188,912
Other income	1,556,052	2,112,929	251,703	379,606	(1,305,214)	2,995,076	2,282,175
Lease payments received	-	1,307,661				1,307,661	1,455,778
Interest income on promissory notes	6,105,289	323				6,105,612	3,909,495
Program administrative expenses	(11,858,752)	(240,974)	(309,862)	(78,550)		(12,488,138)	(14,967,677)
Grants, incentives and credit enhancements	(17,442,801)				1,166,051	(16,276,750)	(18,640,964)
Purchases of energy equipment	(4,371,059)					(4,371,059)	(4,027,221)
General and administrative expenditures	(2,749,895)	(423,623)	(4,550)	(54,698)	139,163	(3,093,603)	(3,150,977)
Net cash provided by (used in) operating activities	12,272,556	3,491,037	(59,826)	685,804	(143,765)	16,245,806	2,451,495
Cash Flows from Noncapital Financing Activities							
Payments to State of Connecticut						-	(14,000,000)
Funds received (disbursed) from escrow and custodial accounts	(217,771)	(180,493)		(61,744)		(460,008)	(1,306,548)
Advances (repayments) to/from CGB component units	(199,322)	(301,035)	500,211	194		-	-
Advances repaid (disbursed) to third-party capital providers	501,616					501,616	(1,542,548)
Net cash provided by (used in) noncapital financing activities	84,523	(481,576)	500,211	(61,550)	-	41,608	(16,849,096)
Cash Flows from Capital and Related Financing Activities							
Purchase of capital assets	(3,080,891)		(358,282)	(143,765)	143,765	(3,439,173)	(7,404,070)
Disposals of capital assets	374	16,038				16,412	3,112
Proceeds from short-term debt	11,000,000					11,000,000	-
Repayment of short-term debt	(4,900,000)					(4,900,000)	-
Proceeds from long-term debt	-					-	39,528,757
Repayment of long-term debt	(5,532,263)	(2,129,679)	(94,791)			(7,756,733)	(2,281,727)
Debt issuance costs	(18,800)					(18,800)	(1,738,746)
Interest expense	(2,393,946)	(1,127,858)	14,224			(3,467,580)	(1,823,150)
Capital contributions from Firstar Development, LLC	-			452,554		452,554	1,695,722
Return of capital to Connecticut Innovations	-					-	(1,000)
Return of capital to Firstar Development, LLC	-	(510,910)		(84,237)		(595,147)	(580,208)
Net cash provided by (used in) capital and related financing activities	(4,885,526)	(3,752,409)	(438,849)	224,552	143,765	(8,708,467)	27,398,690
Cash Flows from Investing Activities							
Gains and losses on investments		(13,156)				(13,156)	-
Loan losses	(31,412)					(31,412)	78,925
Return of principal on WC & program loans	6,877,267					6,877,267	(78,791)
Interest on short-term investments, cash, solar lease notes and loans, net	(433,014)	4,454	133	478		(427,949)	(664,515)
Purchase of SBEA loan portfolios	(1,011,807)					(1,011,807)	(3,048,996)
CPACE program loan disbursements	(5,525,600)					(5,525,600)	(4,486,084)
Grid Tied program loan disbursements	-					-	(110,493)
Commercial Solar Loan program disbursements	(4,688,408)					(4,688,408)	(987,960)
Residential Solar Loan program disbursements	(15,307,292)					(15,307,292)	(12,286,451)
Net cash provided by (used in) investing activities	(20,120,266)	(8,702)	133	478	-	(20,128,357)	(21,584,365)
Net Increase (Decrease) in Cash and Cash Equivalents	(12,648,713)	(751,650)	1,669	849,284	-	(12,549,410)	(8,583,276)
Cash and Cash Equivalents - Beginning of Year	28,978,884	6,112,008	204,858	319,261	-	35,615,011	44,198,287
Cash and Cash Equivalents - End of Year	\$ 16,330,171	\$ 5,360,358	\$ 206,527	\$ 1,168,545	\$ -	\$ 23,065,601	\$ 35,615,011
Reconciliation of Operating Income (Loss) to Net Cash Provided by (Used in) Operating Activities:							
Operating income (loss)	\$ 3,893,142	\$ 187,209	\$ (67,312)	\$ 258,428	\$ 342,689	\$ 4,614,156	\$ 1,946,993
Adjustments to reconcile operating income (loss) to net cash provided by (used in) operating activities:							
Depreciation	512,725	2,478,364	11,143	427,342		3,429,574	3,218,624
Accretion	-	138,850		47,976		186,826	187,475
Deferred lease revenue	-	(50,967)		(27,284)		(78,251)	(1,574,396)
Pension expense adjustment	2,158,952					2,158,952	2,225,531
OPEB expense adjustment	1,467,899					1,467,899	662,072
Changes in operating assets and liabilities:							
(Increase) decrease in operating assets	4,187,744	561,062	(3,657)	(16,712)	(680,263)	4,048,184	(3,071,257)
(Decrease) increase in operating liabilities	52,094	176,519		(3,946)	193,799	418,466	(1,143,547)
Net Cash Provided by (Used in) Operating Activities	\$ 12,272,556	\$ 3,491,037	\$ (59,826)	\$ 685,804	\$ (143,765)	\$ 16,245,806	\$ 2,451,495

The accompanying notes are an integral part of the consolidating financial statements

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

1. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES

Nature of Operations

The Connecticut Green Bank (the Green Bank) was established in July 2011 under Title 16, Sec. 16-245n of the General Statutes of the State of Connecticut as the successor entity of the Connecticut Clean Energy Fund. The Green Bank, a component unit of the State of Connecticut, was created to promote energy efficiency and investment in renewable energy sources in accordance with a comprehensive plan developed by it to foster the growth, development and commercialization of renewable energy sources and related enterprises and stimulate demand for renewable energy and deployment of renewable energy sources which serve end-use customers in the State. The Green Bank constitutes the successor agency to Connecticut Innovations Incorporated (CI), a quasi-public agency of the State of Connecticut, for the purposes of administering the Clean Energy Fund in accordance with section 4-38d of the Connecticut General Statutes and therefore the net position of such fund was transferred to the newly created Green Bank as of July 1, 2011.

On June 6, 2014, Public Act 14-94 of the State of Connecticut changed the name of the Clean Energy Finance and Investment Authority to the Connecticut Green Bank.

Prior Period Summarized Financial Information

The basic financial statements include certain prior year summarized comparative information in total but not at the level of detail required for a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with the Green Bank's financial statements for the year ended June 30, 2019, from which the summarized information was derived.

Principal Revenue Sources

The Public Utility Regulatory Authority (PURA) assesses a charge per kilowatt-hour to each end-use customer of electric services provided by utility companies (excluding municipally owned entities) in the state, which is paid to the Green Bank and is the principal source of the Green Bank's revenue. The Green Bank may deploy the funds for loans, direct or equity investments, contracts, grants or other actions that support energy efficiency projects and research, development, manufacture, commercialization, deployment and installation of renewable energy technologies.

The Green Bank also receives a portion, currently 23%, of proceeds the State of Connecticut receives from quarterly Regional Greenhouse Gas Initiative (RGGI) auctions. These proceeds finance renewable energy projects through the Green Bank's CPACE program. The Green Bank also earns both interest income and revenue from the sale of Solar Renewable Energy Credits (SREC's) generated by facilities it has financed.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

1. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Reporting Entity

The Green Bank, as the primary government, follows the reporting requirements of Governmental Accounting Standards Board (GASB) Statement No. 61 (*The Financial Reporting Entity Omnibus - an Amendment of GASB Statements No. 14 and No. 34*) (the Statement) regarding presentation of component units. The Statement modifies certain requirements for including component units in the reporting entity, either by blending (recording their amounts as part of the primary government), or discretely presenting them (showing their amounts separately in the reporting entity's financial statements). To qualify as a blended component unit, the unit must meet one of the following criteria: 1) have substantively the same governing body as that of the primary government, and either (A) a financial benefit or burden relationship exists between the unit and the primary government, or (B) management of the primary government (below the level of the governing body) has operational responsibility of the unit; 2) the unit provides services or benefits exclusively or almost exclusively to the primary government; or 3) the unit's total debt outstanding, including leases, is expected to be repaid by resources of the primary government. A unit which fails to meet the substantively the same governing requirement may still be included as a discretely presented component unit, if the primary government has appointed the voting majority of the component unit's governance or met other criteria specified in the Statement such as whether or not it would be misleading were the entity to be excluded.

The Green Bank, as of June 30, 2020, has established nine legally separate for-profit entities whose collective purpose is to administer the Green Bank's clean energy programs. The Green Bank believes to exclude any of the entities from these financial statements would be misleading. Each entity is listed below, along with whether it is included as a blended component unit (blended) or qualifies as a discretely presented component unit (discrete) within these financial statements based on the criteria previously described.

CEFIA Holdings LLC (blended)

A Connecticut limited liability company (LLC), wholly owned by the Green Bank, established to acquire and develop a portfolio of commercial and residential solar facilities and, through its CT Solar Lease 2 program, to enable investment in solar photovoltaic equipment for the benefit of Connecticut homeowners, businesses, not-for-profits and municipalities (the End Users). CEFIA Holdings LLC acquires the initial title to the solar assets and contracts with independent solar installers to complete the installation of the solar assets and arrange for the leasing of the solar assets (or sale of energy under power purchase agreements) to the End Users. CEFIA Holdings LLC is also responsible for procuring insurance for the solar assets, operation and maintenance services as well as warranty management services for the ultimate owner of the solar assets, CT Solar Lease 2 LLC or CT Solar Lease 3 LLC, to which CEFIA Holdings LLC sells the residential and commercial projects before the projects are placed in service. After acquiring the residential and commercial projects, CT Solar Lease 2 LLC or CT Solar Lease 3 LLC administers the portfolio of projects with the assistance of Renew Financial Corporation. The Green Bank's Board of Directors acts as the governing authority of CEFIA Holdings LLC. The Green Bank appoints its employees to manage the operations of CEFIA Holdings LLC. The Green Bank is also financially responsible (benefit/burden) for CEFIA Holdings LLC's activities.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

1. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

CT Solar Loan I LLC (blended)

A limited liability company, wholly owned by CEFIA Holdings LLC, CT Solar Loan I LLC was established to make loans to residential property owners for the purpose of purchasing and installing solar photovoltaic equipment. The Green Bank's Board of Directors acts as the governing authority of CT Solar Loan I LLC. The Green Bank appoints its employees to manage the operations of CT Solar Loan I LLC. The Green Bank is also financially responsible (benefit/burden) for CT Solar Loan I LLC's activities.

CEFIA Solar Services, Inc. (discrete)

A Connecticut corporation, 100% owned by CEFIA Holdings LLC, established to share in the ownership risks and benefits derived from the leasing of solar photovoltaic and the sale of energy under power purchase agreements as managing member of CT Solar Lease 2 LLC and CT Solar Lease 3 LLC. CEFIA Solar Services, Inc. (Solar Services) has a one percent ownership interest in CT Solar Lease 2 LLC and CT Solar Lease 3 LLC and is its managing member. Solar Services is responsible for performing all management and operational functions pursuant to the Operating Agreement of CT Solar Lease 2 LLC and of CT Solar Lease 3 LLC. The Green Bank through CEFIA Holdings LLC directly appoints the Board of Directors of Solar Services. The Board of Directors is comprised exclusively of Green Bank employees. The primary government's intent for owning a controlling interest in Solar Services is to enhance its ability to offer financing options to commercial entities and residents of Connecticut wishing to install renewable energy equipment. The Green Bank believes that to exclude Solar Services from these financial statements would be misleading.

CT Solar Lease 2 LLC (discrete)

A Connecticut limited liability company, CT Solar Lease 2 LLC acquires title to the residential and commercial solar projects from the developer, CEFIA Holdings LLC, using capital from its members along with non-recourse funding from participating banks. Repayment to participating banks is predicated upon the property owners' payment to CT Solar Lease 2 LLC of their obligations under leases and power purchase agreements, as well as revenue earned from production-based incentives. CT Solar Lease 2 LLC is owned ninety-nine percent (99%) by Firststar Development, LLC, a Delaware limited liability company, as the Investor Member and one percent (1%) by CEFIA Solar Services, Inc., as the Managing Member. The primary government's intent to provide management services through Solar Services is to directly enhance its ability to provide financing options to commercial entities and residents of Connecticut wishing to install renewable energy equipment. Although the Green Bank has a minority membership interest in CT Solar Lease 2 LLC, the Green Bank believes that to exclude it from these financial statements would be misleading.

As of June 30, 2017, CT Solar Lease 2 LLC has completed its acquisition of residential and commercial solar projects from the developer. All projects have been placed in service and are generating revenue. CT Solar Lease 2 LLC has also received all capital contributions required under its Operating Agreement from its members.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

1. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

CT Solar Lease 3 LLC (discrete)

A Connecticut limited liability company, CT Solar Lease 3 LLC acquires title to commercial solar projects from the developer, CEFIA Holdings LLC, using capital from its members. CT Solar Lease 3 LLC's primary sources of revenue will be from the sale of electricity generated by its solar PV facilities to property owners through power purchase agreements and the sale of RECs generated from facility electrical production to third parties. CT Solar Lease 3 LLC is owned ninety-nine percent (99%) by Firststar Development, LLC, a Delaware limited liability company, as the Investor Member and one percent (1%) by CEFIA Solar Services Inc., as the Managing Member. The primary government's intent to provide management services through Solar Services is to directly enhance its ability to provide financing options to commercial entities and residents of Connecticut wishing to install renewable energy equipment. Although the Green Bank has a minority membership interest in CT Solar Lease 3 LLC, the Green Bank believes that to exclude it from these financial statements would be misleading.

As of December 17, 2019, CT Solar Lease 3 LLC has completed its acquisition of commercial solar projects from the developer. All projects have been placed in service and are generating revenue. CT Solar Lease 3 LLC has also received all capital contributions required under its Operating Agreement from its members.

CGB Meriden Hydro LLC (blended)

On August 31, 2017, the Green Bank, through its wholly owned component unit, CGB Meriden Hydro LLC (CGB Meriden), purchased a 195 kW hydroelectric facility located in Meriden, Connecticut, from the facility's developer, Hanover Pond Hydro LLC (Hanover Pond), pursuant to a sale and leaseback agreement dated January 1, 2017 for \$3,911,706. The Green Bank utilized the proceeds of the Clean Energy Renewable Bond (CREB), \$2,957,971 issued in fiscal year 2017, to finance a portion of the total purchase price.

Hanover Pond remits to CGB Meriden a monthly lease payment equal to the monthly payment made by the City of Meriden to Hanover Pond for the purchase of electricity generated by the hydroelectric facility under a power purchase agreement dated August 14, 2014, as amended. This lease commenced on the date commercial operations began and terminates on the 30th anniversary of said date. Commercial operations began on March 7, 2017. In addition to revenues earned through its lease with Hanover Pond, CGB Meriden also receives revenues from the sale of renewable energy credits generated by the facility and sold to the local utility company under a sale and purchase contract dated July 31, 2014 which was assigned to CGB Meriden on September 18, 2017.

CGB KFC LLC (blended)

A Connecticut corporation, single member LLC 100% owned by Connecticut Green Bank, established on November 7, 2017 to hold the loan liability resulting from draws made on a \$3,000,000 loan facility provided by the Kresge Foundation. On December 14, 2018 CGB KCF LLC received a disbursement of \$1,000,000 which was held by Connecticut Green Bank in a restricted cash account until January 23, 2020 when it was transferred to Inclusive Prosperity Capital, Inc. (IPC) with the agreement of the Kresge Foundation. IPC has assumed full responsibility for the loan and reporting to Kresge as of January 21, 2020. IPC is a not-for-profit strategic partner of the Connecticut Green Bank focused on increasing access to capital to low-to-moderate income communities, nonprofits, faith-based organizations, housing authorities, schools, and smaller businesses. As of the end of Fiscal Year 2020, CGB has no interest in this loan.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

1. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

SHREC ABS 1 (blended)

A Delaware corporation, single member LLC 100% owned by Connecticut Green Bank, established on February 19, 2019 to be the issuer of \$38,600,000 of SHREC Collateralized Notes, Series 2019-1 (SHREC notes), \$36,800,000 Class A notes and \$1,800,000 Class B notes, with Bank of New York Mellon acting as trustee. The SHREC notes were sold to a single investor on April 2, 2019. The proceeds were used to retire Green Bank short-term debt, as well as to support Green Bank investment and operational activities. Quarterly payments of scheduled principal and interest for a period of 14 years are funded by billings to two Connecticut utilities for SHREC revenues generated by approximately 14,000 solar PV systems on residential rooftops. Advances between the Green Bank and SHREC ABS 1 LLC were involved in the establishment of the note, retirement of Green Bank short-term debt, as well as to pay certain organizational costs. Advances were eliminated in preparing the combining and reporting entity financial statements.

SHREC Warehouse 1 LLC (blended)

A Connecticut corporation, single member LLC 100% owned by Connecticut Green Bank, established on April 23, 2019 to collect payments due from Connecticut Light & Power (CL&P) and United Illuminating (UI) pursuant to the Master Purchase Agreement dated July 30, 2018 as amended for the purchase and sale of Solar Home Renewable Energy Credits (SHRECs). SHREC Warehouse 1 LLC acts as the sole borrower under a revolving loan facility provided by Liberty Bank and Webster Bank. Payments due from CL&P and UI are pledged as security for the loans. Loans drawn by SHREC Warehouse 1 LLC are advanced to CGB to be used for investment and operational activities. Advances were eliminated in preparing the combining and reporting entity financial statements.

CT Solar Lease 1 LLC (blended)

A Connecticut corporation, single member LLC 100% owned by Connecticut Green Bank, established on April 23, 2019 to hold collateral that supports a \$5,000,000 guaranty on a line of credit with Amalgamated Bank. On May 21, 2019, the Green Bank assigned its solar lease promissory note portfolio to CT Solar Lease 1 LLC. Solar Lease 1 LLC receives note payments and maintains a loan loss reserve for the portfolio. Advances between the Green Bank and Solar Lease 1 LLC were involved in the transfer of assets and loan loss reserves. Advances were eliminated in preparing the combining and reporting entity financial statements.

Advances between the primary government (the Green Bank) and its component units, or between the component units themselves, involved establishment of funds to provide for loan loss reserves as well as pay certain organizational costs. Advances were eliminated in preparing the combining and reporting entity financial statements.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

1. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Condensed combining information for the primary government (The Green Bank) and its seven blended component units (CGB Meriden Hydro LLC, CG KCF LLC, SHREC ABS 1 LLC, SHREC Warehouse 1 LLC, CT Solar Lease I LLC, CT Solar Loan I LLC and CEFIA Holdings LLC) is presented as of June 30, 2020 as follows:

Condensed, Combining Information - Statement of Net Position

	CGB	CGB Meriden Hydro LLC	SHREC ABS 1 LLC	SHREC Warehouse 1 LLC	CT Solar Lease I LLC	CT Solar Loan I LLC	CEFIA Holdings LLC	Eliminating Entries	Total Primary Government
Assets									
Current Assets									
Cash and cash equivalents	\$ 3,400,382	\$ 12,522	\$ 267,739	\$ 350,046	\$ -	\$ 448,774	\$ 993,868	\$ -	\$ 5,473,330
Accounts receivable	2,700,337	-	-	-	-	-	426,756	-	3,127,093
Utility remittance receivable	2,214,775	-	-	-	-	-	-	-	2,214,775
Other receivables	231,331	-	-	-	85,252	7,727	1,125,686	-	1,448,996
Due from component units	51,414,597	-	35,744,478	5,296,785	-	-	6,659,126	(59,015,015)	40,099,971
Prepaid expenses and other assets	1,210,807	102,510	41,067	-	-	10,570	115,690	-	1,481,244
Current maturities of prepaid warranty management	-	-	-	-	-	-	-	-	-
Current portion of solar lease notes	-	-	-	-	967,530	-	-	-	967,530
Current portion of SBEA promissory notes	-	-	-	-	-	-	1,549,492	-	1,549,492
Current portion of program loans	3,973,024	-	-	-	-	163,527	260,064	-	4,396,615
Total current assets	65,145,253	115,032	36,053,884	5,646,830	1,052,782	630,598	11,130,682	(59,015,015)	60,760,046
Noncurrent Assets									
Portfolio investments	1	-	-	-	-	-	-	-	1
Bonds receivable	3,031,134	-	-	-	-	-	-	-	3,031,134
Prepaid warranty management, less current portion	-	-	-	-	-	-	-	-	-
Solar lease notes, less current portion	-	-	-	-	3,979,704	-	-	-	3,979,704
SBEA promissory notes, less current portion	-	-	-	-	-	-	968,608	-	968,608
Program loans, less current portion	75,465,156	-	-	-	-	1,729,352	4,090,698	-	81,285,206
Renewable energy credits	407,360	-	-	-	-	-	-	-	407,360
Investment in component units	100,100	-	-	-	-	-	100	(100,100)	100
Capital assets, net of depreciation and amortization	10,050,861	4,117,736	-	-	-	-	-	-	14,168,597
Restricted assets:									
Cash and cash equivalents	7,274,703	-	1,190,835	1,989,508	-	301,795	-	-	10,556,841
Total noncurrent assets	96,429,315	4,117,736	1,190,835	1,989,508	3,979,704	2,031,147	5,059,406	(100,100)	114,697,551
Total Assets	161,574,568	4,232,768	37,244,719	7,636,338	5,032,486	2,661,745	16,190,088	(59,115,115)	175,457,597
Deferred Outflows of Resources									
Deferred amount for pensions	6,265,821	-	-	-	-	-	-	-	6,265,821
Deferred amount for OPEB	5,189,388	-	-	-	-	-	-	-	5,189,388
Deferred amount for asset retirement obligations	-	-	-	-	-	-	-	-	-
Total Deferred Outflows of Resources	11,455,209	-	-	-	-	-	-	-	11,455,209
Liabilities and Net Position									
Liabilities									
Current maturities of long-term debt	\$ 645,916	\$ -	\$ 2,130,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,775,916
Current maturities of warranty management	-	-	-	-	-	-	-	-	-
Accounts payable and accrued expenses	7,205,709	-	78,267	5,477	-	21,206	38,426	-	7,349,085
Due to component units	413,431,837	5,181,401	-	-	5,349,768	2,462,500	5,010,084	(59,015,015)	302,575
Line of credit	100,000	-	-	6,000,000	-	-	-	-	6,100,000
Custodial liability	394,386	-	-	-	-	-	1,282,288	-	1,676,674
Unearned revenue	-	-	-	-	-	-	-	-	-
Total current liabilities	49,689,848	5,181,401	2,208,267	6,005,477	5,349,768	2,483,706	6,330,798	(59,015,015)	18,204,250
Asset retirement obligation									
Long-term debt, less current maturities	10,629,127	-	34,059,938	-	-	-	-	-	44,689,065
Warranty management, less current maturities	-	-	-	-	-	-	-	-	-
Fair value of interest rate swap	-	-	-	-	-	-	-	-	-
Pension liability	25,174,453	-	-	-	-	-	-	-	25,174,453
OPEB liability	28,484,971	-	-	-	-	-	-	-	28,484,971
Total noncurrent liabilities	64,288,551	-	34,059,938	-	-	-	-	-	98,348,489
Total Liabilities	113,978,399	5,181,401	36,268,205	6,005,477	5,349,768	2,483,706	6,330,798	(59,015,015)	116,552,739
Deferred Inflows of Resources									
Deferred amount for pensions	1,380,337	-	-	-	-	-	-	-	1,380,337
Deferred amount for OPEB	2,336,216	-	-	-	-	-	-	-	2,336,216
Total deferred inflows of resources	3,716,553	-	-	-	-	-	-	-	3,716,553
Net Position									
Net investment in capital assets	1,465,109	1,428,447	-	-	-	-	-	-	2,893,556
Restricted net position:									
Nonexpendable									
Restricted for energy programs	6,980,318	-	1,190,835	1,989,508	-	301,795	-	-	10,462,456
Unrestricted (deficit)	46,889,398	(2,377,080)	(214,321)	(358,647)	(317,282)	(93,758)	9,859,290	(100,100)	53,287,502
Total Net Position	\$ 55,234,825	\$ (948,633)	\$ 976,514	\$ 1,630,861	\$ (317,282)	\$ 208,039	\$ 9,859,290	\$ (100,100)	\$ 66,643,514

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

1. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Condensed, Combining Information - Statement of Revenues, Expenses and Changes in Net Position

	CGB	CGB Meriden Hydro LLC	SHREC ABS 1 LLC	SHREC Warehouse 1 LLC	CT Solar Lease 1 LLC	CT Solar Loan 1 LLC	CEFIA Holdings LLC	Eliminating Entries	Total Primary Government
Operating Revenues									
Utility remittances	\$ 24,854,150	\$	\$	\$	\$	\$	\$	\$	\$ 24,854,150
Interest income- promissory notes	5,473,427				315,001	140,904	175,958		6,105,290
Grant revenue	76,402								76,402
R/GI auction proceeds	4,581,628								4,581,628
Energy system sales							4,373,424		4,373,424
REC sales	905,001		5,179,976	1,890,384					7,975,361
Other income	1,062,661					924	545,845		1,609,430
Total operating revenues	36,953,269	-	5,179,976	1,890,384	315,001	141,828	5,095,227	-	49,575,685
Operating Expenses									
Cost of goods sold- energy systems							4,371,059		4,371,059
Provision for loan losses	3,999,439				318,802	48,914	595,188		4,962,343
Grants and incentive programs	17,313,711								17,313,711
Program administration expenses	11,273,193	47,1732	60,000	132,139	320,360	40,137	36,203		12,333,764
General and administrative expenses	6,678,242	3,976	3,626	1,514		5,034	9,274		6,701,666
Total operating expenses	39,264,585	475,708	63,626	133,653	639,162	94,085	5,011,724	-	45,682,543
Operating Income (Loss)	(2,311,316)	(475,708)	5,116,350	1,756,731	(324,161)	47,743	83,503	-	3,893,142
Nonoperating Revenue (Expenses)									
Interest income- short-term cash deposits	137,394		17,185	92		314	5,520		160,505
Interest expense long-term debt	(168,632)		(1,945,835)	(125,962)		(86,908)			(2,327,387)
Interest income- component units	66,327								66,327
Interest expense- component units									
Debt issuance costs	(18,800)								(18,800)
Payments to State of Connecticut									
Distributions to member									
Distributions to former member									
Realized and unrealized loss on investments	(106,957)								(106,957)
Unrealized gain (loss) on interest rate swap									
Total nonoperating revenue (expenses)	(90,718)	-	(1,928,650)	(125,870)	-	(86,594)	5,520	-	(2,226,312)
Change in Net Position before Capital Contributions	(2,402,034)	(475,708)	3,187,700	1,630,861	(324,161)	(38,851)	89,023	-	1,666,830
Capital Contributions									
Change in Net Position	(2,402,034)	(475,708)	3,187,700	1,630,861	(324,161)	(38,851)	89,023	-	1,666,830
Net Position - Beginning of Year	57,736,859	(472,925)	(2,211,186)		6,879	246,890	9,770,267	(100,100)	64,976,684
Net Position - End of Year	\$ 55,334,825	\$ (948,633)	\$ 976,514	1,630,861	\$ (317,282)	\$ 208,039	\$ 9,859,290	\$ (100,100)	\$ 66,643,514

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

1. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Condensed, Combining Information - Statement of Cash Flows

	CGB	CGB Meriden Hydro LLC	SHREC ABS 1 LLC	SHREC Warehouse 1 LLC	CT Solar Lease 1 LLC	CT Solar Loan 1 LLC	CEFIA Holdings LLC	Eliminating Entries	Total Primary Government
Cash Flows from Operating Activities									
Sales of energy systems	\$	\$	\$	\$	\$	\$	\$	\$	\$
Sales of Renewable Energy Credits	260,400		5,179,976	1,890,384			4,514,823		4,514,823
Utility company remittances	24,533,339								7,330,760
Grants disbursed	59,221								24,533,339
RGGI auction proceeds	4,595,579								59,221
Other income	1,395,643					924	159,485		4,595,579
Lease payments received									1,556,052
Interest income on promissory notes	5,473,427				315,000	140,904	17,958		-
Program administrative expenses	(11,053,546)	(337,467)	(60,000)	(128,806)	(228,922)	(20,552)	(29,469)		6,105,289
Grants, incentives and credit enhancements	(17,442,801)								(11,858,752)
Purchases of energy equipment							(4,371,059)		(17,442,801)
General and administrative expenditures	(2,723,110)	(3,976)	(6,992)	(1,514)		(5,032)	(9,271)		(4,371,059)
Net cash provided by (used in) operating activities	5,098,152	(341,433)	5,112,984	1,760,064	86,078	116,244	440,467		(2,749,895)
Cash Flows from Noncapital Financing Activities									
Payments to State of Connecticut									
Funds received (disbursed) from escrow and custodial accounts	(183,384)						(3,437)		-
Advances (repayments) to/from CGB component units	9,013,694	321,220	(3,400,000)	(5,296,785)	(1,025,008)	1,215,000	(1,027,443)		(217,771)
Advances repaid (disbursed) to third-party capital providers	(42,019)						543,635		(199,322)
Net cash provided by (used in) noncapital financing activities	8,738,291	321,220	(3,400,000)	(5,296,785)	(1,025,008)	1,215,000	(518,195)		501,616
Cash Flows from Capital and Related Financing Activities									
Purchase of capital assets	(3,080,891)								(3,080,891)
Disposals of capital assets	374								374
Proceeds from short-term debt	5,000,000			6,000,000					11,000,000
Repayment of short-term debt	(4,900,000)								(4,900,000)
Proceeds from long-term debt									-
Repayment of long-term debt	(1,625,017)		(2,243,000)			(1,664,246)			(5,532,263)
Debt issuance costs	(18,800)								(18,800)
Interest expense	(176,726)		(1,945,495)	(123,818)	(20,998)	(86,909)			(2,353,946)
Capital contributions from Firstar Development, LLC									-
Return of capital to Connecticut Innovations									-
Return of capital to Firstar Development, LLC									-
Net cash provided by (used in) capital and related financing activities	(4,801,060)	-	(4,188,495)	5,876,182	(20,998)	(1,751,156)			(4,885,526)
Cash Flows from Investing Activities									
Gains and losses on investments									
Loan losses	(53,265)						21,853		(31,412)
Return of principal on WC & program loans	3,853,009				959,928	424,864	1,839,466		6,877,267
Interest on short-term investments, cash, solar lease notes and loans, net	(362,335)		17,185	92		1,328	(89,284)		(433,014)
Purchase of SBEA loan portfolios							(1,011,807)		(1,011,807)
CPACE program loan disbursements	(5,525,600)								(5,525,600)
Grid Tied program loan disbursements									-
Commercial Solar Loan program disbursements							(4,688,408)		(4,688,408)
Residential Solar Loan program disbursements	(15,307,292)								(15,307,292)
Net cash provided by (used in) investing activities	(17,595,483)		17,185	92	959,928	426,192	(3,928,180)		(20,120,266)
Net Increase (Decrease) in Cash and Cash Equivalents	(8,510,100)	(20,213)	(2,458,326)	2,339,553		6,281	(4,005,908)		(12,648,713)
Cash and Cash Equivalents - Beginning of Year	19,285,185	32,735	3,916,900			744,288	4,999,776		28,978,884
Cash and Cash Equivalents - End of Year	\$ 10,775,085	\$ 12,522	\$ 1,458,574	\$ 2,339,553	\$ -	\$ 750,569	\$ 993,868	\$ -	\$ 16,330,171

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

1. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Measurement Focus, Basis of Accounting and Financial Statement Presentation

All entities are enterprise funds. Enterprise funds are used to account for governmental activities that are similar to those found in the private sector in which the determination of net income is necessary or useful to sound financial administration.

Basis of Presentation

These financial statements are reported using the economic resources measurement focus and accrual basis of accounting. Revenues are recognized when earned, and expenses are recognized when the liability is incurred, regardless of the timing of the related cash flows.

Revenue Recognition

The Green Bank, in addition to utility assessments and RGGI auction income, recognizes revenue from grants as expenses are incurred, as well as interest income from C-PACE and program loans as earned.

CT Solar Loan I LLC derives revenue from interest earned on residential solar loan products.

CEFIA Holdings LLC derives revenue from the sales of photovoltaic energy systems to CT Solar Lease 2 LLC. This amount was eliminated to arrive at the total reporting entity revenue.

CEFIA Solar Services, Inc., revenue consists of an administrative fee from CT Solar Lease 2 LLC. This amount was eliminated to arrive at the total reporting entity revenue.

CT Solar Lease 2 LLC derives revenue from the following sources: operating leases, energy generation, performance based incentives (PBIs) and the sale of Solar Renewable Energy Certificates (SRECs) to third parties.

CT Solar Lease 3 LLC derives revenue from the following sources: energy generation and the sale of Solar Renewable Energy Certificates (SRECs) to third parties.

CGB Meriden Hydro derives revenue from the following sources: energy generation and the sale of Solar Renewable Energy Certificates (SRECs) to third parties.

CGB KCF LLC will have no revenue. All interest in the Kresge loan facility has been transferred to Inclusive Prosperity Capital.

SHREC ABS 1 LLC derives revenue from interest income and the sale of Solar Home Renewable Energy Certificates (SHRECs) to two Connecticut utilities for two tranches of approximately 14,000 rooftop PV systems. Proceeds are directed to trustee accounts and are used for quarterly bond payments on the SHREC ABS collateralized note.

CT Solar Lease 1 derives revenue from interest income from residential solar lease promissory notes secured by specific PV equipment leases (Note 6 - Solar Lease Notes Receivable).

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

1. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

SHREC Warehouse 1 LLC derives revenue from interest income and the sale of SHRECs to two Connecticut utilities for a tranche of approximately 4,800 rooftop PV systems. Proceeds are retained in a restricted bank account by Webster Bank as security for the loan facility for which the revenues have been pledged.

Rental income from operating leases for residential and certain commercial scale solar facilities is recognized on a straight-line basis over the term of each underlying lease.

Energy generation revenue will be recognized as electricity is generated, based on actual output and contractual prices set forth in long term PPAs associated with certain commercial scale facilities.

Revenue from the sale of SRECs and SHRECs to third parties is recognized upon the transfer of title and delivery of the SRECs to third parties and is derived from contractual prices set forth in SREC sale agreements associated with commercial scale facilities.

Operating vs. Nonoperating Revenue (Expense)

All entities distinguish operating revenues and expenses from nonoperating items. Operating revenues consist of utility customer assessments, grants for operating activities and other revenue generated in connection with investments in clean energy programs. Operating expenses consist of operating costs, including depreciation on capital assets and grants and programs. Nonoperating revenue (expense) consists of investment earnings, and other items not considered operational by management.

Use of Accounting Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenditures/expenses during the reporting period. Actual results could differ from those estimates.

Use of Restricted vs. Nonrestricted Resources

When both restricted and unrestricted amounts are available for use, the policy is to use restricted resources for their intended purposes first and then unrestricted resources.

Cash and Cash Equivalents

Cash equivalents consist of cash and highly liquid short-term investments with an original term of 90 days when purchased and are recorded at cost, which approximates fair value.

Capital Assets

Capital asset acquisitions exceeding \$1,000 are capitalized at cost. Maintenance and repair expenses are charged to operations when incurred. Depreciation is computed using straight-line methods over the estimated useful lives of the assets, which range from two to thirty years. Leasehold improvements are amortized over the shorter of their useful life or the lease term.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

1. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

The estimated useful lives of capital assets are as follows:

<u>Asset</u>	<u>Years</u>
Solar lease equipment	30 years
Hydroelectric equipment	30 years
Furniture and equipment	5 years
Leasehold improvements	5 years
Computer hardware and software	2-3 years

For capital assets sold or otherwise disposed of, the cost and related accumulated depreciation and amortization are removed from the accounts, and any related gain or loss is reflected in income for the period.

All solar facilities are owned by CT Solar Lease 2 LLC and CT Solar Lease 3 LLC and are stated at cost and include all amounts necessary to construct them. Systems are placed in service when they are ready for use and all necessary approvals have been received from local utility companies. Additions, renewals, and betterments that significantly extend the life of an asset are capitalized. Expenditures for warranty maintenance and repairs to solar facilities are charged to expense as incurred.

Deferred Outflows/Inflows of Resources

In addition to assets, the consolidating statement of financial position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position that applies to a future period or periods and so will not be recognized as an outflow of resources (expense) until then. The Green Bank reports deferred outflows related to pension and OPEB in the statement of net position which result from differences between expected and actual experience, changes in assumptions or other inputs, and contributions after the measurement date. These amounts are deferred and included in pension expense and OPEB expense in a systematic and rational manner over a period equal to the average of the expected remaining service lives of all employees that are provided with benefits. The Green Bank also reports deferred amounts relates to asset retirement obligations in the statement of net position, which results from a known future liability to retire certain assets.

In addition to liabilities, the statement of financial position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position or fund balance that applies to a future period or periods and so will not be recognized as an inflow of resources (revenue) until that time. The Green Bank reports deferred inflows of resources related to pensions and OPEB in the consolidated statement of net position which result from differences between expected and actual experience, changes in assumptions or other inputs. These amounts are deferred and included in pension and OPEB expense in a systematic and rational manner over a period equal to the average of the expected remaining service lives of all employees that are provided with benefits.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

1. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Impairment of Long-Lived Assets

CT Solar Lease 2 LLC (CT SL2) and CT Solar Lease 3 LLC (CT SL3) review their solar facilities for impairment whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. When recovery is reviewed, if the undiscounted cash flows estimated to be generated by an asset is less than its carrying amount, management compares the carrying amount of the asset to its fair value in order to determine whether an impairment loss has occurred. The amount of the impairment loss is equal to the excess of the asset's carrying value over its estimated fair value. No impairment loss was recognized by CT SL2 or CT SL3 during the fiscal year ended June 30, 2020.

Asset Retirement Obligations

CT SL2 and CT SL3 are required to recognize their liability related to asset retirement obligations when they have the legal obligation to retire long-lived assets. Upon the expiration of operating leases or a Power Purchase Agreement's (PPA's) initial or extended terms, customers generally have the option to purchase the solar facilities at fair market value or require CT SL2 or CT SL3 to remove the solar facilities at their expense.

Asset retirement obligations are recorded in the period in which they are incurred and reasonably estimable, including those obligations for which the timing method of settlement are conditional on a future event that may or may not be in the control of CT SL2 or CT SL3. Retirement of assets may involve efforts to remove the solar facilities depending on the nature and location of the assets. In identifying asset retirement obligations, CT SL2 and CT SL3 consider identification of legally enforceable obligations, changes in existing law, estimates of potential settlement dates, and the calculation of an appropriate discount rate to be used in calculating the fair value of the obligations. For those assets where a range of potential settlement dates may be reasonably estimated, obligations are recorded. CT SL2 and CT SL3 routinely review and reassess their estimates to determine if an adjustment to the value of asset retirement obligations is required.

The aggregate carrying amount of asset retirement obligations recognized by CT SL2 and CT SL3 was \$3,919,988 and \$3,824,355 at June 30, 2020 and June 30, 2019, respectively. The following table shows changes in the aggregate carrying amount of CT SL2 and CT SL3's asset retirement obligation for the year ended June 30, 2020:

Balance - June 30, 2019	\$	3,824,355
Accretion expense		<u>95,633</u>
Balance - June 30, 2020	\$	<u>3,919,988</u>

The Green Bank also records a deferred outflow of resources related to this asset retirement obligation. The outflow is being recognized in a systematic and rational manner over the estimated useful life of the tangible capital assets for which the asset retirement obligation relates. A portion of the deferred outflow is recognized each year as an outflow (expense) based upon actual costs incurred that year. The total remaining deferred outflow at June 30, 2020 is \$2,658,143 in the statement of net position.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

1. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Pension Accounting

The Green Bank's proportionate share of the net pension liability and expense associated with the Green Bank's requirement to contribute to the Connecticut State Employees Retirement System (SERS) have been determined on the same basis as they are reported by SERS. Contributions made to SERS after the measurement date and prior to the Green Bank's fiscal year are reported as deferred outflows of resources.

OPEB Accounting

The Green Bank's proportionate share of the net OPEB liability and expense associated with the Green Bank's requirement to contribute to the State of Connecticut Other Post-Employment Benefits Program have been determined on the same basis as they are reported by State of Connecticut Other Post-Employment Benefits Program. Contributions made to the State of Connecticut Other Post-Employment Benefits Program after the measurement date and prior to the Green Bank's fiscal year are reported as deferred outflows of resources.

Portfolio Investments

The Green Bank carries all investments at fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer liability by in an orderly transaction between market participants at the measurement date. As discussed in Note 4, the Green Bank's portfolio investments are managed by CI. Fair value is determined by CI's independent valuation committee (Committee) using United States Private Equity Valuation Guidelines promulgated by the Private Equity Investment Guidelines Group. In the absence of readily determinable market values, the Committee gives consideration to pertinent information about the companies comprising these investments, including, but not limited to, recent sales prices of the issuer's securities, sales growth, progress toward business goals and other operating data. CI has applied procedures in arriving at the estimate of the value of such securities that it believes are reasonable and appropriate. Green Bank management reserves the right to establish a reserve in addition to the reserve recommended by the Committee to further account for current market conditions and volatility. Due to the inherent uncertainty of valuation, those estimated values may differ significantly from the amounts ultimately realized from the investments, and the differences could be material. The Green Bank reports gains as realized and unrealized consistent with the practice of venture capital firms. The calculation of realized gains and losses is independent of the calculation of the net change in investment value.

All of the Green Bank's portfolio investments are uninsured against loss and unregistered, and are held in CI's name since the investments were made when the Green Bank's predecessor, the Connecticut Clean Energy Fund, was administered by CI.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

1. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Net Position

Net position is presented in the following three categories:

- *Investment in Capital Assets* represent capital assets, net of accumulated depreciation and amortization that are attributable to those particular assets.
- *Restricted Net Position* represent assets whose use is restricted through external restrictions imposed by creditors, grantors, contributors and the like, or through restrictions imposed by laws or through constitutional provisions or enabling legislature, and includes equity interest within the Green Bank's component units by outside entities.
- *Unrestricted Net Position* represents assets which do not meet the definition of the two preceding categories.

Grants and Programs

Expenditures for grants and programs are recorded upon the submission of invoices and other supporting documentation and approval by management. Salaries, benefits and overhead expenses are allocated to program expenses based on job functions.

Reclassifications

Certain amounts in the 2019 summarized information have been reclassified to conform to the 2020 presentation.

Subsequent Events

The Green Bank has performed a review of events subsequent to the statement of net position date through **October XX, 2020**, the date the financial statements were available to be issued. See Note 22 for further discussion.

2. FAIR VALUE MEASUREMENTS

The framework for measuring fair value provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements); followed by quoted prices in inactive markets or for similar assets or with observable inputs (Level 2 measurements); and the lowest priority to unobservable inputs (Level 3 measurements). In determining fair value, the Green Bank utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs. The Green Bank also considers nonperformance risk in the overall assessment of fair value.

**CONNECTICUT GREEN BANK
 NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
 FOR THE YEAR ENDED JUNE 30, 2020**

2. FAIR VALUE MEASUREMENTS (CONTINUED)

Investments are measured at fair value utilizing valuation techniques based on observable and/or unobservable inputs. Observable inputs reflect readily obtainable data from independent sources, while unobservable inputs reflect market assumptions. These inputs are classified into the following hierarchy:

Level 1

Unadjusted quoted prices in active markets that are accessible at the measurement date for identical assets or liabilities.

Level 2

Inputs other than quoted prices in active markets for identical assets and liabilities that are observable either directly or indirectly for substantially the full term of the asset or liability. Level 2 inputs include the following:

- Quoted prices for similar assets or liabilities in active markets
- Quoted prices for identical or similar assets or liabilities in markets that are not active
- Observable inputs other than quoted prices that are used in the valuation of the asset or liability (e.g., interest rate and yield curve quotes at commonly quoted intervals)
- Inputs that are derived principally from or corroborated by observed market data by correlation or other means

Level 3

Unobservable inputs for the asset or liability (supported by little or no market activity). Level 3 inputs include management's own assumptions about the assumptions that market participants would use in pricing the asset or liability (including assumptions about risk).

The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

The following table sets forth by level, within the fair value hierarchy, the Green Bank's fair value measurements at June 30, 2020:

Investment Assets at Fair Value as of June 30, 2020				
	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
Portfolio Investments	\$ -	\$ -	\$ 1	\$ 1

The following table sets forth by level, within the fair value hierarchy, the Green Bank's fair value measurements at June 30, 2019:

Investment Assets at Fair Value as of June 30, 2019				
	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
Portfolio Investments	\$ -	\$ -	\$ 1	\$ 1

There were no transfers between levels during the years ended June 30, 2020 and 2019.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

3. CASH AND CASH EQUIVALENTS

The following is a summary of cash and cash equivalents for the reporting entity at June 30:

	<u>2020</u>	<u>2019</u>
Checking	\$ 5,744,016	\$ 6,573,239
Money market	1,828,063	5,821,080
State Treasurer's Short-Term Investment Fund	<u>584,014</u>	<u>6,552,895</u>
Unrestricted cash and cash equivalents	8,156,093	18,947,214
Checking - restricted	3,801,285	5,500,822
Money market - restricted	6,413,985	5,112,047
State Treasurer's Short-Term Investment Fund - restricted	<u>4,694,238</u>	<u>6,054,928</u>
Total Cash and Cash Equivalents	<u>\$ 23,065,601</u>	<u>\$ 35,615,011</u>

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**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

3. CASH AND CASH EQUIVALENTS (CONTINUED)

	Cash and Cash Equivalents as of June 30, 2020				
	Primary Government	CT Solar Lease 2 LLC	CEFIA Solar Services, Inc.	CT Solar Lease 3 LLC	Total
Checking	\$ 4,292,294	\$ 930,464	\$ 103,372	\$ 417,886	\$ 5,744,016
Money market	597,022	460,227	20,155	750,659	1,828,063
State Treasurer's Short-Term Investment Fund	584,014				584,014
Unrestricted cash and cash equivalents	5,473,330	1,390,691	123,527	1,168,545	8,156,093
Restricted cash:					
Checking	2,578,285	1,140,000	83,000		3,801,285
Money market	3,584,318	2,829,667			6,413,985
State Treasurer's Short-Term Investment Fund	4,694,238				4,694,238
Restricted cash and cash equivalents	10,856,841	3,969,667	83,000	--	14,909,508
Total	\$ 16,330,171	\$ 5,360,358	\$ 206,527	\$ 1,168,545	\$ 23,065,601

	Cash and Cash Equivalents as of June 30, 2019				
	Primary Government	CT Solar Lease 2 LLC	CEFIA Solar Services, Inc.	CT Solar Lease 3 LLC	Total
Checking	\$ 5,559,529	\$ 642,875	\$ 51,835	\$ 319,000	\$ 6,573,239
Money market	4,941,502	809,294	70,023	261	5,821,080
State Treasurer's Short-Term Investment Fund	6,552,895				6,552,895
Unrestricted cash and cash equivalents	17,053,926	1,452,169	121,858	319,261	18,947,214
Restricted cash:					
Checking	4,277,822	1,140,000	83,000		5,500,822
Money market	1,592,208	3,519,839			5,112,047
State Treasurer's Short-Term Investment Fund	6,054,928				6,054,928
Restricted cash and cash equivalents	11,924,958	4,659,839	83,000	--	16,667,797
Total	\$ 28,978,884	\$ 6,112,008	\$ 204,858	\$ 319,261	\$ 35,615,011

State Treasurer's Short-Term Investment Fund

The State Treasurer's Short-Term Investment Fund is a Standard & Poor's AAAM investment pool of high-quality, short-term money market instruments managed by the Cash Management Division of the State Treasurer's Office and operates in a manner similar to money market mutual funds. It is the investment vehicle for the operating cash of the State of Connecticut Treasury, state agencies and authorities, municipalities, and other political subdivisions of the State. The value of the Green Bank's position in the pool is the same as the value of pool shares. Regulatory oversight is provided by an investment advisory council and the State Treasurer's Cash Management Board.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

3. CASH AND CASH EQUIVALENTS (CONTINUED)

Investment Maturities

The State Treasurer's Short-Term Investment Fund itself has no maturity date and is available for withdrawal on demand.

Interest Rate Risk

The Green Bank manages its exposure to declines in fair value by limiting the average maturity of its cash and cash equivalents to no more than one year. The Green Bank does not have a formal policy relating to a specific investment related risk.

Credit Risk

Connecticut General Statutes authorize the Green Bank to invest in obligations of the U.S. Treasury including its agencies and instrumentalities, commercial paper, banker's acceptance, repurchase agreements and the State Treasurer's Short-Term Investment Fund.

Investment ratings for the Fund's investment are as follows:

	<u>Standard & Poor's</u>
State Treasurer's Short-Term Investment Fund	AAAm

Concentration of Credit Risk

The Green Bank's investment policy does not limit the investment in any one investment vehicle. The State Treasurer's Short-term Investment Fund is not subject to this disclosure.

Custodial Credit Risk - Deposits

In the case of deposits, this represents the risk that, in the event of a bank failure, the Green Bank's deposits may not be returned to it. The Green Bank does not have a deposit policy for custodial credit risk. As of June 30, 2020 and 2019, \$14,005,899 and \$19,547,165, respectively, of the Green Bank's bank balances were exposed to custodial credit risk. Primary government consisted of \$8,366,995 and \$13,849,709 as of June 30, 2020 and 2019, respectively. CT Solar Lease 2 LLC consisted of \$4,720,359 and \$5,628,195 as of June 30, 2020 and 2019, respectively. CEFIA Solar Services, Inc. consisted of \$-0- as of June 30, 2020 and 2019. CT Solar Lease 3 LLC consisted of \$918,545 and \$69,261 as of June 30, 2020 and 2019, respectively. Funds held by banks on behalf of the Green Bank, CT Solar Lease 2 LLC and CEFIA Solar Services included contractual requirements to maintain \$10,858,009 in deposits with financial institutions participating in various lease and loan programs, representing loan loss and lease maintenance reserves and guaranty pledge accounts.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

3. CASH AND CASH EQUIVALENTS (CONTINUED)

Custodial Credit Risk - Investments

For an investment, this represents the risk that, in the event of the failure of the counterparty, the Green Bank will not be able to recover the value of the investment. The Green Bank does not have a policy relating to the credit risk of investments. As of June 30, 2020 and 2019, the Green Bank had no reportable credit risk.

4. PORTFOLIO INVESTMENTS

The former Connecticut Clean Energy Fund (CCEF) invested in emerging technology companies as equity and debt investments in Operational Demonstration projects. Based on a memorandum of understanding between the Green Bank and CI, CI manages these investments on behalf of the Green Bank.

5. BONDS RECEIVABLE

Subordinate Series 2014B-1 and 2014C-1

This Series represents two \$800,000 bonds received in connection with the Green Bank's May 2014 sale of C-PACE loans to Clean Fund Holdings, LLC (CFH). CFH paid the Green Bank approximately \$6.4 million in cash along with two bonds issued to the Green Bank through Public Finance Authority. The 2014 Series bonds carry interest of 5.30% per annum with a maturity date of September 10, 2034. The bonds are secured by the C-PACE loans sold to CFH. The Green Bank received a principal repayment of \$38,075 and \$8,858 as a result of a C-PACE loan payoff in 2020 and 2016, respectively. As of June 30, 2020, management believes no valuation allowance is necessary on these bonds.

Each bond required semi-annual interest-only payments to the Green Bank starting September 10, 2014 and continuing to September 10, 2034. Starting March 10, 2030 and every six months thereafter, principal payments, along with the required interest is to be paid to the Green Bank.

Subordinate Series 2015B-1 and 2015C-1

This Series represents two \$955,000 bonds received in connection with the Green Bank's August 2015 sale of C-PACE Loans to Clean Fund Holdings, LLC (CFH). CFH paid the Green Bank approximately \$7.7 million in cash along with two bonds issued to the Green Bank through Public Finance Authority. The 2015 Series bonds carry interest of 5.52% per annum with a maturity date of August 13, 2035. The bonds are secured by the C-PACE loans sold to CFH. The Green Bank received principal repayments of \$37,207, \$19,938 and \$81,877 for each bond as a result of C-PACE loan payoffs in 2020, 2019 and 2017, respectively. As of June 30, 2020, management believes no valuation allowance is necessary on these bonds.

Each bond required semi-annual interest-only payments to the Green Bank starting September 10, 2015 and continuing to August 13, 2035. Starting September 10, 2032 and every six months thereafter, principal payments, along with the required interest is to be paid to the Green Bank.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
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5. BONDS RECEIVABLE (CONTINUED)

Principal maturities of these bonds are as follows:

<u>Year Ending June 30,</u>	<u>2014B-1</u>	<u>2014C-1</u>	<u>2015B-1</u>	<u>2015B-1</u>	<u>Total</u>
2021	\$	\$	\$	\$	\$
2022					-
2023					-
2024					-
2025					-
2026 - 2030	30,000	30,000			60,000
2031 - 2035	723,067	723,067	632,500	632,500	2,711,134
2036			130,000	130,000	260,000
	<u>\$ 753,067</u>	<u>\$ 753,067</u>	<u>\$ 762,500</u>	<u>\$ 762,500</u>	<u>\$ 3,031,134</u>

6. SOLAR LEASE NOTES RECEIVABLE

In June of 2008, the predecessor of the Green Bank, the Connecticut Clean Energy Fund (CCEF) entered into a Master Lease Program Agreement with CT Solar Leasing LLC, a third-party leasing company, AFC First Financial Corporation, a third-party servicer and Firststar Development LLC, the tax equity investor, to develop a residential solar PV leasing program in Connecticut. CCEF purchased a total of \$13,248,685 of promissory notes issued by CT Solar Leasing LLC during the period commencing in April of 2009 and ending in February of 2012 to fund the program. Each nonrecourse promissory note is secured by the payments under a specific PV equipment lease, with a rate of interest of 5% and a term of 15 years. Future principal repayments under the program and the current loss reserve are as follows:

Future Principal Repayments

2021	\$ 967,530
2022	1,013,894
2023	1,032,531
2024	1,063,897
2025	821,822
Thereafter	430,031
	<u>5,329,705</u>
Less reserve for losses	<u>(382,471)</u>
	<u>\$ 4,947,234</u>
Current portion	\$ 967,530
Noncurrent portion	<u>3,979,704</u>
	<u>\$ 4,947,234</u>

CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020

7. PROGRAM LOANS RECEIVABLE

Outstanding principal balances by program for the years ended June 30, 2020 and 2019, are as follows:

	<u>2020</u>	<u>2019</u>
Loans in repayment for completed projects:		
Connecticut Green Bank		
C-PACE Program benefit assessments - in repayment	\$ 33,956,989	\$ 36,373,428
C-PACE Lending Facility	2,000,000	
Grid-Tied Program term loans	10,684,289	12,197,048
Multifamily/Affordable housing program loans	26,175,211	16,681,271
Alpha/Operational Demonstration program loans	650,000	650,000
Other program loans	1,428,080	1,523,432
CT Solar Loan I LLC		
Residential Solar PV Program loans-in repayment	1,941,793	2,369,799
CEFIA Holdings LLC		
Other program loans	4,579,752	
	<u>81,416,114</u>	<u>69,794,978</u>
Reserve for loan losses	(13,110,162)	(8,890,602)
Total loans in repayment for completed projects, net	<u>68,305,952</u>	<u>60,904,376</u>
Loan advances for projects under construction:		
Connecticut Green Bank		
C-PACE Program benefit assessments - under construction	13,144,102	7,097,743
Grid-Tied Program term loans - under construction	4,231,767	554,827
Total loans advances for projects under construction	<u>17,375,869</u>	<u>7,652,570</u>
Total	<u>\$ 85,681,821</u>	<u>\$ 68,556,946</u>
Current portion	\$ 4,396,615	\$ 3,756,932
Noncurrent portion	<u>81,285,206</u>	<u>64,800,014</u>
	<u>\$ 85,681,821</u>	<u>\$ 68,556,946</u>

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

7. PROGRAM LOANS RECEIVABLE (CONTINUED)

Scheduled repayments of principal under these loans in repayment as of June 30, 2020 is as follows:

	2021	2022	2023	2024	2025	Thereafter	Total
Connecticut Green Bank							
C-PACE Program benefit assessments- in repayment	\$ 1,834,368	\$ 1,936,110	\$ 2,042,488	\$ 2,133,528	\$ 2,177,722	\$ 23,832,773	\$ 33,956,989
C-PACE Lending Facility					2,000,000		2,000,000
Grid-Tied Program term loans	982,111	1,054,218	1,132,578	1,217,350	1,310,262	4,987,770	10,684,289
Multifamily/Affordable housing term loans	1,148,635	17,544,179	1,238,003	1,371,305	1,197,447	3,675,642	26,175,211
Alpha/Operational Demonstration program loans			650,000				650,000
Other program loans	56,285	87,279	118,580	135,701	82,504	947,731	1,428,080
CT Solar Loan I LLC							
Residential Solar PV Program loans - in repayment	163,527	173,390	183,512	195,337	204,816	1,021,211	1,941,793
CEFIA Holdings LLC							
Other program loans	260,064	279,058	291,257	301,425	309,557	3,138,391	4,579,752
	4,444,990	21,074,234	5,656,418	5,354,646	7,282,308	37,603,518	81,416,114
Reserve for loan losses	(48,375)	(2,520,888)	(589,177)	(54,560)		(9,897,162)	(13,110,162)
	<u>\$ 4,396,615</u>	<u>\$ 18,553,346</u>	<u>\$ 5,067,241</u>	<u>\$ 5,300,086</u>	<u>\$ 7,282,308</u>	<u>\$ 27,706,356</u>	<u>\$ 68,305,952</u>

CPACE Program Benefit Assessments

Benefits assessments under the C-PACE program finance energy efficiency upgrades and the installation of renewable energy equipment on non-residential property. These assessments carry interest rates ranging from 5.0% to 9.0% with terms ranging from 10 to 26 years. On April 18, 2019 the Green Bank repurchased 37 benefit assessments from a third-party capital provider and cancelled the CPACE promissory notes. These benefit assessments carry interest rates ranging from 7.1% to 14.4% and mature at various intervals commencing on September 10, 2036 and ending on March 10, 2037.

CPACE Lending Facility

The Green Bank has advanced \$2,000,000 of a \$5,000,000 CPACE lending facility to a third-party capital provider to finance projects in their CPACE lending program. The loan is interest only paid semi-annually in arrears at a rate of 6.1% beginning December 31, 2020. The facility matures on June 20, 2025 with the option of one five-year extension.

Grid-Tied Program Loans

Grid-tied term loans represent the financing of three projects. The first project is the 15-megawatt Bridgeport Fuel Cell Park from Project 150. The primary term loan carries an interest rate of 8% with interest and principal repaid on a monthly basis for a term of 7 years. There is a secondary \$1,800,000 term loan where interest is paid monthly on the outstanding principal balance at a rate of 5.0%, increasing to 8% during 2020, with principal payments beginning in 2026. The second project is a 5 mega-watt wind turbine facility in Colebrook, CT. Interest on a revolving term loan is paid quarterly at prime plus 3%. Interest on a nonrevolving term loan is paid quarterly based on the project's cash flows. The minimum rate of interest on the nonrevolving term loan is 10%. Both loans mature 15 years from the date the project was placed in service in November 2015. As of June 30, 2020 the nonrevolving loan has been paid in full. The third project is an anaerobic digestion facility located in Southington, CT. The term loan carries an interest rate of 2% and interest and principal are repaid on a quarterly basis. Commencing on May 1, 2018 the borrower is required to make annual payments against principal equal to 50% of excess project cash flow as defined in the loan agreement.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
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7. PROGRAM LOANS RECEIVABLE (CONTINUED)

Multifamily/Affordable Housing Loans

Affordable Housing initiatives include providing term loans to two third-party capital providers to finance solar PV installations and energy efficiency measures for low to moderate income households.

Under the first initiative through June 30, 2020, the Green Bank has advanced all funds under a \$15,000,000 term financing facility with an interest rate of 7.5% payable monthly. The maturity date of all advances under this facility is December 12, 2021. Under another agreement with the same capital provider, the Green Bank has entered into a \$5,000,000 revolving financing facility secured by Performance Based Incentive earnings of the capital provider. Five advances totaling \$5,157,523 have been disbursed. The total of the advances exceeds the total facility limit due its revolving feature which allows repaid funds to be redrawn provided that the outstanding facility balance does not exceed \$5,000,000 at any point in time. Each facility advance repays principal and interest monthly, with a rate of 7.5% and a term of 6 years. Maturity dates range from December 2024 to April 2026.

Under the second initiative, on March 18, 2020 the Green Bank closed a \$6,500,000 facility with a third-party capital provider and moved the existing loan balances of \$3,006,336 under the facility. All notes carry an interest rate of 3% payable along with principal on a monthly basis. The notes have terms of 20 years with maturities ranging from December 2025 to March 2040. As of June 30, 2020 the facility balance is \$4,402,120. On December 24, 2019 the Green Bank closed an additional \$4,500,000 facility with the same capital provider to house, administer, originate and underwrite loans under the Energy Efficiency Loan Program funded by Eversource. Upon closing the outstanding short-term loan of \$1,500,000 was moved under the facility. As of June 30, 2020 the facility balance is \$2,556,000. The loan has a maturity date of December 24, 2022 and a variable interest rate of the higher of prime plus 0.50% or 3.5%.

The Green Bank also originates Multifamily pre-development loans which are advances to developers and owners of multifamily residences to provide funding for project feasibility and site development work. Loans mature in two years and carry no interest. As of June 30, 2020 and June 30, 2019, \$316,067 and \$225,889 has been advanced under this program, respectively.

Alpha/Operational Demonstration Program Loans

Operational demonstration program loans are residual transactions of the programs of the Connecticut Clean Energy Fund. The loans finance the development of emerging clean energy technologies. Repayment of each loan is based upon the commercial success of the technology and carries an interest rate of 6%. If commercial success is not achieved after ten years from the date of the loan agreement, the loan converts to a grant. Connecticut Innovations assists in overseeing these loans.

Other Program Loans

Other program loans represent the financing of feasibility studies for various renewable energy projects or energy efficiency upgrades. This category also includes loans to two third parties to finance purchase of solar facilities developed by the Green Bank. The loans with the first lender carry an interest rate of 5.25% payable along with principal on a quarterly basis for a term of 15 years. As of June 30, 2020 and June 30, 2019 the loan balances were \$1,825,759 and \$987,960, respectively. The loans with the second lender carry an interest rate of 5.5% payable along with principal on a quarterly basis for a term of 15 years. As of June 30, 2020 \$3,697,376 is outstanding on these loans.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
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7. PROGRAM LOANS RECEIVABLE (CONTINUED)

Residential Solar PV Loans

The residential solar PV loan program administered by CT Solar Loan I LLC makes loans to residential property owners for solar PV installations. Loans carry an interest rate ranging from 6.49% to 6.75% with a term of 15 years.

8. SBEA PROMISSORY NOTES RECEIVABLE

In December of 2018 the Green Bank and Amalgamated Bank entered into a Master Purchase and Servicing Agreement with The Connecticut Light and Power Company dba Eversource Energy to purchase Small Business Energy Advantage (SBEA) loans. The loans are non-interest bearing for a term of up to 48 months. Eversource sells loans in tranches with the purchase price being determined by discounting each loan. A 4.4% discount, or the initial discount rate, was used for the initial purchase plus all purchases in the first year. For loans purchased after the first anniversary of the initial purchase date, the discount is equal to Thirty-Day LIBOR plus 2.25%, or the ensuing discount rate. Amalgamated Bank purchases 90% of the loan portfolio and the Green Bank purchases 10%. Eversource collects monthly payments on customer utility bills and remits to the Green Bank and Amalgamated Bank. Amalgamated Bank receives 90% of the scheduled loan payments, with the Green Bank's payment being adjusted for any shortfall or overage. In the event of default, the loans are fully backed by the Energy Conservation and Load Management Fund a/k/a Connecticut Energy Efficiency Fund (CEEF) that will reimburse the Green Bank. Accordingly, there has been no loan loss reserve until June of 2020, when CEFIA Holdings LLC decided to record a \$366,200 loan loss reserve as a result of COVID-19. The reserve is meant to absorb the potential short-term cash shortfall that will be incurred by CEFIA Holdings LLC if customers are unable to pay their loans and request a three-month deferral of payment which is being offered by Eversource to customers who demonstrate need. It was CEFIA Holdings LLC's expectation that a portion of the portfolio may be deferred, and as a result, the reserve was established to cover the periods prior to reimbursement from CEEF.

On October 21, 2019 the Green Bank and CEFIA Holdings LLC entered into an Assignment and Assumption Agreement with Amalgamated Bank and The Connecticut Light and Power Company whereby the Green Bank assigned its interests in the Master Purchase and Servicing Agreement to CEFIA Holdings LLC. All qualifying loans that were purchased by the Green Bank under the Master Agreement prior to October 2019 were transferred to CEFIA Holdings LLC along with all the duties and obligations required of the Green Bank under the original Master Purchase Agreement.

During 2020 CEFIA Holdings LLC purchased three tranches of loans: (1) 289 loans valued at \$508,229 for \$469,235, (2) 182 loans valued at \$332,057 for \$306,561 and (3) 146 loans valued at \$251,001 for \$236,011. During 2019 the Green Bank purchased two tranches of loans: (1) 4,014 loans valued at \$4,125,361 for \$3,892,133 and (2) 327 loans valued at \$642,759 for \$594,515.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

8. SBEA PROMISSORY NOTES RECEIVABLE (CONTINUED)

Future principal repayments under the program are as follows:

	<u>Loan Portfolio</u>	<u>Discount</u>	<u>Balance</u>
2021	\$ 1,640,564	\$ (91,072)	\$ 1,549,492
2022	904,574	(53,197)	851,377
2023	433,334	(27,448)	405,886
2024	82,281	(5,033)	77,248
2025	320	(23)	297
	<u>(366,200)</u>		<u>(366,200)</u>
	<u>\$ 2,694,873</u>	<u>\$ (176,773)</u>	<u>\$ 2,518,100</u>
Current portion	\$ 1,274,364	\$ (91,072)	\$ 1,549,492
Noncurrent portion	1,420,509	(85,701)	968,608
	<u>\$ 2,694,873</u>	<u>\$ (176,773)</u>	<u>\$ 2,518,100</u>

9. LONG TERM DEBT

<u>Legal Entity</u>	<u>Description</u>	<u>Balance July 1, 2019</u>	<u>Additions</u>	<u>Payments</u>	<u>Transfer to Strategic Partner</u>	<u>Balance June 30, 2020</u>	<u>Amount Due in One Year</u>
Connecticut Green Bank	Bonds Payable - CREBs 2017 - Meriden Hydro	\$ 2,798,331	\$ -	\$ (109,041)	\$ -	\$ 2,689,290	\$ 123,718
Connecticut Green Bank	Bonds Payable - CREBs 2017 - CSCU	9,101,729	-	(515,976)	-	8,585,753	522,198
Total Connecticut Green Bank		11,900,060	-	(625,017)	-	11,275,043	645,916
SHREC ABS 1 LLC	Bonds Payable - SHREC ABS	38,499,000	-	(2,243,000)	-	36,256,000	2,130,000
SHREC ABS 1 LLC	Bonds Payable - SHREC ABS - Discount	(71,243)	-	5,181	-	(66,062)	-
Total SHREC ABS 1 LLC		38,427,757	-	(2,237,819)	-	36,189,938	2,130,000
Total Bonds		<u>50,327,817</u>	<u>-</u>	<u>(2,862,836)</u>	<u>-</u>	<u>47,464,981</u>	<u>2,775,916</u>
CGB KCF LLC	Note Payable - Kresge Foundation (KCF)	1,000,000	-	-	(1,000,000)	-	-
CT Solar Loan 1 LLC	Note Payable - Solar Mosaic	296,560	-	(296,560)	-	-	-
CT Solar Loan 1 LLC	Note Payable - Reinvestment Fund	1,367,685	-	(1,367,685)	-	-	-
Total - Solar Loan LLC		<u>1,664,245</u>	<u>-</u>	<u>(1,664,245)</u>	<u>-</u>	<u>-</u>	<u>-</u>
CT Solar Lease 2 LLC	Note Payable - Key Bank / Webster Bank	22,989,920	-	(2,129,680)	-	20,860,240	1,600,000
CEFA Solar Services Inc.	Note Payable - CHFA	1,650,931	-	(94,790)	-	1,556,141	94,788
Total Notes Payable		<u>27,299,096</u>	<u>-</u>	<u>(3,888,715)</u>	<u>(1,000,000)</u>	<u>22,410,381</u>	<u>1,694,788</u>
Connecticut Green Bank	Pension Liability	25,805,346	-	(630,893)	-	25,174,453	-
Connecticut Green Bank	OPEB Liability	24,000,448	4,484,523	-	-	28,484,971	-
Total		<u>\$ 127,432,707</u>	<u>\$ 4,484,523</u>	<u>\$ (7,382,444)</u>	<u>\$ (1,000,000)</u>	<u>\$ 123,534,786</u>	<u>\$ 4,470,704</u>

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
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10. FINANCING ACTIVITIES

Short-Term Debt - Primary Government

Connecticut Green Bank Line of Credit - Amalgamated Bank

On May 22, 2019 the Green Bank executed a \$5,000,000 line of credit ("LOC") with Amalgamated Bank which was amended on June 30, 2020 to extend the maturity date to May 21, 2021, modify the interest rate, increase the collateral and apply a quarterly commitment reduction to the maximum LOC balance outstanding. The facility is revolving and funds can be advanced and repaid in increments of \$50,000 or more until the availability period ends 15 days before maturity or May 6, 2021. All principal for advances made under the LOC are due at maturity on May 21, 2021. Advances can be prepaid without penalty. Through the availability period the amount by which the aggregate commitment exceeds aggregate advances is subject to a 0.2% unused commitment fee. The maximum loan availability permanently decreases by \$300,000 each quarter beginning September 30, 2020. At the time of the original closing the Green Bank paid the lender a commitment fee of \$20,000. Upon the LOC renewal on June 30, 2020 the Green Bank paid a \$20,000 renewal fee. As of June 30, 2020 \$5,000,000 in loans have been advanced and \$4,900,000 have been repaid leaving a balance of \$100,000. As of June 30, 2019, no loans had been advanced.

The LOC is guaranteed by a security interest in all present and future personal property and the proceeds thereof, of CT Solar Lease 1 LLC ("CTSL1") and CT Solar Loan I LLC ("CTSLNI"). CTSL1 manages a portfolio of residential solar lease promissory notes. As of June 30, 2020 and 2019, the promissory note balances, net of reserves were \$5,276,408 and \$6,303,262, respectively. CTSLNI manages a portfolio of residential solar loans. As of June 30, 2020 and 2019, the loan balances, net of reserves were \$1,892,879 and \$2,369,799, respectively.

Interest to be paid on each advance commences on the date the advance is disbursed and ends one month thereafter. Interest is calculated based as the greater of (1) the Prime Rate as published in the Wall Street Journal minus 0.80% or (2) 2.45%. As of June 30, 2020 and 2019, \$64,250 and \$0 respectively, have been paid as interest to the lender.

SHREC Warehouse 1 LLC Line of Credit

On July 19, 2019 SHREC Warehouse 1 LLC executed a \$14,000,000 line of credit ("LOC") with Webster Bank N.A. and Liberty Bank, with Webster Bank as the administrative agent. The LOC is broken down by lender as follows:

Liberty Bank	\$	7,000,000
Webster Bank, National Association		<u>7,000,000</u>
	\$	<u>14,000,000</u>

Funds must be advanced during an availability period which ends on July 31, 2020. All advances must be made in a principal amount of \$250,000 or in additional whole multiples of \$50,000. Each loan advance will be shared by the participating lenders in accordance with their pro-rata share of the of the total facility commitment. All principal on advances made under the LOC are due at maturity which is (1) the initial maturity date of July 31, 2020 or (2) the extended maturity date which extends the maturity for one or more additional one-year periods. Advances can be prepaid without penalty. Through the availability period the amount by which the aggregate commitment exceeds aggregate advances is subject to a 0.5% unused commitment fee. At the time of closing SHREC Warehouse 1 LLC paid the lenders a commitment fee of \$85,000. As of June 30, 2020 \$6,000,000 has been advanced under the LOC.

**CONNECTICUT GREEN BANK
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10. FINANCING ACTIVITIES (CONTINUED)

The LOC is collateralized with revenues generated from Tranche 3 solar facilities under the Master Purchase Agreement (“MPA”) the Green Bank entered into with Connecticut’s two investor owned public utilities. Under the MPA each utility must purchase Solar Home Energy Credits (“SCHRECs”) generated by solar PV facilities located in its service area from the Green Bank. See Note 21 for further detail on the SHREC program. In connection with the LOC, SHREC Warehouse 1 LLC is required to establish and maintain a collections account with Webster Bank into which all proceeds from the sale of SHRECs are to be deposited and an interest reserve account with each lender. As of June 30, 2020 the collections account balance was \$1,889,973, and the cumulative balance in the interest reserve accounts was \$99,534.

Interest to be paid on each advance commences on the date the advance is disbursed and ends one month thereafter. Interest is calculated based on the one-month LIBOR rate plus the applicable margin of 240 basis points. As of June 30, 2020, \$125,962 in interest has been paid to the lenders.

Long-Term Debt - Primary Government

CT Solar Loan I LLC Line of Credit

On February 3, 2014, CT Solar Loan I LLC (SLI) executed a \$4,000,000 line of credit with Solar Mosaic, Inc. (LOC). The LOC was amended in June 2015 to \$1,100,000. Borrowings on the LOC immediately turn into a term note with predefined repayment terms at the time of borrowing. No further borrowings were available after June 30, 2015. Borrowings on the Mosaic LOC bear interest at 6.4586% (Base Rate) and SLI exercised its option to buy-down the interest rate to 6.00% (Reduced Rate) by making a payment on the borrowing date of 2.875% of the principal amount of the loan (Rate Buy-down Amount). As of June 30, 2020 and 2019 the outstanding principal balance was \$0 and \$296,560, respectively.

In connection with the LOC, SLI is required to establish and maintain a collections account, debt service reserve account and a loan loss reserve account. Deposits shall be made into the collections account for all payments received from residential borrowers against loans securing the LOC. The debt service reserve account is required to have no less than six months forward-looking principal and interest payments for the loans outstanding. The loan loss reserve account required a one-time deposit of \$300,000 as of June 30, 2014 which was reduced to \$82,500 as of June 30, 2015.

On June 19, 2020 the loan was paid in full. The debt service reserve and the loan loss reserve accounts remain open as of June 30, 2020 while SLI waits for the funds to be released by the bank.

**CONNECTICUT GREEN BANK
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10. FINANCING ACTIVITIES (CONTINUED)

CT Solar Loan I LLC Term Note

On April 25, 2016, CT Solar Loan I LLC (SLI) executed a \$2,510,837 Loan Agreement and Promissory Note (Note) with the Reinvestment Fund, Inc. The Note carries a fixed interest rate of 6.02%. Interest and principal repayments are amortized over a hypothetical 15 year period. The Note has a maturity date of April 1, 2023 with all unpaid principal and accrued interest due at that time. Principal repayments and interest payments are made in monthly installments beginning June 1, 2016. As of June 30, 2020 and 2019 the outstanding principal balance was \$0 and \$1,367,686, respectively.

In connection with the Note, SLI is required to establish and maintain a collections account, and maintain \$217,500 in a loan loss reserve account. Deposits shall be made into the collections account for all payments received from residential borrowers against loans securing the Note.

On June 19, 2020 the loan was paid in full. The \$217,500 loan loss reserve account remains open as of June 30, 2020 while SLI waits for the funds to be released by the bank.

SHREC ABS 1 LLC Collateralized Note

On March 29, 2019, the Board of Directors authorized the Green Bank to offer for sale, and to sell two classes of Series 2019-1 Notes as follows: 1) \$36,800,000 of Class A Notes, and 2) \$1,800,000 of Class B Notes that would be issued by SHREC ABS 1 LLC, a special purpose Delaware limited liability company that is a wholly owned subsidiary of the Green Bank. The Class A Notes carry an interest rate of 5.09% while the Class B Notes carry an interest rate of 7.04%. Both classes of notes are for a term of 14 years, maturing on March 15, 2033.

The note is collateralized by revenue from quarterly sales of Solar Home Renewable Energy Credits (SHRECs) for two tranches of approximately 14,000 residential solar PV systems to two Connecticut utilities. Collections from these billings and disbursements of funds to the bondholder and the Green Bank are managed by the trustee, Bank of New York Mellon. Interest and principal payments are quarterly per the bond schedule which anticipates the fluctuations in SHREC revenue due to seasonal solar PV generation.

On April 2, 2019, both notes were sold to a single investor as a private placement. The proceeds were used to pay off a short-term loan facility, for further Green Bank investments and to support the sweep payment of \$14,000,000 to the State of Connecticut.

**CONNECTICUT GREEN BANK
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10. FINANCING ACTIVITIES (CONTINUED)

Future maturities on borrowings under the SHREC ABS are as follows:

<u>Years Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2021	\$ 2,130,000	\$ 1,833,353	\$ 3,963,353
2022	2,263,000	1,720,887	3,983,887
2023	2,382,000	1,601,258	3,983,258
2024	2,477,000	1,475,724	3,952,724
2025	2,566,000	1,345,747	3,911,747
2026-2030	15,303,000	4,518,151	19,821,151
2031-2033	9,135,000	660,835	9,795,835
	<u>\$ 36,256,000</u>	<u>\$ 13,155,955</u>	<u>\$ 49,411,955</u>

CGB KCF LLC Kresge Loan

On December 6, 2017 CGB KCF LLC executed a program-related investment loan in the aggregate principal amount of \$3,000,000 to be provided in multiple disbursements ending 18 months after the closing date. The loan is evidenced by promissory note with a term of 10 years that bears an interest rate of 2.0% requiring interest payments be made quarterly in arrears. The note is interest only through December 6, 2026. The outstanding principal of the note is payable in two installments. On December 6, 2026 one-half of the aggregate amount disbursed is due and payable with all remaining amounts payable on December 6, 2027.

Proceeds from the loan must follow program investment guidelines that specify originating loans to at least nine targeted projects to fund the installation of combined solar panel and battery storage systems while meeting the goals of relieving poverty and distress, combatting community deterioration, revitalizing neighborhoods and lessening the burdens of government.

On December 14, 2018 CGB KCF LLC received a disbursement of \$1,000,000 which was held by Connecticut Green Bank in a restricted cash account until January 23, 2020 when it was transferred to Inclusive Prosperity Capital, Inc. (IPC) with the agreement of the Kresge Foundation. IPC has assumed full responsibility for the loan and reporting to Kresge as of January 21, 2020. IPC is a not-for-profit strategic partner of the Connecticut Green Bank focused on increasing access to capital to low-to-moderate income communities, nonprofits, faith-based organizations, housing authorities, schools, and smaller businesses. As of June 30, 2020 CGB has no interest in this loan.

CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020

10. FINANCING ACTIVITIES (CONTINUED)

Connecticut Green Bank New Clean Renewable Energy Bond

On February 26, 2016, the Board of Directors of the Green Bank authorized the issuance of a New Clean Energy Renewable Energy Bond (CREB) in an amount not to exceed \$3,000,000 to finance a portion of the acquisition cost of a 193kW Hydroelectric Facility located in Meriden, Connecticut, by CGB Meriden Hydro LLC, a subsidiary of the Green Bank. On February 2, 2017 the Green Bank issued a CREB in the amount of \$2,957,971 with an annual interest rate of 4.19%, maturing on November 15, 2036. Interest and principal payments are to be paid annually on November 15. Proceeds from the sale of the CREB were deposited with the bond trustee and were disbursed upon acquisition of the hydroelectric facility from its developer on August 31, 2017. Proceeds from the sale of electricity generated by the facility to the City of Meriden along with revenue from the associated renewable energy credits will fund the payment of principal and interest on the CREB. The CREB qualified for a tax credit from the U.S. Treasury under Section 54C of the Internal Revenue Code. The tax credit will be paid in the form of a subsidy to the Green Bank. The project also qualified to receive an interest rate subsidy from the local electricity utility through a program approved by the Connecticut Public Utility Regulatory Authority (PURA). This subsidy will be paid directly to the purchaser of the CREB. Both these subsidies will reduce the borrowing costs of the Green Bank.

Future maturities on borrowings under the CREB is as follows:

<u>Years Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>U.S. Treasury Tax Subsidy</u>	<u>CT PURA Interest Subsidy</u>	<u>Total</u>
2021	\$ 123,718	\$ 112,681	\$ (79,479)	\$ (18,013)	\$ 138,907
2022	134,348	107,497	(75,822)	(18,013)	148,010
2023	158,669	101,868	(71,852)	(18,013)	170,672
2024	163,905	95,220	(67,162)	(18,013)	173,950
2025	169,247	88,352	(62,318)	(18,013)	177,268
2026-2030	856,159	334,099	(235,654)	(36,026)	918,578
2031-2035	771,404	159,383	(112,419)		818,368
2036-2037	311,840	19,691	(13,889)		317,642
	<u>\$ 2,689,290</u>	<u>\$ 1,018,791</u>	<u>\$ (718,595)</u>	<u>\$ (126,091)</u>	<u>\$ 2,863,395</u>

On September 28, 2017, the Board of Directors of the Green Bank authorized the issuance of a CREB in an amount not to exceed \$9,350,000 to finance the installation of various solar projects for the benefit of the Connecticut State College and University System (CSCUS). To that end on December 29, 2017, the Green Bank entered into an equipment lease/purchase agreement financed by the issuance of a \$9,101,729 CREB with an annual interest rate of 4.90%, maturing on November 15, 2037 to construct and lease these solar facilities to CSCUS. Interest and principal payments are to be paid annually on November 15. Proceeds from the sale of the CREB were deposited with an escrow agent and \$9,079,618 has been disbursed to construct the eight solar facilities now in service. The remaining \$22,111 in escrow funds will be used for the November 15, 2020 bond payment. Proceeds from the sale of electricity generated by the facilities to CSCUS along with revenue from the associated renewable energy credits will fund the payment of principal and interest on the CREB. The CREB qualified for a tax credit from the U.S. Treasury under Section 54C of the Internal Revenue Code. The tax credit will be paid in the form of a subsidy to the Green Bank. The project also qualified to receive an interest rate subsidy from the local electricity utility through a program approved by the Connecticut Public Utility Regulatory Authority (PURA). This subsidy will be paid directly to the purchaser of the CREB. Both these subsidies will reduce the borrowing costs of the Green Bank.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
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10. FINANCING ACTIVITIES (CONTINUED)

Future maturities on borrowings under the CREB is as follows:

<u>Years Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>U.S. Treasury Tax Subsidy</u>	<u>CT PURA Interest Subsidy</u>	<u>Total</u>
2021	\$ 522,198	\$ 420,702	\$ (223,573)	\$ (56,417)	\$ 662,910
2022	528,550	395,114	(209,975)	(56,417)	657,272
2023	535,036	369,215	(196,212)	(56,417)	651,622
2024	541,657	342,999	(182,279)	(56,417)	645,960
2025	548,416	316,457	(168,174)	(56,417)	640,282
2026-2030	2,848,465	1,172,333	(623,011)	(169,251)	3,228,536
2031-2035	2,299,217	474,088	(251,944)		2,521,361
2036-2038	762,214	74,863	(39,784)		797,293
	<u>\$ 8,585,753</u>	<u>\$ 3,565,771</u>	<u>\$ (1,894,952)</u>	<u>\$ (451,336)</u>	<u>\$ 9,805,236</u>

Long-Term Debt - Primary Government - Discretely Presented Component Units

CEFIA Solar Services Inc. Term Note

On October 18, 2016, CEFIA Solar Services, Inc., executed a term note with the Connecticut Housing Finance Authority (CHFA) in the amount of \$1,895,807 with an interest rate of 2.5% with a 20-year term maturing on November 1, 2036. Principal and interest are payable monthly. CEFIA Solar Services, Inc., in its role as managing member of CT Solar Lease 2 LLC (CT SL2) lent these funds to CT SL2 through the execution of a subordinated promissory note of same date. CT SL2 used these funds to finance the acquisition of renewable energy equipment and installation of energy efficiency measures by eleven housing developments owned by municipalities throughout Connecticut.

Future maturities on borrowings under CHFA is as follows:

<u>Years Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2021	\$ 94,788	\$ 37,817	\$ 132,605
2022	94,788	35,448	130,236
2023	94,788	33,078	127,866
2024	94,788	30,708	125,496
2025	94,788	28,338	123,126
2026-2030	473,953	106,146	580,099
2031-2035	473,953	47,001	520,954
2036-2037	134,295	2,518	136,813
	<u>\$ 1,556,141</u>	<u>\$ 321,054</u>	<u>\$ 1,877,195</u>

CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020

10. FINANCING ACTIVITIES (CONTINUED)

Line of Credit - Discretely Presented Component Unit - CT Solar Lease 2 LLC

CT Solar Lease 2 LLC has a \$27,600,000 line of credit agreement (Additional LOC) with Key Bank as the Administrative Agent and Lender along with an additional participating lender. The additional LOC is broken down by lender as follows:

Key Bank	\$	17,250,000
Webster Bank, National Association		10,350,000
		<u>27,600,000</u>

Funds may be drawn down in no more than ten total advances by March 31, 2017. With the exception of the final advance, each advance must be in the principal amount of \$2,760,000 or a whole multiple of \$100,000 in excess of \$2,760,000. Each loan funding will be shared by all participating lenders in accordance with their pro-rata share of the total facility commitment. As of June 30, 2017, \$27,500,633 had been advanced under the additional LOC through March 31, 2017 the advance termination date. Principal repayments as of June 30, 2020 and 2019, were \$2,129,679 and \$681,547, respectively.

Each advance will be amortized separately. CT Solar Lease 2 LLC has the option with each advance of selecting between the LIBOR rate or the base rate which is defined as the highest of (a) the Federal Funds Effective Rate plus one-half of 1 percent, (b) Key Bank's prime rate, and (c) the LIBOR rate plus 1%. CT Solar Lease 2 LLC may also elect to convert an advance from one rate to the other by following the process outlined in the credit agreement.

Payments of interest with respect to any LIBOR rate advances are due on the 15th day of the month following each calendar quarter end. Payments of interest with respect to any base rate advances are due monthly. Payments of principal with respect to all advances are due on the 15th day of the month following each calendar quarter end. Principal payments on each advance will be based on a modified 15-year amortization schedule and are calculated as the lesser of 2.1675% of the initial principal amount of each advance or the net operating income with respect to the projects purchased with each advance as defined in the credit agreement.

Within one month of each advance, CT Solar Lease 2 LLC is required to enter into an interest rate swap contract with respect to a minimum amount of 75% of such advance. If one of the participating lenders is the counterparty to the swap contract, such contract will be secured by the collateral of the credit agreement; otherwise, the swap contract will be unsecured. See Note 11.

Certain obligations of CT Solar Lease 2 LLC under the credit agreement are guaranteed by the Green Bank. This credit agreement is secured by all assets of CT Solar Lease 2 LLC as well as CEFIA Solar Services (the Managing Member) interest in CT Solar Lease 2 LLC. There are no prepayment penalties. There are certain debt service coverage ratios CT Solar Lease 2 LLC must maintain related to each separate advance and which require the separate measurement of the net operating income with respect to the projects purchased with each advance.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

11. INTEREST RATE SWAP AGREEMENT

CT Solar Lease 2 LLC entered into a multi-year interest rate swap agreement with Key Bank (the KeyBank Agreement) in September 2014 in anticipation of making its first draw down on the credit agreement with KeyBank. Payments made and received were based on a notional amount of \$12,091,575 and \$13,912,275 as of June 30, 2020 and 2019, respectively. The KeyBank Agreement provides for CT Solar Lease 2 LLC to receive payments based on the one-month USD-LIBOR-BBA (0.19388% and 2.39425% at June 15, 2020 and 2019, respectively, the dates of the last reset) and to make payments based on fixed interest rates ranging from 1.96% to 2.78%. The KeyBank Agreement matures on December 15, 2025. The fair value of the KeyBank Agreement as of June 30, 2020 and 2019 was reported as a liability of \$1,093,780 and \$500,465, respectively, which is represented as the fair value of the interest rate swap on the accompanying 2020 and 2019 statement of net position.

CT Solar Lease 2 LLC entered into an interest rate swap agreement with Webster Bank (the Webster Agreement) in June of 2017 to meet certain requirements under its credit agreement with KeyBank in which Webster Bank also participates. Payments made and received were based on a notional amount of \$1,479,800 and \$1,653,200 as of June 30, 2020 and 2019, respectively. The Webster Agreement provides for CT Solar Lease 2 LLC to receive payments based on the one-month USD-LIBOR-BBA (0.18475% at June 30, 2020 and 2.39425% at June 30, 2019) and to make payments based on a fixed rate of 2.10%. The Webster Agreement matures on June 15, 2027. The fair value of the Webster Agreement as of June 30, 2020 and 2019 was reported as a liability of \$70,576 and \$22,759, respectively, which is a component of the fair value of interest rate swap on the accompanying 2020 and 2019 statement of net position.

CT Solar Lease 2 LLC uses the dollar-offset method for evaluating effectiveness of the interest rate swap agreements.

12. RELATED PARTY TRANSACTIONS AND OPERATING LEASES

Due to Outside Agency

The Green Bank utilizes the services of CI when needed for certain operating expenses. CI provides these services at cost. Such services include, but are not limited to, staff for human resources, office space, equipment leases and office expenses. Expenses billed to the Green Bank by CI totaled \$5,021 and \$0 for the years ended June 30, 2020 and 2019, respectively. As of June 30, 2020 and 2019, no amounts was due to CI.

Unused Commitment Fee

The Investor Member of CT Solar Lease 3 LLC is entitled to an annual fee due within 30 days of the end of each calendar quarter, calculated on a monthly basis, based on the amount of the Investor Member's unfunded capital contributions. The fee for each month is equal to 1.25% times the amount by which the Investor Member's contribution cap exceeds the total capital contributions funded as of the last day of the month in question divided by twelve. Amounts not paid timely accrue interest at the U.S. Bank Prime Rate in effect on the due date plus 2%. In accordance with the Operating Agreement, the unused commitment fee is paid to the Investor Member by the Managing Member of CT Solar Lease 3, CEFIA Holdings LLC, and not the Company. The Managing Member will not be required to pay unused commitment fees once the contractual Completion Deadline of September 30, 2018 has passed. The unused commitment fee totaled \$0, and \$27,848 for the years ended June 30, 2020 and 2019, respectively.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

12. RELATED PARTY TRANSACTIONS AND OPERATING LEASES (CONTINUED)

Priority Return

The Investor Member is the Tax-Equity Investor and is entitled to substantially all of the tax benefits of both CT Solar Lease 2 LLC and CT Solar Lease 3, LLC until January 1 of the year which is five years after the date the last project is installed, which is anticipated to be January 1, 2023 for CT Solar Lease 2 LLC and January 1, 2024 for CT Solar Lease 3, LLC, the Flip Date.

The Investor Member of CT Solar Lease 2 LLC shall be due a cumulative, quarterly distribution, payable by CT Solar Lease 2 LLC, equal to 0.5% of its paid-in capital contributions in respect of projects beginning at the end of the first quarter after the first project acquisition capital contribution is made and continuing until the Flip Date. To the extent the priority return is not paid in a quarter until the Flip Date, unpaid amounts will accrue interest at the lower of 24% per annum or the highest rate permitted by law.

In accordance with the Operating Agreement, all amounts and accrued interest due on the priority return are to be paid from net cash flow prior to certain required payments due under the Credit Agreement. The Investor Member was paid priority returns of \$511,540 and \$510,142 for the years ended June 30, 2020 and 2019, respectively.

The Investor Member of CT Solar Lease 3 LLC shall be due a cumulative, quarterly distribution, payable by CEFIA Solar Services, Inc., its managing member, equal to 0.5% of its paid-in capital contributions in respect of projects beginning at the end of the first quarter after the first project acquisition capital contribution is made and continuing until the Flip Date. To the extent the priority return is not paid in a quarter until the Flip Date, unpaid amounts will accrue interest at the lower of 24% per annum or the highest rate permitted by law.

In accordance with the Operating Agreement, all amounts and accrued interest due on the priority return are to be paid from net cash flow prior to certain required payments due under the Credit Agreement. The Investor Member was paid priority returns of \$86,494 and \$78,521 for the years ended June 30, 2020 and 2019, respectively.

Administrative Services Fee

The Managing Member of CT Solar Lease 2 LLC, CEFIA Solar Services, Inc., provides administrative and management services and earns a quarterly fee initially equal to \$30,000 per quarter beginning July 1, 2013. The amount of the fee increased 2.5% each July 1 beginning July 1, 2014. The administrative services fee totaled \$139,163 and \$135,769 for the years ended June 30, 2020 and 2019, respectively, and is included in accounts payable and accrued expenses on the accompanying statement of net position.

Payroll Taxes and Fringe Benefit Charges

Pursuant to state statute, the Green Bank is subject to fringe benefit charges for pension plan and medical plan contributions which are paid at the state level. The Green Bank's employer payroll taxes are also paid at the state level. The Green Bank reimburses the state for these payments. The reimbursement for 2020 and 2019 was \$3,231,128 and \$ 3,734,571, respectively, comprising 82.23% and 89.01% respectively, of gross salaries.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
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12. RELATED PARTY TRANSACTIONS AND OPERATING LEASES (CONTINUED)

Operating Leases

During 2014, the Green Bank entered into a noncancelable operating lease with an unrelated entity for its main office space. The lease calls for monthly escalating payments beginning at \$12,567 through December 31, 2020. Rent expense related to this lease for the years ended June 30, 2020 and 2019 was \$183,047 and \$175,571, respectively. The Green Bank anticipates signing a new lease for this space in February 2021. The lease will be a noncancelable operating lease calling for initial monthly payments of \$14,966, with escalating payments through August 2031.

In addition, the Green Bank has a noncancelable operating lease for an additional office space from an unaffiliated entity which calls for initial monthly payments of \$7,333, with escalating payments through December 2020. Rent expense related to this lease for the years ended June 30, 2020 and 2019, amounted to \$ 97,723 each year. In August of 2020 the Green Bank signed a new lease for this office space. The lease is a noncancelable operating lease which calls for initial monthly payments of \$10,488, with escalating payments through April 2026.

In addition, the Green Bank leases office equipment on a month-to-month basis. Rent expense related to the office equipment for the years ended June 30, 2020 and 2019, was \$1,314 and \$13,425, respectively.

Future minimum lease payments for office rentals are as follows:

<u>Years Ending June 30,</u>	
2021	\$ 292,131
2022	292,885
2023	318,987
2024	326,273
2025	333,237
Thereafter	<u>1,484,394</u>
	<u>\$ 3,047,907</u>

CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020

13. CAPITAL ASSETS

Capital asset activity for reporting entity for the years ended June 30, 2020 and 2019, are as follows:

Primary Government:

2020	Balance, July 1, 2019	Additions	Deletions	Adjustments	Balance, June 30, 2020
Capital assets being depreciated:					
Solar lease equipment	\$ 8,282,230	\$ 2,176,352	\$ -	\$ -	\$ 10,458,582
Furniture and equipment	4,733,640				4,733,640
Computer hardware and software	201,134	8,873	(1,497)		208,510
Leasehold improvements	192,027				192,027
	13,409,031	2,185,225	(1,497)	-	15,592,759
Less accumulated depreciation and amortization:					
Solar lease equipment	105,017	330,483			435,500
Furniture and equipment	459,632	154,407			614,039
Computer hardware and software	170,590	20,536	(1,497)		189,629
Leasehold improvements	177,320	7,674			184,994
	912,559	513,100	(1,497)	-	1,424,162
Capital Assets, Net	\$ 12,496,472	\$ 1,672,125	\$ -	\$ -	\$ 14,168,597
2019	Balance, July 1, 2018	Additions	Deletions	Adjustments	Balance, June 30, 2019
Capital assets being depreciated:					
Solar lease equipment	\$ 8,282,230	\$ -	\$ -	\$ -	\$ 8,282,230
Furniture and equipment	4,084,161	649,479			4,733,640
Computer hardware and software	215,458	17,506	(31,830)		201,134
Leasehold improvements	192,027				192,027
	4,491,646	8,949,215	(31,830)	-	13,409,031
Less accumulated depreciation and amortization:					
Solar lease equipment		105,017			105,017
Furniture and equipment	282,278	177,354			459,632
Computer hardware and software	174,621	26,176	(30,207)		170,590
Leasehold improvements	166,723	10,597			177,320
	623,622	319,144	(30,207)	-	912,559
Capital Assets, Net	\$ 3,868,024	\$ 8,630,071	\$ (1,623)	\$ -	\$ 12,496,472

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

13. CAPITAL ASSETS (CONTINUED)

Discretely presented component units:

2020	Balance, July 1, 2019	Additions	Deletions	Adjustments	Balance, June 30, 2020
Capital assets being depreciated:					
Solar lease equipment	\$ 76,637,064	\$ 367,030	\$ (19,440)	\$ (2,365)	\$ 76,982,289
Less accumulated depreciation and amortization:					
Solar lease equipment	8,610,496	2,916,849	(3,402)	(345,053)	11,178,890
Capital Assets, Net	<u>\$ 68,026,568</u>	<u>\$ (2,549,819)</u>	<u>\$ (16,038)</u>	<u>\$ 342,688</u>	<u>\$ 65,803,399</u>
2019	Balance, July 1, 2018	Additions	Deletions	Adjustments	Balance, June 30, 2019
Capital assets being depreciated:					
Solar lease equipment	\$ 75,602,983	\$ 1,348,000	\$	\$ (313,919)	\$ 76,637,064
Less accumulated depreciation and amortization:					
Solar lease equipment	6,053,786	2,900,971		(344,261)	8,610,496
Capital Assets, Net	<u>\$ 69,549,197</u>	<u>\$ (1,552,971)</u>	<u>\$ -</u>	<u>\$ 30,342</u>	<u>\$ 68,026,568</u>

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CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020

13 CAPITAL ASSETS (CONTINUED)

Total Reporting Entity:

2020	Balance, July 1, 2019	Additions	Deletions	Adjustments	Balance, June 30, 2020
Capital assets being depreciated:					
Solar lease equipment	\$ 84,919,294	\$ 2,543,382	\$ (19,440)	\$ (2,365)	\$ 87,440,871
Furniture and equipment	4,733,640				4,733,640
Computer hardware and software	201,134	8,873	(1,497)		208,510
Leasehold improvements	192,027				192,027
	<u>90,046,095</u>	<u>2,552,255</u>	<u>(20,937)</u>	<u>(2,365)</u>	<u>92,575,048</u>
Less accumulated depreciation and amortization:					
Solar lease equipment	8,715,513	3,247,332	(3,402)	(345,053)	11,614,390
Furniture and equipment	459,632	154,407			614,039
Computer hardware and software	170,590	20,536	(1,497)		189,629
Leasehold improvements	177,320	7,674			184,994
	<u>9,523,055</u>	<u>3,429,949</u>	<u>(4,899)</u>	<u>(345,053)</u>	<u>12,603,052</u>
Capital Assets, Net	\$ <u>80,523,040</u>	\$ <u>(877,694)</u>	\$ <u>(16,038)</u>	\$ <u>342,688</u>	\$ <u>79,971,996</u>
2019	Balance, July 1, 2018	Additions	Deletions	Adjustments	Balance, June 30, 2019
Capital assets being depreciated:					
Solar lease equipment	\$ 75,602,983	\$ 9,630,230	\$	\$ (313,919)	\$ 84,919,294
Furniture and equipment	4,084,161	649,479			4,733,640
Computer hardware and software	215,458	17,506	(31,830)		201,134
Leasehold improvements	192,027				192,027
	<u>80,094,629</u>	<u>10,297,215</u>	<u>(31,830)</u>	<u>(313,919)</u>	<u>90,046,095</u>
Less accumulated depreciation and amortization:					
Solar lease equipment	6,053,786	3,005,988		(344,261)	8,715,513
Furniture and equipment	282,278	177,354			459,632
Computer hardware and software	174,621	26,176	(30,207)		170,590
Leasehold improvements	166,723	10,597			177,320
	<u>6,677,408</u>	<u>3,220,115</u>	<u>(30,207)</u>	<u>(344,261)</u>	<u>9,523,055</u>
Capital Assets, Net	\$ <u>73,417,221</u>	\$ <u>7,077,100</u>	\$ <u>(1,623)</u>	\$ <u>30,342</u>	\$ <u>80,523,040</u>

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

14. FEDERAL GRANT PROGRAMS

The Green Bank, the primary government, recognizes grant revenue based on expenditures or fulfillment of program requirements. For the years ended June 30, 2020 and 2019, the Green Bank recognized related grant revenue of \$76,402 and \$100,779, respectively, under Department of Energy programs.

15. COMMITMENTS AND LOAN GUARANTEES

Commitments

As of June 30, 2020 and 2019, the Board of Directors designated a portion of the Green Bank's unrestricted net position to fund financial incentives for specific commercial and residential projects in the following areas:

	<u>Type</u>	<u>June 30, 2020</u>	<u>June 30, 2019</u>
Primary Government			
Connecticut Green Bank			
Solar PV	Incentive	\$ 48,652,459	\$ 51,517,641
Multifamily/LMI Solar PV & Energy Efficiency	Loan	3,933,632	3,751,054
CPACE	Loan	3,084,628	6,093,805
CPACE Lending	Loan	3,000,000	-
Fuel Cells	Loan	2,000,000	13,500,000
Anaerobic Digester	Loan	791,910	-
Hydropower	Loan	329,843	945,173
Other Technologies	Loan	161,302	161,302
		<u>61,953,774</u>	<u>75,968,975</u>
CEFIA Holdings LLC			
Solar PPA	Loan	1,376,592	-
Small Business Energy Advantage	Loan	1,168,212	1,113,352
		<u>2,544,804</u>	<u>1,113,352</u>
Total Commitments		<u>64,498,578</u>	<u>77,082,327</u>
Solar PV commitments payable to CT Solar Lease 2 LLC		<u>(302,574)</u>	<u>(504,399)</u>
Total Reporting Entity		<u>\$ 64,196,004</u>	<u>\$ 76,577,928</u>

These commitments are expected to be funded over the next one to six fiscal years and are contingent upon the completion of performance milestones by the recipient. All commitments are those of the primary government.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
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15. COMMITMENTS AND LOAN GUARANTEES (CONTINUED)

Loan Guarantees

As of June 30, 2020 and 2019, the following financial guarantees, approved by the Board of Directors, were outstanding. As of June 30, 2020, CGB has not recognized a liability or made any payments pursuant to these guarantees. Should payments be made in the future, the Green Bank will utilize standard collection efforts to recover payments made on behalf of issuers to those entitled to receive payments pursuant to the obligation guaranteed. All guarantees are those of the primary government.

<u>Guarantor</u>	<u>Issuer</u>	<u>Relationship of Guarantor to Issuer</u>	<u>Type of Obligation Guaranteed</u>	<u>Maximum Amount of Guaranty</u>	<u>Guaranty Obligation as of 6/30/2020</u>	<u>Guaranty Obligation as of 6/30/2019</u>
CGB	Owners of multifamily dwellings in Connecticut	Issuers participate in program administered by CGB and the Housing Development Fund to install energy upgrades in multifamily dwellings.	Commercial and consumer loan products with various terms	\$ 5,000,000	\$ 4,138,968	\$ 4,335,449
CGB	CT Solar Loan 1 LLC	Blended unit of primary government	Nonrevolving term note	2,510,837	-	1,367,686
CGB	CT Energy Efficiency Finance Company	Issuer provides loans for the installation of energy efficiency measures in single family homes to credit challenged households to meet the goals outlined in CGB's Comprehensive Plan.	Guarantee limited to \$600,000 on revolving credit note of \$6,000,000	600,000	600,000	600,000
CGB	New England Hydropower Company	Issuer is the developer of hydropower project in Connecticut approved by the CGB Board of Directors	Line of credit	300,000	300,000	300,000
CEFIA Holdings LLC	CEFIA Solar Services Inc.	Holdings is the sole shareholder of Services and an affiliate of CGB	Promissory Note for funds received from CHFA upon their issuance of Qualified Energy Conservation Bonds (QEGBs) for State Sponsored Housing Projects (SSHP)	1,895,807	1,556,141	1,650,931
CGB	Canton Hydro, LLC	Issuer is the developer of hydropower project in Connecticut approved by the CGB Board of Directors	Unfunded guaranty not to exceed \$500,000	500,000	500,000	500,000
CT Solar Lease 1 LLC / CT Solar Loan 1 LLC	CT Green Bank	Issuer is holder of Solar Lease notes used as collateral and a wholly owned subsidiary of CGB.	Guarantee payment of a \$5,000,000 revolving line of credit with Amalgamated Bank	5,000,000	100,000	5,000,000
CGB	PosiGen Inc.	Issuer is the owner of residential solar projects in Connecticut approved by the CGB Board of Directors	Guarantee payment of a \$2,500,000 secured working capital line of credit with Enhanced Capital	2,500,000	2,500,000	2,500,000
				<u>\$ 18,306,644</u>	<u>\$ 9,695,109</u>	<u>\$ 16,254,066</u>

CT Solar Loan 1 repaid its outstanding non-revolving term note in full during fiscal year 2020 and the Green Bank's obligation to guaranty repayment was terminated.

All commitments and guaranty obligations will be funded from current and future unrestricted cash balances.

**CONNECTICUT GREEN BANK
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16. STATE EMPLOYEES' RETIREMENT SYSTEM

All employees of the Green Bank participate in the State Employees' Retirement System (SERS), which is administered by the State Employees' Retirement Commission. The latest actuarial study was performed on the plan as a whole, as of June 30, 2019, and does not separate information for employees of the Green Bank. Therefore, certain pension disclosures pertinent to the Green Bank otherwise required pursuant to accounting principles generally accepted in the United States of America are omitted. Based upon the 2019 valuation, the Plan, as a whole, utilized the project unit credit cost method to develop employer contributions, and included the following actuarial assumptions: 1) investment return of 6.9%; 2) price inflation of 2.5% for cost of living adjustments; 3) projected salary increases of 3.5% to 19.5%, Social Security wage base increases of 3.50% per annum; 4) payroll growth of 3.5% per annum; and 5) the RP-2014 White Collar Mortality Table. Information on the total plan funding status and progress, contribution required and trend information can be found in the State of Connecticut's Comprehensive Annual Financial Report available from the Office of the State Comptroller, 55 Elm Street, Hartford, Connecticut 06106.

Plan Description

SERS is a single-employer defined benefit public employee retirement system (PERS) established in 1939 and governed by Sections 5-152 and 5-192 of the Connecticut General Statutes. Employees are covered under one of four tiers, Tier I, Tier II, Tier IIA and Tier III all of which are contributory plans.

Members who joined the retirement system prior to July 1, 1984 are enrolled in Tier I. Tier I employees who retire at or after age 65 with 10 years of credited service, at or after age 55 with 25 years of service, or at age 55 with 10 years of credited service with reduced benefits are entitled to an annual retirement benefit payable monthly for life, in an amount of 2 percent of the annual average earnings (which are based on the three highest earning years of service) over \$4,800 plus 1 percent of \$4,800 for each year of credited service.

Employees hired on and after July 2, 1984 are covered under the Tier II plan. Tier II requires employee contributions of 1.5 percent of salary. Tier II employees who retire at or after age 60 with 25 years of service, or at age 62 with 10 years of service, or at age 65 with 5 years of service, are entitled to one and one-third percent of the average annual earnings plus one-half of one percent of the average annual earnings in excess of the salary breakpoint in the year of retirement for each year of credited service. Tier II employees between the ages of 55 and 62 with 10 years but less than 25 years of service may retire with reduced benefits. In addition, Tier II and Tier IIA members with at least five but less than ten years of actual state service who terminate their state employment July 2, 1997 or later and prior to attaining age 62 will be in deferred vested status and may commence receipt of normal retirement benefits on the first of the month on or following their sixty-fifth (65) birthday.

Employees hired on and after July 1, 1997 are covered under the Tier IIA plan. Tier IIA plan is essentially the existing Tier II plan with the exception that employee contributions of 3.5 percent of salary are required. Tier I members are vested after ten years of service, while Tier II and Tier IIA members may be vested after five years of service under certain conditions, and all three plans provide for death and disability benefits.

**CONNECTICUT GREEN BANK
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16. STATE EMPLOYEES' RETIREMENT SYSTEM (CONTINUED)

Employees hired on or after July 1, 2011 are covered under the Tier III plan. Tier III requires employee contributions of 2 percent of salary up to a \$285,000 limit after which no additional contributions will be taken on earnings above this limit. The normal retirement date will be the first of any month on or after age 63 if the employee has at least 25 years of vested service or age 65 if the employee has at least 10 but less than 25 years of vested service. Tier III members who have at least 10 years of vested service can receive early reduced retirement benefits if they retire on the first of any month on or following their 58th birthday. Tier III normal retirement benefits include annual retirement benefits for life, in the amount of one and one-third percent of the five-year average annual earnings plus one-half of one percent of the five-year average annual earnings in excess of the salary breakpoint in the year of retirement for each year of credited service plus one and five-eighths of the five-year annual average salary times years of credited service over 35 years.

Employees hired on or after July 1, 2017 are covered under the Tier IV plan. Tier IV employees are eligible for a Hybrid Plan structure that includes a combination of a defined benefit and defined contribution plan. Tier IV requires employee contributions to the defined benefit portion of the Hybrid Plan of 5 percent of salary up to \$285,000 limit after which no additional contributions will be taken on earnings above this limit. Tier IV also requires employee contributions of 1 percent of salary up to \$285,000 to the defined contribution portion of the Hybrid Plan. The normal retirement date will be the first of any month on or after age 63 if the employee has at least 25 years of vested service or age 65 if the employee has at least 10 but less than 25 years of vested service. Tier IV members who have at least 10 years of vested service can receive early reduced retirement benefits if they retire on the first of any month on or following their 58th birthday. Tier IV normal retirement benefits include annual retirement benefits for life, in the amount of one and one-third percent of the five-year average annual earnings times years of credited service with no breakpoint.

The total payroll for employees of the Green Bank covered by SERS for the years ended June 30, 2020 and 2019, was \$3,849,111 and \$4,819,830, respectively.

Contributions Made

Green Bank's contribution is determined by applying a State mandated percentage to eligible salaries and wages as follows for the years ended June 30:

	<u>2020</u>	<u>2019</u>	<u>2018</u>
Contributions made:			
By employees	\$ 162,611	\$ 162,555	\$ 176,270
Percent of current year covered payroll	4.2%	3.4%	3.4%
Percent of required contributions	100.0%	100.0%	100.0%
By Green Bank	\$ 1,381,046	\$ 1,743,395	\$ 1,717,420
Percent of current year covered payroll	35.9%	39.6%	33.5%
Percent of required contributions	100.0%	100.0%	100.0%

The Green Bank has contributed the required amount for each of the past three years.

CONNECTICUT GREEN BANK
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16. STATE EMPLOYEES' RETIREMENT SYSTEM (CONTINUED)

The Green Bank recognizes a net pension liability for the difference between the present value of the projected benefits for the past service known as the Total Pension Liability (TPL) and the restricted resources held in trust for the payment of pension benefits, known as the Fiduciary Net Position (FNP). For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the FNP of SERS and additions to/deductions from SERS FNP have been determined on the same basis as they are reported by SERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit term. Investments are recorded at fair value.

At June 30, 2020 and 2019, the Green Bank reported a liability of \$25,174,453 and \$25,805,346, respectively, for its proportionate share of the net pension liability. The net pension liability as of June 30, 2020 was measured as of June 30, 2019, and the total pension liability used to calculate the net pension liability was determined by the actuarial valuation as of that date based on actuarial experience studies. The Green Bank's allocation of the net pension liability was based on the 2020 covered payroll multiplied by the SERS 2020 contribution rate of 60.83%. As of June 30, 2020 and 2019, the Green Bank's proportion was 0.110355% and 0.118992%, respectively.

For the years ended June 30, 2020 and 2019, the Green Bank recognized pension expense of \$3,538,363 and \$3,966,895, respectively. Pension expense is reported in the Green Bank's financial statements as part of general and administration expense. At June 30, 2020 and 2019, the Green Bank reported deferred outflows of resources and deferred inflows of resources related to pension from the following sources:

As of June 30, 2020:	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Difference between expected and actual experience	\$ 1,710,397	\$
Net difference between projected and actual earnings on pension plan investments		59,901
Change of assumptions	1,652,492	
Change in proportion and differences between employer contributions and proportionate share of contributions	1,521,886	1,320,436
Green Bank contributions subsequent to the measurement date	<u>1,381,046</u>	<u></u>
	<u>\$ 6,265,821</u>	<u>\$ 1,380,337</u>
As of June 30, 2019:	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Difference between expected and actual experience	\$ 910,835	\$
Net difference between projected and actual earnings on pension plan investments		80,906
Change of assumptions	2,811,782	
Change in proportion and differences between employer contributions and proportionate share of contributions	2,290,223	
Green Bank contributions subsequent to the measurement date	<u>1,743,395</u>	<u></u>
	<u>\$ 7,756,235</u>	<u>\$ 80,906</u>

CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
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16. STATE EMPLOYEES' RETIREMENT SYSTEM (CONTINUED)

The contributions subsequent to the measurement date of the net pension liability but before the end of the reporting period will be recognized as a reduction of the net pension liability in the subsequent fiscal period. The amount recognized as deferred inflows and outflows of resources, representing the net differences between expected and actual experience and changes in assumptions or other inputs, is amortized over a five-year closed period beginning in the year in which the difference occurs and will be recognized in expense as follows:

Year 1 (2021)	\$	1,923,216
Year 2 (2022)		1,246,983
Year 3 (2023)		271,668
Year 4 (2024)		89,345
Year 5 (2025)		<u>(26,774)</u>
	\$	<u>3,504,438</u>

Actuarial Methods and Assumption

The total pension liability in the June 30, 2019 actuarial valuation was determined based on the results of standard actuarial rollforward techniques. The key actuarial assumptions are summarized below:

Inflation	2.50%
Salary increase	3.50% -19.50% including inflation
Investment rate of return	6.90%, net of pension plan investment expense, including inflation
Cost of living adjustment	1.95%-3.25% for certain tiers

Mortality rates were based on the RP-2014 White Collar Mortality Table projected to 2020 by scale BB at 100% for males and 95% for females is used for the period after service retirement and for dependent beneficiaries. The RP-2014 Disabled Retiree Mortality Table at 65% for males and 85% for females is used for the period after disability.

Discount Rate

The discount rate used to measure the total pension liability at June 30, 2019 was the long-term expected rate of return, 6.90%. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rates and that employer contributions will be made equal to the difference between the projected actuarially determined contribution and member contributions. Projected future benefit payments for all current plan members were projected through the year 2139.

Expected Rate of Return on Investments

The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighing the expected future real rate of return by the target asset allocation percentage and by adding expected inflation.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
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16. STATE EMPLOYEES' RETIREMENT SYSTEM (CONTINUED)

The target asset allocation and best estimate of arithmetic real rates of return for each major asset class are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-term Expected Real Rate of Return</u>
Domestic Equity Fund	20.0%	5.6%
Developed Market Intl. Stock Fund	11.0%	6.0%
Emerging Market Intl. Stock Fund	9.0%	7.9%
Core Fixed Income Fund	16.0%	2.1%
Inflation Linked Bond Fund	5.0%	1.1%
Emerging Market Debt Fund	5.0%	2.7%
High Yield Bond Fund	6.0%	4.0%
Real Estate Fund	10.0%	4.5%
Private Equity	10.0%	7.3%
Alternative Investments	7.0%	2.9%
Liquidity Fund	1.0%	0.4%
	<u>100.0%</u>	

Sensitivity of Green Bank Proportionate Share of the Net Pension Liability to Changes in the Discount Rates

The following presents the Green Bank's proportionate share of the net pension liability calculated using the discount rate of 6.90%, as well as the proportionate share of the net pension liability using a 1.00% increase or decrease from the current discount rate.

	<u>1% Decrease</u>	<u>Discount Rate</u>	<u>1% Increase</u>
Green Bank's proportionate share of the net pension liability	\$ 30,064,996	\$ 25,174,453	\$ 21,094,955

17. POST EMPLOYMENT BENEFITS

In addition to the pension benefits described in Note 16, the State single-employer plan provides post-employment health care and life insurance benefits in accordance with State statutes, Sections 5-257(d) and 5-259(a), to all eligible employees who retire from the State, including employees of Connecticut Green Bank.

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17. POST EMPLOYMENT BENEFITS (CONTINUED)

Plan Description

Currently, four employees meet those eligibility requirements. When employees retire, the State pays up to 100% of their health care insurance premium cost (including dependent's coverage) depending upon the plan. The State currently pays up to 20% of the cost for retiree dental insurance (including dependent's coverage) depending upon the plan. In addition, the State pays 100% of the premium cost for a portion of the employees' life insurance continued after retirement. The amount of life insurance, continued at no cost to the retiree, is determined based on the number of years of service that the retiree had with the State at time of retirement as follows: (a) if the retiree had 25 years or more of service, the amount of insurance will be one-half of the amount of insurance for which the retiree was insured immediately prior to retirement, but the reduced amount cannot be less than \$10,000; (b) if the retiree had less than 25 years of service, the amount of insurance will be the proportionate amount that such years of service is to 25, rounded to the nearest \$100. The State finances the cost of post-employment health care and life insurance benefits on a pay-as-you-go basis through an appropriation in the General Fund.

In accordance with the Revised State Employees Bargaining Agent Coalition (SEBAC) 2011 Agreement between the State of Connecticut and the SEBAC, all employees shall pay the three percent (3%) retiree health care insurance contribution for a period of ten (10) years or retirement, whichever is sooner. In addition, participants of Tier III shall be required to have fifteen (15) years of actual State service to be eligible for retirement health insurance. Deferred vested retirees who are eligible for retiree health insurance shall be required to meet the rule of seventy-five (75), which is the combination of age and actual State service equaling seventy-five (75) in order to begin receiving retiree health insurance based on applicable SEBAC agreement.

Contributions Made

Green Bank's contribution is determined by applying a State mandated percentage to eligible salaries and wages as follows for the years ended June 30:

	<u>2020</u>	<u>2019</u>	<u>2018</u>
Contributions made:			
By employees	\$ 109,644	\$ 125,622	\$ 130,954
Percent of current year covered payroll	2.8%	2.9%	2.6%
Percent of required contributions	100.0%	100.0%	100.0%
By Green Bank	\$ 982,304	\$ 1,164,217	\$ 1,264,900
Percent of current year covered payroll	25.5%	26.4%	24.7%
Percent of required contributions	100.0%	100.0%	100.0%

OPEB Liabilities, OPEB Expense, Deferred Outflows of Resources, and Deferred Inflows of Resources

The Green Bank recognizes a net OPEB liability for the difference between the present value of the projected benefits for the past service known as the Total OPEB Liability (TOL) and the restricted resources held in trust for the payment of OPEB benefits, known as the Fiduciary Net Position (FNP).

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17. POST EMPLOYMENT BENEFITS (CONTINUED)

For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the FNP and additions to/deductions from FNP have been determined on the same basis as they are reported by SERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit term. Investments are recorded at fair value.

At June 30, 2020 and 2019, the Green Bank reported a liability of \$28,484,971 and \$24,000,448, respectively, for its proportionate share of the net OPEB liability. The net OPEB liability as of June 30, 2020 was measured as of June 30, 2019, and the total OPEB liability used to calculate the net OPEB liability was determined by the actuarial valuation as of that date based on actuarial experience studies. The Green Bank's allocation of the net OPEB liability was based on the 2019 covered payroll multiplied by the OPEB 2019 contribution rate of 38.43%. As of June 30, 2020 and 2019, the Green Bank's proportion was 0.137726% and 0.139017%, respectively.

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17. POST EMPLOYMENT BENEFITS (CONTINUED)

For the years ended June 30, 2020 and June 30, 2019, the Green Bank recognized OPEB expense of \$2,322,184 and \$1,783,370, respectively. OPEB expense is reported in the Green Bank's financial statements as part of salaries and benefits. At June 30, 2020 and June 30, 2019, the Green Bank reported deferred outflows of resources and deferred inflows of resources related to pension from the following sources:

As of June 30, 2020:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Net difference between projected and actual earnings on pension plan investments	\$	\$ 6,180
Change of assumptions	3,805,216	943,409
Change in proportion and differences between employer contributions and proportionate share of contributions	401,868	667,817
Difference between expected and actual experience in the total OPEB liability		718,810
Green Bank contributions subsequent to the measurement date	982,304	
	<u>\$ 5,189,388</u>	<u>\$ 2,336,216</u>

As of June 30, 2019:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Net difference between projected and actual earnings on pension plan investments	\$	\$ 10,273
Change of assumptions		1,282,713
Change in proportion and differences between employer contributions and proportionate share of contributions	567,930	602,613
Green Bank contributions subsequent to the measurement date	1,164,217	
	<u>\$ 1,732,147</u>	<u>\$ 1,895,599</u>

**CONNECTICUT GREEN BANK
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17. POST EMPLOYMENT BENEFITS (CONTINUED)

The contributions subsequent to the measurement date of the net pension liability but before the end of the reporting period will be recognized as a reduction of the net pension liability in the subsequent fiscal period. The amount recognized as deferred outflows of resources, representing change in proportion and differences between employer contributions and proportionate share of contributions, deferred inflows of resources, representing the net difference between projected and actual earnings, and changes in plan assumptions, is amortized over a five-year closed period beginning in the year in which the difference occurs and will be recognized in expense as follows:

Year 1 (2021)	\$	394,635
Year 2 (2022)		394,633
Year 3 (2023)		380,362
Year 4 (2024)		550,231
Year 5 (2025)		<u>151,007</u>
	\$	<u>1,870,868</u>

Actuarial Methods and Assumption

The total OPEB liability in the June 30, 2019 actuarial valuation was determined based on standard actuarial rollforward techniques. The key actuarial assumptions are summarized below:

Payroll growth rate	3.50%
Salary increase	3.25% to 19.50% varying by years of service and retirement system
Discount rate	3.58% as of June 30, 2019 and 3.95% as of June 30, 2018
Health care cost trend rates	
Medical and prescription drug	6.0% graded to 4.5% over 6 years
Dental	3.0%
Part B	4.50%
Administrative Expense	3.0%

Mortality rates were based on the RP-2014 White Collar Mortality Table projected to 2020 by scale BB at 100% for males and 95% for females is used for the period after service retirement and for dependent beneficiaries. The RP-2014 Disabled Retiree Mortality Table at 65% for males and 85% for females is used for the period after disability.

Discount Rate

The discount rate is a blend of the long-term expected rate of return on OPEB Trust assets (6.9% as of June 30, 2019 and June 30, 2018) and a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rate of AA/Aa or higher (3.50% as of June 30, 2019 and 3.87% as of June 30, 2018). The final discount rate used to measure to total OPEB liability was 3.58% as of June 30, 2018 and 3.95% as of June 30, 2018. The blending is based on the sufficiency of projected assets to make projected benefit payments.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
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17. POST EMPLOYMENT BENEFITS (CONTINUED)

Expected Rate of Return on Investments

The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighing the expected future real rate of return by the target asset allocation percentage and by adding expected inflation.

The target asset allocation and best estimate of arithmetic real rates of return for each major asset class are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-term Expected Real Rate of Return</u>
Domestic Equity Fund	20.0%	5.6%
Developed Market International Stock Fund	11.0%	6.0%
Emerging Market International Stock Fund	9.0%	7.9%
Core Fixed Income	16.0%	2.1%
Inflation Linked Bond Fund	5.0%	1.1%
Emerging Market Debt Fund	5.0%	2.7%
High Yield Bond Fund	6.0%	4.0%
Real Estate Fund	10.0%	4.5%
Private Equity	10.0%	7.3%
Alternative Investments	7.0%	2.9%
Liquidity Fund	1.0%	0.4%
	<u>100.0%</u>	

Sensitivity of Green Bank Proportionate Share of the Net OPEB Liability to Changes in the Discount Rates

The following presents the Green Bank's proportionate share of the net OPEB liability calculated using the discount rate of 3.58%, as well as the proportionate share of the net OPEB liability using a 1.00% increase or decrease from the current discount rate.

	<u>1% Decrease</u>	<u>Current Discount Rate</u>	<u>1% Increase</u>
Net OPEB liability	\$ 33,152,063	\$ 28,484,971	\$ 24,696,346

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17. POST EMPLOYMENT BENEFITS (CONTINUED)

Sensitivity of Green Bank Proportionate Share of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates

The following presents the Green Bank's proportionate share of the net OPEB liability, as well as what the Green Bank's share of the net OPEB liability would be if it were calculated using healthcare cost trend rates that are 1 percentage point lower or 1 percentage point higher than the current healthcare cost trend rates:

	<u>1% Decrease</u>	<u>Healthcare Cost Trend Rates</u>	<u>1% Increase</u>
Net OPEB liability	\$ 24,418,678	\$ 28,484,971	\$ 33,617,389

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18. RESTRICTED NET POSITION

Restricted net position at June 30, 2020 and 2019 consisted of the following:

	<u>2020</u>	<u>2019</u>
Primary Government		
Energy Programs:		
Connecticut Green Bank:		
Assets restricted for maintaining loan loss and interest rate buydown reserves	\$ 3,895,333	\$ 4,060,359
Assets restricted by contractual obligations under Clean Renewable Energy Bond	1,855,061	3,568,162
Assets restricted by contractual obligations for maintaining pledge accounts for loan guarantees	1,209,924	1,207,665
Assets restricted by contractual obligations for health and safety revolving loan fund	20,000	20,000
Assets restricted by contractual obligations for Kresge loan		1,000,000
SHREC ABS 1 LLC:		
Assets restricted by contractual obligations for maintaining liquidity and trustee reserves	1,190,835	1,249,920
SHREC Warehouse 1 LLC:		
Assets restricted by contractual obligations for maintaining loan loss reserve	1,989,508	
CT Solar Loan I LLC:		
Assets restricted by contractual obligations for maintaining loan loss reserve	301,795	301,481
	<u>10,462,456</u>	<u>11,407,587</u>
Discretely Presented Component Units		
CT Solar Lease 2 LLC:		
Nonexpendable:		
Firststar Development Corporation equity interest	14,310,055	16,411,193
Firststar Development Corporation invested in capital assets net of related debt	31,199,058	31,164,155
Firststar Development Corporation assets restricted for maintaining loan loss reserve	2,939,970	3,623,241
Firststar Development Corporation assets restricted for operating and maintenance reserve	990,000	990,000
	<u>49,439,083</u>	<u>52,188,589</u>
Energy Programs:		
Assets restricted for maintaining loan loss reserve	29,697	36,598
Assets restricted for operating and maintenance reserve	10,000	10,000
	<u>39,697</u>	<u>46,598</u>
CEFIA Solar Services:		
Energy Programs:		
Assets restricted for maintaining loan loss reserve	83,000	83,000
CT Solar Lease 3 LLC:		
Nonexpendable:		
Firststar Development Corporation equity interest	4,390,414	3,768,040
Firststar Development Corporation invested in capital assets net of related debt	10,558,588	10,944,990
	<u>14,949,002</u>	<u>14,713,030</u>
	<u>\$ 74,973,238</u>	<u>\$ 78,438,804</u>

**CONNECTICUT GREEN BANK
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FOR THE YEAR ENDED JUNE 30, 2020**

19. RISK MANAGEMENT

The Green Bank is subject to normal risks associated with its operations including property damage, personal injury and employee dishonesty. All risks are managed through the purchase of commercial insurance. There have been no losses exceeding insurance coverage, and there have been no decreases in insurance coverage over the last three years.

20. RENEWABLE ENERGY CREDITS (PRIMARY GOVERNMENT)

The Green Bank owns Class 1 Renewable Energy Credits (RECs) that are generated by certain commercial renewable energy facilities for which the Green Bank provided the initial funding. Through its Residential Solar Incentive Program (RSIP), the Green Bank owns the rights to future RECs generated by facilities installed on residential properties placed in service prior to January 1, 2015. The Green Bank has entered into contracts with various third parties to sell RECs generated through vintage year 2019. For the years ended June 30, 2020 and 2019 the Green Bank generated and sold its contractual obligations of 40,000 RECs for vintage year 2019 and 30,000 RECs for vintage year 2018, respectively. Revenues generated from REC sales for the years ending June 30, 2020 and 2019 were \$631,250 and \$420,000, respectively.

As of June 30, 2020, the Green Bank has contractual obligations to sell RECs by vintage year as follows:

<u>Vintage</u>	<u>Quantity</u>
2020	41,000
2021	40,000
2022	34,000
2023	16,000
2024	16,000
	<u>147,000</u>

On May 28, 2020, CEFIA Holdings LLC entered into an agreement with Sol Systems LLC to sell 9,659 RECs for vintage year 2019. CHOL generated \$386,360 in REC sales for the year ending June 30, 2020. As of June 30, 2020, CHOL has no additional contractual obligations to sell more RECs.

Based on historical performance, management believes that the RECs it will receive from these commercial and residential facilities will exceed its contractual obligations.

RECs trade on the New England Power Pool (NEPOOL) market. The market price of Connecticut Class 1 RECs as of June 30, 2020 ranged from \$36.50 to \$44.50. The Green Bank's inventory of RECs generated by commercial facilities as of June 30, 2020 and 2019, was \$31,826 and \$30,542, respectively. The Green Bank recorded its inventory as of June 30, 2020 at cost, which is below market price.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

20. RENEWABLE ENERGY CREDITS (PRIMARY GOVERNMENT) (CONTINUED)

Public Act No.15-194 (the Act) enacted on October 1, 2015 and as amended by Public Act 16-212 created a Solar Home Energy Credit (SHREC) associated with energy generated from qualifying residential solar PV systems that have received incentives under the Green Bank's RSIP. Each SHREC represents 1 megawatt hour of electrical generation. Under the Act, the Green Bank will own these SHRECs. The Act requires these SHRECs to be purchased by the State's two investor owned public utilities from the Green Bank through a Master Purchase Agreement (MPA) which was executed on February 7, 2017. The MPA commences on January 1, 2015 and terminates the earlier of the year ending December 31, 2022 or with the deployment of solar PV systems that in the aggregate can generate 300 megawatts of electricity. During each year of the MPA's term, solar PV facilities that commence operation will be aggregated into a tranche agreement between the Green Bank and the utility companies which will be approved by the State's Public Utility Regulatory Authority (PURA) prior to its execution. Each tranche will state the price set by the Green Bank for the purchase of a SHREC generated by the PV systems within that tranche for a period of 15 years. As of June 30, 2020, the following tranche agreements have been entered into with the public utilities:

	<u>Date</u>	<u>REC Price</u>	<u>Megawatts</u>
Tranche 1	7/1/2017	\$ 50.00	47.176
Tranche 2	7/15/2018	49.00	59.836
Tranche 3	6/28/2019	48.00	39.275
			<u>146.287</u>

SHRECs are created and certificated in the New England Power Pool Generation System (NEPOOL GIS). SHRECs are certificated by NEPOOL GIS during the fifth month subsequent to the end of the quarter in which the electricity was generated. Once certificated ownership of the SHRECs is transferred to each public utility, payment is received by the Green Bank 30 days later. The Green Bank recognizes income upon the delivery of the SHRECs to each public utility. The Green Bank is not committed to deliver a specific amount of SHRECs to each utility during the term of the MPA.

The SHRECs for T1 and T2 were assigned to SHREC ABS 1 LLC upon closing of the SHREC ABS bond and provide revenue stream for bond payments. The SHRECs for T3 were assigned from CGB to SHREC Warehouse 1 LLC upon closing of the SHREC Warehouse LOC and are held in a restricted cash account as collateral for the LOC.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

21. RENEWABLE ENERGY CREDITS (PRIMARY GOVERNMENT) (CONTINUED)

For the years ending June 30, 2020 and 2019 the following SHREC sales were recognized:

	Fiscal Year Ended June 30, 2020			
	CGB	SHREC ABS 1	SHREC Warehouse 1	Total
	Tranche 1	-	2,324,550	-
Tranche 2	-	2,855,426	-	2,855,426
Tranche 3	-	-	1,890,384	1,890,384
	-	5,179,976	1,890,384	7,070,360

	Fiscal Year Ended June 30, 2019			
	CGB	SHREC ABS 1	SHREC Warehouse 1	Total
	Tranche 1	2,246,450	-	-
Tranche 2	2,669,667	-	-	2,669,667
Tranche 3	-	-	-	-
	4,916,117	-	-	4,916,117

22. SUBSEQUENT EVENTS

On July 29, 2020 the Green Bank issued its inaugural offering of \$16,795,000 of Series 2020 Green Liberty Bonds, which were approved on March 25, 2020 by the Board of Directors to finance the SHREC Receivables for SHREC Tranche 3. The Green Liberty Bonds were created in honor of the 50th anniversary of Earth Day – a type of green bond whose proceeds are used to invest in projects that confront climate change in Connecticut. Modelled after the Series-E War Bonds of the 1940s, the bonds were designed to be purchased by everyday citizens through lower-dollar denominations of no more than \$1,000, enabling them to invest in green projects in Connecticut. The bonds are Climate Bond Certified and carry an S&P rating of A.

**CONNECTICUT GREEN BANK
NOTES TO CONSOLIDATING FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2020**

22. SUBSEQUENT EVENTS (CONTINUED)

The bonds were issued in the series below with the indicated maturity dates, principal amounts and interest rates:

<u>Series</u>	<u>Maturity (November 15)</u>	<u>Principal Amount</u>	<u>Interest Rate</u>
Serial	2021	\$ 1,145,000	0.095%
Serial	2022	1,148,000	1.080%
Serial	2023	1,147,000	1.250%
Serial	2024	1,146,000	1.450%
Serial	2025	1,145,000	1.600%
Serial	2026	1,144,000	1.900%
Serial	2027	1,144,000	2.000%
Serial	2028	1,143,000	2.200%
Serial	2029	1,141,000	2.300%
Serial	2030	1,138,000	2.400%
Term	2035	<u>5,354,000</u>	2.900%
		<u>\$ 16,795,000</u>	

The bonds are collateralized by revenue from quarterly sales of Tranche 3 Solar Home Renewable Energy Credits (“SHRECs”) for approximately 4,800 residential solar PV systems and 39 megawatts of installed capacity to two Connecticut public utilities. Collections from these billings and disbursements of funds to the bondholders are managed by the trustee, Bank of New York Mellon. Interest payments are semi-annual on May 15th and November 15th. The term series bonds are subject to redemption prior to their stated maturity date.

The Green Bank received net proceeds of \$14,704,810 after funding the state supported Special Capital Reserve Fund of \$1,496,133, the cost of issuance fund of \$370,000 and paying Bond Issuance Costs of \$224,057. The proceeds will be used to invest in green energy projects and to refinance expenditures related to the Residential Solar Investment Program.

23. CORONAVIRUS (COVID-19)

On January 30, 2020, the World Health Organization declared the coronavirus to be a public health emergency. On March 10, 2020, the Governor of the State of Connecticut declared a public health emergency and a civil preparedness emergency due to COVID-19.

While the Green Bank derives less than half of its revenues from commercial and residential lending, the immediate impact of COVID-19 on our investments is currently unknown. Future potential impacts may include impairment of our ability to collect on financing contracts, significant declines in consumer demand as well as changes in the regulatory environment. While the Green Bank has not experienced any significant increase in the amount of delinquency on its loans, the situation creates uncertainty about the impact of future revenues that might be generated. In addition, at this time, it is uncertain what the effects of the pandemic will be on the Green Bank’s health care costs, changes in interest rates, investment valuation and future rate payer based revenues. The Green Bank is actively working to mitigate the impact of these and other unforeseen potential disruptions to our investments and operations.

**REQUIRED
SUPPLEMENTARY
INFORMATION**

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**CONNECTICUT GREEN BANK
SCHEDULE OF GREEN BANK'S PROPORTIONATE SHARE OF THE NET PENSION LIABILITY
LAST SIX FISCAL YEARS***

	2020	2019	2018	2017	2016	2015
As of June 30,						
Green Bank's portion of the net pension liability	0.11036%	0.11899%	0.11692%	0.10994%	0.09741%	0.09304%
Green Bank's proportionate share of the net pension liability	\$ 25,174,453	\$ 25,805,346	\$ 24,636,114	\$ 25,245,439	\$ 16,096,113	\$ 14,899,766
Green Bank's covered payroll**	\$ 4,819,830	\$ 5,036,904	\$ 4,960,932	\$ 4,695,647	\$ 4,013,411	\$ 3,121,583
Green Bank's proportionate share of the net pension liability as a percentage of its covered payroll	522.31%	512.33%	496.60%	537.63%	401.06%	477.31%
Plan fiduciary net position as a percentage of the total pension liability	36.79%	36.62%	36.25%	31.69%	39.23%	39.54%

*Note: This schedule is intended to show information for ten years. Additional years' information will be displayed as it becomes available.

**Covered payroll is on a calendar year basis which coincides with the pension liability valuation date.

**CONNECTICUT GREEN BANK
SCHEDULE OF GREEN BANK'S PROPORTIONATE CONTRIBUTIONS TO THE STATE EMPLOYEES' RETIREMENT SYSTEM (SERS)
LAST NINE FISCAL YEARS***

	2020	2019	2018	2017	2016	2015	2014	2013	2012*
Contractually required contribution	\$ 1,381,046	\$ 1,743,395	\$ 1,717,420	\$ 1,713,946	\$ 1,615,681	\$ 1,974,507	\$ 1,669,961	\$ 1,125,649	\$ 601,014
Contributions in relation to the contractually required contribution	1,381,046	1,743,395	1,717,420	1,713,946	1,615,681	1,974,507	1,669,961	1,125,649	601,014
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Green Bank's covered payroll	\$ 3,849,111	\$ 4,819,830	\$ 5,036,904	\$ 4,960,932	\$ 4,695,647	\$ 4,013,411	\$ 3,121,583	\$ 2,517,190	\$ 1,541,308
Contributions as a percentage of covered payroll	35.88%	36.17%	34.10%	34.55%	34.41%	49.20%	53.50%	44.72%	38.99%

*Note: The Green Bank had no employees prior to 2012. Years 2015 through 2012 include contributions for other post employment benefits (OPEB) in addition to contributions for the SERS plan. The allocation of the total contribution between SERS and OPEB is not available for this period.

**CONNECTICUT GREEN BANK
 SCHEDULE OF GREEN BANK'S PROPORTIONATE SHARE OF THE NET OPEB LIABILITY
 LAST FOUR FISCAL YEARS***

	2020	2019	2018	2017
As of June 30,				
Green Bank's portion of the net OPEB liability	0.13773%	0.13902%	0.14327%	0.13805%
Green Bank's proportionate share of the net OPEB liability	\$ 28,484,971	\$ 24,000,448	\$ 24,875,889	\$ 23,803,688
Green Bank's covered payroll**	\$ 4,819,830	\$ 5,036,904	\$ 4,960,932	\$ 4,695,647
Green Bank's proportionate share of the net OPEB liability as a percentage of its covered payroll	591.00%	476.49%	501.44%	506.93%
Plan fiduciary net position as a percentage of the total OPEB liability	5.47%	4.69%	3.03%	1.94%

*Note: This schedule is intended to show information for ten years. Additional years' information will be displayed as it becomes available.

**Covered payroll is on a calendar year basis which coincides with the pension liability valuation date.

**CONNECTICUT GREEN BANK
SCHEDULE OF GREEN BANK'S PROPORTIONATE CONTRIBUTIONS TO THE STATE
EMPLOYEES' OTHER POST EMPLOYMENT BENEFIT PLAN
LAST FIVE FISCAL YEARS'**

	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Contractually required contribution	\$ 982,304	\$ 1,164,217	\$ 1,264,900	\$ 956,207	\$ 840,178
Contributions in relation to the contractually required contribution	<u>982,304</u>	<u>1,164,217</u>	<u>1,264,900</u>	<u>956,207</u>	<u>840,178</u>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Green Bank's covered payroll	\$ 3,849,111	\$ 4,819,830	\$ 5,036,904	\$ 4,960,932	\$ 4,695,647
Contributions as a percentage of covered payroll	25.52%	24.15%	25.11%	19.27%	17.89%

*Note: This schedule is intended to show information for ten years. Additional years' information will be displayed as it becomes available.

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STATISTICAL SECTION
(unaudited)

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FINANCIAL STATISTICS

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**CONNECTICUT GREEN BANK
STATISTICAL SECTION INTRODUCTION**

This part of the Connecticut Green Bank's (CGB's) comprehensive annual financial report presents detailed information as a context for understanding what the information about the primary government and the discretely presented component units in the financial statements, note disclosures, and required supplementary information says about the benefits of CGB's investments.

FINANCIAL STATISTICS

CONTENTS **PAGE**

Financial Trends 78-81

These schedules contain trend information to help the reader understand how CGB's financial performance and well-being have changed over time.

Revenue Capacity 82-84

These schedules contain information to help the reader assess CGB's most significant local revenue sources.

Debt Capacity 85

These schedules present information to help the reader assess the affordability of the government's current level of outstanding debt and the CGB's ability to issue additional debt in the future.

Demographic and Economic Information 86-87

These schedules offer demographic and economic indicators to help the reader understand the environment within which CGB's financial activities take place.

Operating Information 88-90

These schedules contain service and infrastructure data to help the reader understand how the information in CGB's financial report relates to the services CGB provides and the activities it performs.

**CONNECTICUT GREEN BANK
NET POSITION BY COMPONENT
Last Nine Fiscal Years***

	Year Ended June 30,								
	2020	2019	2018	2017	2016	2015	2014	2013	2012
Primary Government									
Net investment in capital assets	\$ 2,893,556	\$ 2,511,829	\$ 963,469	\$ 1,98,486	\$ 2,48,752	\$ 263,839	\$ 289,932	\$ 362,505	\$ 91,329
Restricted Net Position:									
Nonexpendable			95,745	91,121	79,179	41,845	8,379	1,000	
Restricted - energy programs	10,462,456	11,407,587	19,205,056	16,798,606	5,249,983	4,299,005	4,595,715	5,036,656	176,974
Unrestricted	53,287,502	51,057,268	59,206,810	(1) 79,830,841	116,273,628	104,840,938	97,747,386	93,717,230	80,920,002
	66,643,514	64,976,684	79,471,080	96,919,054	121,351,542	109,445,627	102,641,412	99,117,391	81,188,305
CT Solar Lease 2 LLC									
Net investment in capital assets	1,327,817	1,330,432	1,347,368	1,356,697	485,108	278,307	35,390		
Restricted Net Position:									
Nonexpendable	57,242,757	60,294,483	62,208,324	64,596,932	66,364,332	36,508,164	7,617,084	4,691,594	
Restricted - energy programs	39,897	46,598	45,113	45,028	45,000	45,000	45,000	45,000	
Unrestricted (deficit)	(21,704,523)	(22,648,568)	(22,247,455)	(25,125,419)	(32,934,704)	(21,703,932)	(4,105,401)	(1,853,380)	
	36,905,748	39,022,945	41,353,350	40,873,238	33,959,736	15,127,539	3,592,073	2,883,214	
CEFIA Solar Services, Inc.									
Invested in capital assets, net of related debt	353,521	--	--	--	--	--	--	--	--
Restricted Net Position:									
Nonexpendable	83,000	83,000		486,565	346,379	224,754	109,223	100	
Restricted - energy programs	20,918	432,139	559,958	486,565	346,379	224,754	109,223	100	
Unrestricted (deficit)	457,439	515,139	559,958	486,565	346,379	224,754	109,223	100	
CT Solar Lease 3 LLC									
Net investment in capital assets	116,856	121,106	111,852						
Restricted Net Position:									
Nonexpendable	15,959,161	15,757,514	13,369,938						
Restricted - energy programs	(3,099,959)	(3,527,528)	(4,076,898)						
Unrestricted (deficit)	12,976,058	12,351,092	9,404,892						
	(40,241,055)	(40,583,744)	(39,454,629)	(31,562,901)	(28,795,323)	(15,630,676)	(5,549,471)	(3,500,100)	
Eliminations									
Total Net Position	\$ 76,741,704	\$ 76,282,116	\$ 91,334,651	\$ 106,715,956	\$ 127,362,334	\$ 109,167,244	\$ 100,793,237	\$ 98,500,605	\$ 81,188,305

*Connecticut Green Bank was established by the Connecticut General Assembly on July 1, 2011. Accordingly, financial results are only shown beginning with Fiscal Year 2012.

(1) Restated

**CONNECTICUT GREEN BANK
CHANGES IN NET POSITION
Last Nine Fiscal Years***

	Year Ended June 30,								
	2020	2019	2018	2017	2016	2015	2014	2013	2012
Primary Government									
Operating Revenues	\$ 49,575,685	\$ 43,837,016	\$ 47,772,908	\$ 46,961,726	\$ 72,146,387	\$ 74,663,780	\$ 53,336,236	\$ 43,926,668	\$ 40,342,691
Operating Expenses									
Cost of goods sold - energy systems	4,371,059	4,601,431	12,979,629	11,333,034	28,826,974	22,526,874	2,794,270		
Provision for loan loss	4,962,343	2,908,974	361,711	956,489	1,021,826	563,625	1,310,933		
Grants and program expenditures	17,313,711	15,598,111	18,932,920	18,128,022	11,539,070	10,686,366	13,798,012	17,767,885	27,977,688
Program administration expenditures	12,333,764	13,586,373	12,878,508	13,228,749	13,964,097	10,833,325	9,150,664	5,866,580	3,144,667
General and administrative expenses	6,701,666	5,484,608	5,759,801	5,228,711	4,445,648	2,984,178	2,408,715	1,811,227	1,387,854
Total Operating Expenses	45,682,543	42,179,497	50,912,569	48,875,005	59,797,615	47,594,568	29,462,594	25,445,692	32,510,209
Operating Income (Loss)	3,893,142	1,657,519	(3,139,661)	(1,913,279)	12,348,772	27,069,212	23,873,642	18,480,976	7,832,482
Nonoperating Revenue (Expenses)									
Interest income - short-term investments	160,505	400,407	311,730	189,237	92,536	83,761	98,383	103,928	140,786
Interest income	66,327	64,544	62,981	61,455	60,127	58,511	57,407		
Interest expense - long-term debt	(2,327,387)	(772,224)	(172,817)	(228,502)	(61,796)	(26,985)			
Interest expense - component units		(429)							
Debt issuance costs	(18,800)	(1,738,743)							
Distributions to former members		(1,000)							
Realized gain (loss) on investments	(106,957)	(104,466)	(510,207)	(93,974)	(33,723)	(1,180,285)	(350,000)	(1,034,605)	
Unrealized gain (loss) on investments				(999,998)			349,999	378,059	434,702
Net Nonoperating Revenues (Expenses)	(2,226,312)	(2,151,911)	(308,313)	(1,071,782)	57,144	(1,064,998)	155,789	(552,618)	575,488
Income (Loss) Before Transfers, Capital Contributions and Member (Distributions)	1,666,830	(494,392)	(3,447,974)	(2,985,061)	12,405,916	26,004,214	24,029,431	17,928,358	8,407,970
Capital Contributions								1,000	
Transfers to State of Connecticut		(14,000,000)	(14,000,000)			(19,200,000)	(8,200,000)		
Change in Net Position	\$ 1,666,830	\$ (14,494,392)	\$ (17,447,974)	\$ (2,985,061)	\$ 12,405,916	\$ 6,804,214	\$ 17,829,431	\$ 17,929,358	\$ 8,407,970

*Connecticut Green Bank was established by the Connecticut General Assembly on July 1, 2011. Accordingly, financial results are only shown beginning with Fiscal Year 2012.

CONNECTICUT GREEN BANK
 CHANGES IN NET POSITION (CONTINUED)
 Last Nine Fiscal Years*

	Year Ended June 30,								
	2020	2019	2018	2017	2016	2015	2014	2013	2012
CT Solar Lease 2 LLC									
Operating Revenues	\$ 4,040,994	\$ 3,942,151	\$ 3,837,865	\$ 3,659,883	\$ 2,416,597	\$ 210,869	\$ 1,770	\$	\$
Operating Expenses									
Program administration expenditures	3,599,905	3,526,293	4,083,177	3,884,129	3,078,633	1,201,123	600,186		
General and administrative expenses	253,880	274,833	288,724	620,912	305,217	124,748	127,511	853,480	
Total Operating Expenses	3,853,785	3,801,126	4,371,901	4,505,041	3,383,850	1,325,871	727,697	853,480	
Operating Income (Loss)	187,209	141,025	(534,036)	(845,158)	(967,253)	(1,115,002)	(726,927)	(853,480)	-
Nonoperating Revenue (Expenses)									
Interest on short-term investments	4,454	15,005	21,904	17,615	27,777	9,207	8,642		
Interest expense	(1,143,661)	(1,281,591)	(1,281,262)	(1,054,848)	(729,170)	(150,871)	(57,407)		
Realized gain (loss) on investments	(13,156)								
Unrealized gain (loss) on investments	(641,133)	(694,702)	712,355	1,086,987	(967,791)	(660,073)			
Net Nonoperating Revenues (Expenses)	(1,793,496)	(1,961,288)	(547,003)	49,754	(1,669,184)	(601,737)	(48,765)	-	-
Income (Loss) Before Transfers, Capital Contributions and Member (Distributions)	(1,606,287)	(1,820,263)	(1,081,039)	(795,404)	(2,636,437)	(1,916,739)	(774,692)	(853,480)	
Capital Contributions			114,755	8,145,358	21,770,182	13,556,783	1,496,135	3,736,694	
Distributions to Members	(510,910)	(510,142)	(509,564)	(436,452)	(301,548)	(104,579)	(12,584)		
Change in Net Position	\$ (2,117,197)	\$ (2,330,405)	\$ (1,475,846)	\$ 6,913,502	\$ 18,832,197	\$ 11,535,465	\$ 708,859	\$ 2,883,214	\$

*Connecticut Green Bank was established by the Connecticut General Assembly on July 1, 2011. Accordingly, financial results are only shown beginning with Fiscal Year 2012.

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CONNECTICUT GREEN BANK
 CHANGES IN NET POSITION (CONTINUED)
 Last Nine Fiscal Years*

	Year Ended June 30,								
	2020	2019	2018	2017	2016	2015	2014	2013	2012
CEIA Solar Services, Inc.									
Operating Revenues	\$ 258,245	\$ 176,938	\$ 132,458	\$ 129,227	\$ 126,075	\$ 123,000	\$ 120,000	\$ -	\$ -
Operating Expenses									
Grants and program expenditures	321,005	223,512	61,520						
General and administrative expenses	4,552	4,600	4,601	4,998	4,750	8,450	10,877		
Total Operating Expenses	325,557	228,112	66,121	4,998	4,750	8,450	10,877	-	-
Operating Income (Loss)	(67,312)	(51,174)	66,337	124,229	121,325	114,550	109,123	-	-
Nonoperating Revenue (Expenses)									
Interest on short-term investments	133	585	4,827	16,446	300	981			
Interest income	49,469	48,129	46,958	31,437					
Interest expense long-term debt	(39,990)	(42,359)	(44,729)	(31,926)					
Net Nonoperating Revenues (Expenses)	9,612	6,355	7,056	15,567	300	981	-	-	-
Income (Loss) Before Transfers, Capital Contributions and Member (Distributions)	(57,700)	(44,819)	73,393	140,186	121,625	115,531	109,123	-	-
Capital Contributions								100	
Change in Net Position	\$ (57,700)	\$ (44,819)	\$ 73,393	\$ 140,186	\$ 121,625	\$ 115,531	\$ 109,123	\$ 100	\$ -

*Connecticut Green Bank was established by the Connecticut General Assembly on July 1, 2011. Accordingly, financial results are only shown beginning with Fiscal Year 2012.

	Year Ended June 30,								
	2020	2019	2018	2017	2016	2015	2014	2013	2012
CT Solar Lease 3 LLC									
Operating Revenues	\$ 924,753	\$ 776,695	\$ 343,814	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Expenses									
Grants and program expenditures	551,135	513,289	354,566						
General and administrative expenses	115,190	94,125	37,332						
Total Operating Expenses	666,325	607,414	391,898	-	-	-	-	-	-
Operating Income (Loss)	258,428	169,281	(48,084)	-	-	-	-	-	-
Nonoperating Revenue (Expenses)									
Interest on short-term investments	478	261	15						
Net Nonoperating Revenues	478	261	15	-	-	-	-	-	-
Income (Loss) Before Transfers, Capital Contributions and Member (Distributions)	258,906	169,542	(48,069)	-	-	-	-	-	-
Capital Contributions	452,554	2,855,179	9,483,568						
Distributions to Members	(66,494)	(78,521)	(30,607)						
Change in Net Position	\$ 624,966	\$ 2,946,200	\$ 9,404,892	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

*Connecticut Green Bank was established by the Connecticut General Assembly on July 1, 2011. Accordingly, financial results are only shown beginning with Fiscal Year 2012.

CONNECTICUT GREEN BANK
 OPERATING REVENUE BY SOURCE
 Last Nine Fiscal Years Ending June 30*

	Total Operating Revenues		Utility Remittances		Interest Income Promissory Notes		RGGI Auction Proceeds		Grant Revenue		Sales of Energy Equipment		Sales of Renewable Energy Certificates		Other Revenues	
	Revenue	% of Annual	Revenue	% of Annual	Revenue	% of Annual	Revenue	% of Annual	Revenue	% of Annual	Revenue	% of Annual	Revenue	% of Annual	Revenue	% of Annual
Primary Government																
2020	\$ 49,575,663	50.1 %	\$ 24,654,150	50.1 %	\$ 6,105,290	12.3 %	\$ 4,581,628	9.2 %	\$ 76,402	0.2 %	\$ 4,373,423	8.8 %	\$ 8,361,721	16.9 %	\$ 1,223,069	2.5 %
2019	43,637,017	59.5 %	26,094,662	59.5 %	3,907,760	8.9 %	2,130,255	4.9 %	200,779	11.0 %	4,833,647	11.0 %	5,348,537	12.2 %	1,321,357	3.0 %
2018	47,772,908	64.3 %	25,943,162	64.3 %	3,291,701	6.9 %	1,250,260	2.6 %	81,952	0.2 %	13,559,517	28.4 %	2,627,662	5.9 %	818,614	1.7 %
2017	66,961,726	39.4 %	26,404,349	39.4 %	22,921,710	34.2 %	2,392,647	3.6 %	98,466	0.1 %	12,669,540	19.0 %	2,214,000	3.3 %	240,994	0.4 %
2016	72,146,367	36.9 %	26,605,064	36.9 %	2,695,504	4.0 %	6,461,562	9.0 %	599,917	0.8 %	32,767,009	45.4 %	2,419,990	3.4 %	367,321	0.5 %
2015	74,663,779	36.5 %	27,233,967	36.5 %	2,825,308	3.5 %	16,563,545	22.2 %	192,274	0.3 %	25,912,414	34.7 %	1,474,468	2.0 %	641,763	0.9 %
2014	53,336,236	52.1 %	27,779,345	52.1 %	1,034,953	1.9 %	20,074,668	37.6 %	321,642	0.6 %	3,548,640	6.7 %	376,559	0.7 %	200,229	0.4 %
2013	43,926,668	62.9 %	27,621,409	62.9 %	563,575	1.3 %	4,744,357	10.8 %	10,035,250	22.8 %	—	—	147,000	0.3 %	794,777	1.8 %
2012	40,342,692	67.0 %	27,025,068	67.0 %	569,007	1.5 %	2,062,748	5.1 %	10,435,251	25.9 %	—	—	142,736	0.4 %	97,660	0.2 %
CT Solar Lease 2 LLC																
2020	\$ 4,040,995	— %	—	— %	323	0.0 %	—	— %	—	— %	—	— %	—	— %	—	— %
2019	3,942,152	— %	—	— %	1,736	0.0 %	—	— %	—	— %	—	— %	—	— %	—	— %
2018	3,637,665	— %	—	— %	1,637	0.0 %	—	— %	—	— %	—	— %	—	— %	—	— %
2017	3,659,663	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2016	2,416,597	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2015	2,10,669	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2014	1,770	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2013	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2012	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
CEEA Solar Services Inc.																
2020	\$ 256,246	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2019	176,938	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2018	132,458	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2017	129,227	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2016	126,075	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2015	123,000	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2014	120,000	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2013	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2012	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
CT Solar Lease 3 LLC																
2020	\$ 924,752	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2019	776,695	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2018	343,614	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2017	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2016	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2015	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2014	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2013	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %
2012	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %	—	— %

CONNECTICUT GREEN BANK
 OPERATING REVENUE BY SOURCE
 Last Nine Fiscal Years Ending June 30.*

	Total Operating Revenues		Utility Remittances		Interest Income Promissory Notes		RGGI Auction Proceeds		Grant Revenue		Sales of Energy Equipment		Sales of Renewable Energy Certificates		Other Revenues	
	Revenue	% of Annual	Revenue	% of Annual	Revenue	% of Annual	Revenue	% of Annual	Revenue	% of Annual	Revenue	% of Annual	Revenue	% of Annual	Revenue	% of Annual
Eliminations																
2020	\$ (1,476,079)	- %	\$ --	- %	\$ --	- %	\$ --	- %	\$ --	- %	\$ (367,029)	24.9 %	\$ --	- %	\$ (1,109,050)	75.1 %
2019	(3,100,440)	- %	--	- %	--	- %	--	- %	--	- %	(2,038,310)	65.7 %	--	- %	(1,062,130)	34.3 %
2018	(11,912,052)	- %	--	- %	--	- %	--	- %	--	- %	(10,777,111)	90.5 %	--	- %	(1,134,941)	9.5 %
2017	(13,662,578)	- %	--	- %	--	- %	--	- %	--	- %	(12,689,540)	91.5 %	--	- %	(1,173,038)	8.5 %
2016	(34,006,320)	- %	--	- %	--	- %	--	- %	--	- %	(32,767,009)	96.4 %	--	- %	(1,239,311)	3.6 %
2015	(26,077,923)	- %	--	- %	--	- %	--	- %	--	- %	(25,895,727)	99.3 %	--	- %	(182,196)	0.7 %
2014	(3,668,840)	- %	--	- %	--	- %	--	- %	--	- %	(3,548,840)	96.7 %	--	- %	(120,000)	3.3 %
2013	--	- %	--	- %	--	- %	--	- %	--	- %	--	- %	--	- %	--	- %
2012	--	- %	--	- %	--	- %	--	- %	--	- %	--	- %	--	- %	--	- %
Total Reporting Entity																
2020	\$ 53,323,597	48.6 %	\$ 24,654,150	11.5 %	\$ 6,105,613	6.6 %	\$ 4,581,628	6.6 %	\$ 76,402	0.1 %	\$ 4,006,394	7.5 %	\$ 9,648,011	18.1 %	\$ 4,051,959	7.6 %
2019	45,632,362	57.2 %	26,094,682	8.6 %	3,909,496	4.7 %	2,130,255	4.7 %	200,779	0.4 %	2,796,337	6.1 %	6,469,479	14.2 %	4,012,334	8.6 %
2018	40,174,993	64.6 %	25,943,162	8.2 %	3,293,338	3.1 %	1,250,260	3.1 %	81,952	0.2 %	2,782,406	6.9 %	3,659,520	9.1 %	3,164,335	7.9 %
2017	56,668,258	48.4 %	26,404,349	40.3 %	22,921,710	40.3 %	2,392,647	4.2 %	96,468	0.2 %	--	--	2,570,647	4.5 %	2,500,419	4.4 %
2016	40,683,739	65.4 %	26,605,084	7.1 %	2,895,504	7.1 %	6,481,562	15.9 %	589,917	1.5 %	--	--	2,653,783	6.5 %	1,457,889	3.6 %
2015	46,919,725	55.7 %	27,233,967	5.4 %	2,825,308	5.4 %	16,583,545	33.9 %	192,274	0.4 %	16,687	0.0 %	1,474,468	3.0 %	793,436	1.6 %
2014	49,789,166	55.8 %	27,779,345	2.1 %	1,034,953	2.1 %	20,074,668	40.3 %	321,642	0.6 %	--	--	376,559	0.8 %	201,999	0.4 %
2013	43,926,668	62.9 %	27,621,409	1.3 %	563,575	1.3 %	4,744,957	10.8 %	10,036,250	22.8 %	--	--	147,000	0.3 %	794,777	1.8 %
2012	40,342,692	67.0 %	27,025,068	1.5 %	589,007	1.5 %	2,052,748	5.1 %	10,435,251	25.9 %	--	--	142,736	0.4 %	97,660	0.2 %

**CONNECTICUT GREEN BANK
SIGNIFICANT SOURCES OF OPERATING REVENUE**
Last Nine Fiscal Years*

	Year Ended June 30,													
	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009		
	Revenue	% of Total	Revenue	% of Total	Revenue	% of Total	Revenue	% of Total	Revenue	% of Total	Revenue	% of Total	Revenue	% of Total
Utility Remittances ⁽¹⁾⁽²⁾														
Eversource	\$ 19,993,531	80.4 %	\$ 20,842,169	80.3 %	\$ 21,223,577	79.8 %	\$ 21,899,541	80.4 %	\$ 22,322,100	80.4 %	\$ 22,144,093	80.2 %	\$ 22,037,771	81.5 %
United Illuminating	4,860,619	19.6 %	5,101,013	19.7 %	5,381,507	20.2 %	5,334,446	19.6 %	5,457,245	19.6 %	5,477,316	19.8 %	4,987,317	18.5 %
Total	\$ 24,854,150	100.0 %	\$ 25,943,182	100.0 %	\$ 26,605,084	100.0 %	\$ 27,233,987	100.0 %	\$ 27,779,345	100.0 %	\$ 27,621,409	100.0 %	\$ 27,025,088	100.0 %
Interest Income-Promissory Notes														
C-PACE Loans and Bonds	\$ 2,618,948	42.9 %	\$ 1,544,710	46.9 %	\$ 1,447,457	50.0 %	\$ 1,408,612	53.7 %	\$ 10,651	1.0 %	\$ --	-- %	\$ --	-- %
Program Loans	3,030,760	49.6 %	1,161,816	36.3 %	651,603	22.6 %	519,977	19.6 %	453,029	43.8 %	--	-- %	--	-- %
Solar Loans and Lease Notes	455,905	7.5 %	511,482	13.1 %	793,244	27.4 %	666,719	26.5 %	571,373	55.2 %	583,575	100.0 %	589,007	100.0 %
Total	\$ 6,105,613	100.0 %	\$ 3,293,338	100.0 %	\$ 2,895,504	100.0 %	\$ 2,626,308	100.0 %	\$ 1,034,953	100.0 %	\$ 583,575	100.0 %	\$ 589,007	100.0 %
RGGI Auction Proceeds ⁽³⁾														
Renewables	\$ 4,581,628	100.0 %	\$ 2,130,255	100.0 %	\$ 6,481,562	100.0 %	\$ 5,631,156	34.0 %	\$ 7,476,158	37.2 %	\$ 4,744,657	100.0 %	\$ 2,062,748	100.0 %
Energy Efficiency	--	-- %	--	-- %	--	-- %	10,562,389	66.0 %	12,598,510	62.8 %	--	-- %	--	-- %
Total	\$ 4,581,628	100.0 %	\$ 2,130,255	100.0 %	\$ 6,481,562	100.0 %	\$ 16,883,545	100.0 %	\$ 20,074,668	100.0 %	\$ 4,744,657	100.0 %	\$ 2,062,748	100.0 %
Grant Revenue														
Federal ARRA Grants	\$ 76,402	-- %	\$ 100,779	-- %	\$ 56,963	-- %	\$ --	-- %	\$ --	-- %	\$ --	-- %	\$ 8,376,681	83.8 %
DOE Grants	--	-- %	100,000	49.8 %	24,959	49.8 %	589,917	74.6 %	321,642	100.0 %	1,622,569	16.2 %	1,645,525	15.8 %
Private Foundation	--	-- %	--	-- %	--	-- %	48,660	25.3 %	--	-- %	36,000	0.4 %	50,000	0.5 %
Total	\$ 76,402	100.0 %	\$ 200,779	100.0 %	\$ 81,952	100.0 %	\$ 192,274	100.0 %	\$ 321,642	100.0 %	\$ 10,035,250	100.0 %	\$ 10,434,251	100.0 %
Sales of Renewable Energy Certificates														
SHREC Proceeds ⁽⁴⁾	\$ 7,070,360	73.3 %	\$ 4,916,117	75.8 %	\$ 2,289,250	61.7 %	\$ --	-- %	\$ --	-- %	\$ --	-- %	\$ --	-- %
LREC/ZREC Receipts ⁽⁵⁾	1,867,142	16.2 %	1,157,112	17.8 %	882,718	23.3 %	386,647	13.9 %	233,798	8.8 %	--	-- %	--	-- %
Gross Proceeds-RECs ⁽⁶⁾	1,014,260	10.5 %	420,000	6.5 %	2,227,500	86.7 %	2,443,924	92.1 %	1,474,488	100.0 %	381,444	101.3 %	190,000	102.3 %
Commissions-RECs	(3,750)	(0.0 %)	(3,750)	(0.3 %)	(10,847)	(0.3 %)	(13,500)	(0.5 %)	(23,534)	(0.9 %)	(4,885)	(1.3 %)	(3,000)	(2.3 %)
Total	\$ 9,648,012	100.0 %	\$ 6,489,479	100.0 %	\$ 3,659,519	100.0 %	\$ 1,474,488	100.0 %	\$ 376,559	100.0 %	\$ 147,000	100.0 %	\$ 142,738	100.0 %

(1) Revenue based on Statutory rate of 1 mil per kWh generated by the utility.

(2) In fiscal years 2018 and 2019 the Green Bank made a cash payments to the State of Connecticut of \$14,000,000 per year sourced primarily from utility remittances, a major component of its operating revenues.

(3) The Regional Greenhouse Gas Initiative (RGGI) is a cooperative effort among nine Northeastern and Mid-Atlantic states to reduce greenhouse gas emissions. RGGI holds quarterly auctions of the member state's CO2 allowances. At auction, a market-based clearing price is determined from prices submitted in the winning bids and is used to value proceeds returned to the states. The Connecticut Green Bank receives a portion of Connecticut's auction proceeds which is recognized as revenue and invested in Class 1 Renewable

(4) Public Act No. 15-194 (the Act) enacted on October 1, 2015 and as amended by Public Act 16-212 created a Solar Home Energy Credit (SHREC), owned by the Green Bank, associated with energy generated from qualifying residential solar PV systems that have received incentives under the Green Bank's RSP. SHRECs are purchased by the State's two investor owned public utilities through a Master Purchase Agreement (MPA).

(5) The Green Bank and its subsidiaries receive LREC/ZREC revenue from the State's two investor owned public utilities. RECs are secured when a solar project is registered and energized with a public utility and revenue is paid quarterly based on generation of the project.

(6) CGB owns Class 1 Renewable Energy Credits (RECs) generated by certain commercial renewable energy facilities for which CGB provided the initial funding. Through its RSP program, CGB owns the rights to future RECs generated by facilities installed on residential properties. CGB enters into contracts to sell RECs generated during specified time periods. RECs trade on the New England Power Pool (NEPOOL) market.

*Connecticut Green Bank was established by the Connecticut General Assembly on July 1, 2011. Accordingly, financial results are only shown beginning with Fiscal Year 2012.

**CONNECTICUT GREEN BANK
OUTSTANDING DEBT BY TYPE
Last Nine Fiscal Years***

	Year Ended June 30,								
	2020	2019	2018	2017	2016	2015	2014	2013	2012
Primary Government - Solar Mosaic									
Line of Credit (including adjustments)	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 4,000,000	\$ --	\$ --
Cumulative Advances	1,085,956	1,085,956	1,085,956	1,085,956	1,085,956	1,085,956	126,088	--	--
Cumulative Repayments	(1,065,956)	(789,396)	(712,478)	(577,162)	(394,249)	(232,431)	--	--	--
Cumulative Outstanding Debt	--	296,560	373,478	508,794	691,707	853,525	126,088	--	--
Available LOC	--	--	--	--	--	--	3,873,912	--	--
Primary Government - Webster Bank and Liberty Bank - CT Green Bank									
Line of Credit (including adjustments)	\$ 16,000,000	\$ 16,000,000	\$ 16,000,000	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --
Cumulative Advances	16,000,000	16,000,000	1,000,000	--	--	--	--	--	--
Cumulative Repayments	(16,000,000)	(16,000,000)	--	--	--	--	--	--	--
Cumulative Outstanding Debt	--	--	1,000,000	--	--	--	--	--	--
Available LOC	--	--	15,000,000	--	--	--	--	--	--
Primary Government - Webster Bank and Liberty Bank - SHREC Warehouse 1									
Line of Credit (including adjustments)	\$ 14,000,000	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --
Cumulative Advances	6,000,000	--	--	--	--	--	--	--	--
Cumulative Repayments	--	--	--	--	--	--	--	--	--
Cumulative Outstanding Debt	6,000,000	--	--	--	--	--	--	--	--
Available LOC	8,000,000	--	--	--	--	--	--	--	--
Primary Government - Amalgamated Bank									
Line of Credit (including adjustments)	\$ 5,000,000	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --
Cumulative Advances	5,000,000	--	--	--	--	--	--	--	--
Cumulative Repayments	(4,900,000)	--	--	--	--	--	--	--	--
Cumulative Outstanding Debt	100,000	--	--	--	--	--	--	--	--
Available LOC	4,900,000	--	--	--	--	--	--	--	--
Primary Government - The Reinvestment Fund									
Original Term Note	2,510,837	2,510,837	2,510,837	2,510,837	2,510,837	--	--	--	--
Repayments	(2,510,837)	(1,143,151)	(921,903)	(541,664)	(6,619)	--	--	--	--
Cumulative Outstanding Debt	--	1,367,686	1,588,934	1,969,173	2,502,218	--	--	--	--
Primary Government - Meriden Hydro									
Clean Renewable Energy Bond	2,957,971	2,957,971	2,957,971	2,957,971	--	--	--	--	--
Repayments	(268,681)	(159,640)	(53,417)	--	--	--	--	--	--
Cumulative Outstanding Debt	2,689,290	2,798,331	2,904,554	2,957,971	--	--	--	--	--
Primary Government - Connecticut State Colleges and Universities									
Clean Renewable Energy Bond	9,101,729	9,101,729	9,101,729	--	--	--	--	--	--
Repayments	(515,976)	--	--	--	--	--	--	--	--
Cumulative Outstanding Debt	8,585,753	9,101,729	9,101,729	--	--	--	--	--	--
Primary Government - SHREC ABS Bond									
SHREC ABS Bond	36,600,000	36,600,000	--	--	--	--	--	--	--
Discount	(66,062)	(71,243)	--	--	--	--	--	--	--
Repayments	(2,344,000)	(101,000)	--	--	--	--	--	--	--
Cumulative Outstanding Debt	36,189,938	36,427,757	--	--	--	--	--	--	--
Primary Government - Kresge Note									
Original Term Note	1,000,000	1,000,000	--	--	--	--	--	--	--
Transfer of Note to Strategic Partner	(1,000,000)	--	--	--	--	--	--	--	--
Cumulative Outstanding Debt	--	1,000,000	--	--	--	--	--	--	--
CT Solar Lease 2 LLC - Key Bank									
Line of Credit (including adjustments)	27,600,000	27,600,000	27,600,000	27,600,000	24,000,000	26,700,000	26,700,000	26,700,000	--
Cumulative Advances	27,500,633	27,500,633	27,500,633	27,500,633	18,000,000	3,000,000	--	--	--
Cumulative Repayments	(6,646,393)	(4,516,713)	(3,835,166)	(2,392,925)	(832,325)	--	--	--	--
Cumulative Outstanding Debt	20,854,240	22,983,920	23,665,467	25,107,708	17,167,675	3,000,000	--	--	--
Available LOC	--	--	--	--	6,000,000	23,700,000	26,700,000	26,700,000	--
CEFIA Solar Services Inc. - Connecticut Housing Finance Authority									
Original Term Note	1,895,807	1,895,807	1,895,807	1,895,807	--	--	--	--	--
Repayments	(339,666)	(244,875)	(150,085)	(55,295)	--	--	--	--	--
Cumulative Outstanding Debt	1,556,141	1,650,932	1,745,722	1,840,512	--	--	--	--	--
Total Reporting Entity									
Cumulative Outstanding Debt	\$ 75,975,362	\$ 77,626,915	\$ 40,379,884	\$ 32,384,158	\$ 20,361,600	\$ 3,853,525	\$ 126,088	\$ --	\$ --

CONNECTICUT GREEN BANK
DEMOGRAPHIC AND ECONOMIC STATISTICS - FOR THE STATE OF CONNECTICUT
Last Nine Fiscal Years*

Fiscal Year	Population ⁽¹⁾	Median Age ⁽²⁾	Per Capita Income ⁽³⁾	Median Household Income ⁽³⁾	Population 3 Years and Over Enrolled in Public School ⁽⁴⁾	Unemployment Rate ⁽⁵⁾
2020	3,545,837	n/a	n/a	n/a	n/a	10.1%
2019	3,565,287	41.2	45,359	\$ 78,833	712,565	3.7%
2018	3,572,665	41.0	\$ 44,026	\$ 76,348	720,366	4.4%
2017	3,573,880	40.9	\$ 42,029	\$ 74,168	718,887	5.0%
2016	3,578,674	40.9	\$ 41,087	\$ 73,433	724,486	5.2%
2015	3,587,509	40.8	\$ 39,430	\$ 71,346	730,132	5.5%
2014	3,594,783	40.7	\$ 39,373	\$ 70,048	733,536	6.5%
2013	3,594,915	40.6	\$ 37,726	\$ 67,098	751,810	7.8%
2012	3,594,395	40.5	\$ 36,891	\$ 67,276	760,146	8.5%

Sources: (1) US Census Bureau - Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2019

(2) US Census Bureau - Annual Population Estimates for Selected Age Groups by Sex

(3) US Census Bureau - SELECTED ECONOMIC CHARACTERISTICS

American Community Survey 1-Year Estimates

(4) US Census Bureau - SCHOOL ENROLLMENT

American Community Survey 1-Year Estimates

(5) US Department of Labor - Databases, Tables & Calculators by Subject

Local Area Unemployment Statistics

*Connecticut Green Bank was established by the Connecticut General Assembly on July 1, 2011. Accordingly, financial results are only shown beginning with Fiscal Year 2012.

CONNECTICUT GREEN BANK
PRINCIPAL EMPLOYERS - FOR THE STATE OF CONNECTICUT
Last Seven Calendar Years*

Employer	2019			2018			2017			2016			2015			2014			2013		
	Employees ⁽¹⁾	Rank	Percentage of Total State Employment	Employees ⁽¹⁾	Rank	Percentage of Total State Employment	Employees ⁽¹⁾	Rank	Percentage of Total State Employment	Employees ⁽¹⁾	Rank	Percentage of Total State Employment	Employees ⁽¹⁾	Rank	Percentage of Total State Employment	Employees ⁽¹⁾	Rank	Percentage of Total State Employment	Employees ⁽¹⁾	Rank	Percentage of Total State Employment
State of Connecticut	48,512	1	2.82%	48,129	1	2.61%	47,752	1	2.58%	48,912	1	2.71%	51,646	1	2.90%	54,230	1	3.05%	53,061	1	3.10%
Yale New Haven Health System	24,365	2	1.32	19,416	2	1.05	21,867	2	1.21	19,920	2	1.10	20,071	3	1.12	19,869	3	1.05	18,639	3	1.07
Hartford Healthcare	19,514	3	1.05	18,652	3	1.01	18,425	3	1.02	18,135	3	1.01	18,107	4	1.01	18,597	4	1.05	16,951	4	0.88
United Technologies	19,000	4	1.03	18,000	4	0.97	18,000	5	0.89	15,000	5	0.83	24,000	2	1.34	25,000	2	1.40	27,000	2	1.55
Yale University	18,089	5	0.97	14,440	5	0.78	18,184	4	0.89	15,018	4	0.83	14,757	5	0.83	14,787	5	0.83	14,750	5	0.85
General Dynamics Electric Boat	11,862	6	0.64	11,862	6	0.64	11,450	6	0.63	10,230	6	0.57	9,683	6	0.54	8,966	7	0.50	8,817	6	0.51
University of Connecticut	9,202	7	0.50	9,760	7	0.53	10,019	7	0.55	9,861	7	0.55	8,900	7	0.49	9,299	6	0.52	8,761	7	0.50
Wal-Mart Stores Inc.	8,345	8	0.45	8,935	8	0.48	8,974	8	0.50	8,000	8	0.44	8,000	7	0.49	8,000	6	0.52	N/A	N/A	0.50
Sikorsky A Lockheed Martin Company	7,625	9	0.41	7,000	9	0.43	7,730	9	0.43	8,000	9	0.44	N/A	N/A	0.41	7,400	9	0.42	7,400	9	0.43
The Travelers Co. Inc.	7,400	10	0.40	7,400	10	0.40	7,400	10	0.41	7,400	10	0.41	7,900	8	0.41	7,400	9	0.42	7,300	10	0.42
Mohagan Sun	7,000	11	0.38	7,150	11	0.39	6,800	11	0.38	6,735	12	0.37	6,900	10	0.39	7,300	10	0.41	7,300	10	0.42
The Hartford Financial Services Group	6,800	12	0.36	6,800	12	0.37	6,800	11	0.38	7,000	11	0.39	7,000	9	0.39	7,000	11	0.39	7,700	11	0.44
Foxwoods Resort Casino	5,500	15	0.30	5,500	14	0.30	6,500	13	0.36	6,500	13	0.36	5,301	14	0.30	7,000	8	0.43	7,667	8	0.44

Sources: (1) Hartford Business Journal, Book of Lists: Connecticut's largest employers (Beginning in 2017, reduced employee count for #1 State of Connecticut by employee count for #7 University of Connecticut due to double counting of the employees.)
(2) Total State Employment from US Department of Labor - Databases, Tables & Calculators by Subject - Local Area Unemployment Statistics

*Connecticut Green Bank was established by the Connecticut General Assembly on July 1, 2011. Accordingly, financial results are only shown beginning with Fiscal Year 2012.

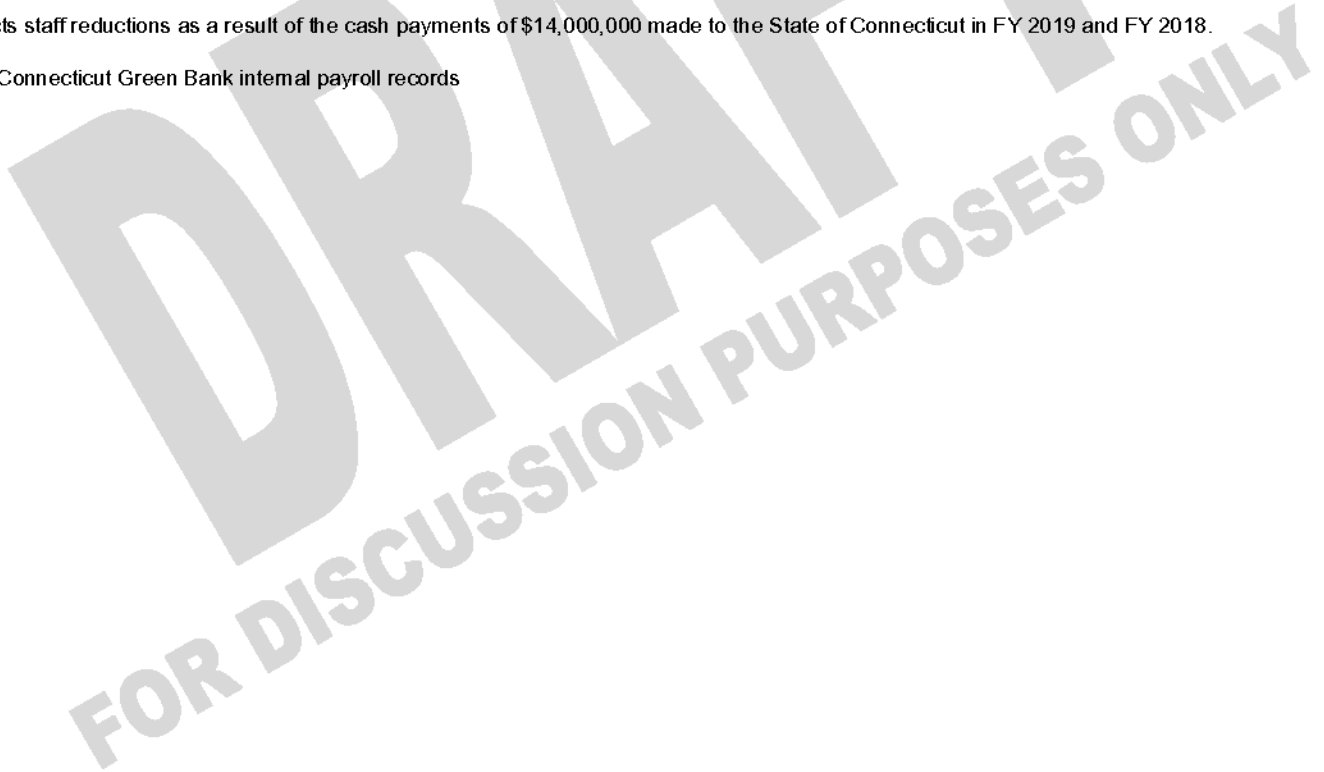


CONNECTICUT GREEN BANK
 FTEs BY FUNCTION
 Last Nine Fiscal Years*

	Year Ended June 30,								
	2020	2019 ⁽¹⁾	2018	2017	2016	2015	2014	2013	2012
Program Services									
Statutory & Infrastructure	9.00	8.00	9.00	9.00	9.00	8.00	7.00	7.00	9.00
Residential	--	1.00	6.00	6.00	6.00	6.00	5.00	3.00	1.00
Commercial & Industrial	3.00	4.00	4.00	4.00	4.00	2.00	4.00	2.00	--
Institutional	--	--	--	--	--	1.00	1.00	1.00	1.00
Subtotal Program Services	12.00	13.00	19.00	19.00	19.00	17.00	17.00	13.00	11.00
Administrative & Support									
Executive	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Finance	5.00	4.00	6.00	5.00	6.00	5.00	4.00	3.00	1.00
Accounting	6.00	5.75	5.75	5.75	5.75	5.30	3.50	2.75	2.20
Legal & Policy	3.00	3.00	3.00	3.00	3.00	3.00	2.00	2.00	2.00
Marketing	3.00	5.00	5.00	6.00	6.00	6.00	5.00	5.00	5.00
Operations	5.00	3.00	3.50	3.50	3.90	3.50	3.80	4.00	3.85
Subtotal Administrative & Support	26.00	24.75	27.25	27.25	28.65	26.80	22.30	20.75	18.05
Total FTEs by Function	38.00	37.75	46.25	46.25	47.65	43.80	39.30	33.75	29.05

⁽¹⁾ Reflects staff reductions as a result of the cash payments of \$14,000,000 made to the State of Connecticut in FY 2019 and FY 2018.

Source: Connecticut Green Bank internal payroll records



CONNECTICUT GREEN BANK
OPERATING INDICATORS BY FUNCTION
Last Nine Fiscal Years*

	Year Ended June 30,								
	2020	2019	2018	2017	2016	2015	2014	2013	2012
Clean Energy Investment (\$s in Millions)									
CGB Dollars Invested	\$ 36.8	\$ 40.3	\$ 32.7	\$ 33.1	\$ 40.0	\$ 57.6	\$ 31.8	\$ 18.5	\$ 3.4
Private Dollars Invested	275.7	297.1	198.9	157.7	283.0	265.1	75.3	92.7	6.5
Total Project Investment	312.5	337.4	231.6	190.9	323.0	322.8	107.1	111.1	9.9
Number of Clean Energy Projects	9,335	12,150	6,692	4,898	7,268	6,488	2,454	1,114	288
Annual Energy Savings of Clean Energy (MMBtu)	354,254	287,647	264,852	536,298	339,461	704,744	244,875	463,269	7,539
Installed Capacity of Clean Energy (MW)									
Anaerobic Digesters	1.0	-	-	-	1.0	-	-	-	-
Biomass	-	-	-	-	-	0.6	-	-	-
CHP	-	0.6	-	0.8	-	0.3	3.0	0.7	-
Fuel Cell	7.8	-	-	-	-	-	-	14.8	-
Energy Efficiency	-	-	-	-	-	-	-	-	-
Geothermal	-	-	-	-	-	-	-	-	-
Hydro	0.9	1.0	-	0.2	-	0.9	-	-	-
Solar PV	72.5	66.5	56.9	49.0	65.1	55.6	20.4	8.0	1.9
Wind	-	-	-	-	-	5.0	-	-	-
Other	-	0.3	-	0.1	-	-	-	-	-
Total	82.2	68.4	56.9	50.1	66.1	62.4	23.4	23.5	1.9
Lifetime Production of Clean Energy (MWh)									
Anaerobic Digesters	31,536	-	-	-	106,171	-	-	-	-
Biomass	-	-	-	-	-	-	-	-	-
CHP	-	65,197	-	94,017	-	31,930	354,780	81,008	-
Energy Efficiency	359,766	1,531,543	174,569	87,756	114,367	1,591,514	59,724	4,862	-
Fuel Cell	618,106	-	-	-	-	-	-	1,166,832	-
Geothermal	628	512	236	584	712	61	61	-	-
Hydro	96,579	107,063	-	20,711	-	96,579	-	-	-
Solar PV	2,153,782	1,983,141	1,707,449	1,470,263	1,893,138	1,590,331	580,837	226,886	55,238
Wind	-	-	-	-	-	118,260	-	-	-
Other	-	-	-	-	655	-	-	-	-
Total	3,260,397	3,687,456	1,882,254	1,673,331	2,115,043	3,428,675	995,402	1,479,588	55,238
Jobs Created by Year									
Direct Jobs (# of Jobs)	1,155	1,467	987	902	1,957	1,728	596	579	58
Indirect and Induced Jobs (# of Jobs)	1,526	1,919	1,286	1,235	3,115	2,671	952	1,161	93
Lifetime CO2 Emission Reductions (Tons)									
Avoided Emissions	1,474,033	1,979,170	1,025,988	858,938	1,131,712	1,890,035	358,717	210,361	31,043
Homes' Energy Use for One Year	154,306	207,185	107,404	89,916	118,471	197,855	37,552	22,021	3,250
Passenger Vehicles Driven for One Year	288,897	387,899	201,084	168,344	221,805	370,430	70,305	41,229	6,084
Acres of U.S. Forests in One Year	1,746,348	2,344,804	1,215,530	1,017,620	1,340,785	2,239,202	424,986	249,223	36,778

Source: Internal Connecticut Green Bank Reporting; Key Performance Indicators Data File

CONNECTICUT GREEN BANK
 CAPITAL ASSETS STATISTICS BY FUNCTION
 Last Nine Fiscal Years*

	Year Ended June 30,								
	2020	2019	2018	2017	2016	2015	2014	2013	2012
Capital assets being depreciated:									
Solar lease equipment	\$ 87,440,871	\$ 84,919,294	\$ 75,602,983	\$ 64,930,842	\$ 47,534,491	\$ 21,011,832	\$ 1,035,159	\$ 335,744	\$ 13,049
Furniture and equipment	4,733,640	4,733,640	4,084,161	169,955	169,423	222,701	338,938	136,659	28,460
Computer hardware and software	208,510	201,134	215,458	234,137	212,832	128,628	88,337	71,470	56,224
Leasehold improvements	192,027	192,027	192,027	250,981	225,844	153,657	139,682		
Capital assets not being depreciated:									
WIP solar lease equipment				11,931,740	6,014,560		1,759,111		
Construction in progress	92,575,048	90,046,095	80,094,629	65,585,915	60,078,832	27,538,519	7,141	543,873	97,733
Less accumulated depreciation and amortization:									
Solar lease equipment	11,614,390	8,715,513	6,053,786	3,619,121	1,600,070	319,144	9,865	146,560	626
Furniture and equipment	614,039	459,632	282,278	136,379	103,079	122,149	205,820	18,093	3,807
Computer hardware and software	189,629	170,590	174,621	164,972	151,573	50,906	33,845	16,715	1,971
Leasehold improvements	184,994	177,320	166,723	155,236	109,196	75,232	44,501	181,368	6,404
Capital assets, net	\$ 79,971,996	\$ 80,523,040	\$ 73,417,221	\$ 61,510,207	\$ 58,114,914	\$ 26,971,088	\$ 3,074,337	\$ 362,505	\$ 91,329

*Note: This schedule is intended to show information for ten years. Additional years' information will be displayed as it becomes available. The Connecticut Green Bank was established in July 2011.

DRAFT
FOR DISCUSSION PURPOSES ONLY

NON-FINANCIAL STATISTICS

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FOR DISCUSSION PURPOSES ONLY

1. Statement of the Connecticut Green Bank

June 30, 2020

Re: Statement of the Connecticut Green Bank on the Non-Financial Statistics Contents of the Comprehensive Annual Financial Report for FY 2020 - Background and Market, Measures of Success, and Market Transformation

Dear Reader:

This is the “Non-Financial Statistics” section of the Comprehensive Annual Financial Report for FY 2020.

In FY 2020, our ninth year of operation, we continued building public private partnerships that leverage limited public funds by attracting private capital to spark the growth of green energy in Connecticut. This year, we were forced to manage through a public health crisis with respect to COVID-19 and its impact on the demand and supply-sides of the clean energy marketplace in Connecticut. Based on surveys conducted with the Governor’s Office, Department of Energy and Environmental Protection (DEEP), Department of Economic and Community Development (DECD), AdvanceCT and our utility partners, the Green Bank saw that the clean energy industry in Connecticut has been significantly harmed by the crisis. Some companies have seen existing business cancelled or delayed while new business dropped significantly. This has led some companies to reduce employee schedules, laying off and furloughing employees at rates higher than at other small businesses. Many of the contractors surveyed feared a long recovery¹.

Despite this turmoil, the Green Bank delivered on another year of successes including:

- In honor of the 50th Anniversary of Earth Day, drafting and implementing our first Green Bond Framework that spells out how the green bank will leverage its bonding capacity while ensuring that all future issuances are held to the highest standards for transparency and receiving programmatic certification from the Climate Bonds Initiative. Winning Environmental Finance’s Green Bond Structure and Asset Backed Bond of the Year for the first ever \$38.6 million solar asset back security transaction by a green bank. The securities were used to finance the Green Bank’s Solar Home Renewable Energy Credits (SHREC) to support the incentives offered to residential end-use customers to install solar PV on their homes.
- In partnership with local contractors and financial institutions, continuing to provide families, especially within vulnerable communities, with access to clean energy to reduce the burden of energy costs through the Residential Solar Investment Program, Solar for All, Smart-E Loan,

¹ Recording of the webinars with contractors regarding the COVID 19 impacts can be found <https://m.youtube.com/watch?v=YX0prqFUX7U> and <https://m.youtube.com/watch?v=lpCQaPct8eE>

CONNECTICUT GREEN BANK

1. STATEMENT OF THE CONNECTICUT GREEN BANK

and suite of multifamily financing programs. Connecticut continues is nationwide example of being a “solar with justice” state by ensuring greater access to and investment in solar PV for low-to-moderate income families and communities of color.

- In collaboration with the electric distribution companies, including Eversource Energy and United Illuminating, as well as our private capital partners Amalgamated Bank, Greenworks Lending, and others, we continue to provide businesses with easy and affordable access to capital to finance clean energy improvements through the Small Business Energy Advantage (SBEA), Commercial Property Assessed Clean Energy (C-PACE), and Green Bank Solar PPA programs.
- Being the green bank featured in Yale University’s “Certificate in Financing and Deploying Clean Energy” program where 80 students from around the world in businesses and government learned about the structure and strategies of green investment banking to accelerate the clean energy transition.
- At the end of FY 2020, the U.S. House of Representatives passed a \$1.5 trillion “Moving America Forward Act” to modernize and decarbonize our nation’s infrastructure, including a \$20 billion “Clean Energy and Sustainability Accelerator” (i.e., National Climate Bank) modelled after the Connecticut Green Bank.

FY 2020 saw our best leverage ratio ever since our inception at 8.5 to 1, further demonstrating that the green bank model of using limited public funds to enable more private investment to “scale-up” clean energy deployment works.

The years ahead also present the organization with new opportunities. Governor Lamont issued his first Executive Order (EO1²) that mandates state agencies improve their sustainability use and reaffirmed the states commitment to fighting climate change with Executive Order 3 (EO3³). The State has a Renewable Portfolio Standard of 40% by 2030. The Public Utilities Regulatory Authority (PURA), initiated its Equitable Modern Grid docket, including energy affordability, battery storage, zero emission vehicles, and other areas of clean energy important to the Green Bank. These will undoubtedly take the Green Bank down new roads and drive continued innovation and opportunities for investment to grow our green energy economy.

We are making steady progress ensuring that the green economy is accessible to everyone – and throughout this report, the reader will see the progress we are making in underserved markets.

The assembly of the “Non-Financial Statistics” section of the Comprehensive Annual Financial Report is a process of continuous improvement, at the forefront of such is having established methodologies for monitoring and evaluating impact. During FY2020, we continued to make great strides in terms of our Evaluation, Measurement, and Verification agenda. Building on our economic development (i.e., job creation and revenue generation for the State of Connecticut from corporate, individual, and sales taxes), environmental protection (i.e., air emission reductions), and public health benefits (e.g. reduced

² <https://portal.ct.gov/-/media/Office-of-the-Governor/Executive-Orders/Lamont-Executive-Orders/Executive-Order-No-1.pdf>

³ <https://portal.ct.gov/-/media/Office-of-the-Governor/Executive-Orders/Lamont-Executive-Orders/Executive-Order-No-3.pdf>

CONNECTICUT GREEN BANK

1. STATEMENT OF THE CONNECTICUT GREEN BANK

hospitalizations, sick days, etc.) from clean energy investment and deployment. In FY2021, we will continue to make progress in developing methodologies to estimate the energy burden reduction from the deployment of clean energy in Connecticut with a focus on financing solar PV projects as well as metrics on equity (i.e., Community Reinvestment Act).

As we continue to bolster our work on social impact methodology and transparency, we have re-engaged Kestrel Verifiers to assess the Green Bank’s methods for representing impact using our indicators. The team from Kestrel has reviewed and endorsed the Green Bank’s current methodologies and found the Green Bank’s reporting to provide a high degree of transparency both in terms of activity and the underlying methodologies used to calculate this activity. They also reviewed the Green Bank’s calculations.

The result is an ever evolving and more transparent Non-Financial Statistics section that we hope is useful to those striving to learn from the successes and challenges of the Connecticut Green Bank.

Regards,



Bryan Garcia
President and CEO



Eric Shrago
Director of Operations

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FOR DISCUSSION PURPOSES

2. Statement of Non-Financial Statistics Auditor



Connecticut Green Bank
845 Brook Street
Rocky Hill, CT 06067

September 30, 2020

To the Board of Directors Connecticut Green Bank,

Report on Non-Financial Metrics included in the 2020 CAFR

In September 2020, the Connecticut Green Bank engaged Kestrel Verifiers (Kestrel) to conduct an independent external review of the metrics and underlying data collection and calculation methods outlined in the non-financial statistics section of Connecticut Green Bank's Comprehensive Annual Financial Report (CAFR or "Report") for FY2020.

Kestrel has confirmed conformance of the Green Bonds Reporting section of the CAFR with the Green Bank's Green Bond Framework. The expected Key Performance Indicators of the bond-financed projects are included, and the report transparently describes the allocation of bond proceeds. We proposed changes to improve the section and usability of information by investors.

Kestrel evaluated data collection methods and performance calculation methodologies described in the Report and assessed the degree of transparency exhibited in reporting on the following metrics: staff diversity, clean energy generated, job years created, public health benefits, carbon dioxide (CO₂) emissions avoided, and nitrogen oxides (NO_x), Sulfur Dioxide (SO₂), and particulate matter (PM_{2.5}) avoided.

We note that the Green Bank's overall efforts in FY2020 resulted in improved air quality, benefits to public health and productivity, including avoiding premature deaths and lost work days. In total, the cumulative health benefits from CTGB's 2020 efforts are estimated at between \$983,350 and \$2,220,239. The Green Bank's FY2020 efforts also resulted in 1,079 direct jobs and \$10,024,298 in individual, corporate, and sales tax revenue, which supports public programs and services.

We commend the Green Bank's meticulous project-level data tracking and the multi-faceted approach to reporting positive impacts on public health, air quality, financial leverage, and the clean energy transition. A remarkable range of metrics are reported, ranging from internal workforce diversity, job years supported, annual CO₂ emissions avoided, public health financial savings, and invested capital. The Green Bank offers equivalencies such as carbon sequestered by young trees that translate the technical metrics into more approachable numbers for all audiences.

Based on the information provided to Kestrel Verifiers by Connecticut Green Bank and our understanding of best practices in goal setting, measurement and disclosure, it is our opinion that Connecticut Green Bank's metrics, data collection and calculation methodologies are sound and represent best practice. It is our opinion that Connecticut Green Bank adequately reports on these metrics and performance against them and demonstrates a high level of transparency.

CONNECTICUT GREEN BANK
2. STATEMENT OF NON-FINANCIAL STATISTICS AUDITOR



We commend the Connecticut Green Bank for leadership in reporting.

Sincerely,

Monica Reid
CEO
Kestrel Verifiers

3. Organizational Background

The Connecticut Green Bank is the nation’s first green bank. The organization is creating a thriving marketplace to accelerate clean energy adoption in Connecticut by making clean energy financing accessible and affordable for homeowners, businesses and institutions.

Governance

Board of Directors

Pursuant to Section 16-245n of the General Statutes of Connecticut, the powers of the Connecticut Green Bank are vested in and exercised by the Board of Directors that is comprised of eleven voting and one non-voting members each with knowledge and expertise in matters related to the purpose of the organization – see Table 1.

TABLE 1. COMPOSITION OF THE BOARD OF DIRECTORS OF THE CONNECTICUT GREEN BANK FOR FY 2020

Position	Name	Status (as of 06-30-2020)	Voting
Commissioner of DECD (or designee)	Binu Chandy	Ex Officio	Yes
Commissioner of DEEP (or designee)	Mary Sotos ⁴ Michael Li	Ex Officio	Yes
State Treasurer (or designee)	Bettina Bronisz Steven Meier ⁵	Ex Officio	Yes
Finance of Renewable Energy	Vacant	Vacant	Yes
Finance of Renewable Energy	Kevin Walsh	Appointed	Yes
Labor Organization	John Harrity	Appointed	Yes
R&D or Manufacturing	Lonnie Reed ⁶	Appointed	Yes
Investment Fund Management	Eric Brown	Appointed	Yes
Environmental Organization	Matthew Ranelli	Appointed	Yes
Finance or Deployment	Tom Flynn	Appointed	Yes
Residential or Low Income	Betsy Crum ⁷ Brenda Watson	Appointed	Yes
President of the Green Bank	Bryan Garcia	Ex Officio	No

⁴ Michael Li, Bureau Chief for the Bureau of Energy and Technology Policy replaced Mary Sotos as DEEP designee as of 10/21/2019,

⁵ Steven Meier replaced Bettina Bronisz as Treasurer’s designee as of 5/1/2020.

⁶ Lonnie Reed was appointed as Chair of the Green Bank by Gov. Lamont as of 10/10/2019.

⁷ Betsy Crum resigned effective 2/8/2020. Brenda Watson was appointed by Rep Aresimowicz on 2/9/2020.

CONNECTICUT GREEN BANK

3. ORGANIZATIONAL BACKGROUND

The Board of Directors of the Connecticut Green Bank is governed through statute, as well as an [Ethics Statement](#)⁸ and [Ethical Conduct Policy](#)⁹, [Resolutions of Purposes](#)¹⁰, [Bylaws](#)¹¹, [Joint Committee Bylaws](#)¹², and [Comprehensive Plan](#)¹³. The Comprehensive Plan for the Connecticut Green Bank provides a multi-year strategy to support the vision and mission of the organization and the public policy objective of delivering consumers cheaper, cleaner, and more reliable sources of energy while creating jobs and supporting local economic development. An Employee Handbook and [Operating Procedures](#)¹⁴ have also been approved by the Board of Directors and serve to guide the staff to ensure that it is following proper contracting, financial assistance, and other requirements.

As noted above, the Connecticut Green Bank's Board of Directors is comprised of eleven (11) ex officio and appointed voting members and one (1) ex officio non-voting members. The leadership of the Board of Directors, includes:

- **Chair** - Lonnie Reed
- **Vice Chair** - Mary Sotos, Deputy Commissioner of DEEP/Michael Li (voted in by her/his peers of the Connecticut Green Bank Board of Directors);
- **Secretary** - Matthew Ranelli, Partner at Shipman and Goodwin (voted in by his peers of the Connecticut Green Bank Board of Directors)
- **Staff Lead** – Bryan Garcia, President and CEO

During FY 2020, the Board of Directors of the Connecticut Green Bank met nine (9) times, including seven (7) regularly scheduled meetings and two (2) special meetings. There was an attendance rate of 77% by the Board of Directors and 66 approved resolutions. For a link to the materials from the Board of Directors meetings that are publicly accessible – click [here](#)¹⁵.

Committees of the Board of Directors

There are four (4) committees of the Board of Directors of the Connecticut Green Bank, including:

- Audit, Compliance, and Governance
- Budget, Operations, and Compensation
- Deployment
- Joint Committee of the Energy Efficiency Board and the Connecticut Green Bank

⁸Ethics Statement: http://www.ctgreenbank.com/wp-content/uploads/2017/02/Green-Bank_Ethics-Statement-CLEAN-REVISED-102214.pdf

⁹ Ethical Conduct Policy: https://ctgreenbank.com/wp-content/uploads/2020/06/Green-Bank_Ethical-Conduct-Policy_BOD_CLEAN-REVISED-January-2020.pdf

¹⁰ Resolutions of Purposes: <https://www.ctgreenbank.com/wp-content/uploads/2016/01/Financial-and-Gov.-CT-Green-Bank-Resolution-of-Purpose.pdf>

¹¹ Bylaws: https://ctgreenbank.com/wp-content/uploads/2020/06/Green-Bank_Revised-Bylaws_062620.pdf

¹² Joint Committee Bylaws: https://www.ctgreenbank.com/wp-content/uploads/2015/12/ECMB_CGB_Joint_Committee_Bylaws_October_2014FINAL.pdf

¹³ Comprehensive Plan: https://ctgreenbank.com/wp-content/uploads/2020/07/Green-Bank_Revised-Comprehensive-Plan_062620a.pdf

¹⁴ Operating Procedures: https://ctgreenbank.com/wp-content/uploads/2020/04/Operating-Procedures_011720.pdf

¹⁵ Board of Directors meetings: <http://www.ctgreenbank.com/about-us/governance/connecticut-grboard-meetings/>

CONNECTICUT GREEN BANK

3. ORGANIZATIONAL BACKGROUND

Audit, Compliance and Governance Committee

The Connecticut Green Bank's Audit, Compliance and Governance (ACG) Committee is comprised of three (3) ex officio and appointed voting members. The leadership of the ACG Committee includes:

- **Chair** – Matthew Ranelli, Partner and Shipman and Goodwin (designated as the Chair by former Chair of the Green Bank, Commissioner Catherine Smith)
- **Members**¹⁶ – Tom Flynn and Mary Sotos/Mike Li

During FY 2020, the ACG Committee of the Connecticut Green Bank met five (5) times, including three (3) regularly scheduled meetings and two (2) special. There was an attendance rate of 92% by the Committee members and 9 approved resolutions. For a link to the materials from the ACG Committee meetings that are publicly accessible – click [here](#)¹⁷.

Budget, Operations, and Compensation Committee

The Connecticut Green Bank's Budget, Operations, and Compensation (BOC) Committee is comprised of three (3) ex officio and appointed voting members. The leadership of the BOC Committee, includes:

- **Chair** - John Harity, retired President of the Connecticut State Council of Machinists (designated as the Chair by former Chair of the Green Bank, Commissioner Catherine Smith)
- **Members**¹⁸ - Eric Brown (designated as member of the Committee by former Chair of the Green Bank, Commissioner Catherine Smith) and Mary Sotos/Michael Li (designated as member of the Committee by herself as current Vice Chair of the Green Bank).

During FY 2020, the BOC Committee of the Connecticut Green Bank met four (4) times, including three (3) regularly scheduled meetings and one (1) special meeting. There was an attendance rate of 95% by the Committee members and 3 approved resolutions. For a link to the materials from the BOC Committee meetings that are publicly accessible – click [here](#)¹⁹.

Deployment Committee

The Connecticut Green Bank's Deployment Committee is comprised of four (4) ex officio and appointed voting members. The leadership of the Deployment Committee includes:

- **Chair** - Mary Sotos, Deputy Commissioner of DEEP/Mike Li, Chief of the Bureau of Energy Technology and Policy²⁰ (designated as the Chair by herself/himself as Vice Chair of the Green Bank).

¹⁶ Note – the Chair and/or Vice Chair of the Board of Directors of the Connecticut Green Bank can attend the Audit, Compliance, and Governance Committee meeting to establish a quorum.

¹⁷ ACG, B&O, Deployment Committee meetings: <https://www.ctgreenbank.com/about-us/governance/connecticut-grittee-meetings/>

¹⁸ Note – the Chair and/or Vice Chair of the Board of Directors of the Connecticut Green Bank can attend the Audit, Compliance, and Governance Committee meeting to establish a quorum.

¹⁹ ACG, B&O, Deployment Committee meetings: <http://www.ctgreenbank.com/about-us/governance/connecticut-grittee-meetings/>

²⁰ Mike Li replaced Mary Sotos effective at the 5/27/2020 meeting.

CONNECTICUT GREEN BANK

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- **Members** - Bettina Bronisz/Steven Meier²¹ (ex officio per bylaws), Matthew Ranelli, and / Betsy Crum/Binu Chandy²² (designated as members of the Committee by former Chair of the Green Bank, Commissioner Catherine Smith)

During FY 2020, the Deployment Committee of the Connecticut Green Bank met four (4) times, including three (3) regularly scheduled meetings and one (1) special meetings. There was an attendance rate of 88% by Committee members and 8 approved resolutions. For a link to the materials from the Deployment Committee meetings that are publicly accessible – click [here](#)²³.

Joint Committee

A Joint Committee of the Energy Efficiency Board and the Connecticut Green Bank was established pursuant to Section 16-245m(d)(2) of the Connecticut General Statutes. Per by-laws established and approved by the EEB and Connecticut Green Bank, the Joint Committee is comprised of four (4) appointed and voting members, one (1) ex officio and voting member, and four (4) ex officio and non-voting members. The leadership of the Joint Committee includes:

- **Chair** - Eric Brown, Attorney with CBIA (voted in by his peers of the EEB and the Connecticut Green Bank)
- **Vice Chair** - Mary Sotos/Mike Li²⁴, Senior Policy Advisor to DEEP
- **Secretary** - Bryan Garcia (non-voting), Connecticut Green Bank, and Craig Diamond, Connecticut Energy Efficiency Fund (voted in by their peers of the EEB and the Connecticut Green Bank)
- **Members**²⁵ - Bert Hunter (non-voting), and John Harrity (designated as members of the Committee by former Chair of the Green Bank, Commissioner Catherine Smith)

During FY 2020, the Joint Committee of the EEB and the Connecticut Green Bank met three (3) times, including three (3) regularly scheduled meetings and no special meetings. There was an attendance rate of 88% by the Joint Committee members and 0 approved resolutions. For a link to the materials from the Joint Committee meetings that are publicly accessible – click [here](#)²⁶.

Open Connecticut

Open Connecticut centralizes state financial information to make it easier to follow state dollars. In Connecticut, quasi-public agencies are required to submit annual reports to the legislature, including a summary of their activities and financial information. In addition, as of Public Act 19-102, quasi-public agencies are required to provide checkbook-level vendor payment data for display on Open Connecticut. The Connecticut Green Bank was among the first to voluntarily submit this information, as

²¹ Steve Meier replaced Bettina effective at the 5/27/2020 meeting.

²² With her appointment as Chair to the IPC Board, Betsy Crum effectively resigned from the Deployment Committee. The committee met with 3 members until Binu Chandy replaced her effective at the 9/25/2019 meeting.

²³ ACG, B&O, Deployment Committee meetings: <http://www.ctgreenbank.com/about-us/governance/connecticut-grittee-meetings/>

²⁴ Mike Li replaced Mary Sotos effective at the 12/18/2019 meeting.

²⁵ Note – these members are representatives from the Connecticut Green Bank.

²⁶ Joint Committee meeting: <http://www.ctgreenbank.com/about-us/governance/connecticut-grittee-meetings/>

CONNECTICUT GREEN BANK

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well as employee payroll data, to the State Comptroller since the inception of Open Connecticut, and it will continue doing so to satisfy the importance of transparency and public disclosure. To access this information, click [here](#)²⁷.

Ethics and Transparency

Statement of Financial Interest

It is required by state ethics laws and a determination of the Governor's standard that senior-level staff (i.e. Director-level and above) and members of the Board of Directors annually file a Statement of Financial Interest (SFI). The Governor's standard is the following:

"Governor Malloy has established a standard which requires "filing of Annual Statements of Financial Interests by all persons in the Executive Branch and Quasi-Public Agencies who exercise (i) significant policy-making, regulatory or contractual authority; (ii) significant decision-making and/or supervisory responsibility for the review and/or award of State contracts; or (iii) significant decision-making and/or supervisory responsibility over staff that monitor State contracts."

These statements include information such as names of all associated business, income over \$1,000, a list of all real property, and a list of creditors. SFIs that have been filed are available to the public under the Freedom of Information Act. The SFIs serve two purposes. First, the financial disclosure provides a checklist or reminder to the official/employee to be mindful of potential conflicts of interest. Second, the statements serve as a tool to maximize public confidence in governmental decision making.

With respect to the 2020 SFI filing required by July 1, 2020, with a 60 day extension being granted by the Connecticut Office of State Ethics (the "OSE") pursuant to Executive Order 7M – the Connecticut Office of State Ethics received the following from the Connecticut Green Bank – see Table 2.

TABLE 2. SUMMARY OF STATE OF FINANCIAL INTEREST FILINGS WITH THE OFFICE OF STATE ETHICS FOR FY 2020

	Number of SFIs Submitted	% Submitted on Time
Senior Staff	6	100%
Board of Directors	8	100%

On July 15, 2020 the Office of State Ethics sent out their July newsletter in which they congratulated the Green Bank for being one of only forty-seven agencies to earn "the distinction of not only achieving 100% timely compliance but also had 100% submit filings electronically". The organization has received this designation in each of its first nine years of operation.

Small and Minority Business Procurement

The State of Connecticut's Supplier Diversity Program was established to ensure Connecticut small businesses have an opportunity to bid on a portion of the State's purchases. Through Fiscal Year 2015, the program required agencies and political subdivisions to set aside 25% of their annual budgets

²⁷ Open Connecticut: <http://www.osc.ct.gov/openCT/quasi.html>

CONNECTICUT GREEN BANK
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for construction, housing rehabilitation, and purchasing goods and services (after approved exemptions by the Department of Administrative Services) to be awarded to certified small businesses, with 25% of this amount to be awarded to certified minority business enterprises. Although reporting is no longer required, the Connecticut Green Bank is performing this analysis to ensure we maintain our voluntarily commitment to meeting our diversity goals in procurement.

TABLE 3. SMALL BUSINESS PROCUREMENT

Year	Goal	Actual	Percentage
2012	\$59,775	\$39,520	66%
2013	\$62,598	\$59,340	95%
2014	\$135,320	\$120,560	89%
2015	\$221,750	\$251,980	113%
2016	\$238,550	\$510,797	214%
2017	\$209,725	\$379,246	180%
2018	\$187,142	\$537,962	287%
2019	\$137,355	\$334,575	244%
2020	\$143,657	\$358,658	250%
Total	\$1,395,872	\$2,592,638	186%

TABLE 4. MINORITY BUSINESS ENTERPRISE PROCUREMENT

Year	Goal	Actual	Percentage
2012	\$14,944	\$31,474	211%
2013	\$15,649	\$52,308	334%
2014	\$33,830	\$88,427	261%
2015	\$55,438	\$153,319	277%
2016	\$9,638	\$96,020	161%
2017	\$52,431	\$107,974	205%
2018	\$46,785	\$28,075	60%
2019	\$34,339	\$15,423	45%
2020	\$35,914	\$30,793	85%
Total	\$298,968	\$603,813	202%

Operational Efficiency

The Green Bank has significantly improved its operational efficiency with respect to reduced financial resources, real estate, and human capital to deliver more impact through the investment in and deployment of clean energy in Connecticut. As demonstrated in Table 5, since FY2012, staff has grown by 1.3 times (i.e., 9 FTEs), office space has increased by 3.4 times (i.e., 8,870 ft²), and general administration has increased by 4 times since 2012.

CONNECTICUT GREEN BANK
3. ORGANIZATIONAL BACKGROUND

TABLE 5. HUMAN AND FINANCIAL RESOURCES OF THE GREEN BANK FY 2012 VS FY 2020

Fiscal Year	Human Resources		Financial Resources				
	FTE	Office Space (ft ²)	Total Expenses	General Admin & Program Admin	General Admin	SBC Revenue	RGGI Revenue
2012	29.1	3,626	\$32,510,209	\$4,532,520	\$1,387,854	\$27,025,088	\$2,052,748
2020	38	12,496	\$43,747,093	\$23,396,881	\$6,936,125	\$24,854,150	\$4,581,628
Multiple	1.3x	3.4x	1.3x	5.12x	4x	.91x	2.23x

With a thirty-five percent increase in FTEs, the impact of the organization has grown significantly. Private Investment and clean energy deployment have increased over 30 and 25-fold respectively as demonstrated in Table 6.

TABLE 6. GREEN BANK IMPACT FY 2012 VS FY 2020

Fiscal Year	Impact					
	Private Investment	Clean Energy Deployment (MW)	Expected Annual Generation (MWh)	Annual Saved / Produced (MMBtu)	Job Years Supported	Annual CO ₂ Emissions Avoided (tons)
2012	\$10,184,827	2.9	3,278	11,183	231	1,833
2020	\$312,779,716	73.3	94,508	306,383	3,355	48,402
Multiple	30.7x	25.3x	28.8x	27.4x	14.5x	26.4x

As a quasi-public organization, the Connecticut Green Bank strives to leverage its resources in attracting investment and in deploying clean energy as efficiently as possible. Reviewing the Green Bank’s human capital, real estate, and expenses versus the amount of private investment and clean energy deployed shows a marked increase during the organization’s first nine years of existence.

TABLE 7. GREEN BANK DEPLOYMENT EFFICIENCY FY 2012 VS FY 2020

Impact Delivered to Human and Financial Resources Used						
Fiscal Year	Private Investment / FTE	Clean Energy Deployment / FTE	Private Investment / Total Expenses	Private Investment / General Admin	Private Investment / Office Space	Clean Energy Deployment / Office Space
	(\$/FTE)	(kW/FTE)			(\$/ft ²)	(kW/ft ²)
2012	\$349,994	100	0.31	7.34	\$2,809	0.8
2020	\$8,453,506	1,981	7.15	55.3	\$25,030	8.9
Multiple	24.2x	19.8x	23.1x	7.5x	8.9x	7.3x

CONNECTICUT GREEN BANK
3. ORGANIZATIONAL BACKGROUND

Workforce and Diversity

In order to achieve its mission, the Connecticut Green Bank is primarily reliant upon its most valuable asset: its people. The organization’s staff is comprised of Program Staff, charged with designing and implementing products and programs that bring clean energy into the targeted markets in the state, Investment Staff, charged with tapping and leveraging efficient sources of capital, and Support Staff including marketing, legal, operations, and accounting functions.

In Fiscal Year 2020, the Green Bank added 3 new positions and eliminated one position. There were five new members hired to fill open vacancies. The organization had a turnover rate of 13%.

The Green Bank realizes that part of having a strong team is ensuring that different perspectives are included in its workforce. To that end, the Green Bank monitors the diversity of its team and, per Connecticut regulations, informs the Governor’s office of this. Table 8 is the report that will be filed for the fiscal year ending June 30, 2020.

TABLE 8. GREEN BANK WORKFORCE ANALYSIS FY 2020

Category or class	Grand Total	Total Male	Total Female	White Male	White Female	Black Male	Black Female	Hispanic Male	Hispanic Female	Other Male	Other Female
ALL CATEGORIES											
Officials/Managers	26	14	12	12	12	1	0	1	0	1	1
Professionals	8	0	8	0	7	0	1	0	0	0	0
Administrative - Clerical	4	0	0	1	1	0	1	0	1	0	0
TOTALS	38	13	20	12	20	1	2	1	1	1	1

4. Measures of Success

The Green Bank develops a comprehensive plan every two to three years, establishing performance targets associated with the organization’s overall objectives as well as individual program objectives. Results are reported in this document through Key Performance Indicators, which have various levels of detail. This section presents performance results across all the programs – that is, at the Green Bank portfolio level. At the highest level, management is interested in the number of “Closed” Projects, the amount of Capital Deployed, and the amount of Clean Energy Generated. Table 9 below highlights these indicators. It is, of course, important to recognize that these data show the summation of numbers of projects, deployed funds, and clean energy generated across all of the Green Bank’s programs, each of which has its own unique set of projects, funds, clean energy generation, and fossil fuel reduction. These are each presented in the later sections of this report, in the program specific presentations.

TABLE 9. GREEN BANK ACTUALS VS TARGETS BY FY CLOSED²⁸

	Target	Actual	% of Target
Fiscal Year	Closed Projects		
2012	-	288	0%
2013	-	1,114	0%
2014	4,396	2,454	56%
2015	4,485	6,488	145%
2016	14,252	7,268	51%
2017	6,846	4,898	72%
2018	5,966	6,692	112%
2019	7,748	12,150	157%
2020	8,629	9,335	108%
Total	52,322	50,687	97%
	Capital Deployed²⁹		
2012	-	\$9,901,511	0%
2013	-	\$111,044,476	0%
2014	\$56,439,000	\$101,830,141	180%
2015	\$291,602,500	\$311,964,251	107%
2016	\$591,131,745	\$316,972,579	54%
2017	\$264,858,518	\$185,757,408	70%
2018	\$218,296,752	\$221,289,513	101%
2019	\$258,917,500	\$334,205,302	129%
2020	\$296,910,000	\$309,180,206	104%
Total	\$1,978,156,015	\$1,902,145,387	96%

²⁸ Residential solar projects that receive financing also receive an incentive under the Residential Solar Incentive Program and Multifamily and Commercial Lease projects may also use C-PACE, so they are counted in each sector's results. In this document, unless we are separating out a specific program, these projects have been removed from the total to avoid double counting.

²⁹ Capital Deployment is defined by the Green Bank as the total project cost of projects financed or incentivized by the organization except for the residential programs where capital deployment only includes the amount financed.

CONNECTICUT GREEN BANK
3. ORGANIZATIONAL BACKGROUND

	Target	Actual	% of Target
	Capacity Installed (MW)		
2012	-	1.9	0%
2013	-	23.5	0%
2014	29.6	23.4	79%
2015	55.5	62.4	112%
2016	119.5	66.1	55%
2017	66.2	50.2	76%
2018	48.6	56.9	117%
2019	72.3	68.4	95%
2020	77.6	81.6	105%
Total	469.3	434.3	93%

The above metrics show that the Green Bank continues to deploy capital to new projects that lead to increased investment in and deployment of clean energy.

DRAFT
 FOR DISCUSSION PURPOSES ONLY

CONNECTICUT GREEN BANK

3. ORGANIZATIONAL BACKGROUND

The following infographic illustrates the activity and impact of the Connecticut Green Bank from FY 2012 through FY 2020:

FY 12 -
FY 20



Green Bank Impact Report

Since the Connecticut Green Bank's inception through the bipartisan passage of Public Act 11-80 on July 1, 2011, we have accelerated the deployment of clean energy to benefit families, businesses, and our communities. The impact of our green bank innovation is shown below in terms of investment, economic development, and environmental protection from FY 2012 through FY 2020.

INVESTMENT IN CONNECTICUT

Investment Since inception, the Green Bank has mobilized **\$1.94 billion** of investment into the State's economy.



Leverage ratio The Green Bank's leverage ratio is the relationship between private investment and Green Bank investment.



Tax revenues The Green Bank's activities have helped generate an estimated **\$96.7 million** in state tax revenues.

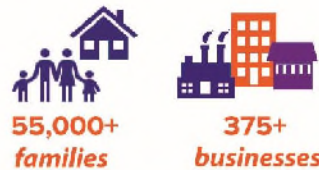


ECONOMIC DEVELOPMENT

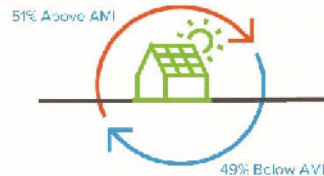
Jobs The Green Bank has supported the creation of more than **23,000** direct, indirect, and induced job-years.



Energy burden The Green Bank has reduced the energy costs on families, businesses, and our communities.



Accessible and affordable The Green Bank has supported residential solar PV installations to achieve income parity against area median income (AMI).

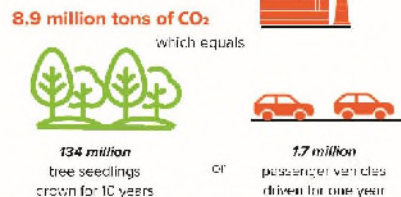


ENVIRONMENTAL PROTECTION

Deployment The Green Bank has accelerated the growth of clean energy to more than **434 MW**.



Pollution The Green Bank has helped reduce air emissions that cause climate change and worsen public health, including **8.4 million** pounds of SOx and **9.7 million** pounds of NOx.



Public health The Green Bank has improved the lives of families, helping them avoid sick days, hospital visits, and even death.



Learn more by visiting ctgreenbank.com/strategy-impact/impact



Winner of the 2017 Forward Ready Series A Future Awards for its work in America's Green economy, the Connecticut Green Bank has also received numerous other accolades including multiple national and state government, industry, and Green Building awards, as well as being ranked as one of the nation's top green banks and business award winners.

Sources: Connecticut Green Bank, Connecticut's Annual Financial Report

CONNECTICUT GREEN BANK
3. ORGANIZATIONAL BACKGROUND

Activity

The Connecticut Green Bank tracks projects through three phases as they move through the pipeline from application through implementation – Approved, Closed, and Completed. “Approved” signifies that the appropriate authority within the Connecticut Green Bank, whether President & CEO, Deployment Committee, or Board of Directors, has approved the agency’s investment in the project per the Comprehensive Plan and Budget. “Closed” indicates all financial and legal documents have been executed and any additional funding has been secured. “Completion” indicates the project has closed, all construction and installation are completed, and the project is operational. The full forward-looking estimates of the energy, economic, and environmental benefits from these projects begin to be fully accounted and reported after they close. Table 10 below presents annual project activity by these three phases.

TABLE 10. GREEN BANK PROJECT ACTIVITY BY FY CLOSED

Fiscal Year	Approved	Closed	Completed
2012	288	288	18
2013	1,139	1,114	759
2014	2,814	2,454	1,205
2015	7,429	6,488	3,947
2016	8,064	7,268	9,539
2017	5,855	4,898	5,425
2018	7,673	6,692	5,896
2019	13,065	12,150	7,196
2020	10,350	9,335	7,327
Total	56,677	50,687	41,313

Summary by fields such as “Number of projects” does not capture the extent of the organization’s activities in a year as different projects have different sizes. Further demonstration of the organization’s reach can be seen in the number of multi-family units impacted by closed projects each year in Table 11.

TABLE 11. GREEN BANK NUMBER OF MULTIFAMILY HOUSING UNITS IMPACTED BY FY CLOSED

Fiscal Year	Affordable	Market Rate	Total
2012	0	0	0
2013	0	0	0
2014	120	0	120
2015	326	82	408
2016	1,576	191	1,767
2017	1,435	100	1,535
2018	1,792	0	1,792
2019	2,049	132	2,181
2020	1,170	114	1,284
Total	8,468	619	9,087

Capital Deployed
 Clean Energy Investment

The Connecticut Green Bank’s intent, stated in the Comprehensive Plan, is to use public funds to attract multiples of private investment into Connecticut’s green energy economy, to decrease reliance on public funds over time, and expand the scale of clean energy investments in the state. Table 12, through Table 14 show activity to date on this subject.

TABLE 12. GREEN BANK CLEAN ENERGY INVESTMENT BY SOURCE - PUBLIC AND PRIVATE BY FY CLOSED

Fiscal Year	CGB Investment	Private Investment	Total Investment
2012	\$3,401,642	\$6,499,869	\$9,901,511
2013	\$18,460,123	\$92,681,093	\$111,141,216
2014	\$31,843,733	\$75,305,819	\$107,149,552
2015	\$57,640,046	\$265,148,965	\$322,789,011
2016	\$39,980,412	\$283,008,108	\$322,988,520
2017	\$33,112,477	\$157,740,303	\$190,852,780
2018	\$32,742,386	\$198,890,921	\$231,633,307
2019	\$40,306,649	\$297,122,070	\$337,428,719
2020	\$36,753,538	\$275,717,821	\$312,471,359
Total	\$294,241,006	\$1,652,114,970	\$1,946,335,975

Table 12 shows the average total investment of public and private funds per project, by fiscal year, and in total. In reviewing the results from year to year it is important to note that the mix, size, and financial requirements of projects differ significantly across the program portfolio offered by the Green Bank.

**CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS**

TABLE 13. GREEN BANK ACTUALS BY FY CLOSED

Fiscal Year	Closed Projects										
	CPACE	Commercial Lease	Solar Lease	Residential Solar	Smart-E	Low Income Leases	Multi-Family	Solar Loan	AD & CHP	Strategic	
2012				288							
2013	3			1,109	3			3	2	1	
2014	23		107	2,382	143		1	140	1		
2015	49	16	610	6,397	278	4	7	136	2	2	
2016	53	27	472	6,804	221	343	31		1		
2017	38	30		4,465	522	669	19		1	1	
2018	66	29		5,202	1,749	656	19				
2019	38	19		6,955	832	849	19			1	
2020	45	6		7,921	737	807	18			2	
Total	315	127	1,189	41,523	4,485	3,328	114	279	7	7	
Total Investment											
2012				\$9,901,511							
2013	\$1,512,144			\$35,426,043	\$71,924			\$91,924	\$3,189,000	\$70,800,000	
2014	\$21,785,167		\$4,324,454	\$73,853,653	\$2,486,507		\$420,000	\$4,461,833	\$6,300,000		
2015	\$33,716,566	\$11,547,562	\$23,672,593	\$214,705,219	\$7,663,425	\$109,380	\$6,282,061	\$4,505,386	\$642,578	\$56,500,000	
2016	\$36,728,026	\$16,711,392	\$18,325,441	\$218,107,091	\$6,145,939	\$9,817,459	\$34,005,715		\$10,500,000		
2017	\$15,487,305	\$34,878,766		\$120,797,529	\$10,748,716	\$18,326,615	\$10,895,117		\$3,401,392	\$4,538,212	
2018	\$26,732,114	\$24,992,210		\$149,130,705	\$34,175,021	\$18,244,551	\$9,493,247				
2019	\$21,482,788	\$11,704,370		\$210,489,564	\$11,336,982	\$24,863,979	\$32,789,800			\$6,503,800	
2020	\$27,518,093	\$2,719,145		\$235,505,360	\$11,544,201	\$20,449,252	\$9,305,699			\$20,738,702	
Total	\$184,962,202	\$102,553,445	\$46,322,488	\$1,267,916,674	\$84,172,715	\$91,811,236	\$103,191,639	\$9,059,143	\$24,032,970	\$159,080,714	
Capacity Installed (MW)											
2012				1.9							
2013	0.1			7.9	0.0			0.0	0.7	14.8	
2014	3.6		0.8	17.1	0.3			1.1	3.0		
2015	7.3	3.5	4.9	48.7	1.3	0.0	1.0	1.1	0.1	5.0	
2016	6.4	5.5	3.8	53.3	1.0	2.2	1.3		1.0		
2017	3.9	11.6		34.8	1.3	4.2	2.3		0.8	0.2	

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	Capacity Installed (MW)									
2018	7.2	8.1	42.4	3.9	4.4	0.1				
2019	5.2	3.6	59.3	0.9	6.0	0.4				1.0
2020	6.1	0.8	66.3	1.0	5.1	2.0				7.7
Total	39.9	33.1	331.7	9.7	21.9	7.1	2.2	5.6		28.7

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TABLE 14. GREEN BANK CLEAN ENERGY PROJECTS - AVERAGE PUBLIC AND PRIVATE INVESTMENTS BY FY CLOSED

Fiscal Year	Average Investment
2012	\$34,380
2013	\$99,768
2014	\$43,663
2015	\$49,752
2016	\$44,440
2017	\$38,965
2018	\$34,613
2019	\$43,188
2020	\$35,830
Total	\$47,178

Leverage Ratio

The table below shows in ratio form the extent to which public monies are driving private investment into the Green Bank’s programs and the clean energy economy. The Green Bank’s “leverage ratio,” as it is commonly referenced, is calculated by dividing the total monies available in each period – here the Green Bank’s fiscal year periods – by the amount of public investment. Table 15 presents these ratios by fiscal year and the Green Bank’s program categories. The increases in leverage over time illustrate the success of the Green Bank model at crowding in private capital and making limited public funds go further.

TABLE 15. GREEN BANK SECTOR LEVERAGE RATIOS BY FY CLOSED

Fiscal Year	Commercial	Infrastructure	Residential	Strategic	Total
2012	0.0	2.9	0.0	0.0	2.9
2013	3.8	3.2	24.8	12.2	6.0
2014	2.2	3.9	10.0	0.0	3.4
2015	2.6	6.5	4.0	17.5	5.6
2016	4.5	11.0	8.1	0.0	8.1
2017	4.7	10.3	4.3	1.2	5.8
2018	4.9	11.7	6.0	0.0	7.1
2019	5.1	13.1	8.2	5.4	8.4
2020	6.5	14.0	4.5	3.1	8.5
Total	4.1	8.7	5.9	7.6	6.6

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Clean Energy Produced and Avoided Energy Use

The data below present the clean energy outputs of the projects supported by the Green Bank. Data are presented as electric capacity (MW), electricity production (MWh), and Energy Saved or Produced (MMBtu) – see Table 16.

TABLE 16. GREEN BANK INSTALLED CAPACITY, ESTIMATED GENERATION AND ENERGY SAVED AND/OR PRODUCED BY FY CLOSED³⁰

Fiscal Year	MW	Estimated Generation (MWh)			Energy Saved/Produced (MMBtu) ³¹		Green Bank Investment (\$) / Lifetime Combined Energy Generated & Saved (MMBtu)
		Annual	Lifetime ³²	Lifetime Clean Energy Produced (kWh) / Green Bank Investment (\$)	Annual	Lifetime	
2012	1.9	2,210	55,238	16.2	7,539	188,473	18.0
2013	23.5	131,562	1,479,588	80.2	463,269	5,266,792	3.5
2014	23.4	51,587	995,402	31.3	244,875	4,499,982	7.1
2015	62.4	209,713	3,428,675	59.5	704,744	11,429,646	5.0
2016	66.1	91,974	2,115,043	52.9	339,461	7,535,281	5.3
2017	50.2	71,734	1,673,331	50.5	536,298	9,768,767	3.4
2018	56.9	78,352	1,882,254	57.5	264,852	6,109,576	5.4
2019	68.4	213,758	3,687,456	91.5	287,647	6,703,779	6.0
2020	81.6	178,565	3,260,397	88.7	354,254	7,995,948	4.6
Total	434.3	1,029,455	18,577,385	63.1	3,202,939	59,498,245	4.9

Clean Energy Technology Deployment

The Connecticut Green Bank takes a technology-agnostic approach to its financing products, and therefore will consider any commercially available technology that meets eligibility guidelines.

³⁰ Residential solar projects that receive financing also receive an incentive under the Residential Solar Incentive Program and Multifamily and Commercial Lease projects may also use C-PACE, so they are counted in each sector's results. These projects have been removed from the total to avoid double counting.

³¹ The MMBTU's include those forecast to be saved from green bank energy efficiency projects and the forecast MWh from generation projects converted to MMBTU's.

³² The lifetime numbers are based on the aggregation of projects' impact for one year multiplied by the useful life of the technology for each project

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Table 17 presents the number of projects by technology and Table 18 by project type by FY closed.

Clean energy means solar photovoltaic energy, solar thermal, geothermal energy, wind, ocean thermal energy, wave or tidal energy, fuel cells, landfill gas, hydropower that meets the low-impact standards of the Low-Impact Hydropower Institute, hydrogen production and hydrogen conversion technologies, low emission advanced biomass conversion technologies, alternative fuels, used for electricity generation including ethanol, biodiesel or other fuel produced in Connecticut and derived from agricultural produce, food waste or waste vegetable oil, provided the Commissioner of Energy and Environmental Protection determines that such fuels provide net reductions in greenhouse gas emissions and fossil fuel consumption, usable electricity from combined heat and power systems with waste heat recovery systems, thermal storage systems, other energy resources and emerging technologies which have significant potential for commercialization and which do not involve the combustion of coal, petroleum or petroleum products, municipal solid waste or nuclear fission, financing of energy efficiency projects, projects that seek to deploy electric, electric hybrid, natural gas or alternative fuel vehicles and associated infrastructure, any related storage, distribution, manufacturing technologies or facilities and any Class I renewable energy source, as defined in section 16-1.³³

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³³ https://www.cga.ct.gov/current/pub/chap_277.htm#sec_16-1, updated by Connecticut Public Act 11-80

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TABLE 17. GREEN BANK PROJECTS BY TECHNOLOGY³⁴ BY FY CLOSED³⁵

Fiscal Year	AD	Bio mass	CHP	EE	Fuel Cell	Geo thermal	Hydro	PV	Solar Thermal	Wind	Other/ None	Total
# of Projects												
2012	0	0	0	0	0	0	0	288	0	0	0	288
2013	0	0	2	4	1	0	0	1,107	0	0	0	1,114
2014	0	0	1	104	0	2	0	2,341	0	0	6	2,454
2015	0	1	4	135	0	2	1	6,335	0	1	9	6,488
2016	1	0	1	125	0	8	0	7,129	1	0	3	7,268
2017	0	0	1	382	0	7	1	4,497	0	0	10	4,898
2018	0	0	0	1,349	0	5	0	5,312	0	0	26	6,692
2019	0	0	2	5,064	0	10	1	7,054	0	0	19	12,150
2020	1	0	0	1,237	2	14	1	8,060	0	0	20	9,335
Total	2	1	11	8,400	3	48	4	42,123	1	1	93	50,687
MW												
2012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.9
2013	0.0	0.0	0.7	0.0	14.8	0.0	0.0	8.0	0.0	0.0	0.0	23.5
2014	0.0	0.0	3.0	0.0	0.0	0.0	0.0	20.4	0.0	0.0	0.0	23.4
2015	0.0	0.6	0.3	0.0	0.0	0.0	0.9	55.6	0.0	5.0	0.0	62.4
2016	1.0	0.0	0.0	0.0	0.0	0.0	0.0	65.1	0.0	0.0	0.0	66.1
2017	0.0	0.0	0.8	0.0	0.0	0.0	0.2	49.0	0.0	0.0	0.1	50.2
2018	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.9	0.0	0.0	0.0	56.9
2019	0.0	0.0	0.6	0.0	0.0	0.0	1.0	66.5	0.0	0.0	0.3	68.4
2020	1.0	0.0	0.0	0.0	7.8	0.0	0.9	72.5	0.0	0.0	0.0	81.6
Total	2.0	0.6	5.3	0.0	22.6	0.0	3.0	396.0	0.0	5.0	0.4	434.3

³⁴ Commercial and Residential projects can be a combination of RE and EE measures. Therefore the data presented includes the EE generation for those projects, but it is assigned to the applicable RE technology.

³⁵ 98% of RSIP projects are accompanied by energy efficiency measures. These are typically identified during the required energy assessment required by the program. See the Residential Solar Investment Program case study for more information.

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Fiscal Year	AD	Bio mass	CHP	EE	Fuel Cell	Geo thermal	Hydro	PV	Solar Thermal	Wind	Other/ None	Total
Expected Lifetime Savings or Generation (MWh)												
2012	0	0	0	0	0	0	0	55,238	0	0	0	55,238
2013	0	0	81,008	4,862	1,166,832	0	0	226,886	0	0	0	1,479,588
2014	0	0	354,780	59,724	0	61	0	580,837	0	0	0	995,402
2015	0	0	31,930	1,591,514	0	61	96,579	1,590,331	0	118,260	0	3,428,675
2016	106,171	0	0	114,367	0	712	0	1,893,138	655	0	0	2,115,043
2017	0	0	94,017	87,756	0	584	20,711	1,470,263	0	0	0	1,673,331
2018	0	0	0	174,569	0	236	0	1,707,449	0	0	0	1,882,254
2019	0	0	65,197	1,531,543	0	512	107,063	1,983,141	0	0	0	3,687,456
2020	31,536	0	0	359,766	618,106	628	96,579	2,153,782	0	0	0	3,260,397
Total	106,171	0	626,932	3,924,100	1,201,522	2,793	320,932	11,661,067	655	118,260	0	18,577,385

Solar PV deployment makes up the largest portion of Connecticut Green Bank's projects by technology: about 83% of all clean energy projects deployed are from solar PV. When comparing deployment to clean energy production, solar PV produces the most energy (65% of all clean energy production), fuel cells also contribute a large proportion given the efficiency of the technology (7% of all clean energy production), and energy efficiency is saving energy (22% from energy savings). The Green Bank also supports additional deployment of energy efficiency not captured in the above tables by requiring an energy assessment for all residential solar PV projects incentivized through the Residential Solar Investment Program (RSIP). RSIP-wide, energy assessments have been performed for an estimated 98% of completed RSIP projects, of which approximately 87% were performed through the utility-administered Home Energy Solutions (HES) program or via the DOE Home Energy Score (DOE HES) overall. If the Green Bank were to include residential energy assessments (or audits) in the number of projects supported through its residential solar PV program, then nearly 55% of all projects are energy efficiency.

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TABLE 18. GREEN BANK PROJECT TYPES BY FY CLOSED³⁶

Fiscal Year	EE	RE	RE/EE	Other/None	Total
# of Projects					
2012	0	288	0	0	288
2013	4	1,109	1	0	1,114
2014	104	2,337	7	6	2,454
2015	135	6,266	78	9	6,488
2016	124	6,903	238	3	7,268
2017	382	4,003	504	9	4,898
2018	1,346	4,785	535	26	6,692
2019	5,063	6,405	664	18	12,150
2020	1,237	7,303	778	17	9,335
Total	8,395	39,399	2,805	88	50,687
MW					
2012	0.0	1.9	0.0	0.0	1.9
2013	0.0	23.4	0.1	0.0	23.5
2014	0.0	22.8	0.6	0.0	23.4
2015	0.0	60.5	1.8	0.0	62.4
2016	0.0	63.9	2.2	0.0	66.1
2017	0.0	46.3	3.9	0.0	50.2
2018	0.0	51.7	5.2	0.0	56.9
2019	0.0	63.3	5.1	0.0	68.4
2020	0.0	74.9	6.7	0.0	81.6
Total	0.0	408.7	25.6	0.0	434.3
Expected Lifetime Savings or Generation (MWh)					
2012	0	55,238	0	0	55,238
2013	4,862	1,471,851	2,875	0	1,479,588
2014	59,724	918,040	17,638	0	995,402
2015	1,591,514	1,783,049	54,113	0	3,428,675
2016	114,367	1,914,099	86,577	0	2,115,043
2017	87,756	1,428,478	157,096	0	1,673,331
2018	174,246	1,503,157	204,851	0	1,882,254
2019	1,531,543	1,938,168	217,745	0	3,687,456
2020	359,766	2,555,124	345,507	0	3,260,397
Total	3,923,778	13,567,205	1,086,402	0	18,577,385

³⁶ Note that projects that are part of the Residential Solar Investment Program have an EE component not reflected in this table.

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The Green Bank Model

Assets – Current and Non-Current

The Connecticut Green Bank's successful shift to a financing model from one formerly driven by grants and subsidies is evidenced by a net positive change in assets since its inception. The growth of the Green Bank's financing programs has led to a steady increase in non-current assets over time as more and more loans and leases are closed. Since 2012, the Green Bank's balance sheet has grown by a factor of 2.3x representing the value of its investments.

Table 19. Current and Non-Current Assets

	Year Ended June 30								
	2020	2019	2018	2017	2016	2015	2014	2013	2012
Current Assets									
Cash and cash equivalents	\$ 8,156,093	\$ 18,947,214	\$ 19,830,102	\$ 37,148,283	\$ 48,072,061	\$ 39,893,649	\$ 71,411,034	\$ 68,105,014	\$ 64,672,910
Receivables	7,763,578	6,673,735	5,036,838	3,682,469	4,531,258	2,867,233	8,253,318	4,545,661	3,305,301
Prepaid expenses and other assets	1,925,122	1,846,104	1,847,848	10,012,025	4,245,806	1,030,251	619,639	520,814	350,302
Contractor loans	--	--	--	--	2,272,906	3,112,663	--	--	--
Current portion of prepaid warranty management	259,148	259,148	259,148	--	--	--	--	--	--
Current portion of solar lease notes	967,530	942,056	908,541	869,831	845,479	803,573	766,086	704,032	670,645
Current portion of SBEA Promissory Notes	1,549,492	1,709,491	--	--	--	--	--	--	--
Current portion of program loans	3,756,932	3,756,932	2,138,512	1,910,048	1,378,242	1,026,825	652,447	--	--
Total Current Assets	24,377,855	34,134,680	30,020,989	53,622,656	61,345,752	57,972,194	81,702,524	73,875,521	68,999,158
Noncurrent Assets									
Portfolio investments	1	1	1	1	1,000,000	1,000,000	1,000,000	1,000,000	2,155,525
Fair Value of interest rate swap	--	--	171,478	--	--	--	--	--	--
Bonds receivable	3,031,134	3,288,656	3,328,530	3,328,530	3,492,282	1,600,000	1,600,000	--	--
Prepaid warranty management, less current portion	3,725,735	3,984,863	4,234,756	--	--	--	--	--	--
Solar lease notes - less current portion	3,979,704	5,361,206	6,358,184	7,242,822	8,162,635	9,015,437	9,778,315	10,536,136	11,064,879
SBEA Promissory Notes - less current portion	1,334,808	1,799,007	--	--	--	--	--	--	--
Program loans - less current portion	81,536,836	64,800,014	43,525,021	40,296,113	31,889,275	30,253,119	12,750,457	3,788,094	--
Renewable energy credits	407,360	468,736	547,556	654,767	812,770	933,054	1,069,390	1,217,491	1,324,614
Capital assets, net of depreciation and amortization	79,971,996	80,523,040	73,417,221	61,510,207	58,114,914	26,971,067	3,074,337	362,505	91,329
Asset retirement obligation, net	--	--	--	2,535,104	2,261,472	1,029,196	--	--	--
Restricted assets:									
Cash and cash equivalents	14,909,508	16,667,797	24,368,185	22,063,406	9,749,983	8,799,005	9,513,715	9,536,656	8,540,684
Total noncurrent assets	188,897,082	176,893,340	155,950,932	137,630,950	115,483,331	79,600,896	38,786,214	26,440,882	23,177,031
Total Assets	\$ 213,274,977	\$ 211,028,020	\$ 185,971,921	\$ 191,253,606	\$ 176,829,083	\$ 137,573,092	\$ 120,488,738	\$ 100,316,403	\$ 92,176,189

Ratio of Public Funds Invested

As highlighted below –Figure 1 and Figure 2, the Connecticut Green Bank has moved towards this model by increasing the overall ratio of financing to subsidies. In addition, it should be noted that funds used for subsidies through the RSIP (including administrative and financing costs) are recovered through the sale of SHRECs to the electric distribution companies (i.e., Avangrid and Eversource Energy) through 15-year Master Purchase Agreements (“MPA”). The declining incentive block design of the RSIP means that the subsidies continue to decrease at an increasing rate and the private capital sourced increases at an increasing rate. This trend has developed even as total investment in clean energy has increased to nearly \$2.0 billion in total from 2012 through 2020. In this way the Connecticut Green Bank has been able to do more at a faster pace while managing ratepayer resources more efficiently.

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FIGURE 1. GREEN BANK CAPITAL DEPLOYMENT BY FY CLOSED

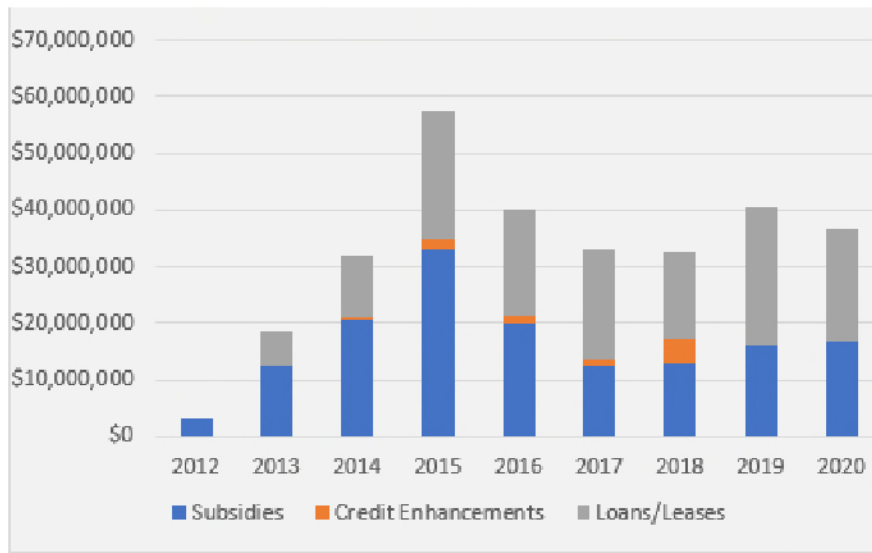
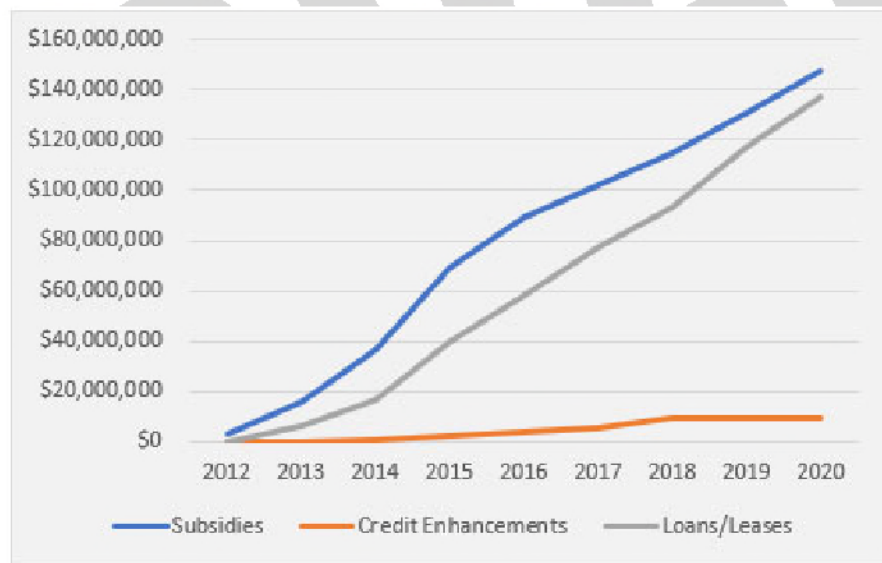


FIGURE 2. GREEN BANK CUMULATIVE GREEN BANK FUNDS INVESTED BY TYPE BY FY CLOSED



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TABLE 20. GREEN BANK RATIO OF CAPITAL INVESTED AS SUBSIDIES, CREDIT ENHANCEMENTS, AND LOANS AND LEASES BY FY CLOSED³⁷

Fiscal Year	Subsidies (Grants & Incentives)	% Subsidies	Credit Enhancements (LLR & IRB)	% Credit Enhancements	Loans and Leases (includes sell downs)	% Loans and Leases	Total
2012	\$3,401,642	100%	\$0	0%	\$0	0%	\$3,401,642
2013	\$12,443,213	67%	\$6,609	0%	\$6,010,302	33%	\$18,460,123
2014	\$20,635,050	65%	\$516,623	2%	\$10,692,059	34%	\$31,843,733
2015	\$32,948,730	57%	\$1,968,322	3%	\$22,722,994	39%	\$57,640,046
2016	\$19,942,836	50%	\$1,518,620	4%	\$18,518,956	46%	\$39,980,412
2017	\$12,433,649	38%	\$1,228,032	4%	\$19,450,797	59%	\$33,112,477
2018	\$12,752,521	39%	\$4,286,879	13%	\$15,702,987	48%	\$32,742,386
2019	\$16,138,816	40%	\$27,574	0%	\$24,140,259	60%	\$40,306,649
2020	\$16,649,641	45%	\$0	0%	\$20,103,898	55%	\$36,753,538
Total	\$147,346,096	50%	\$9,552,658	3%	\$137,342,251	47%	\$294,241,006

Creation of Private Investment Opportunities

As stated above, the Connecticut Green Bank’s approach to leveraging limited public resources has created new opportunities for the private market investment. These financial innovations have broad impact in Connecticut and beyond. In FY 2020, the Green Bank, was a part of or a stimulus for upward of \$150 million dollars of clean energy financings. These include:

SHREC warehouse (Tranche 3)

In preparation for a bond issuance following the successful April 2019 SHREC ABS bond issuance, the Green Bank established a second warehouse funding facility secured by the systems that were to be securitized for the upcoming issuance of Green Liberty Bonds. The \$14 million dollar revolving credit warehouse with Webster Bank and Liberty Bank was closed in July of 2019.

Capital Solutions Program (Open RFP)

In January, the Green Bank Board of Directors approved a request for proposals for the use of Green Bank capital. The Capital Solutions Program allows project developers, companies, and others to bring clean energy opportunities to the Green Bank for our consideration and investment. Since its launch, \$48 million worth of transactions have been proposed to the Green Bank.

Ares Capital refinancing for PosiGen

The Green Bank worked with PosiGen to help secure financing for their solar partnership back-leverage facility resulting in a \$65 million refinancing that allows PosiGen to continue to grow their operations in the state.

³⁷ This table excludes the loan loss reserves for the Smart-E loan due to its rolling nature. The loan loss reserves in this table are calculated at the close of the loan and are not updated to reflect paid down principal.

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The first Farm based Anaerobic Digester in Connecticut

In November 2019, the Green Bank was part of a \$4.8 million project financing with Live Oak Bank for a Thompson CT anaerobic digester. This is the first farm waste-to-energy digester financed by the Green Bank, its second digester project.

Engagement of Impact Investors

During the year, the Green Bank approved two foundations for impact investments which resulted in one of the foundations investing in the inaugural issue of Green Liberty Bonds. The Green Bank sees this investment leading to additional investment from other foundations and endowments seeking more ESG investments.

Fuel Cell Construction Financing for the US Navy Submarine Base in New London

As part of an overall engagement to raise funds for fuel cell projects under development in the state by FuelCell Energy (FCE), the Green Bank approved a \$3m construction loan facility related to FCE's New London USN Submarine Base project with Groton Utilities of the Connecticut Municipal Electric Energy Cooperative (CMEEC). The project will use two (2) SureSource 4000 fuel cell power plants to supply the submarine base with 7.2 MWs of clean energy generation which will also be connection to a microgrid for resilience.

Recapitalization of Capital for Change's energy lending programs

In March 2020, CT Green Bank, along with Inclusive Prosperity Capital, Inc, agreed to lend to Capital for Change (C4C) a Connecticut Community Development Financial Institution, \$7.7 million. C4C has long partnered with the Green Bank and the Connecticut Energy Efficiency Fund in the administration of programs and sought the Green Bank's expertise to source capital in FY2019 to continue to operate as a lender for the energy efficiency fund, the Green Bank's Smart-E program, and its LIME loan program.

\$3m expansion for REC-secured financing facility

To further the expansion of solar and energy efficiency for low-to-moderate income families in the state, the Green Bank provided PosiGen \$3 million in additional funding under a financing facility secured by solar renewable energy credits.

\$27m facility for C4C for residential EE & RE loans partnering with Amalgamated Bank.

Capital for Change Inc (C4C) is the largest originator of the Green Bank's Smart-E loan program. The Green Bank together with its lending partner Amalgamated Bank partnered to provide C4C a \$27 million revolving credit facility to finance its portfolio of Smart-E loans. This facility will enable C4C to provide additional solar and energy efficiency financing for families in single family homes throughout the state.

Term loan facility for commercial solar PV projects with Skyview Venture

In April 2020, the Green Bank agreed to loan Skyview Ventures up to \$3.5m for the development of additional commercial solar assets. The target assets are sited on various municipal properties, with the respective municipalities as energy off-takers. In connection with the loan, each target asset is secured by a power purchase agreement has been executed by and between Skyview and the off-taker as well

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as a zero emission renewable energy credit contract between Skyview and Eversource or United Illuminating.

Term loan facility for Greenworks awarded under C-PACE RFP

The Green Bank issued an RFP for the use of its capital by C-PACE lenders with the aim that it could help lower lender's cost of capital and thus increase lending in Connecticut for C-PACE. In June 2020, Greenworks SPV LLC entered into an agreement with CT Green Bank to receive a \$5m term loan facility secured by C-PACE benefit assessment liens.

Preparation for the next Bond Issuance

The Green Bank, having had a successful bond issuance in the Asset Backed Securities market in FY 2019, sought to replicate the transaction in the municipal debt capital market, where the Green Bank could reach individual "retail" investors as well as achieve a lower execution cost for the transaction. The organization spent much of the year preparing the transaction and working with outside consultants, engineers, ratings agencies, and bankers. It awarded Ramirez & Co and Stifel senior managing underwriter and co-managing underwriter respectively for the inaugural \$16.8 million Green Liberty Bond which was scheduled for issuance in April but was delayed to July 2020 due to market conditions resulting from COVID 19.

Societal Benefits

Societal Benefits and the Evaluation Framework

One of the Connecticut Green Bank's evaluation activities is intended to understand how the increase in investment and deployment of clean energy supported by the Green Bank results in benefits to society. Working with internal and external subject matter experts, the Connecticut Green Bank has established an evaluation framework to guide the assessment, monitoring and reporting of the program impacts and processes, including, but not limited to energy savings and clean energy production and the resulting societal impacts or benefits arising from clean energy investment. The evaluation framework can be found [here](#)³⁸.

Societal Benefits: Jobs

The Connecticut Green Bank stimulates economic activity in the state through its program related and strategic lending and investing. This economic activity can be measured by job creation. The Green Bank, in conjunction with the Connecticut Department of Economic and Community Development commissioned a study by Navigant Consulting in 2010 to quantify those jobs. This study was updated in 2016 and is the basis for how the Green Bank measures its impact on job creation. This study and calculator were reviewed by the Connecticut Department of Economic and Community Development which deemed them a reasonable estimation and an appropriate tool for assessing this impact. For

³⁸ CGB Evaluation Framework: https://www.ctgreenbank.com/wp-content/uploads/2018/03/CGB_DECD_Jobs-Study_Fact-Sheet.pdf

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more information on this study and the methodology, click [here](#)³⁹. An overview of our Jobs methodology can be found [here](#)⁴⁰. Essentially, investments into clean energy can be translated into manufacturing, engineering, installation and project management jobs in the clean energy sector. In 2020, the direct jobs showed a 24% decrease from the previous year.

TABLE 21. GREEN BANK JOB YEARS SUPPORTED BY FY CLOSED^{41 42}

Fiscal Year	Direct Jobs	Indirect and Induced Jobs	Total Jobs
2012	58	93	151
2013	579	1,161	1,740
2014	596	952	1,548
2015	1,728	2,671	4,399
2016	1,957	3,115	5,072
2017	902	1,235	2,137
2018	987	1,286	2,272
2019	1,467	1,919	3,386
2020	1,155	1,526	2,681
Total	9,429	13,958	23,387

Societal Benefits: Tax Revenue

The aforementioned economic stimulation by the Connecticut Green Bank also generates tax revenue through personal and corporate income taxes as well as sales and use taxes. Tax revenues go into the State’s General Fund, where they are used for a wide variety of public benefit activities such as education, transportation and public safety. In 2018, the Green Bank engaged Navigant Consulting to conduct a study on the levels of this revenue generation. The result of this study is the Navigant Tax Calculator. The Green Bank has adopted this calculator to estimate the impact of its projects to state tax revenues. This study and calculator were reviewed by the Connecticut Department of Revenue Services which found them to be both a reasonable estimation and an appropriate tool for assessing this impact. For more information on the Navigant study and the methodology, click [here](#)⁴³. An overview of our Tax methodology can be found [here](#)⁴⁴. In 2020, total tax revenue generated decreased 38%.

TABLE 22. GREEN BANK TAX REVENUES GENERATED BY FY CLOSED⁴⁵

Fiscal Year	Individual Income Tax Revenue Generated	Corporate Tax Revenue Generated	Sales Tax Revenue Generated	Total Tax Revenue Generated
2012	\$267,742	\$79,970	\$0	\$347,712

³⁹ Clean Energy Jobs in Connecticut: <http://ctgreenbank.com/wp-content/uploads/2017/02/CTGreenBank-Clean-Energy-Jobs-CT-August102016.pdf>

⁴⁰ CGB Economic Development Factsheet: https://www.ctgreenbank.com/wp-content/uploads/2018/03/CGB_DECD_Jobs-Study_Fact-Sheet.pdf

⁴¹ The Green Bank updated its job study in 2016 and implemented new job creation factors in FY2017

⁴² See Appendix for Job Year Factors.

⁴³ Tax Report: https://www.ctgreenbank.com/wp-content/uploads/2018/09/Tax-Study_Final_Report_01-19-18.pdf

⁴⁴ Tax Methodology: <https://www.ctgreenbank.com/wp-content/uploads/2018/09/CGB-Eval-Tax-Methodology-7-24-18.pdf>

⁴⁵ See Appendix for Average Emission Rates.

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Fiscal Year	Individual Income Tax Revenue Generated	Corporate Tax Revenue Generated	Sales Tax Revenue Generated	Total Tax Revenue Generated
2013	\$2,895,068	\$925,510	\$4,143,940	\$7,964,519
2014	\$2,811,457	\$1,754,942	\$813,476	\$5,379,875
2015	\$8,793,765	\$4,504,274	\$4,000,366	\$17,298,405
2016	\$9,317,322	\$4,068,566	\$2,856,338	\$16,242,225
2017	\$4,286,692	\$2,484,216	\$1,899,106	\$8,670,014
2018	\$5,236,375	\$3,099,352	\$2,266,284	\$10,602,011
2019	\$7,662,814	\$4,427,538	\$5,609,150	\$17,699,502
2020	\$6,557,565	\$3,332,253	\$2,645,905	\$12,535,722
Total	\$47,828,800	\$24,676,621	\$24,234,564	\$96,739,985

Societal Benefits: Environmental Impacts and Equivalencies

The Green Bank assesses the impact of its projects in terms of local environmental protection benefits produced by projects. These benefits are primarily in the form of cleaner air in the state and are measured in terms of tons of Carbon Dioxide (CO₂) and pounds of Nitrous Oxide (NO_x), Sulfur Dioxide (SO_x) and particulate matter (PM 2.5) not emitted. The Green Bank has developed its measurement methodology for these measurements in conjunction with outside experts from the Connecticut Department of Energy and Environmental Protection and at the United States Environmental Protection Agency. These agencies have found the methodology to be a reasonable estimation and an appropriate tool for assessing this impact. For more information on this methodology, click [here](#)⁴⁶. For more information on the EPA’s AvERT, click [here](#)⁴⁷. Note that the lifetime values are based on the aggregation of projects’ impact for one year multiplied by the useful life of the technology for each project.

TABLE 23. GREEN BANK AVOIDED EMISSIONS BY FY CLOSED⁴⁸

CO₂ Emissions Avoided (tons)			
Fiscal Year	Annual	Lifetime	Green Bank Investment (\$) / Project Lifetime Tons of Avoided CO₂ Emissions
2012	1,242	31,043	\$109.58
2013	13,254	210,361	\$87.75
2014	15,644	358,717	\$88.77
2015	114,618	1,890,035	\$30.50
2016	47,803	1,131,712	\$35.33
2017	35,551	858,938	\$38.55
2018	42,561	1,025,988	\$31.91
2019	114,098	1,979,170	\$20.37
2020	66,950	1,474,033	\$24.93
Total	451,719	8,959,997	\$32.84

⁴⁶ CGB Environmental Impact Factsheet: <https://www.ctgreenbank.com/wp-content/uploads/2017/05/CGB-Environmental-Impact-051617.pdf>

⁴⁷ Environmental Protection Agency AvERT User Manual: https://www.ctgreenbank.com/wp-content/uploads/2017/05/AVERT_fact_sheet_user_manual_03-01-17.pdf

⁴⁸ See Appendix for Average Emission Rates.

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NOx Emissions Avoided (pounds)			
Fiscal Year	Annual	Lifetime	Green Bank Investment (\$) / Project Lifetime Pounds of Avoided NO_x Emissions
2012	1,638	40,958	\$83.05
2013	70,847	822,178	\$22.45
2014	20,433	471,189	\$67.58
2015	112,391	1,949,751	\$29.56
2016	50,848	1,201,181	\$33.28
2017	32,385	783,845	\$42.24
2018	39,852	964,738	\$33.94
2019	102,956	1,820,076	\$22.15
2020	92,437	1,691,902	\$21.72
Total	523,788	9,745,818	\$30.19
SOx Emissions Avoided (pounds)			
Fiscal Year	Annual	Lifetime	Green Bank Investment (\$) / Project Lifetime Pounds of Avoided SO_x Emissions
2012	2,117	52,930	\$64.27
2013	55,541	699,386	\$26.39
2014	22,856	526,584	\$60.47
2015	104,457	1,839,576	\$31.33
2016	41,281	962,629	\$41.53
2017	23,417	565,684	\$58.54
2018	33,140	802,753	\$40.79
2019	89,740	1,581,258	\$25.49
2020	75,281	1,415,529	\$25.96
Total	447,831	8,446,329	\$34.84
PM 2.5 Emissions Avoided (pounds)			
Fiscal Year	Annual	Lifetime	Green Bank Investment (\$) / Project Lifetime Pounds of Avoided PM 2.5 Emissions
2012	111	2,772	\$1,227.29
2013	473	11,603	\$1,590.92
2014	1,353	31,762	\$1,002.56
2015	9,194	153,384	\$375.79
2016	4,129	98,565	\$405.62
2017	2,997	72,575	\$456.25
2018	3,594	86,843	\$377.03
2019	9,148	159,173	\$253.23
2020	5,100	116,575	\$315.28
Total	36,098	733,252	\$401.28

To help put this environmental impact into everyday terms, the Green Bank calculates the environmental "equivalencies" of reduced emissions, as shown in Table 24. The Green Bank calculates environmental equivalencies using factors from the EPA's environmental equivalency calculator, which was also reviewed and deemed to be a reasonable estimation of impact by the Connecticut Department of Energy and Environment. The calculator translates abstract reductions into everyday equivalencies. For example, avoided carbon dioxide emissions can translate to avoided emissions from vehicles, or the number of tree seedlings needed to sequester an equivalent amount of carbon. For more

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information on this methodology, click [here](#)⁴⁹. The EPA environmental equivalency calculator can be found [here](#)⁵⁰.

TABLE 24. GREEN BANK GREENHOUSE GAS EQUIVALENCIES (BASED ON REDUCTIONS OF CO₂ TONS) BY FY CLOSED

	Greenhouse gas emissions from:			
	Passenger vehicles driven for one year		Miles driven by an average passenger vehicle	
Fiscal Year	Annual	Lifetime of Asset	Annual	Lifetime of Asset
2012	243	6,084	2,795,209	69,880,216
2013	2,598	41,229	29,835,451	473,538,037
2014	3,066	70,305	35,215,289	807,499,627
2015	22,464	370,430	258,013,572	4,254,618,290
2016	9,369	221,805	107,608,074	2,547,572,345
2017	6,968	168,344	80,027,142	1,933,537,956
2018	8,342	201,084	95,807,821	2,309,579,698
2019	22,362	387,899	256,844,310	4,455,267,020
2020	13,122	288,897	150,708,805	3,318,164,648
Total	88,533	1,756,079	1,016,855,672	20,169,657,837
	CO ₂ emissions from:			
	Gallons of gasoline consumed		Homes' energy use for one year	
Fiscal Year	Annual	Lifetime of Asset	Annual	Lifetime of Asset
2012	126,755	3,168,868	130	3,250
2013	1,352,952	21,473,594	1,387	22,021
2014	1,596,913	36,617,796	1,638	37,552
2015	11,700,177	192,934,756	11,999	197,855
2016	4,879,718	115,525,111	5,004	118,471
2017	3,629,002	87,680,409	3,722	89,916
2018	4,344,610	104,732,826	4,455	107,404
2019	11,647,154	202,033,601	11,944	207,185
2020	6,834,213	150,469,265	7,008	154,306
Total	46,111,493	914,636,225	47,287	937,959
	Carbon sequestered by:			
	Tree seedlings grown for 10 years		Acres of U.S. forests in one year	
Fiscal Year	Annual	Lifetime of Asset	Annual	Lifetime of Asset
2012	18,626	465,660	1,471	36,778
2013	198,814	3,155,511	15,702	249,223
2014	234,664	5,380,927	18,534	424,986
2015	1,719,323	28,351,459	135,792	2,239,202
2016	717,067	16,976,233	56,634	1,340,785
2017	533,276	12,884,498	42,118	1,017,620
2018	638,434	15,390,324	50,424	1,215,530
2019	1,711,531	29,688,520	135,177	2,344,804
2020	1,004,277	22,111,222	79,318	1,746,348
Total	6,776,011	134,404,353	535,170	10,615,276

⁴⁹ <http://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references>

⁵⁰ March 2020EPA Greenhouse Gas Equivalencies Calculator: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

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Societal Benefits: Public Health

The avoided emissions described above result in cleaner air which correlates to public health benefits. Air pollution influences the prevalence and severity of asthma, bronchitis, coronary and respiratory disease, and even death.

With the adoption of the AvERT tool for assessing environmental impacts, the Green Bank is able to leverage this information to gauge public health benefits of its activities. The Green Bank assesses public health benefits and illnesses or deaths avoided using data from the AvERT tool. After the Connecticut Department of Public Health and Connecticut Department of Energy & Environmental Protection reviewed the EPA’s Co-Benefit Risk Assessment Tool (CoBRA) in 2017 and found it to be a reasonable estimation and an appropriate tool for assessing this impact, the Green Bank’s Board of Directors approved its use. The CoBRA tool reports back low and high estimates of avoided incidents, locations, and associated costs of the health outcomes described above. These public health impacts are quantified and presented as total estimated public health savings of the policies in dollars. For more information on this methodology, click [here](#)⁵¹. An overview of CoBRA can be found [here](#)⁵². The factors used to measure impact from CoBRA can be found in the appendix.

TABLE 25. ECONOMIC SAVINGS DUE TO PUBLIC HEALTH FROM GREEN BANK PROJECTS (BASED ON REDUCTIONS OF EMISSIONS) BY FY CLOSED

Fiscal Year	Annual		Lifetime		Green Bank Investment (\$) / Lifetime Public Health Savings	
	Low	High	Low	High	Low	High
2012	\$42,865	\$96,778	\$1,071,624	\$2,419,440	\$3.17	\$1.41
2013	\$1,021,876	\$2,309,359	\$12,873,526	\$29,087,378	\$1.43	\$0.63
2014	\$526,541	\$1,189,010	\$12,212,728	\$27,575,862	\$2.61	\$1.15
2015	\$1,417,901	\$3,200,842	\$33,506,606	\$75,642,682	\$1.72	\$0.76
2016	\$1,618,470	\$3,654,503	\$38,589,816	\$87,130,897	\$1.04	\$0.46
2017	\$1,203,613	\$2,717,616	\$29,560,919	\$66,743,689	\$1.12	\$0.50
2018	\$1,487,688	\$3,359,269	\$35,933,015	\$81,135,286	\$0.91	\$0.40
2019	\$1,628,842	\$3,677,743	\$40,287,743	\$90,964,028	\$1.00	\$0.44
2020	\$1,402,936	\$3,168,660	\$28,670,307	\$64,743,098	\$1.28	\$0.57
Total	\$10,350,732	\$23,373,778	\$232,706,285	\$525,442,360	\$1.26	\$0.56

⁵¹ <https://www.ctgreenbank.com/wp-content/uploads/2018/03/CGB-Eval-PUBLICHEALTH-1-25-18-new.pdf>

⁵² <https://www.epa.gov/statelocalenergy/co-benefits-risk-assessment-cobra-health-impacts-screening-and-mapping-tool>

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Social Cost of Carbon

Using the methodology adopted by the Obama Administration in 2014, the Green Bank has estimated the total avoided economic costs of the carbon emissions avoided as a result of these projects. This was done by forecasting out when the projected estimated emissions savings are likely to occur and then applying the prices identified by the White House Council on Environmental Quality at the various discount rates adjusted to 2019 dollars⁵³.

Table 26 shows the annual forecasted emissions avoided and the related social cost of those emissions at various discount rates. Using the 3% discount rate, in alignment with the initial study, the overall value of the Green Banks projects in terms of emissions avoided is \$501,934,953.55.

TABLE 26. AVOIDED CO₂ EMISSIONS FORECAST AND THE SOCIAL COSTS OF CARBON

Year	Estimated CO ₂ annual emissions avoided	Economic Value of Avoided Emissions at Different Discount Rates			
		5% Average	3% Average	2.5% Average	High Impact (95th Pct at 3%)
2011	5,139.62	\$61,058.69	\$177,625.27	\$283,090.27	\$499,571.06
2012	9,742.31	\$118,953.61	\$356,860.82	\$573,140.10	\$1,005,698.66
2013	28,080.49	\$345,951.64	\$1,069,305.06	\$1,698,308.04	\$3,050,664.43
2014	128,659.70	\$1,613,392.64	\$5,133,522.03	\$8,066,963.19	\$14,813,877.86
2015	180,295.30	\$2,260,903.06	\$7,399,319.11	\$11,510,051.95	\$21,581,347.41
2016	218,626.00	\$2,789,667.76	\$9,637,034.08	\$14,455,551.12	\$27,389,465.28
2017	260,320.70	\$3,378,962.69	\$11,979,958.61	\$18,123,527.13	\$34,403,983.71
2018	367,086.60	\$5,330,097.43	\$17,766,991.44	\$26,650,487.16	\$51,524,275.18
2019	437,666.80	\$6,512,481.98	\$22,250,980.11	\$33,105,116.75	\$65,124,819.84
2020	463,095.40	\$6,890,859.55	\$24,118,008.43	\$35,602,774.35	\$70,631,310.41
2021	463,095.40	\$6,890,859.55	\$24,118,008.43	\$36,177,012.65	\$72,354,025.30
2022	455,219.30	\$7,338,135.12	\$24,272,293.08	\$36,126,203.65	\$72,816,879.23
2023	455,219.30	\$7,338,135.12	\$24,836,765.01	\$36,690,675.58	\$74,510,295.02
2024	452,441.00	\$7,293,348.92	\$25,246,207.80	\$37,027,771.44	\$75,738,623.40
2025	381,155.40	\$6,616,857.74	\$21,741,104.02	\$32,139,023.33	\$65,223,312.05
2026	375,439.90	\$6,517,636.66	\$21,880,637.37	\$32,122,637.84	\$65,641,912.12
2027	372,644.50	\$6,931,187.70	\$22,179,800.64	\$32,345,542.60	\$66,077,322.74
2028	357,411.20	\$6,647,848.32	\$21,716,304.51	\$31,466,482.05	\$64,705,723.65
2029	292,428.50	\$5,439,170.10	\$17,767,955.66	\$26,108,016.48	\$54,029,089.66
2030	276,396.00	\$5,483,696.64	\$17,136,552.00	\$25,019,365.92	\$52,095,118.08
2031	269,148.50	\$5,339,906.24	\$17,020,951.14	\$24,697,066.36	\$51,730,341.70
2032	268,985.90	\$5,670,222.77	\$17,344,210.83	\$25,015,688.70	\$52,699,717.53
2033	268,985.90	\$5,670,222.77	\$17,677,753.35	\$25,349,231.22	\$53,700,345.08
2034	268,985.90	\$6,003,765.29	\$18,011,295.86	\$25,682,773.73	\$54,700,972.62
2035	266,656.90	\$5,951,782.01	\$18,186,000.58	\$25,791,055.37	\$55,549,965.41

⁵³ https://obamawhitehouse.archives.gov/sites/default/files/omb/infoereg/scc_tsd_final_clean_8_26_16.pdf

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Year	Estimated CO2 annual emissions avoided	Economic Value of Avoided Emissions at Different Discount Rates			
		5% Average	3% Average	2.5% Average	High Impact (95th Pct at 3%)
2036	262,424.10	\$6,182,711.80	\$18,222,729.50	\$25,707,064.84	\$55,644,406.16
2037	254,903.00	\$6,005,514.68	\$18,016,544.04	\$25,602,457.32	\$54,997,871.28
2038	230,143.30	\$5,707,553.84	\$16,551,906.14	\$23,400,970.74	\$50,511,851.48
2039	184,223.20	\$4,568,735.36	\$13,477,769.31	\$18,960,251.74	\$41,118,618.24
2040	148,687.90	\$3,871,832.92	\$11,062,379.76	\$15,487,331.66	\$33,740,258.27
2041	113,520.30	\$2,956,068.61	\$8,586,675.49	\$11,965,039.62	\$26,182,321.99
2042	71,737.13	\$1,956,988.91	\$5,426,196.51	\$7,650,047.54	\$16,812,313.79
2043	20,360.40	\$555,431.71	\$1,565,307.55	\$2,196,479.95	\$4,847,404.03
	8,608,925.85	\$156,239,941.82	\$501,934,953.55	\$732,797,200.40	\$1,505,453,702.67

Other Societal Benefits

The Green Bank is presently working on methodologies to further measure additional societal impacts of its programs. In Fiscal Year 2021, the Green Bank will continue to review Community Reinvestment Act eligibility for projects, methods to assess equity (i.e., income and race) from investments in clean energy, as well as the economic relief from the energy burden felt by participating property owners and tenants that install clean energy systems annually and over the life of the renewable energy projects.

Community Impacts

Community and Market Descriptions

Communities across Connecticut are demonstrating leadership by supporting the deployment of clean energy. The Connecticut Green Bank distributes reports to communities on an annual basis to provide them with information about their performance in comparison to others in the state. There are many leaders of clean energy deployment across Connecticut, and we have assembled the “Top 5” in energy, economy, and environment for FY 2020 as well as FY 2012 through FY 2020. It should be noted that in a 2016 United Nations report, an estimated \$90 trillion must be invested globally through 2030 to make progress toward all these Sustainable Development Goals in order to confront climate change.⁵⁴ This equates to an average annual investment per capita of approximately \$790⁵⁵.

TABLE 27. THE “TOP 5” ON ENERGY, ECONOMY, AND ENVIRONMENTAL PERFORMANCE - FY 2020 CLOSED ACTIVITY

Municipality	Watts / Capita	Municipality	Investment / Capita	Municipality	Total Lifetime CO2 Emissions (Tons)
Putnam	115.7	Windsor Locks	\$325.37	Putnam	53,051
North Haven	70.6	Morris	\$252.13	Bridgeport	44,674
Windsor Locks	63.4	North Haven	\$246.82	Ridgefield	43,703
Salem	63.4	Salem	\$233.69	Waterbury	42,931
Durham	61.0	Putnam	\$226.67	Stratford	34,392

⁵⁴ <https://www.un.org/pga/71/wp-content/uploads/sites/40/2017/02/Financing-Sustainable-Development-in-a-time-of-turmoil.pdf>

⁵⁵ \$90,000,000,000/7.6B people/15 years until 2030 = \$790

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TABLE 28. THE “TOP 5” ON ENERGY, ECONOMY, AND ENVIRONMENTAL PERFORMANCE - FY 2012 – 2020 CLOSED ACTIVITY

Municipality	Watts / Capita	Municipality	Investment / Capita	Municipality	Total Lifetime CO2 Emissions (Tons)
Colebrook	3,420.3	Colebrook	\$15,364.04	Bridgeport	1,178,749
Canaan	413.6	Canaan	\$1,749.83	Hartford	196,097
Woodbridge	357.9	Woodbridge	\$1,335.63	Waterbury	177,963
Putnam	336.8	Durham	\$1,315.52	Stratford	166,871
Durham	326.0	Bridgeport	\$1,280.32	Hamden	162,421

Projects by Income Bands

In addition to tracking funding and clean energy deployment in distressed municipalities, the Green Bank works to ensure that low to moderate income (LMI) census tracts across the entire state benefit from its programs. The Green Bank defines low to moderate income as 100% or less of the Area Median Income (AMI) of a Metropolitan Statistical Area (MSA).

Table 31 groups the Green Bank’s residential projects by the average area median income (AMI) of their census tract from the American Community Survey (ACS) 5-Year Estimate data. Table 32 groups the Green Bank’s residential projects by the average state median income (SMI) of their census tract from the American Community Survey (ACS) 5-Year Estimate data.

**CONNECTICUT GREEN BANK
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TABLE 29 OVERVIEW OF CONNECTICUT POPULATION AND HOUSEHOLDS BY METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS^{56 57}

MSA AMI Band	Total Population	% Total Population Distribution	Total Households	% Total Household Distribution	Total Owner Occupied 1-4 Unit Households	% Owner Occupied 1-4 Unit Household Distribution	Total Owner Occupied 1-4 Unit Households	% Owner Occupied 1-4 Unit Household Distribution	Total Owner/Rental Occupied 5+ Unit Households	% Owner/Rental Occupied 5+ Unit Household Distribution
<60%	636,795	18%	234,319	17%	62,247	7%	83,249	35%		
60%-80%	553,007	15%	219,309	16%	109,142	13%	55,429	23%		
80%-100%	569,113	16%	232,794	17%	145,988	17%	45,080	19%		
100%-120%	710,802	20%	278,265	20%	204,880	24%	34,590	14%		
> 120%	1,103,484	31%	402,643	29%	343,989	40%	21,753	9%		
Total	3,581,504	100%	1,367,374	100%	866,246	100%	240,101	100%		

TABLE 30 OVERVIEW OF CONNECTICUT POPULATION AND HOUSEHOLDS BY METROPOLITAN STATISTICAL AREA (MSA) STATE MEDIAN INCOME (SMI) BANDS^{58 59}

MSA SMI Band	Total Population	% Total Population Distribution	Total Households	% Total Household Distribution	Total Owner Occupied 1-4 Unit Households	% Owner Occupied 1-4 Unit Household Distribution	Total Owner/Rental Occupied 5+ Unit Households	% Owner/Rental Occupied 5+ Unit Household Distribution
<60%	623,994	17%	231,517	17%	62,026	7%	80,135	33%
60%-80%	593,375	17%	235,228	17%	121,250	14%	51,651	22%
80%-100%	706,394	20%	287,930	21%	182,344	21%	58,702	24%
100%-120%	607,030	17%	240,427	18%	180,841	21%	30,015	13%
> 120%	1,042,408	29%	372,228	27%	319,785	37%	19,598	8%
Total	3,581,504	100%	1,367,374	100%	866,246	100%	240,101	100%

⁵⁶ 2018 American Community Survey (ACS)

⁵⁷ The suite of products offered by the Connecticut Green Bank do not currently address rental properties of 1-4 units.

⁵⁸ 2018 American Community Survey (ACS)

⁵⁹ The suite of products offered by the Connecticut Green Bank do not currently address rental properties of 1-4 units.

**CONNECTICUT GREEN BANK
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TABLE 31. GREEN BANK RESIDENTIAL⁶⁰ ANNUAL ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA)/AREA MEDIAN INCOME (AMI) BANDS BY FY CLOSED⁶¹

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
2012	<60%	10	3%	0.1	3%	\$227,144	2%	228,062	17%	0.0	\$1.00	0.2
2012	60%-80%	6	2%	0.0	2%	\$144,970	1%	207,439	15%	0.0	\$0.70	0.2
2012	80%-100%	66	23%	0.4	21%	\$2,125,276	21%	239,356	18%	0.3	\$8.88	1.7
2012	100%-120%	77	27%	0.5	26%	\$2,689,978	27%	280,563	21%	0.3	\$9.59	1.8
2012	>120%	129	45%	0.9	48%	\$4,714,144	48%	404,748	30%	0.3	\$11.65	2.3
2012	Total	288	100%	1.9	100%	\$9,901,511	100%	1,360,184	100%	0.2	\$7.28	1.4
2013	<60%	32	3%	0.2	2%	\$850,831	2%	224,259	17%	0.1	\$3.79	0.8
2013	60%-80%	55	5%	0.3	4%	\$1,569,188	4%	222,791	16%	0.2	\$7.04	1.5
2013	80%-100%	193	17%	1.3	16%	\$5,874,222	17%	236,905	17%	0.8	\$24.80	5.3
2013	100%-120%	223	20%	1.5	19%	\$7,350,774	21%	264,685	20%	0.8	\$27.77	5.8
2013	>120%	604	55%	4.6	58%	\$19,745,057	56%	407,204	30%	1.5	\$48.49	11.2
2013	Total	1,107	100%	7.9	100%	\$35,390,072	100%	1,355,849	100%	0.8	\$26.10	5.8
2014	<60%	117	5%	0.6	4%	\$2,868,553	4%	224,369	17%	0.5	\$12.78	2.7
2014	60%-80%	175	7%	1.0	6%	\$4,958,809	6%	216,437	16%	0.8	\$22.45	4.6
2014	80%-100%	651	26%	3.6	21%	\$16,968,776	22%	231,014	17%	2.8	\$73.45	15.5
2014	100%-120%	614	24%	4.5	27%	\$21,009,984	27%	278,174	21%	2.2	\$75.53	16.0
2014	>120%	989	39%	7.0	42%	\$32,071,894	41%	406,185	30%	2.4	\$78.96	17.3
2014	Total	2,546	100%	16.7	100%	\$77,777,966	100%	1,356,206	100%	1.9	\$57.35	12.3
2015	<60%	371	6%	2.1	4%	\$9,515,351	4%	240,062	18%	1.5	\$39.64	8.9
2015	60%-80%	783	12%	5.0	10%	\$23,102,780	10%	193,188	14%	4.1	\$119.59	25.7
2015	80%-100%	1,485	22%	9.8	21%	\$47,380,896	21%	264,609	20%	5.6	\$179.06	37.0
2015	100%-120%	1,613	24%	12.2	26%	\$57,572,575	26%	240,485	18%	6.7	\$239.40	50.8
2015	>120%	2,465	37%	18.6	39%	\$87,078,515	39%	414,212	31%	6.0	\$210.23	44.9
2015	Total	6,717	100%	47.7	100%	\$224,650,117	100%	1,352,583	100%	5.0	\$166.09	35.3
2016	<60%	947	11%	4.5	8%	\$37,833,617	14%	236,643	17%	4.0	\$159.88	18.9

⁶⁰ Residential Owner-occupied properties of 1-4 units and multifamily housing greater than 4 units.

⁶¹ Excludes projects in unknown bands.

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Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
2016	60%-80%	1,325	16%	8.2	15%	\$35,313,502	13%	199,269	15%	6.6	\$177.22	41.1
2016	80%-100%	2,026	24%	12.5	22%	\$57,469,050	22%	261,240	19%	7.8	\$219.99	47.8
2016	100%-120%	1,941	23%	13.3	24%	\$60,496,977	23%	251,604	19%	7.7	\$240.45	52.8
2016	>120%	2,036	25%	17.4	31%	\$75,378,206	28%	405,921	30%	5.0	\$185.70	43.0
2016	Total	8,275	100%	55.9	100%	\$266,491,352	100%	1,354,713	100%	6.1	\$196.71	41.2
2017	<60%	1,194	20%	4.1	12%	\$17,066,807	13%	242,723	18%	4.9	\$70.31	17.0
2017	60%-80%	1,237	20%	6.5	18%	\$26,051,158	19%	190,564	14%	6.5	\$136.71	34.0
2017	80%-100%	1,377	23%	7.6	21%	\$28,354,967	21%	250,616	18%	5.5	\$113.14	30.1
2017	100%-120%	1,022	17%	7.5	21%	\$27,837,813	20%	280,637	21%	3.6	\$99.20	26.8
2017	>120%	1,280	21%	9.8	28%	\$36,966,195	27%	397,174	29%	3.2	\$93.07	24.7
2017	Total	6,110	100%	35.5	100%	\$136,276,940	100%	1,361,755	100%	4.5	\$100.07	26.1
2018	<60%	2,401	29%	4.0	9%	\$26,086,684	14%	234,319	17%	10.2	\$111.33	17.1
2018	60%-80%	1,202	14%	7.5	18%	\$29,358,919	16%	219,309	16%	5.5	\$133.87	34.2
2018	80%-100%	1,459	17%	9.6	22%	\$37,131,885	20%	232,794	17%	6.3	\$159.51	41.0
2018	100%-120%	1,390	17%	8.9	21%	\$36,329,227	20%	278,265	20%	5.0	\$130.56	32.0
2018	>120%	1,905	23%	12.9	30%	\$54,927,033	30%	402,643	29%	4.7	\$136.42	31.9
2018	Total	8,357	100%	42.8	100%	\$183,833,748	100%	1,367,374	100%	6.1	\$134.44	31.3
2019	<60%	2,061	21%	5.6	9%	\$49,255,818	19%	234,319	17%	8.8	\$210.21	23.7
2019	60%-80%	1,618	17%	10.5	18%	\$39,303,987	16%	219,309	16%	7.4	\$179.22	47.9
2019	80%-100%	2,287	24%	13.4	22%	\$49,766,699	20%	232,794	17%	9.8	\$213.78	57.5
2019	100%-120%	1,705	18%	13.2	22%	\$51,404,895	20%	278,265	20%	6.1	\$184.73	47.3
2019	>120%	1,993	21%	17.0	29%	\$63,647,274	25%	402,643	29%	4.9	\$158.07	42.2
2019	Total	9,664	100%	59.6	100%	\$253,378,674	100%	1,367,374	100%	7.1	\$185.30	43.6
2020	<60%	1,164	12%	6.2	9%	\$26,313,313	10%	234,319	17%	5.0	\$112.30	26.6
2020	60%-80%	1,654	18%	11.0	16%	\$40,362,848	16%	219,309	16%	7.5	\$184.05	50.1
2020	80%-100%	1,939	21%	14.8	22%	\$54,152,622	22%	232,794	17%	8.3	\$232.62	63.4
2020	100%-120%	2,149	23%	14.0	21%	\$52,339,311	21%	278,265	20%	7.7	\$188.09	50.4
2020	>120%	2,456	26%	21.3	32%	\$78,184,607	31%	402,643	29%	6.1	\$194.18	53.0
2020	Total	9,362	100%	67.3	100%	\$251,352,702	100%	1,367,374	100%	6.8	\$183.82	49.2
Total	<60%	8,297	16%	27.4	8%	\$170,018,116	12%	234,319	17%	35.4	\$725.58	116.8

**CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS**

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
Total	60%-80%	8,055	15%	50.0	15%	\$200,066,162	14%	219,309	16%	36.7	\$912.26	228.0
Total	80%-100%	11,483	22%	72.8	22%	\$299,224,393	21%	232,794	17%	49.3	\$1,285.36	312.7
Total	100%-120%	10,734	20%	75.6	23%	\$317,031,485	22%	278,265	20%	38.6	\$1,139.31	271.7
Total	>120%	13,857	26%	109.6	33%	\$452,712,926	31%	402,643	29%	34.4	\$1,124.35	272.2
Total	Total	52,426	100%	335.3	100%	\$1,439,053,082	100%	1,367,374	100%	38.3	\$1,052.42	245.2

TABLE 32. GREEN BANK RESIDENTIAL⁶² ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) STATE MEDIAN INCOME (SMI) BANDS BY FY CLOSED⁶³

Fiscal Year	MSA SMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
2012	<60%	10	3%	0.1	3%	\$227,144	2%	249,608	18%	0.0	\$0.91	0.2
2012	60%-80%	6	2%	0.0	2%	\$144,970	1%	204,836	15%	0.0	\$0.71	0.2
2012	80%-100%	66	23%	0.4	21%	\$2,125,276	21%	293,878	22%	0.2	\$7.23	1.4
2012	100%-120%	77	27%	0.5	26%	\$2,689,978	27%	260,689	19%	0.3	\$10.32	2.0
2012	>120%	129	45%	0.9	48%	\$4,714,144	48%	351,157	26%	0.4	\$13.42	2.6
2012	Total	288	100%	1.9	100%	\$9,901,511	100%	1,360,184	100%	0.2	\$7.28	1.4
2013	<60%	32	3%	0.2	2%	\$850,831	2%	251,171	19%	0.1	\$3.39	0.8
2013	60%-80%	55	5%	0.3	4%	\$1,569,188	4%	211,049	16%	0.3	\$7.44	1.5
2013	80%-100%	194	18%	1.3	16%	\$5,922,484	17%	295,748	22%	0.7	\$20.03	4.3
2013	100%-120%	223	20%	1.5	19%	\$7,311,110	21%	247,329	18%	0.9	\$29.56	6.1
2013	>120%	603	54%	4.6	58%	\$19,736,460	56%	350,547	26%	1.7	\$56.30	13.0
2013	Total	1,107	100%	7.9	100%	\$35,390,072	100%	1,355,849	100%	0.8	\$26.10	5.8
2014	<60%	122	5%	0.6	4%	\$3,014,178	4%	264,100	19%	0.5	\$11.41	2.4
2014	60%-80%	172	7%	1.0	6%	\$4,712,699	6%	189,153	14%	0.9	\$24.91	5.2
2014	80%-100%	697	27%	3.9	23%	\$18,822,279	24%	288,116	21%	2.4	\$65.33	13.6
2014	100%-120%	598	23%	4.1	25%	\$19,387,375	25%	242,617	18%	2.5	\$79.91	17.0

⁶² Residential Owner-occupied properties of 1-4 units and multifamily housing greater than 4 units.

⁶³ Excludes projects in unknown bands.

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Fiscal Year	MSA SMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
2014	>120%	957	38%	7.1	42%	\$31,841,435	41%	372,193	27%	2.6	\$85.55	19.0
2014	Total	2,546	100%	16.7	100%	\$77,777,966	100%	1,356,206	100%	1.9	\$57.35	12.3
2015	<60%	429	6%	2.2	5%	\$10,502,569	5%	236,756	18%	1.8	\$44.36	9.3
2015	60%-80%	854	13%	5.0	11%	\$23,484,986	10%	235,289	17%	3.6	\$99.81	21.4
2015	80%-100%	1,433	21%	10.2	21%	\$49,190,058	22%	262,503	19%	5.5	\$187.35	39.0
2015	100%-120%	1,786	27%	12.3	26%	\$58,059,244	26%	247,545	18%	7.2	\$234.54	49.6
2015	>120%	2,215	33%	18.0	39%	\$83,423,261	37%	370,463	27%	6.0	\$225.19	48.5
2015	Total	6,717	100%	47.7	100%	\$224,650,117	100%	1,352,583	100%	5.0	\$166.09	35.3
2016	<60%	901	11%	4.2	7%	\$36,018,843	14%	235,940	17%	3.8	\$152.66	17.7
2016	60%-80%	1,352	16%	8.8	16%	\$37,755,434	14%	235,390	17%	5.7	\$160.40	37.2
2016	80%-100%	2,083	25%	12.9	23%	\$58,119,286	22%	278,870	21%	7.5	\$208.41	46.2
2016	100%-120%	1,783	22%	13.0	23%	\$56,012,607	21%	248,827	18%	7.2	\$225.11	52.2
2016	>120%	2,156	26%	17.1	31%	\$78,585,182	29%	355,650	26%	6.1	\$220.96	48.1
2016	Total	8,275	100%	55.9	100%	\$266,491,352	100%	1,354,713	100%	6.1	\$196.71	41.2
2017	<60%	1,101	18%	3.5	10%	\$14,283,007	10%	227,939	17%	4.8	\$62.66	15.6
2017	60%-80%	1,481	24%	7.1	20%	\$29,462,231	22%	235,460	17%	6.3	\$125.13	30.2
2017	80%-100%	1,331	22%	7.9	22%	\$29,589,187	22%	285,522	21%	4.7	\$103.63	27.5
2017	100%-120%	955	16%	7.2	20%	\$26,302,874	19%	242,028	18%	3.9	\$108.68	29.5
2017	>120%	1,242	20%	9.8	29%	\$36,639,641	27%	370,765	27%	3.3	\$98.82	26.5
2017	Total	6,110	100%	35.5	100%	\$136,276,940	100%	1,361,755	100%	4.5	\$100.07	26.1
2018	<60%	2,177	26%	3.6	8%	\$20,039,094	11%	231,517	17%	9.4	\$86.56	15.6
2018	60%-80%	1,507	18%	8.2	19%	\$36,761,109	20%	235,228	17%	6.4	\$156.28	34.8
2018	80%-100%	1,556	19%	9.8	23%	\$39,092,054	21%	287,930	21%	5.4	\$135.77	34.1
2018	100%-120%	1,348	16%	8.7	20%	\$35,603,001	19%	240,427	18%	5.6	\$148.08	36.3
2018	>120%	1,769	21%	12.5	29%	\$52,338,489	28%	372,228	27%	4.8	\$140.61	33.6
2018	Total	8,357	100%	42.8	100%	\$183,833,748	100%	1,367,374	100%	6.1	\$134.44	31.3
2019	<60%	2,031	21%	5.3	9%	\$48,158,760	19%	231,517	17%	8.8	\$208.01	22.9
2019	60%-80%	1,645	17%	10.6	18%	\$39,667,939	16%	235,228	17%	7.0	\$168.64	44.9
2019	80%-100%	2,410	25%	14.1	24%	\$55,286,794	22%	287,930	21%	8.4	\$192.01	48.8
2019	100%-120%	1,639	17%	12.9	22%	\$47,608,215	19%	240,427	18%	6.8	\$198.02	53.5

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4. MEASURES OF SUCCESS**

Fiscal Year	MSA SMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
2019	>120%	1,939	20%	16.8	28%	\$62,656,966	25%	372,228	27%	5.2	\$168.33	45.2
2019	Total	9,664	100%	59.6	100%	\$253,378,674	100%	1,367,374	100%	7.1	\$185.30	43.6
2020	<60%	1,140	12%	6.1	9%	\$25,719,476	10%	231,517	17%	4.9	\$111.09	26.4
2020	60%-80%	1,715	18%	11.2	17%	\$41,604,027	17%	235,228	17%	7.3	\$176.87	47.6
2020	80%-100%	2,352	25%	15.1	22%	\$55,822,784	22%	287,930	21%	8.2	\$193.88	52.3
2020	100%-120%	1,786	19%	13.7	20%	\$51,158,615	20%	240,427	18%	7.4	\$212.78	57.1
2020	>120%	2,369	25%	21.2	32%	\$77,047,800	31%	372,228	27%	6.4	\$206.99	57.0
2020	Total	9,362	100%	67.3	100%	\$251,352,702	100%	1,367,374	100%	6.8	\$183.82	49.2
Total	<60%	7,943	15%	25.8	8%	\$158,813,901	11%	231,517	17%	34.3	\$685.97	111.6
Total	60%-80%	8,787	17%	52.2	16%	\$215,162,582	15%	235,228	17%	37.4	\$914.70	221.9
Total	80%-100%	12,122	23%	75.5	23%	\$313,960,201	22%	287,930	21%	42.1	\$1,090.40	262.2
Total	100%-120%	10,195	19%	73.9	22%	\$304,133,020	21%	240,427	18%	42.4	\$1,264.97	307.3
Total	>120%	13,379	26%	107.9	32%	\$446,983,377	31%	372,228	27%	35.9	\$1,200.83	290.0
Total	Total	52,426	100%	335.3	100%	\$1,439,053,082	100%	1,367,374	100%	38.3	\$1,052.42	245.2

**CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS**

In recent years the Green Bank has focused on increasing its penetration in the LMI market to deliver inclusive prosperity through the green economy. It has done so through a number of products and initiatives, among them the LMI solar incentive, its partnership with PosiGen, ongoing education to the market about the good credit quality of low and moderate income homeowners, market research made available to industry participants for targeting candidate projects (customer segmentation, demographic and geographic data), and its affordable multifamily housing energy financing products. The Green Bank has focused on increasing its penetration in the LMI market shown in Table 33 and Table 36 to deliver inclusive prosperity through the green economy by AMI and SMI bands.

TABLE 33. GREEN BANK RESIDENTIAL⁶⁴ ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS ABOVE OR BELOW 100% BY FY CLOSED⁶⁵

Fiscal Year	# Project Units			MW			Total Investment					
	Total	Over 100% AMI	100% or Below AMI	% at 100% or Below	Total	Over 100% AMI	100% or Below AMI	% at 100% or Below	Total	Over 100% AMI	100% or Below AMI	% at 100% or Below
2012	288	206	82	28%	1.9	1.4	0.5	26%	\$9,901,511	\$7,404,122	\$2,497,389	25%
2013	1,107	827	280	25%	7.9	6.1	1.8	23%	\$35,390,072	\$27,095,831	\$8,294,240	23%
2014	2,546	1,603	943	37%	16.7	11.5	5.2	31%	\$77,777,966	\$53,081,829	\$24,696,137	32%
2015	6,717	4,078	2,639	39%	47.7	30.8	16.9	35%	\$224,650,117	\$144,651,090	\$79,999,027	36%
2016	8,275	3,977	4,298	52%	55.9	30.7	25.1	45%	\$266,491,352	\$135,875,183	\$130,616,169	49%
2017	6,110	2,302	3,808	62%	35.5	17.3	18.2	51%	\$136,276,940	\$64,804,008	\$71,472,931	52%
2018	8,357	3,295	5,062	61%	42.8	21.8	21.1	49%	\$183,833,748	\$91,256,260	\$92,577,488	50%
2019	9,664	3,698	5,966	62%	59.6	30.2	29.4	49%	\$253,378,674	\$115,052,169	\$138,326,505	55%
2020	9,362	4,605	4,757	51%	67.3	35.3	32.0	47%	\$251,352,702	\$130,523,919	\$120,828,783	48%
Total	52,426	24,591	27,835	53%	335.3	185.2	150.1	45%	\$1,439,053,082	\$769,744,411	\$669,308,671	47%

⁶⁴ Residential Owner-occupied properties of 1-4 units and multifamily housing greater than 4 units

⁶⁵ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

TABLE 34. GREEN BANK RESIDENTIAL⁶⁶ PERFORMANCE INDICATORS BY PARTICIPATION IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS ABOVE OR BELOW 100% BY FY CLOSED⁶⁷

Fiscal Year	KW per Project Unit (1000*MW/total units)			Total Investment per MW (\$000s)			Investment per Project Unit (\$)		
	Total	Over 100% AMI	100% or Below AMI	Total	Over 100% AMI	100% or Below AMI	Total	Over 100% AMI	100% or Below AMI
2012	6.7	7.0	6.1	\$5,103	\$5,134	\$5,014	\$34,380	\$35,942	\$30,456
2013	7.1	7.4	6.4	\$4,498	\$4,451	\$4,659	\$31,969	\$32,764	\$29,622
2014	6.6	7.2	5.5	\$4,656	\$4,616	\$4,744	\$30,549	\$33,114	\$26,189
2015	7.1	7.6	6.4	\$4,709	\$4,694	\$4,736	\$33,445	\$35,471	\$30,314
2016	6.8	7.7	5.8	\$4,769	\$4,420	\$5,195	\$32,204	\$34,165	\$30,390
2017	5.8	7.5	4.8	\$3,840	\$3,737	\$3,938	\$22,304	\$28,151	\$18,769
2018	5.1	6.6	4.2	\$4,292	\$4,192	\$4,395	\$21,998	\$27,695	\$18,289
2019	6.2	8.2	4.9	\$4,252	\$3,816	\$4,698	\$26,219	\$31,112	\$23,186
2020	7.2	7.7	6.7	\$3,734	\$3,693	\$3,779	\$26,848	\$28,344	\$25,400
Total	6.4	7.5	5.4	\$4,291	\$4,156	\$4,458	\$27,449	\$31,302	\$24,046

TABLE 35. GREEN BANK RESIDENTIAL⁶⁸ RELATIONSHIP OF PERFORMANCE INDICATORS BETWEEN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS ABOVE OR BELOW 100% BY FY CLOSED⁶⁹

Fiscal Year	KW per Project Unit	Total Investment per MW (\$000s)	Investment per Project Unit (\$)
	Ratio of Above 100% AMI to Below 100% AMI	Ratio of Above 100% AMI to Below 100% AMI	Ratio of Above 100% AMI to Below 100% AMI
2012	1.15	1.02	1.18
2013	1.16	0.96	1.11
2014	1.30	0.97	1.26
2015	1.18	0.99	1.17
2016	1.32	0.85	1.12
2017	1.58	0.95	1.50
2018	1.59	0.95	1.51
2019	1.65	0.81	1.34
2020	1.14	0.98	1.12
Total	1.40	0.93	1.30

⁶⁶ Residential Owner-occupied properties of 1-4 units and multifamily housing greater than 4 units

⁶⁷ Excludes projects in unknown bands.

⁶⁸ Residential Owner-occupied properties of 1-4 units and multifamily housing greater than 4 units

⁶⁹ Excludes projects in unknown bands.

**CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS**

TABLE 36. GREEN BANK RESIDENTIAL⁷⁰ ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) STATE MEDIAN INCOME (SMI) BANDS ABOVE OR BELOW 100% BY FY CLOSED⁷¹

Fiscal Year	# Project Units			MW			Total Investment					
	Total	Over 100% SMI	100% or Below SMI	% at 100% or Below	Total	Over 100% SMI	100% or Below SMI	% at 100% or Below	Total	Over 100% SMI	100% or Below SMI	% at 100% or Below
2012	288	206	82	28%	1.9	1.4	0.5	26%	\$9,901,511	\$7,404,122	\$2,497,389	25%
2013	1,107	826	281	25%	7.9	6.1	1.8	23%	\$35,390,072	\$27,047,569	\$8,342,502	24%
2014	2,546	1,555	991	39%	16.7	11.2	5.5	33%	\$77,777,966	\$51,228,811	\$26,549,156	34%
2015	6,717	4,001	2,716	40%	47.7	30.2	17.5	37%	\$224,650,117	\$141,482,505	\$83,167,612	37%
2016	8,275	3,939	4,336	52%	55.9	30.1	25.8	46%	\$266,491,352	\$134,597,789	\$131,893,563	49%
2017	6,110	2,197	3,913	64%	35.5	17.0	18.5	52%	\$136,276,940	\$62,942,515	\$73,334,425	54%
2018	8,357	3,117	5,240	63%	42.8	21.2	21.6	50%	\$183,833,748	\$87,941,490	\$95,892,258	52%
2019	9,664	3,578	6,086	63%	59.6	29.7	29.9	50%	\$253,378,674	\$110,265,181	\$143,113,492	56%
2020	9,362	4,155	5,207	56%	67.3	34.9	32.4	48%	\$251,352,702	\$128,206,415	\$123,146,287	49%
Total	52,426	23,574	28,852	55%	335.3	181.8	153.5	46%	\$1,439,053,082	\$751,116,397	\$687,936,685	48%

⁷⁰ Residential Owner-occupied properties of 1-4 units and multifamily housing greater than 4 units.

⁷¹ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
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TABLE 37. GREEN BANK RESIDENTIAL⁷² PERFORMANCE INDICATORS BY PARTICIPATION IN METROPOLITAN STATISTICAL AREA (MSA) STATE MEDIAN INCOME (SMI) BANDS ABOVE OR BELOW 100% BY FY CLOSED⁷³

Fiscal Year	KW per Project Unit			Total Investment per MW (\$000s)			Investment per Project Unit (\$)		
	Total	Over 100% SMI	100% or Below SMI	Total	Over 100% SMI	100% or Below SMI	Total	Over 100% SMI	100% or Below SMI
2012	6.7	7.0	6.1	\$5,103	\$5,134	\$5,014	\$34,380	\$35,942	\$30,456
2013	7.1	7.4	6.4	\$4,498	\$4,449	\$4,665	\$31,969	\$32,745	\$29,689
2014	6.6	7.2	5.6	\$4,656	\$4,585	\$4,800	\$30,549	\$32,945	\$26,790
2015	7.1	7.6	6.4	\$4,709	\$4,679	\$4,759	\$33,445	\$35,362	\$30,621
2016	6.8	7.6	6.0	\$4,769	\$4,476	\$5,111	\$32,204	\$34,171	\$30,418
2017	5.8	7.7	4.7	\$3,840	\$3,709	\$3,960	\$22,304	\$28,649	\$18,741
2018	5.1	6.8	4.1	\$4,292	\$4,144	\$4,437	\$21,998	\$28,214	\$18,300
2019	6.2	8.3	4.9	\$4,252	\$3,715	\$4,785	\$26,219	\$30,818	\$23,515
2020	7.2	8.4	6.2	\$3,734	\$3,669	\$3,804	\$26,848	\$30,856	\$23,650
Total	6.4	7.7	5.3	\$4,291	\$4,131	\$4,481	\$27,449	\$31,862	\$23,844

TABLE 38. GREEN BANK RESIDENTIAL⁷⁴ RELATIONSHIP OF PERFORMANCE INDICATORS BETWEEN METROPOLITAN STATISTICAL AREA (MSA) STATE MEDIAN INCOME (SMI) BANDS ABOVE OR BELOW 100% BY FY CLOSED⁷⁵

Fiscal Year	KW per Project Unit	Total Investment per MW (\$000s)	Investment per Project Unit (\$)
	Ratio of Above 100% SMI to Below 100% SMI	Ratio of Above 100% SMI to Below 100% SMI	Ratio of Above 100% SMI to Below 100% SMI
2012	1.15	1.02	1.18
2013	1.16	0.95	1.10
2014	1.29	0.96	1.23
2015	1.17	0.98	1.15
2016	1.28	0.88	1.12
2017	1.63	0.94	1.53
2018	1.65	0.93	1.54
2019	1.69	0.78	1.31
2020	1.35	0.96	1.30
Total	1.45	0.92	1.34

⁷² Residential Owner-occupied properties of 1-4 units and multifamily housing greater than 4 units

⁷³ Excludes projects in unknown bands.

⁷⁴ Residential Owner-occupied properties of 1-4 units and multifamily housing greater than 4 units

⁷⁵ Excludes projects in unknown bands.

**CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS**

Distressed Communities

Connecticut's "distressed communities"⁷⁶ are particularly affected by the state's high energy prices. On average, Connecticut's neediest households owe \$2,165 more in annual energy bills than they can afford⁷⁷. The Green Bank's financing products and marketing efforts seek to bring lower and more predictable energy costs to homes and businesses in these communities.

TABLE 39. DISTRESSED AND NOT DISTRESSED MUNICIPALITIES, POPULATION, AND HOUSEHOLDS IN CONNECTICUT⁷⁸

For more information on DECD Distressed Municipality criteria, click [here](#)⁷⁹

2019 ⁸⁰ DECD Distressed Designation						
	Municipalities	% of All Municipalities	Population	% of State Population	Households	% of total Households
Distressed	25	15%	1,102,584	31%	420,071	31%
Not Distressed	144	85%	2,478,920	69%	947,303	69%
Total	169	100%	3,581,504	100%	1,367,374	100%

The Green Bank has steadily increased its percentage of projects deployed each year in distressed municipalities.

⁷⁶ Distressed Municipalities are defined by the Connecticut Department of Economic and Community Development by a combination of per capita income, poverty rates, unemployment rates, growth, age of buildings, education. More information can be found here: <https://www.ct.gov/ecdc/cwp/view.asp?a=1105&q=251248>
⁷⁷ Home Energy Affordability in Connecticut: www.operationfuel.org/wp-content/uploads/2017/12/2017-ConnecticutHEAG-11-27-17-RDC-edits.pdf \$2,615 is the average energy affordability gap for Households earning less than 49% of the Federal Poverty Level. For households earning less than 200% FPL (approximately 320,000 households in CT) the average energy affordability gap is \$1,404.

⁷⁸ As designated by DECD in 2019.

⁷⁹ Department of Economic and Community Development: https://portal.ct.gov/DECD/Content/About_DECD/Research-and-Publications/02_Review_Publications/Distressed-Municipalities

⁸⁰ https://portal.ct.gov/DECD/Content/About_DECD/Research-and-Publications/02_Review_Publications/Distressed-Municipalities

**CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS**

TABLE 40. GREEN BANK COMMERCIAL AND RESIDENTIAL ACTIVITY IN DISTRESSED COMMUNITIES BY FY CLOSED

Fiscal Year	Distressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
2012	Yes	34	12%	0.2	10%	\$980,813	10%	447,962	33%	0.1	\$2.19	0.4
2012	No	254	88%	1.7	90%	\$8,920,698	90%	912,222	67%	0.3	\$9.78	1.9
2012	Total	288	100%	1.9	100%	\$9,901,511	100%	1,360,184	100%	0.2	\$7.28	1.4
2013	Yes	117	11%	15.5	66%	\$75,145,149	68%	426,564	31%	0.3	\$176.16	36.4
2013	No	997	89%	7.9	34%	\$35,996,066	32%	929,285	69%	1.1	\$38.74	8.5
2013	Total	1,114	100%	23.5	100%	\$111,141,216	100%	1,355,849	100%	0.8	\$81.97	17.3
2014	Yes	395	16%	4	17%	\$21,572,461	20%	416,415	31%	0.9	\$51.81	9.5
2014	No	2,178	84%	19.4	83%	\$85,577,091	80%	939,791	69%	2.3	\$91.06	20.7
2014	Total	2,573	100%	23.4	100%	\$107,149,552	100%	1,356,206	100%	1.9	\$79.01	17.3
2015	Yes	1,544	21%	13	21%	\$94,551,569	29%	423,559	31%	3.6	\$223.23	30.7
2015	No	5,235	79%	49.3	79%	\$228,237,443	71%	929,024	69%	5.6	\$245.67	53.1
2015	Total	6,779	100%	62.4	100%	\$322,789,011	100%	1,352,583	100%	5	\$238.65	46.1
2016	Yes	2,495	31%	17.4	26%	\$101,460,458	31%	438,710	32%	5.7	\$231.27	39.6
2016	No	5,827	69%	48.7	74%	\$221,528,062	69%	916,003	68%	6.4	\$241.84	53.2
2016	Total	8,322	100%	66.1	100%	\$322,988,520	100%	1,354,713	100%	6.1	\$238.42	48.8
2017	Yes	2,230	35%	15.7	31%	\$61,451,368	32%	435,595	32%	5.1	\$141.07	36.1
2017	No	3,941	65%	34.4	69%	\$129,401,413	68%	926,160	68%	4.3	\$139.72	37.2
2017	Total	6,171	100%	50.2	100%	\$190,852,780	100%	1,361,755	100%	4.5	\$140.15	36.8
2018	Yes	2,227	11%	8.8	16%	\$38,189,283	16%	430,098	31%	5.2	\$88.79	20.5
2018	No	6,215	89%	48.1	84%	\$193,444,024	84%	937,276	69%	6.6	\$206.39	51.3
2018	Total	8,442	100%	56.9	100%	\$231,633,307	100%	1,367,374	100%	6.2	\$169.40	41.6
2019	Yes	3,663	25%	16	23%	\$90,537,202	31%	420,071	31%	8.7	\$215.53	38.1
2019	No	6,051	75%	52.4	77%	\$199,210,312	69%	947,303	69%	6.4	\$210.29	55.3
2019	Total	9,714	100%	68.4	100%	\$289,747,514	100%	1,367,374	100%	7.1	\$211.90	50
2020	Yes	3,232	32%	21.6	27%	\$81,975,680	27%	420,071	31%	7.7	\$195.15	51.5
2020	No	6,318	68%	59.7	73%	\$218,427,540	73%	947,303	69%	6.7	\$230.58	63
2020	Total	9,550	100%	81.3	100%	\$300,403,220	100%	1,367,374	100%	7	\$219.69	59.5
Total	Yes	15,937	25%	112.2	26%	\$565,863,983	30%	420,071	31%	37.9	\$1,347.07	267.1
Total	No	37,016	75%	321.8	74%	\$1,320,742,648	70%	947,303	69%	39.1	\$1,394.21	339.7
Total	Total	52,953	100%	434	100%	\$1,886,606,631	100%	1,367,374	100%	38.7	\$1,379.73	317.4

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

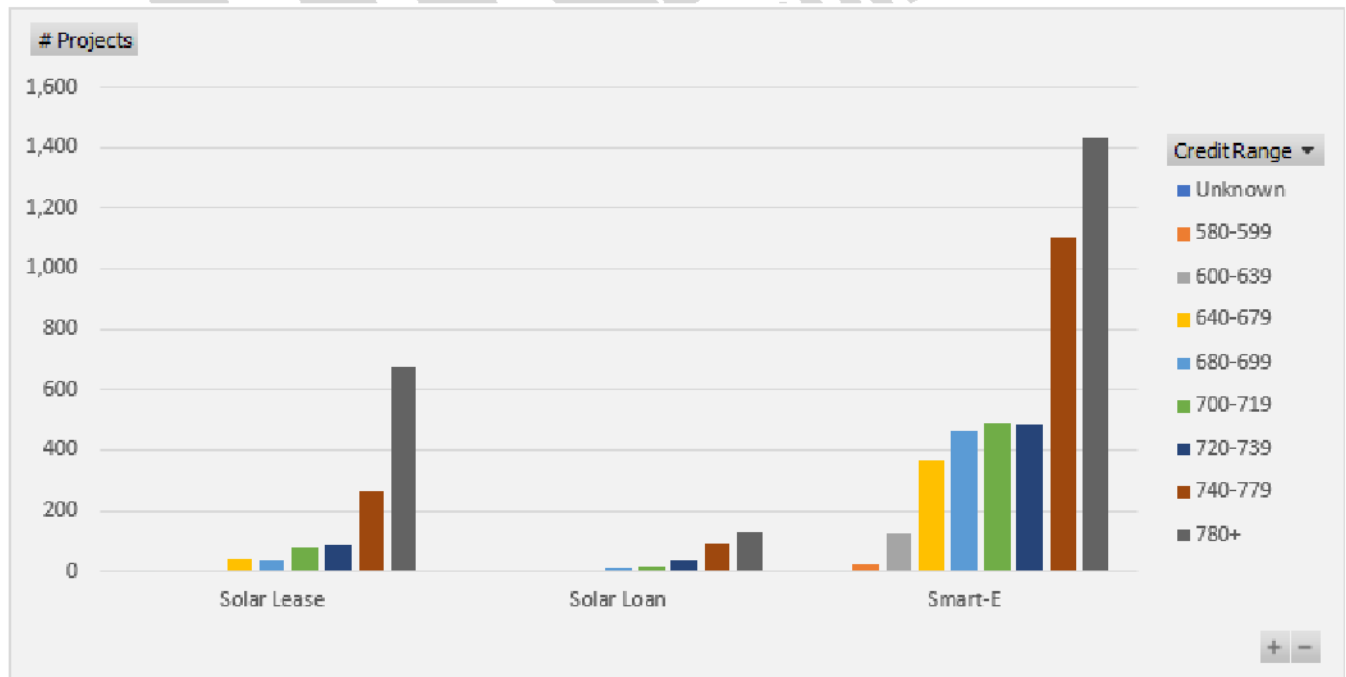
Credit Quality of Homeowners

The credit quality of borrowers in Green Bank residential financing programs that do FICO-based underwriting reflects the relatively high FICO scores in the state; 90% of single-family households that are Green Bank borrowers in these programs have a FICO of 680 or higher. The Green Bank has begun to focus on ensuring that credit-challenged customers also have access to energy financing products. Initiatives as the partnership with PosiGen, which uses an alternative underwriting approach, and a new version of the Smart-E program which broadens credit eligibility to serve credit-challenged households are examples of this. The Smart-E program now has six lenders with experience serving this market including Capital 4 Change - a Community Development Financial Institution, and all the participating credit unions.

TABLE 41. CREDIT SCORE RANGES OF HOUSEHOLD BORROWERS USING RESIDENTIAL FINANCING PROGRAMS FY2012-FY2020

Program Name	Unknown	580-599	600-639	640-679	680-699	700-719	720-739	740-779	780+	Grand Total
Solar Lease	4		1	45	39	78	85	264	673	1,189
Solar Loan					11	15	34	90	129	279
Smart-E	1	23	126	364	467	490	482	1,101	1,431	4,485
Grand Total	5	23	127	409	517	583	601	1,455	2,233	5,953
	0%	0%	2%	7%	9%	10%	10%	24%	38%	100%

FIGURE 3. CREDIT SCORE RANGES OF HOUSEHOLD BORROWERS USING RESIDENTIAL FINANCING PROGRAMS



**CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS**

Projects by CRA Eligibility

The Community Reinvestment Act was enacted by Congress in 1977 to encourage depository institutions to lend in low-to-moderate-income communities. These lending institutions are rated by regulators as to the volume of their lending to projects in these communities by regulators. Projects are potentially compliant with CRA requirements if they are below 80% of a Metropolitan Statistical Area's (MSA) Adjusted Median Income (AMI) level.

TABLE 42. GREEN BANK COMMERCIAL AND RESIDENTIAL ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS ABOVE OR BELOW 80% BY FY CLOSED^{81, 82}

Fiscal Year	# Project Units ⁸³			MW			Total Investment			
	Total	Over 80% AMI	80% or Below AMI	% at 80% or Below	Total	Over 80% AMI	80% or Below AMI	Over 80% AMI	80% or Below AMI	% at 80% or Below
2012	288	272	16	6%	1.9	1.9	0.1	\$9,901,511	\$372,114	4%
2013	1,107	1,020	87	8%	7.9	7.4	0.5	\$35,390,072	\$2,420,018	7%
2014	2,546	2,254	292	11%	16.7	15.1	1.6	\$77,777,966	\$7,727,361	10%
2015	6,717	5,563	1,154	17%	47.7	40.6	7.1	\$224,650,117	\$32,618,131	15%
2016	8,275	6,003	2,272	27%	55.9	43.2	12.7	\$266,491,352	\$73,147,119	27%
2017	6,110	3,679	2,431	40%	35.5	24.9	10.6	\$136,276,940	\$43,117,964	32%
2018	8,357	4,754	3,603	43%	42.8	31.3	11.5	\$183,833,748	\$55,445,603	30%
2019	9,664	5,985	3,679	38%	59.6	43.5	16.1	\$253,378,674	\$88,559,806	35%
2020	9,362	6,544	2,818	30%	67.3	50.1	17.2	\$251,352,702	\$66,676,161	27%
Total	52,426	36,074	16,352	31%	335.3	258.0	77.4	\$1,439,053,062	\$1,068,968,804	26%

⁸¹ Excludes projects in unknown bands.

⁸² This table has been adjusted to include all the Low-Income Solar Lease (ESA) and Multifamily Affordable Housing projects as 80% or Below AMI regardless of which census tract the project falls into as these programs are designed to serve the LMI market.

⁸³ Project units are counted as 1 for each CI&I, Residential 1-4 project and are the number of units in the multifamily housing development for multifamily projects.

CONNECTICUT GREEN BANK
5. GREEN BOND IMPACT

Customer Types and Market Segments

The Connecticut Green Bank targets end users of energy in Connecticut both at work and at home. A breakdown of projects by year (2012-2020) by sector is shown in Table 44.

TABLE 43. GREEN BANK ACTIVITY IN RESIDENTIAL AND COMMERCIAL AND INDUSTRIAL MARKETS BY FY CLOSED

Fiscal Year	# of Projects	# of Project Units	Total Investment	Installed Capacity (MW)	Expected Annual Generation (MWh)	Annual Saved / Produced (MMBtu)
Commercial and Industrial						
2012	0	0	\$0	0.0	0	0
2013	7	7	\$75,751,144	15.6	122,597	432,677
2014	27	27	\$29,371,586	6.7	32,134	179,454
2015	62	62	\$98,138,894	14.6	154,406	519,996
2016	71	71	\$56,497,168	10.2	25,614	115,260
2017	61	61	\$54,575,841	14.7	26,297	373,488
2018	85	85	\$47,799,559	14.1	18,432	63,341
2019	4,389	4,389	\$84,050,045	8.8	139,488	34,477
2020	667	667	\$60,525,054	14.3	88,148	55,284
Total	5,369	5,369	\$506,709,290	98.9	607,115	1,773,977
Multifamily						
2012	0	0	\$0	0.0	0	0
2013	0	0	\$0	0.0	0	0
2014	1	120	\$420,000	0.0	18	61
2015	3	294	\$1,051,296	0.0	56	212
2016	19	1,097	\$31,239,253	0.5	1,091	3,778
2017	15	1,288	\$7,702,985	1.0	1,125	11,128
2018	18	1,768	\$9,335,247	0.1	1,409	5,221
2019	15	1,918	\$31,479,010	0.0	0	756
2020	10	886	\$5,250,111	0.4	3,469	724
Total	81	7,371	\$86,477,902	2.0	7,168	21,879
Residential						
2012	288	288	\$9,901,511	1.9	2,210	7,539
2013	1,107	1,107	\$35,390,072	7.9	8,964	30,591
2014	2,426	2,426	\$77,357,966	16.7	19,435	65,360
2015	6,423	6,423	\$223,598,821	47.7	55,251	184,536
2016	7,178	7,178	\$235,252,099	55.3	65,270	220,423
2017	4,822	4,822	\$128,573,955	34.5	44,313	151,682
2018	6,589	6,589	\$174,498,501	42.8	58,511	196,290
2019	7,746	7,746	\$221,899,664	59.6	74,271	252,415
2020	8,658	8,658	\$246,696,194	66.9	86,948	298,246
Total	45,237	45,237	\$1,353,168,783	333.3	415,173	1,407,083

5. Green Bonds

The Green Bank views Green Bond issuance as a key tool for expanding the organization's reach and impact. While the organization had previously issued privately placed Clean Renewable Energy Bonds (CREB's), FY2019 marked the Green Bank's first publicly offered debt issuance, the SHREC ABS Note Series A & Series B Climate Bond. The success of this offering and the potential to use debt capital markets as a tool for accessing capital and engaging investors, led us to build a larger multi-year strategy. The "Green Bonds Us" strategy seeks to raise additional lower cost capital from individual investors through bonds, including smaller denomination bonds, to support the clean economy and accelerate deployment of clean energy.

Green Bond Framework

The Green Bank has always valued transparency as a management principle and a cornerstone of leadership. The organization believes that clear and publicly available data, allows for transactions to be replicated with ease, thus expediting the transformation of a market. With bonds, we believe the same is true and that impact investors require assurance that their investments are going to intended purpose. Ergo, the Green Bank obtained certification from the Climate Bonds Initiative (CBI) for our SHREC ABS 2019-1 Class A and Class B notes and we worked with Kestrel Verifiers to certify the issuance. CBI has built a thorough certification regime using established standards for specific technologies for which the proceeds are used and incorporating transparency and robust reporting practices.

With bond issuance at the heart of our strategy, the Green Bank needed an efficient way to operationalize the certification process. In FY 2020, the Green Bank adopted a Green Bond Framework that holds the organization to high standards of transparency and reporting on all future bond issuances. The Framework commits the organization to certify its bonds as Climate Bonds per CBI, where applicable. If no CBI Standard applies, the Green Bank will certify the issuances as Green Bonds. The Framework also commits the Green Bank to engage in regular impact reporting, which is presented in the next part of this Non-Financial Statistics section.

Working with Kestrel Verifiers and CBI, the Green Bank received programmatic certification in April 2020, thus reducing the cost, effort, and time needed to issue Certified Climate Bonds in the future. The framework and Kestrel Verifiers' Second Party Opinion on the framework are publicly available on the Green Bank's [website](#).

Bond Issuances



SHREC ABS 2019-1 Class A and Class B notes

In April 2019, the Connecticut Green Bank sold \$38.6 million in investment-grade rated asset-backed securities. This first-of-its-kind issuance monetized the solar home renewable energy credits (SHRECs) generated through the Residential Solar Investment Program (RSIP). The sale was comprised of two tranches of SHRECs produced by more than 108 megawatts of 14,000 residential solar photovoltaic (PV) systems. The SHRECs were aggregated by the Green Bank and sold in annual tranches to Connecticut's two investor-owned utilities, Eversource Energy and United Illuminating Company, at a fixed, predetermined price over 15 years. The funds raised through this sale will recover the costs of administering and managing

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the RSIP, including the incentives offered to residential participants in the program. RSIP is discussed in further detail in the section below, Case 3 – Residential Solar Investment Program.

Use of Proceeds

One Climate Bond was issued by the Green Bank in FY20. All proceeds from the 2019-1 Class A and Class B Notes have been allocated to the SHREC Program and none are outstanding.

The notes won Environmental Finance’s annual award for Innovation in 2020, highlighting the creative bond-structuring approach for leveraging additional environmental benefits.

The Green Bank will annually report on the use of proceeds from each bond issued and their impact.

The use of proceeds from the Green Bond Issuances of the Green Bank are illustrated in Table 44 below.

TABLE 44. GREEN BOND ISSUANCES

Issuance	Gross Proceeds	Underwriting Fees & Out of Pocket Expenses	Net Bond Proceeds after Underwriting Fees & Out of Pocket Expenses	Proceeds Used	Use
SHREC Series 2019-1 Class A and Class B	\$38,527,549.54	\$1,018,746.00	\$37,508,803.54	\$37,508,803.54	The proceeds from this offering were used to reimburse the Green Bank for incentives and program administration costs of the RSIP.

Key Performance Indicators

In alignment with the Green Bank’s targets for issuing Green Bonds, the issuance of the 2019 Notes has directly supported the organization’s goal to increase annual clean energy investment on a per capita basis by a factor of ten. The Key Performance Indicators for the Green Bonds closed activity are reflected in Table 45 through Table 47.

TABLE 45. GREEN BONDS PROJECT TYPES AND INVESTMENT BY FY CLOSED

	# RE Projects	Total Investment	Green Bank Investment⁸⁴	Private Investment	Leverage Ratio
SHREC Series 2019-1 Class A and Class B	14,026	\$423,723,284	\$39,664,998	\$384,058,286	10.7

⁸⁴ Includes incentives, interest rate buydowns and loan loss reserves.

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TABLE 46. GREEN BONDS PROJECT CAPACITY, GENERATION AND SAVINGS BY FY CLOSED

	Installed Capacity (kW)	Expected Annual Generation (kWh)	Expected Lifetime Savings or Generation (MWh)	Annual Saved / Produced (MMBtu)	Lifetime Saved / Produced (MMBtu)
SHREC Series 2019-1 Class A and Class B	108,833.9	123,940,091	3,098,502	422,884	10,572,090

TABLE 47. GREEN BONDS PROJECT AVERAGES BY FY CLOSED

	Average Total Investment	Average Incentive Amount	Average Installed Capacity (kW)	Average Expected Annual Generation (kWh)	Average Annual Saved / Produced (MMBtu)
SHREC Series 2019-1 Class A and Class B	\$30,210	\$2,828	7.8	8,836	30

Societal Impacts

Ratepayers in Connecticut enjoy societal benefits, also referred to as social benefits, of Green Bonds. Over the course of its existence, the SHREC Series 2019-1 issuance has supported creation of 5,662 job years, avoided the lifetime emission of 1,734,304 tons of carbon dioxide, 1,802,197 pounds of nitrous oxide, 1,454,681 pounds of sulfur oxide, and 151,023 pounds of particulate matter as illustrated by Table 48 and Table 50. These projects are estimated to have generated \$14 million in tax revenue in their construction for the state of CT as shown in Table 49. The lifetime economic value of the public health impacts are estimated between \$60.1 and \$135 million as illustrated in Table 51. See Calculations and Assumptions in the appendix for the metrics included in the following tables.

TABLE 48. GREEN BONDS JOB YEARS SUPPORTED BY FY CLOSED

	Direct Jobs	Indirect and Induced Jobs	Total Jobs
SHREC Series 2019-1 Class A and Class B	2,240	3,422	5,662

TABLE 49. GREEN BONDS TAX REVENUES GENERATED BY FY CLOSED

	Individual Income Tax Revenue Generated	Corporate Tax Revenue Generated	Sales Tax Revenue Generated	Total Tax Revenue Generated
SHREC Series 2019-1 Class A and Class B	\$10,655,425	\$3,422,243	\$0	\$14,077,668

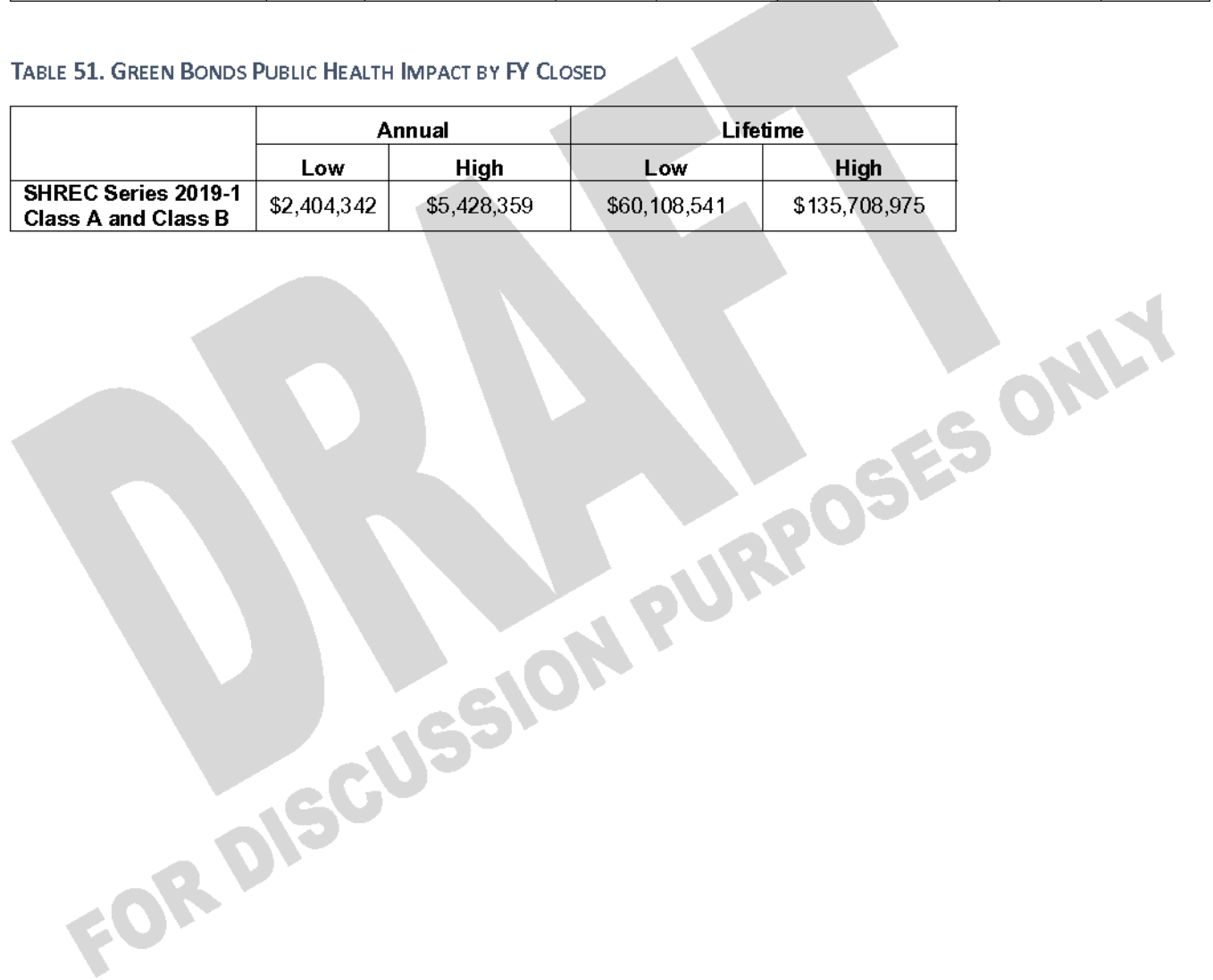
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TABLE 50. GREEN BONDS AVOIDED EMISSIONS BY FY CLOSED

	CO2 Emissions Avoided (tons)		NOx Emissions Avoided (pounds)		SOx Emissions Avoided (pounds)		PM 2.5 (pounds)	
	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime
SHREC Series 2019-1 Class A and Class B	69,372	1,734,304	72,088	1,802,197	58,187	1,454,681	6,041	151,023

TABLE 51. GREEN BONDS PUBLIC HEALTH IMPACT BY FY CLOSED

	Annual		Lifetime	
	Low	High	Low	High
SHREC Series 2019-1 Class A and Class B	\$2,404,342	\$5,428,359	\$60,108,541	\$135,708,975

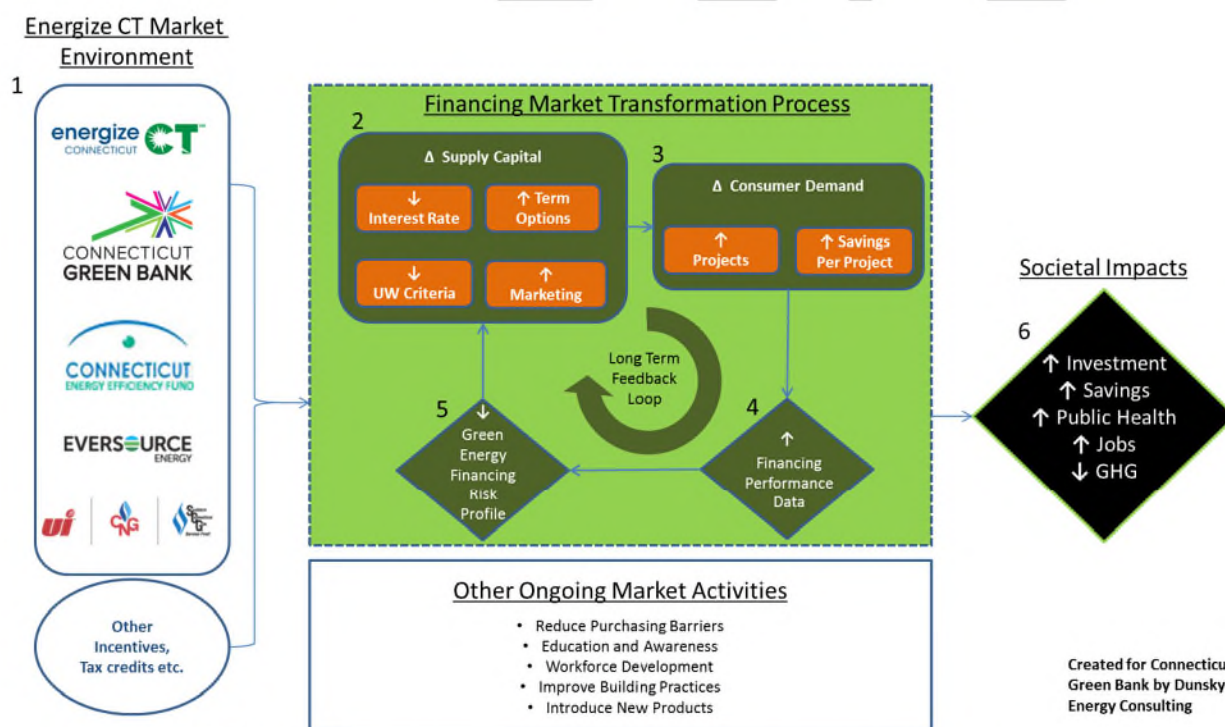


6. Programs

Program Logic Model and the Financing Market Transformation Strategy

The Connecticut Green Bank has prepared an Evaluation Framework⁸⁵ and developed a Program Logic Model (PLM) that presents the green bank model of attracting and deploying private capital through financing – see Figure 4. In addition to representing graphically how a program is structured, this PLM serves as a foundation for evaluating clean energy deployment through subsidy and financing programs of the Connecticut Green Bank.

FIGURE 4. CONNECTICUT GREEN BANK PROGRAM LOGIC MODEL – INCLUDING SUBSIDIES AND FINANCING



The above figure is a generalized market transformation and impact logic model. It has been adapted to individual Green Bank programs to incorporate the unique circumstances of each of those programs, enabling a clearer definition of program objectives and of metrics for reporting and future evaluation. Additionally, with the continued maturation of the organization’s programs, more data are becoming available to quantify and present the societal impacts associated with those programs.

As the Green Bank’s available capital expands to support more clean energy deployment, greater coordination with utilities is sought. As such, various other key participants have been included in this overall logic model. Beginning by identifying the multitude of interactions that occur across their respective programs, the Green Bank and the utilities will be better prepared to accommodate the

⁸⁵ Evaluation Framework – Assessing, Monitoring, and Reporting of Program Impacts and Processes by Opinion Dynamics and Dunskey Energy Consulting for the Connecticut Green Bank (July 2016)

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funding demands of clean energy projects over the short, medium, and long term. In addition, the model facilitates the identification and capture of known interventions in the clean energy environment, which may impact the trajectory of the Green Bank's financing efforts over time.

The PLM includes three (3) components – Energize CT Market Environment (including Other Ongoing Market Activities), Green Bank Financing Market Transformation Process, and Societal Impacts.

Energize CT Market Environment

Energize CT is an initiative of the Green Bank, the Connecticut Energy Efficiency Fund, the State, and the local electric and gas utilities. It provides Connecticut consumers, businesses and communities the resources and information they need to make it simple to save energy and build a clean energy future for everyone in the state. Under this umbrella, the electric and gas investor owned utilities (IOUs) provide information, marketing, and deliver the energy efficiency programs that have been approved by the State and supported by the Connecticut Energy Efficiency Fund. Operating under a statutory mandate that all cost-effective energy efficiency be acquired, with guidance from the Connecticut Energy Efficiency Board and its consultants, the utilities offer a variety of programs and encouragements for residential, commercial, and industrial customers to make decisions to participate in these cost-reducing opportunities. A range of methods is used to encourage customers to participate in the programs, among them targeted information, low cost/no cost measures, financial incentives, discounted retail products, and product and project financing. The Connecticut Green Bank, with a statutorily established residential solar PV target of 350 MW⁸⁶ on or before December 31, 2022, also markets and delivers its clean energy programs to residential customers. Informed by aggregate consumer and demographic data, the Green Bank promotes its programs and market offerings with direct incentives and financing opportunities in addition to a host of marketing, communication and outreach tools.⁸⁷

Within the Green Bank's current programs, only participants in the Residential Solar Investment Program (RSIP) are required to receive a home energy assessment through the utility-administered [Home Energy Solutions \(HES\)](#) program⁸⁸, the DOE Home Energy Score, or an alternate RSIP-approved energy assessment conducted by a [BPI](#)⁸⁹ or equivalently credentialed professional. Having satisfied the program's qualifying energy producing measures, RSIP participants may also receive rebates or incentives from the utilities (intended to overcome barriers to customer participation and/or encourage increased selection of energy efficient measures), or other levels of government (e.g., state incentives and Federal tax credits for several energy saving technologies), as well as opportunities to access affordable financing for some or all of the remaining portion of their clean energy project. In the context of a PLM, one may also anticipate similar links between the Green Bank programs and those of the investor owned utilities (IOU's).

⁸⁶ Updated by PA 19-35. <https://www.cga.ct.gov/2019/ACT/pa/pdf/2019PA-00035-R00HB-05002-PA.pdf>, passed June 28, 2019

⁸⁷ Per Public Act 15-194 "An Act Concerning the Encouragement of Local Economic Development and Access to Residential Renewable Energy," the Connecticut Green Bank administers a rebate and performance-based incentive program to support solar PV.

⁸⁸ <https://www.energizect.com/your-home/solutions-list/home-energy-solutions-core-services>

⁸⁹ <http://www.bpi.org/about-us>

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The impetus behind increased coordination among the utility administered energy efficiency programs and the Green Bank's programs is threefold: 1) more energy savings, and resulting emissions reductions, are expected to be acquired more economically both to the programs and to the project participants, 2) delivery efficiencies and greater savings could be found in coordinating financing that each entity offers to common customer segments within the sphere of program activities that they offer, and 3) coordination through a Joint Committee of the Energy Efficiency Board and the Connecticut Green Bank is required by statute.⁹⁰ It is important to note that a number of other ongoing market activities are occurring through Energize CT or outside of the Green Bank's market transformation process. From introducing new products, reducing purchasing barriers, education and awareness programs to workforce development, and improving building practices – there are a variety of activities that help move the market toward more clean energy deployment.

Finance Market Transformation Process

The efforts of the Green Bank are exemplified through the financing market transformation process which focuses on accelerating the deployment of clean energy – more customers and “deeper” more comprehensive measures being undertaken – by securing increasingly affordable and attractive private capital. The Green Bank can enter the process at several points (i.e., from numbers 2 through 4 in the above PLM figure), such as supplying capital through financing offers, marketing clean energy financing, or offsetting clean energy financing risk by backstopping loans, or sharing loan performance data.

Below is a breakdown of each component of the financing market transformation process of the Green Bank:

- **Supply of Capital** – financing programs aim to increase the supply of affordable and attractive capital available to support energy savings and clean energy production in the marketplace. This is done at the Green Bank by:
 - a. Providing financing (loans or leases) to customers using Green Bank capital; and/or
 - b. Establishing structures, programs, and public-private partnerships that connect third-party capital to support energy savings projects.

Beyond ensuring that financing is available for clean energy projects, the Green Bank's Supply of Capital interventions can lead to, but are not limited to benefits such as:

- a. Reduced interest rates, which lower the cost of capital for clean energy projects;
- b. More loan term options to better match savings cash flows (e.g., longer terms for longer payback projects, early repayment, or deferred first year payments);
- c. Less restrictive underwriting criteria, resulting in increased eligibility and access to financing; and

⁹⁰ Pursuant to Section 15-245m(d)(2) of Connecticut General Statutes, the Joint Committee shall examine opportunities to coordinate the programs and activities contained in the plan developed under Section 16-245n(c) of the General Statutes [Comprehensive Plan of the Connecticut Green Bank] with the programs and activities contained in the plan developed under section 16-245m(d)(1) of the General Statutes [Energy Conservation and Load Management Plan] and to provide financing to increase the benefits of programs funded by the plan developed under section 16-245m(d)(1) of the General Statutes so as to reduce the long-term cost, environmental impacts, and security risks of energy in the state.

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- d. Increased marketing efforts by lenders to leverage clean energy investment opportunities.

Each of these features is intended to increase uptake of clean energy projects, leading to increased energy savings, clean energy production, and other positive societal impacts. The long-term goal of the Green Bank's efforts is to achieve these attractive features in the market with a reduced need for Green Bank intervention, through the provision of performance data that convinces private capital providers to offer such features on their own.

- **Consumer Demand** – in combination with a comprehensive set of clean energy programs under the Energize CT initiative, offered by the utilities, the Green Bank drives consumer demand for clean energy by marketing financing programs and increasing awareness of the potential benefits stemming from clean energy projects through the range of programs it offers. It should also be noted that through channel marketing strategies (e.g., contractor channels to the customer) success will be determined by an increase in demand for financing. The results of the increased demand are expected to, but are not limited to:
 - a. Increase in the number of clean energy projects; and
 - b. Increase in the associated average savings and/or clean energy production per project.

Increasing affordable and attractive financing offerings in the marketplace is an important component of unlocking consumer demand and driving greater energy savings and clean energy production and is central to the Green Bank's market transformation efforts.

- **Financing Performance Data** – Green Bank gathers and communicates the performance of clean energy financing either through its own programs or for other financing options in the marketplace. This increases access to valuable information that can help lenders and customers identify promising clean energy investments. Enabling access to this information (i.e., data transparency) is important to encouraging market competition.

Ultimately, data on the performance of Green Bank sponsored financial products is expected to continue to play a pivotal role in the attraction of private capital directed toward more affordable and accessible financing offerings. As the Green Bank increases the access to affordable and attractive capital, and more customers use this financing for their clean energy projects, data demonstrating strong and reliable performance of these projects is also expected to enable lower interest rates due to a better-informed assumption of risk.

- **Financing Risk Profile** – Green Bank can help reduce clean energy financing risk profiles in many ways. For example, it can absorb a portion or all the credit risk by providing loan loss reserve (LLR) funds and guarantees or taking the first-loss position on investments (i.e., subordinated debt). It can also channel or attract rebates and incentives to finance energy saving projects thus improving their economic performance and lowering the associated performance risk. In the long run, by making clean energy financing performance data available to the market, Green Bank programs increase lenders' and borrowers' understanding of clean energy investment risk profiles, which is expected to enable them to (1) design more affordable and attractive financing products and (2) select projects for financing to reduce risks.

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This element of the PLM plays the key linking role in the Market Transformation feedback loop, leading to longer term impacts, as the market (1) recognizes the expected advantageous risk/return profile associated with clean energy investments and (2) takes further steps to increase the supply of affordable and attractive capital with less Green Bank credit enhancement needed to support demand for clean energy investments.

Ensuring that financing performance and risk profile data are available to the market is important from various perspectives. For a deeper examination and presentation, please see the report by the State Energy Efficiency Action Network.⁹¹

Societal Impact

The efforts to accelerate and scale-up investment in clean energy deployment by the Green Bank, lead to a myriad of societal impacts and benefits.

All the PLM elements ultimately aim to contribute to Green Bank program impacts and benefits. These include the direct increase in energy savings and improvement of public health (e.g., asbestos remediation, lead abatement, etc.) to the customer, increase in the creation of local in-state jobs, and the reduction of greenhouse gas emissions for society. The impacts may also include consideration of secondary or indirect benefits such as GDP growth and energy savings supported by lenders who have leveraged Green Bank data or marketing efforts.

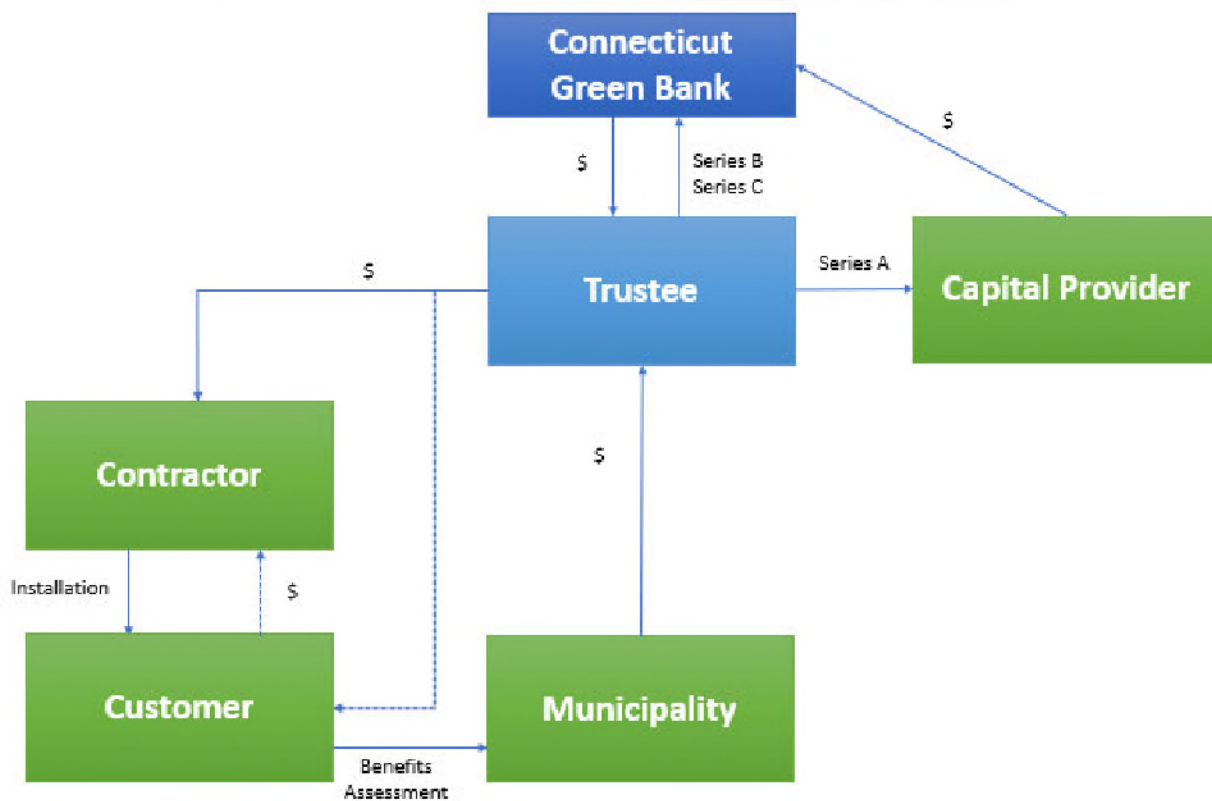
⁹¹ State and Local Energy Efficiency Action Network. (2014). *Energy Efficiency Finance Programs: Use Case Analysis to Define Data Needs and Guidelines*. Prepared by: Peter Thompson, Peter Larsen, Chris Kramer, and Charles Goldman of Lawrence Berkeley National Laboratory. Click [here \(http://www4.eere.energy.gov/seeaction/publication/energy-efficiency-finance-programs-use-case-analysis-define-data-needs-and-guidelines\)](http://www4.eere.energy.gov/seeaction/publication/energy-efficiency-finance-programs-use-case-analysis-define-data-needs-and-guidelines)

Case 1 – C-PACE

Description

Commercial Property Assessed Clean Energy (C-PACE) enables building owners to pay for clean energy improvements or clean energy production projects over time through a voluntary benefit assessment on their property tax bills. This process makes it easier for building owners to secure low-interest, long-term capital to fund energy improvements and is structured so that energy savings more than offset the benefit assessment.

FIGURE 5. LEGAL STRUCTURE AND FLOWS OF CAPITAL FOR C-PACE



For a municipality to participate in the C-PACE program, its legislative body must pass a resolution enabling it to enter into an agreement with the Connecticut Green Bank to assess, collect, remit, and assign benefit assessments against C-PACE borrowers' liabilities. As of June 30, 2020, there are 135 cities and towns signed up for C-PACE representing more than 90% of commercial and industrial building space in Connecticut. Additionally, as of June 30, 2020, nearly \$185 million in C-PACE benefit assessment advances have been closed that are expected to save over \$286 million in avoided energy costs over the life of the projects.

Key Performance Indicators

The Key Performance Indicators for C-PACE closed activity are reflected in Table 52 through Table 55. These illustrate the volume of projects by year, investment, generation capacity installed, and the

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amount of energy saved and/or produced. It also breaks down the volume of projects by energy efficiency, renewable generation, or both.

TABLE 52. C-PACE PROJECT TYPES AND INVESTMENT BY FY CLOSED

Fiscal Year	EE	RE	RE/EE	Other	# Projects	Total Investment ⁹²	Green Bank Investment ⁹³	Private Investment	Leverage Ratio
2012	0	0	0	0	0	\$0	\$0	\$0	0
2013	2	0	1	0	3	\$1,512,144	\$210,302	\$1,301,842	7.2
2014	6	14	3	0	23	\$21,785,167	\$9,550,120	\$12,235,046	2.3
2015	10	30	9	0	49	\$33,716,566	\$13,913,876	\$19,802,690	2.4
2016	10	35	8	0	53	\$36,728,026	\$7,862,683	\$28,865,342	4.7
2017	5	27	6	0	38	\$15,487,305	\$4,459,609	\$11,027,696	3.5
2018	10	46	9	1	66	\$26,732,114	\$6,432,768	\$20,299,346	4.2
2019	2	33	3	0	38	\$21,482,788	\$6,944,679	\$14,538,109	3.1
2020	3	37	5	0	45	\$27,518,093	\$4,762,380	\$22,755,713	5.8
Total	48	222	44	1	315	\$184,962,202	\$54,136,417	\$130,825,785	3.4

TABLE 53. C-PACE PROJECT CAPACITY, GENERATION AND SAVINGS BY FY CLOSED

Fiscal Year	Installed Capacity (kW)	Expected Annual Generation (kWh)	Expected Lifetime Savings or Generation (MWh)	Annual Saved / Produced (MMBtu)	Lifetime Saved / Produced (MMBtu)	Annual Cost Savings	Lifetime Cost Savings
2012	0.0	0	0	0	0	\$0	\$0
2013	101.0	513,495	7,657	2,021	32,845	\$132,907	\$2,538,186
2014	3,631.0	8,409,814	154,673	36,264	716,930	\$1,905,050	\$40,635,908
2015	7,275.9	14,301,795	308,545	41,464	877,020	\$2,792,189	\$58,534,753
2016	6,367.7	15,315,444	278,056	59,323	1,125,290	\$3,842,877	\$82,458,936
2017	3,916.4	6,142,726	131,693	21,662	466,881	\$813,966	\$15,172,649
2018	7,284.8	10,700,244	236,250	36,959	817,285	\$972,755	\$25,889,113
2019	5,219.3	10,394,443	202,121	21,169	406,759	\$680,488	\$20,682,469
2020	6,141.4	9,874,585	246,312	23,744	591,726	\$578,585	\$40,172,130
Total	39,937.6	75,652,546	1,565,307	242,607	5,034,735	\$11,718,818	\$286,084,143

TABLE 54. C-PACE PROJECT AVERAGES BY FY CLOSED

Fiscal Year	Average Total Investment	Average Amount Financed	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)	Average Finance Term (years)	Average Finance Rate
2012	\$0	\$0	0.0	0	0	0.00
2013	\$504,048	\$70,101	33.7	674	17	5.33
2014	\$947,181	\$415,223	157.9	1,577	18	5.91
2015	\$688,093	\$283,957	148.5	846	18	5.79
2016	\$692,982	\$148,353	130.0	1,119	18	5.77

⁹² Includes closing costs and capitalized interest for C-PACE and the Fair Market Value for Commercial Leases.

⁹³ Includes incentives, interest rate buydowns and loan loss reserves.

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Fiscal Year	Average Total Investment	Average Amount Financed	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)	Average Finance Term (years)	Average Finance Rate
2017	\$407,561	\$117,358	103.1	570	17	5.66
2018	\$405,032	\$97,466	113.8	560	16	5.84
2019	\$565,337	\$182,755	137.4	557	19	6.03
2020	\$611,513	\$105,831	139.6	528	17	6.00
Total	\$587,182	\$171,862	129.7	770	17	5.85

TABLE 55. C-PACE PROJECT APPLICATION YIELD⁹⁴ BY FY RECEIVED⁹⁵

Fiscal Year	Applications Received	Projects in Review/On Hold	Projects Approved	Projects Withdrawn	Applications Denied	Approved Rate	Denied Rate
2012	0	0	0	0	0	0%	0%
2013	55	1	25	27	2	96%	4%
2014	146	21	44	80	1	99%	1%
2015	144	26	51	63	4	97%	3%
2016	111	29	44	33	5	94%	6%
2017	98	10	47	39	2	98%	2%
2018	80	12	56	12	0	100%	0%
2019	63	8	42	13	0	100%	0%
2020	73	14	48	9	2	97%	3%
Total	770	121	357	276	16	98%	2%

C-PACE has been used as a financing tool across a wide variety of end-use customers in Connecticut in its 8 years of existence as illustrated by Table 56.

TABLE 56. TYPES OF END-USE CUSTOMERS PARTICIPATING IN C-PACE

Property Type	# of Properties	Square Footage	Average Square Footage per Property
Agricultural	3	10,904	10,904
Athletic/Recreational Facility	5	69,372	34,686
Education	5	170,258	56,753
Hotel	2	185,059	92,530
House of Worship	11	114,462	22,892
Industrial	76	3,375,101	47,537
Multi-family/apartment (> 5 units)	15	625,014	44,644
Non-profit	25	629,492	33,131

⁹⁴ Applications received are complete initial applications that have been received for C-PACE financing. Applications denied are any initial applications received for C-PACE financing that do not meet programmatic requirements. Projects in review are projects that are being reviewed, either technically or financially, prior to being approved. Projects approved are projects that have gone through technical and financial underwriting and have met all the necessary programmatic requirements. These include projects that have been approved and are waiting to close, projects that have closed, and projects that have completed construction and are in repayment. Projects withdrawn are projects that have been approved at the application stage but have since fallen out of our pipeline for numerous reasons and are no longer active. Projects in this category could have fallen out of our pipeline in the in review or the approved stage.

⁹⁵ This table represents projects whose initial applications have been approved and are proceeding through the C-PACE financing pipeline prior to loan closure.

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Property Type	# of Properties	Square Footage	Average Square Footage per Property
Nursing Home/Rehab Facility	1	175,680	175,680
Office	82	4,875,711	66,791
Public assembly	4	139,000	46,333
Retail	68	1,912,858	28,983
Special Purpose	3	78,380	26,127
Warehouse & storage	15	655,050	46,789
Grand Total	315	13,016,341	46,990

To date, 135 municipalities have opted into the C-PACE program resulting in 315 closed projects – see Table 57.

TABLE 57. MUNICIPALITIES PARTICIPATING IN C-PACE

Municipality	Opt in Date	# Closed Projects
Ansonia	7/9/2013	1
Avon	4/1/2013	2
Barkhamsted	6/24/2014	0
Beacon Falls	1/14/2013	0
Berlin	9/3/2013	2
Bethany	3/24/2015	1
Bethel	8/6/2013	2
Bloomfield	6/10/2013	2
Bolton	4/7/2020	0
Branford	7/10/2013	2
Bridgeport	9/17/2012	18
Bristol	11/12/2014	11
Brookfield	8/5/2013	4
Burlington	1/25/2016	0
Canaan	7/23/2013	1
Canterbury	11/5/2014	0
Canton	5/8/2013	1
Cheshire	9/9/2014	1
Chester	7/23/2013	0
Clinton	5/29/2013	4
Columbia	9/3/2014	0
Coventry	3/18/2013	0
Cromwell	4/9/2014	1
Danbury	5/7/2013	4
Darien	2/24/2014	8
Deep River	7/22/2014	1
Durham	11/19/2012	1
East Granby	6/26/2013	0

CONNECTICUT GREEN BANK
6. PROGRAMS – C-PACE

Municipality	Opt in Date	# Closed Projects
East Haddam	5/8/2013	2
East Hampton	7/9/2013	0
East Hartford	3/1/2013	4
East Haven	2/7/2017	2
East Lyme	9/3/2014	3
East Windsor	10/21/2013	8
Eastford	11/10/2014	0
Easton	2/23/2015	0
Ellington	8/25/2014	1
Enfield	12/2/2013	2
Essex	7/16/2014	2
Fairfield	9/23/2013	7
Farmington	12/10/2013	7
Franklin	10/5/2015	0
Glastonbury	6/19/2013	3
Granby	10/7/2013	0
Greenwich	4/8/2013	2
Griswold	2/23/2016	1
Groton	9/3/2013	2
Guilford	3/21/2016	1
Haddam	6/29/2015	0
Hamden	3/3/2014	2
Hartford	10/22/2012	27
Hebron	10/6/2016	0
Kent	6/3/2014	0
Killingly	11/18/2014	0
Killingworth	5/20/2013	2
Lebanon	5/4/2015	0
Ledyard	1/13/2016	1
Madison	8/25/2014	2
Manchester	5/7/2013	7
Mansfield	8/12/2013	0
Meriden	5/20/2013	4
Middlefield	6/16/2015	0
Middletown	1/7/2013	9
Milford	6/3/2013	2
Monroe	2/27/2017	0
Montville	11/26/2013	1
Naugatuck	6/17/2014	2
New Britain	7/17/2013	11
New Canaan	7/16/2014	0
New Fairfield	3/28/2019	0
New Hartford	9/14/2017	0

CONNECTICUT GREEN BANK
6. PROGRAMS – C-PACE

Municipality	Opt in Date	# Closed Projects
New Haven	10/21/2013	3
New London	5/6/2013	9
New Milford	5/28/2013	3
Newington	10/28/2014	2
Newtown	5/15/2013	4
Norfolk	5/12/2014	0
North Branford	5/21/2013	0
North Canaan	12/30/2013	2
North Haven	7/24/2014	2
North Stonington	2/23/2015	2
Norwalk	9/26/2012	4
Norwich	9/16/2013	2
Old Lyme	1/25/2016	0
Old Saybrook	2/20/2013	1
Orange	5/11/2016	0
Oxford	1/12/2016	2
Plainfield	2/23/2016	1
Plainville	6/17/2013	3
Plymouth	1/9/2019	0
Pomfret	9/16/2019	0
Portland	9/18/2013	1
Preston	10/23/2014	0
Putnam	2/1/2013	4
Redding	10/20/2015	0
Ridgefield	2/21/2018	3
Rocky Hill	9/16/2013	3
Salisbury	8/11/2016	0
Seymour	1/27/2014	0
Sharon	2/21/2014	0
Shelton	9/11/2014	2
Simsbury	12/12/2012	1
Somers	5/23/2014	2
South Windsor	6/2/2014	3
Southbury	2/7/2013	0
Southington	5/13/2013	3
Sprague	12/30/2013	0
Stafford	9/26/2013	0
Stamford	1/7/2013	15
Stonington	1/30/2014	2
Stratford	2/23/2013	4
Suffield	5/1/2013	0
Thomaston	2/4/2016	1
Tolland	4/9/2013	0

CONNECTICUT GREEN BANK
6. PROGRAMS – C-PACE

Municipality	Opt in Date	# Closed Projects
Torrington	5/6/2013	1
Trumbull	6/3/2013	2
Vernon	7/16/2013	4
Washington	5/16/2019	1
Waterbury	5/6/2013	7
Waterford	6/3/2013	1
Watertown	2/20/2014	6
West Hartford	12/20/2012	2
West Haven	10/28/2013	3
Westbrook	5/1/2013	0
Weston	8/18/2014	1
Westport	1/8/2013	4
Wethersfield	5/20/2013	1
Willington	6/16/2014	1
Wilton	2/1/2013	2
Windham	12/18/2012	1
Windsor	5/6/2013	2
Windsor Locks	7/9/2013	2
Woodbridge	5/20/2014	5
Woodbury	3/17/2015	1
Woodstock	3/23/2016	0
Total	135	315

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**CONNECTICUT GREEN BANK
6. PROGRAMS – C-PACE**

Area Median Income Band Penetration

C-PACE has been used to fund projects in economically diverse locations across the state as reflected by Table 58 for Metropolitan Statistical Area (MSA) Area Median Income (AMI). It should be noted that C-PACE is not an income targeted program.

TABLE 58. C-PACE ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS BY FY CLOSED⁹⁶

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Population	% Population Distribution	Project Units / 1,000 People	Total Investment / Population	Watts / Population
2012	<60%	0	0%	0.0	0%	\$0	0%	609,363	17%	0.0	\$0.00	0.0
2012	60%-80%	0	0%	0.0	0%	\$0	0%	527,217	15%	0.0	\$0.00	0.0
2012	80%-100%	0	0%	0.0	0%	\$0	0%	589,440	17%	0.0	\$0.00	0.0
2012	100%-120%	0	0%	0.0	0%	\$0	0%	722,664	20%	0.0	\$0.00	0.0
2012	>120%	0	0%	0.0	0%	\$0	0%	1,116,395	31%	0.0	\$0.00	0.0
2012	Total	0	0%	0.0	0%	\$0	0%	3,572,213	100%	0.0	\$0.00	0.0
2013	<60%	1	33%	0.0	0%	\$150,877	10%	604,433	17%	0.0	\$0.25	0.0
2013	60%-80%	0	0%	0.0	0%	\$0	0%	568,952	16%	0.0	\$0.00	0.0
2013	80%-100%	1	33%	0.1	100%	\$711,251	47%	588,813	16%	0.0	\$1.21	0.2
2013	100%-120%	1	33%	0.0	0%	\$650,016	43%	690,591	19%	0.0	\$0.94	0.0
2013	>120%	0	0%	0.0	0%	\$0	0%	1,131,305	31%	0.0	\$0.00	0.0
2013	Total	3	100%	0.1	100%	\$1,512,144	100%	3,592,053	100%	0.0	\$0.42	0.0
2014	<60%	7	30%	0.5	14%	\$6,432,379	30%	614,135	17%	0.0	\$10.47	0.8
2014	60%-80%	1	4%	0.1	2%	\$243,296	1%	546,132	15%	0.0	\$0.45	0.1
2014	80%-100%	6	26%	2.1	59%	\$6,435,779	30%	577,061	16%	0.0	\$11.15	3.7
2014	100%-120%	3	13%	0.3	7%	\$800,605	4%	720,856	20%	0.0	\$1.11	0.4
2014	>120%	6	26%	0.7	18%	\$7,873,108	36%	1,125,910	31%	0.0	\$6.99	0.6
2014	Total	23	100%	3.6	100%	\$21,785,167	100%	3,592,053	100%	0.0	\$6.06	1.0
2015	<60%	16	33%	1.7	23%	\$7,094,387	21%	662,619	18%	0.0	\$10.71	2.6
2015	60%-80%	5	10%	0.8	10%	\$3,408,609	10%	489,826	14%	0.0	\$6.96	1.6
2015	80%-100%	5	10%	0.5	7%	\$3,724,052	11%	650,163	18%	0.0	\$5.73	0.8
2015	100%-120%	10	20%	1.2	16%	\$4,855,095	14%	631,741	18%	0.0	\$7.69	1.9

⁹⁶ Excludes projects in unknown bands.

**CONNECTICUT GREEN BANK
6. PROGRAMS – C-PACE**

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Population	% Population Distribution	Project Units / 1,000 People	Total Investment / Population	Watts / Population
2015	>120%	13	27%	3.1	43%	\$14,634,422	43%	1,150,974	32%	0.0	\$12.71	2.7
2015	Total	49	100%	7.3	100%	\$33,716,566	100%	3,593,222	100%	0.0	\$9.38	2.0
2016	<60%	9	18%	0.7	12%	\$3,685,924	10%	649,617	18%	0.0	\$5.67	1.1
2016	60%-80%	6	12%	0.8	13%	\$2,828,263	8%	509,088	14%	0.0	\$5.56	1.5
2016	80%-100%	10	20%	1.5	25%	\$14,605,432	41%	641,084	18%	0.0	\$22.78	2.4
2016	100%-120%	10	20%	1.9	32%	\$8,082,742	23%	653,309	18%	0.0	\$12.37	2.9
2016	>120%	15	30%	1.1	18%	\$6,312,610	18%	1,126,543	31%	0.0	\$5.60	1.0
2016	Total	50	100%	6.1	100%	\$35,514,972	100%	3,588,570	100%	0.0	\$9.90	1.7
2017	<60%	8	21%	1.7	42%	\$5,506,176	36%	663,181	18%	0.0	\$8.30	2.5
2017	60%-80%	4	11%	0.4	10%	\$1,295,929	8%	488,396	14%	0.0	\$2.65	0.8
2017	80%-100%	7	18%	0.4	9%	\$1,487,162	10%	612,043	17%	0.0	\$2.43	0.6
2017	100%-120%	12	32%	0.8	21%	\$3,998,495	26%	722,808	20%	0.0	\$5.53	1.1
2017	>120%	7	18%	0.7	17%	\$3,199,542	21%	1,099,277	31%	0.0	\$2.91	0.6
2017	Total	38	100%	3.9	100%	\$15,487,305	100%	3,594,478	100%	0.0	\$4.31	1.1
2018	<60%	7	11%	0.9	15%	\$3,702,498	16%	636,795	18%	0.0	\$5.81	1.5
2018	60%-80%	13	21%	1.5	24%	\$4,850,211	21%	553,007	15%	0.0	\$8.77	2.7
2018	80%-100%	7	11%	0.4	6%	\$3,130,891	13%	569,113	16%	0.0	\$5.50	0.7
2018	100%-120%	10	16%	1.2	20%	\$4,063,576	17%	710,802	20%	0.0	\$5.72	1.7
2018	>120%	24	39%	2.1	34%	\$7,574,924	32%	1,103,484	31%	0.0	\$6.86	1.9
2018	Total	61	100%	6.2	100%	\$23,322,100	100%	3,581,504	100%	0.0	\$6.51	1.7
2019	<60%	13	35%	1.4	28%	\$5,765,546	28%	636,795	18%	0.0	\$9.05	2.2
2019	60%-80%	7	19%	0.5	11%	\$4,237,854	20%	553,007	15%	0.0	\$7.66	1.0
2019	80%-100%	7	19%	1.1	22%	\$3,374,551	16%	569,113	16%	0.0	\$5.93	1.9
2019	100%-120%	7	19%	1.6	32%	\$6,188,145	30%	710,802	20%	0.0	\$8.71	2.3
2019	>120%	3	8%	0.4	8%	\$1,182,152	6%	1,103,484	31%	0.0	\$1.07	0.3
2019	Total	37	100%	5.0	100%	\$20,748,248	100%	3,581,504	100%	0.0	\$5.79	1.4
2020	<60%	12	27%	0.6	11%	\$9,039,149	33%	636,795	18%	0.0	\$14.19	1.0
2020	60%-80%	8	18%	1.4	24%	\$6,581,407	24%	553,007	15%	0.0	\$11.90	2.6
2020	80%-100%	6	14%	0.9	15%	\$2,318,096	9%	569,113	16%	0.0	\$4.07	1.6
2020	100%-120%	4	9%	1.3	22%	\$2,815,444	10%	710,802	20%	0.0	\$3.96	1.9
2020	>120%	14	32%	1.7	28%	\$6,426,545	24%	1,103,484	31%	0.0	\$5.82	1.5

**CONNECTICUT GREEN BANK
6. PROGRAMS – C-PACE**

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Population	% Population Distribution	Project Units / 1,000 People	Total Investment / Population	Watts / Population
2020	Total	44	100%	6.0	100%	\$27,180,640	100%	3,581,504	100%	0.0	\$7.59	1.7
Total	<60%	73	24%	7.5	20%	\$41,376,936	23%	636,795	18%	0.1	\$64.98	11.8
Total	60%-80%	44	14%	5.5	14%	\$23,445,569	13%	553,007	15%	0.1	\$42.40	9.9
Total	80%-100%	49	16%	7.1	19%	\$35,787,216	20%	569,113	16%	0.1	\$62.88	12.4
Total	100%-120%	57	19%	8.3	22%	\$31,454,117	18%	710,802	20%	0.1	\$44.25	11.7
Total	>120%	82	27%	9.8	26%	\$47,203,304	26%	1,103,484	31%	0.1	\$42.78	8.8
Total	Total	305	100%	38.2	100%	\$179,267,142	100%	3,581,504	100%	0.1	\$50.05	10.7

TABLE 59. C-PACE ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS ABOVE OR BELOW 100% BY FY CLOSED⁹⁷

Fiscal Year	# Project Units				MW				Total Investment				% at 100% or Below
	Over 100% AMI	100% or Below AMI	% at 100% or Below	Total	Over 100% AMI	100% or Below AMI	% at 100% or Below	Total	Over 100% AMI	100% or Below AMI	% at 100% or Below	Total	
2012	0	0	0%	0.0	0.0	0.0	0%	\$0	\$0	\$0	0%	\$0	0%
2013	3	2	67%	0.1	0.0	0.1	100%	\$1,512,144	\$650,016	\$862,128	57%	\$862,128	57%
2014	23	14	61%	3.6	0.9	2.7	75%	\$21,785,167	\$8,673,712	\$13,111,454	60%	\$13,111,454	60%
2015	49	23	53%	7.3	4.3	3.0	41%	\$33,716,566	\$19,489,517	\$14,227,049	42%	\$14,227,049	42%
2016	50	25	50%	6.1	3.0	3.0	50%	\$35,514,972	\$14,395,352	\$21,119,620	59%	\$21,119,620	59%
2017	38	19	50%	3.9	1.5	2.4	62%	\$15,487,305	\$7,198,037	\$8,289,267	54%	\$8,289,267	54%
2018	61	34	44%	6.2	3.4	2.8	46%	\$23,322,100	\$11,638,500	\$11,683,600	50%	\$11,683,600	50%
2019	37	10	73%	5.0	2.0	3.0	60%	\$20,748,248	\$7,370,297	\$13,377,951	64%	\$13,377,951	64%
2020	44	18	59%	6.0	3.0	3.0	50%	\$27,180,640	\$9,241,989	\$17,938,652	66%	\$17,938,652	66%
Total	305	139	54%	38.2	18.1	20.1	53%	\$179,267,142	\$78,657,421	\$100,609,721	56%	\$100,609,721	56%

⁹⁷ Excludes projects in unknown bands.

**CONNECTICUT GREEN BANK
6. PROGRAMS – C-PACE**

Distressed Community Penetration

For a breakdown of C-PACE project volume and investment by census tracts categorized by Distressed Communities – see Table 60. It should be noted that C-PACE is not an income targeted program.

TABLE 60. C-PACE ACTIVITY IN DISTRESSED COMMUNITIES BY FY CLOSED

Fiscal Year	Distressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Population	% Population Distribution	Project Units / 1,000 People	Total Investment/ Population	Watts / Population
2012	Yes	0	0%	0.0	0%	\$0	0%	1,171,385	33%	0.0	\$0.00	0.0
2012	No	0	0%	0.0	0%	\$0	0%	2,400,828	67%	0.0	\$0.00	0.0
2012	Total	0	0%	0.0	0%	\$0	0%	3,572,213	100%	0.0	\$0.00	0.0
2013	Yes	2	67%	0.0	0%	\$800,893	53%	1,124,923	31%	0.0	\$0.71	0.0
2013	No	1	33%	0.1	100%	\$711,251	47%	2,458,638	69%	0.0	\$0.29	0.0
2013	Total	3	100%	0.1	100%	\$1,512,144	100%	3,583,561	100%	0.0	\$0.42	0.0
2014	Yes	7	30%	1.4	40%	\$9,047,808	42%	1,106,027	31%	0.0	\$8.18	1.3
2014	No	16	70%	2.2	60%	\$12,737,358	58%	2,486,026	69%	0.0	\$5.12	0.9
2014	Total	23	100%	3.6	100%	\$21,785,167	100%	3,592,053	100%	0.0	\$6.06	1.0
2015	Yes	24	49%	4.0	54%	\$17,121,093	51%	1,122,550	31%	0.0	\$15.25	3.5
2015	No	25	51%	3.3	46%	\$16,595,474	49%	2,470,672	69%	0.0	\$6.72	1.3
2015	Total	49	100%	7.3	100%	\$33,716,566	100%	3,593,222	100%	0.0	\$9.38	2.0
2016	Yes	16	30%	1.5	24%	\$15,251,763	42%	1,162,653	32%	0.0	\$13.12	1.3
2016	No	37	70%	4.9	76%	\$21,476,262	58%	2,425,917	68%	0.0	\$8.85	2.0
2016	Total	53	100%	6.4	100%	\$36,728,026	100%	3,588,570	100%	0.0	\$10.23	1.8
2017	Yes	10	26%	2.0	51%	\$6,515,790	42%	1,150,554	32%	0.0	\$5.66	1.7
2017	No	28	74%	1.9	49%	\$8,971,514	58%	2,443,924	68%	0.0	\$3.67	0.8
2017	Total	38	100%	3.9	100%	\$15,487,305	100%	3,594,478	100%	0.0	\$4.31	1.1
2018	Yes	7	11%	0.9	12%	\$3,706,595	14%	1,130,773	32%	0.0	\$3.28	0.8
2018	No	59	89%	6.4	88%	\$23,025,520	86%	2,450,731	68%	0.0	\$9.40	2.6
2018	Total	66	100%	7.3	100%	\$26,732,114	100%	3,581,504	100%	0.0	\$7.46	2.0
2019	Yes	17	45%	2.1	40%	\$10,173,088	47%	1,102,584	31%	0.0	\$9.23	1.9
2019	No	21	55%	3.2	60%	\$11,309,699	53%	2,478,920	69%	0.0	\$4.56	1.3
2019	Total	38	100%	5.2	100%	\$21,482,788	100%	3,581,504	100%	0.0	\$6.00	1.5

**CONNECTICUT GREEN BANK
6. PROGRAMS – C-PACE**

Fiscal Year	Distressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Population	% Population Distribution	Project Units / 1,000 People	Total Investment / Population	Watts / Population
2020	Yes	18	40%	2.4	40%	\$6,871,727	25%	1,102,584	31%	0.0	\$6.23	2.2
2020	No	27	60%	3.7	60%	\$20,646,366	75%	2,478,920	69%	0.0	\$8.33	1.5
2020	Total	45	100%	6.1	100%	\$27,518,093	100%	3,581,504	100%	0.0	\$7.68	1.7
Total	Yes	101	32%	14.3	36%	\$69,488,757	38%	1,102,584	31%	0.1	\$63.02	13.0
Total	No	214	68%	25.6	64%	\$115,473,445	62%	2,478,920	69%	0.1	\$46.58	10.3
Total	Total	315	100%	39.9	100%	\$184,962,202	100%	3,581,504	100%	0.1	\$51.64	11.2

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CONNECTICUT GREEN BANK
6. PROGRAMS – C-PACE

Societal Impacts

Ratepayers in Connecticut continue to enjoy the societal benefits of C-PACE. In its 8 years of existence, the program has supported the creation of 1,886 job years, avoided the lifetime emission of 818,633 tons of carbon dioxide, 833,577 pounds of nitrous oxide, 748,665 pounds of sulfur oxide, and 61,174 pounds of particulate matter as illustrated by Table 61 and Table 63. CPACE is estimated to have generated \$12.5 million in tax revenue for the state of CT since its inception as shown in Table 62. The lifetime economic value of the public health impacts of CPACE are estimated between \$23.8 and \$53.9 million as illustrated in Table 64.

TABLE 61. C-PACE JOB YEARS SUPPORTED BY FY CLOSED

Fiscal Year	Direct Jobs	Indirect and Induced Jobs	Total Jobs
2012	0	0	0
2013	9	15	24
2014	109	174	282
2015	142	227	369
2016	178	285	463
2017	55	74	129
2018	89	116	204
2019	73	95	168
2020	104	141	245
Total	759	1,126	1,886

TABLE 62. C-PACE TAX REVENUES GENERATED BY FY CLOSED

Fiscal Year	Individual Income Tax Revenue Generated	Corporate Tax Revenue Generated	Sales Tax Revenue Generated	Total Tax Revenue Generated
2012	\$0	\$0	\$0	\$0
2013	\$42,924	\$45,544	\$46,694	\$135,162
2014	\$489,858	\$773,000	\$366,235	\$1,629,093
2015	\$711,515	\$1,074,192	\$727,217	\$2,512,924
2016	\$853,042	\$1,092,624	\$682,252	\$2,627,917
2017	\$257,202	\$407,685	\$99,582	\$764,470
2018	\$440,130	\$916,522	\$162,881	\$1,519,534
2019	\$337,344	\$660,385	\$329,403	\$1,327,132
2020	\$531,240	\$928,041	\$506,388	\$1,965,669
Total	\$3,663,256	\$5,897,993	\$2,920,653	\$12,481,902

CONNECTICUT GREEN BANK
6. PROGRAMS – C-PACE

TABLE 63. C-PACE AVOIDED EMISSIONS BY FY CLOSED

Fiscal Year	CO2 Emissions Avoided (tons)		NOx Emissions Avoided (pounds)		SOx Emissions Avoided (pounds)		PM 2.5 (pounds)	
	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime
2012	0	0	0	0	0	0	0	0
2013	283	4,224	386	5,811	477	7,148	24	360
2014	4,700	86,427	6,077	113,223	6,872	128,033	400	7,497
2015	7,345	161,794	7,841	171,075	7,480	161,286	454	9,613
2016	8,626	156,267	9,181	163,676	8,099	136,665	716	13,207
2017	3,345	71,784	3,000	64,793	2,203	46,446	282	6,108
2018	5,858	129,664	5,398	121,162	4,446	100,178	491	10,956
2019	3,331	75,542	3,160	72,309	2,729	62,363	280	6,391
2020	5,329	132,929	4,871	121,528	4,271	106,545	283	7,042
Total	38,818	818,633	39,914	833,577	36,577	748,665	2,930	61,174

TABLE 64. C-PACE ECONOMIC VALUE OF PUBLIC HEALTH BY FY CLOSED

Fiscal Year	Annual		Lifetime	
	Low	High	Low	High
2012	\$0	\$0	\$0	\$0
2013	\$8,806	\$19,901	\$134,682	\$304,304
2014	\$150,753	\$340,563	\$2,851,883	\$6,441,221
2015	\$173,305	\$391,416	\$3,699,744	\$8,354,710
2016	\$273,734	\$618,401	\$5,113,659	\$11,549,860
2017	\$114,289	\$258,114	\$2,496,292	\$5,636,915
2018	\$200,612	\$453,042	\$4,499,574	\$10,160,200
2019	\$114,145	\$257,761	\$2,618,068	\$5,911,521
2020	\$98,561	\$222,526	\$2,454,910	\$5,542,553
Total	\$1,134,206	\$2,561,725	\$23,868,812	\$53,901,283

Financing Program

Commercial Property Assessed Clean Energy (C-PACE) is a structure through which commercial property owners can finance clean energy improvements through a voluntary benefit assessment on their property, repaid through their municipality along with real property taxes. A lien, or voluntary benefit assessment, is placed on the improved property as security for the financing, and the Connecticut Green Bank requires lender consent from existing mortgage holders prior to approving a C-PACE project. To date, 46 unique banks and 36 specialized lending institutions have provided lender consent for over 230 projects – demonstrating that existing mortgage holders see that C-PACE adds adding value to properties and increases net income to the business occupying the building as a result of lower energy prices.

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6. PROGRAMS – C-PACE

The Connecticut Green Bank administers the C-PACE program as an “open” platform. Private lenders work directly with building owners to finance projects. The lenders and owners then work with the Connecticut Green Bank to approve the project and place the benefit assessment on the property. In addition, the Connecticut Green Bank maintains a warehouse of capital from which it finances C-PACE transactions. Through the warehouse, funds are advanced to either the customer or the contractor during construction based on the project meeting certain deliverables. Once the project is completed, the construction advances convert to long term financing whereby the property owner pays a benefit assessment over time to the municipality at the same time real property taxes are paid on the property. As the benefit assessment payments are made by the property owners, they are then remitted from the associated municipalities to the Connecticut Green Bank, or its designated servicer, to repay the capital providers for the energy improvements financed through C-PACE.

Financial Performance

To date there have been no defaults and as of June 30, 2020, there are six (6) delinquencies.

Marketing

To accelerate the adoption of C-PACE to finance clean energy and energy efficiency projects, the Connecticut Green Bank has implemented marketing efforts that target specific industry verticals. The Green Bank used a group purchase model, in which it aggregated several C-PACE projects at auto retailers and offered interest rate reductions on the portfolio of projects. Connecticut Green Bank also worked with the State of Connecticut’s Department of Economic and Community Development (DECD) to target manufacturing facilities through its Manufacturing Innovation Fund (MIF). Promoted via its multi touch “Energy on the Line” marketing campaign, the Green Bank was able to access \$800,000 through MIF to provide manufacturers an incentive in the form of a grant equal to a 1% interest rate reduction, applied to the total project amount of a closed C-PACE project.

Connecticut Green Bank has also established relationships with contractors and provided them with materials and resources to support their use of C-PACE. Green Bank provides co-brandable materials and other physical sales tools, serving as both a means of originating projects for the Green Bank and a way of creating more skilled and active C-PACE contractors.

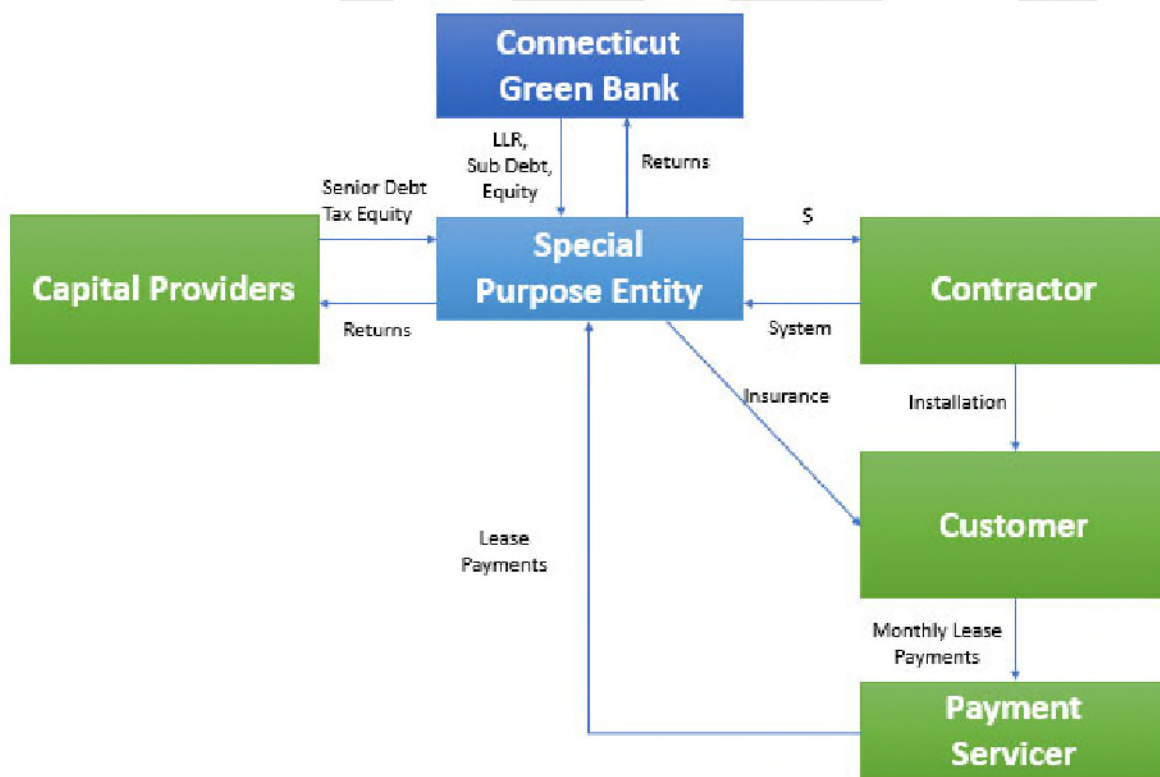
Case 2 – CT Green Bank PPA and CT Solar Lease

Description

The Green Bank has used third-party ownership structures to deploy distributed solar generation in Connecticut in both the Residential and Commercial sectors. These funds are a unique combination of a tax equity investor and a syndicate of debt providers and the Green Bank to support solar PV installations (i.e., rooftop residential lease financing for solar PV and commercial leases and PPAs for rooftop, carport, and ground mount solar PV).

Residential leases were one of the first products to graduate from Green Bank funding, but the organization still actively pursues new projects in the Commercial, Industrial, and Institutional sector for its funds and performs asset management functions for the entire portfolio including the now closed Residential portion of the program.

FIGURE 6. LEGAL STRUCTURE AND FLOWS OF CAPITAL FOR THE CT GREEN BANK PPA AND CT SOLAR LEASE⁹⁸



The CT Solar Lease 2 fund was the second “solar PV fund” established using a combination of ratepayer funds and private capital. In developing this fund, which was fully utilized in 2017, the Green Bank sought to innovate both in the types of credits that would be underwritten and via broadening the sources of capital in the fund. Before these innovations by the Green Bank, a fund had not been established that would underwrite residential solar PV installations as well as installations on a

⁹⁸ It should be noted that the Special Purpose Entity structure includes several entities – CT Solar Lease II, LLC and CEFA Holdings, LLC that provide different functions.

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6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE

“commercial scale” such as for municipal and school buildings, community oriented not-for-profit structures (all of which can’t take advantage of Federal tax incentives due to their tax-exempt status) as well as a vast array of for profit enterprises. These commercial-scale projects were historically the most difficult to finance: too small to attract investment funds, and similarly if aggregated to a size worthy of investment, comprised of off-takers that for the most part are non-investment grade or “unrated” credits that are difficult to underwrite in a manner that would permit deploying solar PV at scale. By prudently assessing these risks and operational issues, the Green Bank was able to obtain the support of the tax equity investor and lenders from Main Street – not Wall Street – in the fund. CT Solar Lease 2 was the first fund to secure solar leases and power purchase agreements using a PACE lien – an innovation that has prompted California to introduce legislation to enable the same security arrangement for its businesses and not for profit organizations. The Green Bank’s leadership and innovation was recognized by the Clean Energy States Alliance “State Leadership in Clean Energy” award in 2016, and the Green Bank has continued its work on this front – solely with respect to commercial-scale projects – via a CT Solar Lease 3 fund, as well as through a sourcing arrangement to deliver a number of these projects to Onyx Renewables (a Blackstone portfolio company) so as to accelerate market adoption of financing strategies for this sector.

Key Performance Indicators

The Key Performance Indicators for PPA and Solar Lease closed activity are reflected in Table 65 through

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6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE

Table 71 for Residential and Commercial projects, respectively. These illustrate the volume of projects by year, investment, generation capacity installed, and the amount of energy saved and/or produced.

TABLE 65. CT GREEN BANK PPA AND COMMERCIAL SOLAR LEASE PROJECT TYPES AND INVESTMENT BY FY CLOSED

Fiscal Year	EE	RE	RE/EE	# Projects	Total Investment	Green Bank Investment⁹⁹	Private Investment	Leverage Ratio
2012	0	0	0	0	\$0	\$0	\$0	0
2013	0	0	0	0	\$0	\$0	\$0	0
2014	0	0	0	0	\$0	\$0	\$0	0
2015	0	16	0	16	\$11,547,562	\$3,002,366	\$8,545,196	3.8
2016	0	27	0	27	\$16,711,392	\$4,344,962	\$12,366,430	3.8
2017	0	28	2	30	\$34,878,766	\$6,642,297	\$28,236,469	5.3
2018	0	28	1	29	\$24,992,210	\$5,323,803	\$19,668,407	4.7
2019	0	19	0	19	\$11,704,370	\$6,351,963	\$5,352,407	1.8
2020	0	6	0	6	\$2,719,145	\$329,908	\$2,389,238	8.2
Total	0	124	3	127	\$102,553,445	\$25,995,298	\$76,558,147	3.9

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⁹⁹ Includes incentives, interest rate buydowns and loan loss reserves.

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TABLE 66. RESIDENTIAL SOLAR LEASE PROJECT INVESTMENT BY FY CLOSED

Fiscal Year	EE ¹⁰⁰	RE	RE/EE	# Projects	Total Investment ¹⁰¹	Green Bank Investment ¹⁰²	Private Investment	Leverage Ratio
2012	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-
2014	-	107	-	107	\$4,324,454	\$888,178	\$3,436,276	4.9
2015	-	610	-	610	\$23,672,592	\$4,861,995	\$18,810,598	4.9
2016	-	472	-	472	\$18,325,440	\$3,763,770	\$14,561,670	4.9
2017	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-
Total	-	1,189	-	1,189	\$46,322,487	\$9,513,943	\$36,808,544	4.9

TABLE 67. CT GREEN BANK PPA AND COMMERCIAL SOLAR LEASE PROJECT CAPACITY, GENERATION AND SAVINGS¹⁰³ BY FY CLOSED

Fiscal Year	Installed Capacity (kW)	Expected Annual Generation (kWh)	Expected Lifetime Savings or Generation (MWh)	Annual Saved / Produced (MMBtu)	Lifetime Saved / Produced (MMBtu)
2012	0.0	0	0	0	0
2013	0.0	0	0	0	0
2014	0.0	0	0	0	0
2015	3,482.3	3,965,655	99,141	12,791	319,779
2016	5,463.0	6,221,207	155,530	20,888	522,201
2017	11,629.5	13,243,652	331,091	45,063	1,126,574
2018	8,059.8	9,178,523	229,463	26,850	671,258
2019	3,610.8	3,928,427	98,211	9,432	235,800
2020	836.7	952,788	23,820	1,620	40,511
Total	33,082.0	37,490,253	937,256	116,645	2,916,124

TABLE 68. RESIDENTIAL SOLAR LEASE PROJECT CAPACITY, GENERATION AND SAVINGS¹⁰⁴ BY FY CLOSED

Fiscal Year	Installed Capacity (kW)	Expected Annual Generation (kWh)	Expected Lifetime Savings or Generation (MWh)	Annual Saved / Produced (MMBtu)	Lifetime Saved / Produced (MMBtu)
2012	-	-	-	-	-
2013	-	-	-	-	-
2014	817.1	930,503	23,263	3,175	79,372
2015	4,894.7	5,574,098	139,352	19,019	475,471
2016	3,841.9	4,375,207	109,380	14,928	373,205
2017	-	-	-	-	-

¹⁰⁰ All projects that receive an RSIP incentive are required to do an energy audit/assessment.

¹⁰¹ Includes closing costs and capitalized interest for C-PACE and the Fair Market Value for Commercial/Residential Leases.

¹⁰² Includes incentives, interest rate buydowns and loan loss reserves.

¹⁰³ The Green Bank currently estimates annual savings and is in the process or reviewing and updating this methodology to include actual savings where possible.

¹⁰⁴ The Green Bank currently estimates annual savings and is in the process or reviewing and updating this methodology to include actual savings where possible.

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2018	-	-	-	-	-
2019	-	-	-	-	-
2020	-	-	-	-	-
Total	9,553.7	10,879,808	271,995	37,122	928,048

TABLE 69. CT GREEN BANK PPA AND COMMERCIAL SOLAR LEASE PROJECT AVERAGES BY FY CLOSED

Fiscal Year	Average Total Investment	Average Amount Financed	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)	Average Finance Term (years)	Average PPA Lease Price
2012	\$0	\$0	0.0	0	0	\$0.00
2013	\$0	\$0	0.0	0	0	\$0.00
2014	\$0	\$0	0.0	0	0	\$0.00
2015	\$721,723	\$187,648	217.6	799	21	\$0.10
2016	\$618,940	\$160,925	202.3	774	20	\$0.10
2017	\$1,162,626	\$221,410	387.6	1,502	20	\$0.09
2018	\$861,800	\$183,579	277.9	926	20	\$0.08
2019	\$616,019	\$334,314	190.0	496	20	\$0.08
2020	\$453,191	\$54,985	139.4	270	20	\$0.09
Total	\$807,507	\$204,687	260.5	918	20	\$0.09

TABLE 70. RESIDENTIAL SOLAR LEASE PROJECT AVERAGES BY FY CLOSED

Fiscal Year	Average Total Investment	Average Amount Financed	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)	Average Finance Term (months)	Average DTI	Average FICO Score
2012	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-
2014	\$40,415	\$38,182	7.6	30	240	30	785
2015	\$38,808	\$36,663	8.0	31	240	31	777
2016	\$38,825	\$36,679	8.1	32	240	35	776
2017	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-
Total	\$38,959	\$36,806	8.0	31	240	33	777

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6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE

TABLE 71. RESIDENTIAL SOLAR LEASE PROJECT APPLICATION YIELD¹⁰⁵ BY FY RECEIVED

Fiscal Year	Applications Received	Applications Approved	Applications Withdrawn	Applications Denied	Approved Rate	Denied Rate
2012	-	-	-	-	-	-
2013	-	-	-	-	-	-
2014	669	196	256	217	68%	32%
2015	1,813	847	619	347	81%	19%
2016	351	146	154	51	85%	15%
2017	-	-	-	-	-	-
2018	-	-	-	-	-	-
2019	-	-	-	-	-	-
2020	-	-	-	-	-	-
Total	2,833	1,189	1,029	615	78%	22%

The types of Commercial end-use customers participating in the PPA and Solar Lease program are shown in Table 72.

TABLE 72. TYPES OF END-USE CUSTOMERS PARTICIPATING IN CT GREEN BANK PPA AND COMMERCIAL SOLAR LEASE

Property Type	# of Properties
Agricultural	3
Athletic/Recreational Facility	5
Education	19
House of Worship	9
Industrial	2
Multi-family/apartment (> 5 units)	15
Municipal building	35
Non-profit	10
Nursing Home/Rehab Facility	1
Office	24
Public assembly	2
Retail	1
Warehouse & storage	1
Grand Total	127

¹⁰⁵ Applications received are applications submitted to Renew Financial (servicer of the CT Solar Lease) for credit approval. Applications approved are applications that have met the credit requirements for the program and can move to lease signing, pending formal technical approval of the solar equipment by the Residential Solar Investment Program. Applications withdrawn are applications that have been cancelled by the submitter due to the project not moving forward. Applications denied are applications that are not approved because the customer does not meet underwriting requirements.

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6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE**

Area Median Income Band Penetration

The CT Solar Lease program has been used to fund projects in economically diverse locations across the state as reflected by Table 73 and Table 74 for Metropolitan Statistical Area (MSA) Area Median Income (AMI). It should be noted that these Solar Lease funds are not part of an income targeted program.

TABLE 73. CT GREEN BANK PPA AND COMMERCIAL SOLAR LEASE ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS BY FY CLOSED¹⁰⁶

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Population	% Population Distribution	Project Units / 1,000 People	Total Investment / Population	Watts / Population
2012	<60%	0	0%	0.0	0%	\$0	0%	609,363	17%	0.0	\$0.00	0.0
2012	60%-80%	0	0%	0.0	0%	\$0	0%	527,217	15%	0.0	\$0.00	0.0
2012	80%-100%	0	0%	0.0	0%	\$0	0%	589,440	17%	0.0	\$0.00	0.0
2012	100%-120%	0	0%	0.0	0%	\$0	0%	722,664	20%	0.0	\$0.00	0.0
2012	>120%	0	0%	0.0	0%	\$0	0%	1,116,395	31%	0.0	\$0.00	0.0
2012	Total	0	0%	0.0	0%	\$0	0%	3,572,213	100%	0.0	\$0.00	0.0
2013	<60%	0	0%	0.0	0%	\$0	0%	604,433	17%	0.0	\$0.00	0.0
2013	60%-80%	0	0%	0.0	0%	\$0	0%	568,952	16%	0.0	\$0.00	0.0
2013	80%-100%	0	0%	0.0	0%	\$0	0%	588,813	16%	0.0	\$0.00	0.0
2013	100%-120%	0	0%	0.0	0%	\$0	0%	690,591	19%	0.0	\$0.00	0.0
2013	>120%	0	0%	0.0	0%	\$0	0%	1,131,305	31%	0.0	\$0.00	0.0
2013	Total	0	0%	0.0	0%	\$0	0%	3,592,053	100%	0.0	\$0.00	0.0
2014	<60%	0	0%	0.0	0%	\$0	0%	614,135	17%	0.0	\$0.00	0.0
2014	60%-80%	0	0%	0.0	0%	\$0	0%	546,132	15%	0.0	\$0.00	0.0
2014	80%-100%	0	0%	0.0	0%	\$0	0%	577,061	16%	0.0	\$0.00	0.0
2014	100%-120%	0	0%	0.0	0%	\$0	0%	720,856	20%	0.0	\$0.00	0.0
2014	>120%	0	0%	0.0	0%	\$0	0%	1,125,910	31%	0.0	\$0.00	0.0
2014	Total	0	0%	0.0	0%	\$0	0%	3,592,053	100%	0.0	\$0.00	0.0
2015	<60%	1	6%	0.0	1%	\$119,000	1%	662,619	18%	0.0	\$0.18	0.0
2015	60%-80%	1	6%	0.1	2%	\$300,000	3%	489,826	14%	0.0	\$0.61	0.2
2015	80%-100%	3	19%	0.7	22%	\$2,201,000	19%	650,163	18%	0.0	\$3.39	1.2

¹⁰⁶ Excludes projects in unknown bands.

**CONNECTICUT GREEN BANK
6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE**

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Population	% Population Distribution	Project Units / 1,000 People	Total Investment / Population	Watts / Population
2015	100%-120%	3	19%	0.4	11%	\$1,238,000	11%	631,741	18%	0.0	\$1.96	0.6
2015	>120%	8	50%	2.3	65%	\$7,689,562	67%	1,150,974	32%	0.0	\$6.68	2.0
2015	Total	16	100%	3.5	100%	\$11,547,562	100%	3,593,222	100%	0.0	\$3.21	1.0
2016	<60%	0	0%	0.0	0%	\$0	0%	649,617	18%	0.0	\$0.00	0.0
2016	60%-80%	1	4%	0.1	3%	\$486,864	3%	509,088	14%	0.0	\$0.96	0.3
2016	80%-100%	6	22%	1.4	25%	\$3,866,034	23%	641,084	18%	0.0	\$6.03	2.1
2016	100%-120%	10	37%	2.1	38%	\$6,365,606	38%	653,309	18%	0.0	\$9.74	3.2
2016	>120%	10	37%	1.9	34%	\$5,992,888	36%	1,126,543	31%	0.0	\$5.32	1.7
2016	Total	27	100%	5.5	100%	\$16,711,392	100%	3,588,570	100%	0.0	\$4.66	1.5
2017	<60%	4	13%	1.4	12%	\$3,564,532	10%	663,181	18%	0.0	\$5.37	2.2
2017	60%-80%	5	17%	2.3	20%	\$6,698,454	19%	488,396	14%	0.0	\$13.72	4.8
2017	80%-100%	4	13%	1.3	11%	\$3,672,782	11%	612,043	17%	0.0	\$6.00	2.1
2017	100%-120%	9	30%	3.7	31%	\$11,017,545	32%	722,803	20%	0.0	\$15.24	5.1
2017	>120%	8	27%	2.9	25%	\$9,925,453	28%	1,099,277	31%	0.0	\$9.03	2.7
2017	Total	30	100%	11.6	100%	\$34,878,766	100%	3,594,478	100%	0.0	\$9.70	3.2
2018	<60%	4	14%	1.4	17%	\$4,421,750	18%	636,795	18%	0.0	\$6.94	2.1
2018	60%-80%	4	14%	0.7	9%	\$2,154,215	9%	553,007	15%	0.0	\$3.90	1.3
2018	80%-100%	3	10%	1.9	24%	\$6,180,720	25%	569,113	16%	0.0	\$10.86	3.3
2018	100%-120%	4	14%	0.6	7%	\$1,668,000	7%	710,802	20%	0.0	\$2.35	0.8
2018	>120%	14	48%	3.5	43%	\$10,567,525	42%	1,103,484	31%	0.0	\$9.58	3.2
2018	Total	29	100%	8.1	100%	\$24,992,210	100%	3,581,504	100%	0.0	\$6.98	2.3
2019	<60%	5	26%	0.5	14%	\$1,680,055	14%	636,795	18%	0.0	\$2.64	0.8
2019	60%-80%	3	16%	1.4	39%	\$4,607,395	39%	553,007	15%	0.0	\$8.33	2.6
2019	80%-100%	2	11%	0.3	9%	\$1,086,963	9%	569,113	16%	0.0	\$1.91	0.6
2019	100%-120%	2	11%	0.2	6%	\$714,025	6%	710,802	20%	0.0	\$1.00	0.3
2019	>120%	7	37%	1.1	31%	\$3,615,933	31%	1,103,484	31%	0.0	\$3.28	1.0
2019	Total	19	100%	3.6	100%	\$11,704,370	100%	3,581,504	100%	0.0	\$3.27	1.0
2020	<60%	1	17%	0.1	10%	\$281,548	10%	636,795	18%	0.0	\$0.44	0.1
2020	60%-80%	1	17%	0.2	27%	\$743,925	27%	553,007	15%	0.0	\$1.35	0.4
2020	80%-100%	1	17%	0.1	12%	\$329,908	12%	569,113	16%	0.0	\$0.58	0.2

**CONNECTICUT GREEN BANK
6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE**

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Population	% Population Distribution	Project Units / 1,000 People	Total Investment / Population	Watts / Population
2020	100%-120%	1	17%	0.1	15%	\$411,840	15%	710,802	20%	0.0	\$0.58	0.2
2020	>120%	2	33%	0.3	35%	\$951,925	35%	1,103,484	31%	0.0	\$0.86	0.3
2020	Total	6	100%	0.8	100%	\$2,719,145	100%	3,581,504	100%	0.0	\$0.76	0.2
Total	<60%	15	12%	3.4	10%	\$10,066,885	10%	636,795	18%	0.0	\$15.81	5.4
Total	60%-80%	15	12%	4.9	15%	\$14,990,853	15%	553,007	15%	0.0	\$27.11	8.8
Total	80%-100%	19	15%	5.8	17%	\$17,337,406	17%	569,113	16%	0.0	\$30.46	10.1
Total	100%-120%	29	23%	7.0	21%	\$21,415,016	21%	710,802	20%	0.0	\$30.13	9.9
Total	>120%	49	39%	12.0	36%	\$38,743,286	38%	1,103,484	31%	0.0	\$35.11	10.8
Total	Total	127	100%	33.1	100%	\$102,553,445	100%	3,581,504	100%	0.0	\$28.63	9.2

TABLE 74. RESIDENTIAL SOLAR LEASE ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS BY FY CLOSED¹⁰⁷

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner Occupied 1-4 Households	% Owner Occupied 1-4 Household Distribution	Project Units / 1,000 Owner Occupied 1-4 Unit Households	Total Investment / Owner Occupied 1-4 Unit Household	Watts / Owner Occupied 1-4 Unit Household
2012	<60%	0	0%	0.0	0%	\$0	0%	61,168	7%	0.0	\$0.00	0.0
2012	60%-80%	0	0%	0.0	0%	\$0	0%	101,640	12%	0.0	\$0.00	0.0
2012	80%-100%	0	0%	0.0	0%	\$0	0%	151,346	17%	0.0	\$0.00	0.0
2012	100%-120%	0	0%	0.0	0%	\$0	0%	216,988	25%	0.0	\$0.00	0.0
2012	>120%	0	0%	0.0	0%	\$0	0%	350,196	40%	0.0	\$0.00	0.0
2012	Total	0	0%	0.0	0%	\$0	0%	881,338	100%	0.0	\$0.00	0.0
2013	<60%	0	0%	0.0	0%	\$0	0%	59,494	7%	0.0	\$0.00	0.0
2013	60%-80%	0	0%	0.0	0%	\$0	0%	109,189	12%	0.0	\$0.00	0.0
2013	80%-100%	0	0%	0.0	0%	\$0	0%	150,603	17%	0.0	\$0.00	0.0
2013	100%-120%	0	0%	0.0	0%	\$0	0%	203,157	23%	0.0	\$0.00	0.0
2013	>120%	0	0%	0.0	0%	\$0	0%	351,633	40%	0.0	\$0.00	0.0
2013	Total	0	0%	0.0	0%	\$0	0%	874,076	100%	0.0	\$0.00	0.0

¹⁰⁷ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner Occupied 1-4 Households	% Owner Occupied 1-4 Household Distribution	Project Units / 1,000 Owner Occupied 1-4 Households	Total Investment / Owner Occupied 1-4 Unit Household	Watts / Owner Occupied 1-4 Unit Household
2014	<60%	0	0%	0.0	0%	\$0	0%	57,673	7%	0.0	\$0.00	0.0
2014	60%-80%	6	6%	0.0	5%	\$212,213	5%	103,934	12%	0.1	\$2.04	0.4
2014	80%-100%	13	12%	0.1	11%	\$483,999	11%	149,038	17%	0.1	\$3.25	0.6
2014	100%-120%	43	40%	0.3	42%	\$1,799,656	42%	209,561	24%	0.2	\$8.59	1.6
2014	>120%	45	42%	0.3	42%	\$1,828,585	42%	348,270	40%	0.1	\$5.25	1.0
2014	Total	107	100%	0.8	100%	\$4,324,454	100%	868,476	100%	0.1	\$4.98	0.9
2015	<60%	5	1%	0.0	1%	\$163,570	1%	64,361	7%	0.1	\$2.54	0.5
2015	60%-80%	43	7%	0.3	6%	\$1,430,822	6%	96,305	11%	0.4	\$14.86	3.0
2015	80%-100%	120	20%	0.9	19%	\$4,384,447	19%	164,873	19%	0.7	\$26.59	5.5
2015	100%-120%	165	27%	1.3	27%	\$6,309,374	27%	184,613	21%	0.9	\$34.18	7.1
2015	>120%	277	45%	2.4	48%	\$11,384,379	48%	352,621	41%	0.8	\$32.29	6.7
2015	Total	610	100%	4.9	100%	\$23,672,592	100%	862,773	100%	0.7	\$27.44	5.7
2016	<60%	20	4%	0.1	4%	\$655,757	4%	60,769	7%	0.3	\$10.79	2.3
2016	60%-80%	35	7%	0.2	6%	\$1,171,212	6%	99,220	12%	0.4	\$11.80	2.5
2016	80%-100%	84	18%	0.6	17%	\$3,079,698	17%	165,331	19%	0.5	\$18.63	3.9
2016	100%-120%	129	27%	1.0	27%	\$4,999,536	27%	187,463	22%	0.7	\$26.67	5.6
2016	>120%	204	43%	1.8	46%	\$8,419,238	46%	345,311	40%	0.6	\$24.38	5.1
2016	Total	472	100%	3.8	100%	\$18,325,440	100%	858,094	100%	0.6	\$21.36	4.5
Total	<60%	25	2%	0.2	2%	\$819,327	2%	60,769	7%	0.4	\$13.48	2.8
Total	60%-80%	84	7%	0.6	6%	\$2,814,247	6%	99,220	12%	0.8	\$28.36	5.8
Total	80%-100%	217	18%	1.6	17%	\$7,948,145	17%	165,331	19%	1.3	\$48.07	9.9
Total	100%-120%	337	28%	2.7	28%	\$13,108,566	28%	187,463	22%	1.8	\$69.93	14.4
Total	>120%	526	44%	4.5	47%	\$21,632,202	47%	345,311	40%	1.5	\$62.65	12.9
Total	Total	1,189	100%	9.6	100%	\$46,322,487	100%	858,094	100%	1.4	\$53.98	11.1

**CONNECTICUT GREEN BANK
6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE**

TABLE 75. CT GREEN BANK PPA AND COMMERCIAL SOLAR LEASE ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS ABOVE OR BELOW 100% BY FY CLOSED¹⁰⁸

Fiscal Year	# Project Units			MW			Total Investment			% at 100% or Below
	Over 100% AMI	100% or Below AMI	% at 100% or Below	Over 100% AMI	100% or Below AMI	% at 100% or Below	Over 100% AMI	100% or Below AMI	% at 100% or Below	
2012	0	0	0%	0.0	0.0	0%	\$0	\$0	0%	
2013	0	0	0%	0.0	0.0	0%	\$0	\$0	0%	
2014	0	0	0%	0.0	0.0	0%	\$0	\$0	0%	
2015	16	5	31%	3.5	2.6	24%	\$11,547,562	\$8,927,562	23%	
2016	27	7	26%	5.5	3.9	28%	\$16,711,392	\$12,358,494	26%	
2017	30	13	43%	11.6	6.6	43%	\$34,878,766	\$20,942,998	40%	
2018	29	11	38%	8.1	4.1	49%	\$24,992,210	\$12,235,525	51%	
2019	19	9	53%	3.6	1.3	63%	\$11,704,370	\$4,329,958	63%	
2020	6	3	50%	0.8	0.4	50%	\$2,719,145	\$1,363,765	50%	
Total	127	49	39%	33.1	19.0	43%	\$102,553,445	\$60,158,302	41%	

TABLE 76. RESIDENTIAL SOLAR LEASE ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS ABOVE OR BELOW 100% BY FY CLOSED¹⁰⁹

Fiscal Year	# Project Units			MW			Total Investment			% at 100% or Below
	Over 100% AMI	100% or Below AMI	% at 100% or Below	Over 100% AMI	100% or Below AMI	% at 100% or Below	Over 100% AMI	100% or Below AMI	% at 100% or Below	
2012	0	0	0%	0.0	0.0	0%	\$0	\$0	0%	
2013	0	0	0%	0.0	0.0	0%	\$0	\$0	0%	
2014	107	88	18%	0.8	0.7	16%	\$4,324,454	\$3,628,242	16%	
2015	610	442	28%	4.9	3.7	25%	\$23,672,592	\$17,693,753	25%	
2016	472	333	29%	3.8	2.8	27%	\$18,325,440	\$13,418,773	27%	
2017	0	0	0%	0.0	0.0	0%	\$0	\$0	0%	
2018	0	0	0%	0.0	0.0	0%	\$0	\$0	0%	

¹⁰⁸ Excludes projects in unknown bands.

¹⁰⁹ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE

Fiscal Year	# Project Units			MW			Total Investment			% at 100% or Below
	Over 100% AMI	100% or Below AMI	Total	Over 100% AMI	100% or Below AMI	Total	Over 100% AMI	100% or Below AMI	Total	
	0	0	0.0	0.0	0.0	\$0	\$0	\$0	0%	
2019	0	0	0.0	0.0	0.0	\$0	\$0	\$0	0%	
2020	0	0	0.0	0.0	0.0	\$0	\$0	\$0	0%	
Total	1,189	863	9.6	7.2	2.4	\$46,322,487	\$34,740,768	\$11,581,719	25%	

Distressed Community Penetration

For a breakdown of Solar Lease project volume and investment by census tracts categorized by Distressed Communities – see Table 77 and Table 78. It should be noted that Solar Lease is not an income targeted program.

TABLE 77. CT GREEN BANK PPA AND COMMERCIAL SOLAR LEASE ACTIVITY IN DISTRESSED COMMUNITIES BY FY CLOSED

Fiscal Year	Disressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Population	% Population Distribution	Project Units / 1,000 People	Total Investment / Population	Watts / Population
2012	Yes	0	0%	0.0	0%	\$0	0%	1,171,385	33%	0.0	\$0.00	0.0
2012	No	0	0%	0.0	0%	\$0	0%	2,400,828	67%	0.0	\$0.00	0.0
2012	Total	0	0%	0.0	0%	\$0	0%	3,572,213	100%	0.0	\$0.00	0.0
2013	Yes	0	0%	0.0	0%	\$0	0%	1,124,923	31%	0.0	\$0.00	0.0
2013	No	0	0%	0.0	0%	\$0	0%	2,458,638	69%	0.0	\$0.00	0.0
2013	Total	0	0%	0.0	0%	\$0	0%	3,583,561	100%	0.0	\$0.00	0.0
2014	Yes	0	0%	0.0	0%	\$0	0%	1,106,027	31%	0.0	\$0.00	0.0
2014	No	0	0%	0.0	0%	\$0	0%	2,486,026	69%	0.0	\$0.00	0.0
2014	Total	0	0%	0.0	0%	\$0	0%	3,592,053	100%	0.0	\$0.00	0.0
2015	Yes	2	13%	0.1	4%	\$416,000	4%	1,122,550	31%	0.0	\$0.37	0.1
2015	No	14	88%	3.3	96%	\$11,131,562	96%	2,470,672	69%	0.0	\$4.51	1.4
2015	Total	16	100%	3.5	100%	\$11,547,562	100%	3,593,222	100%	0.0	\$3.21	1.0
2016	Yes	1	4%	0.1	3%	\$486,864	3%	1,162,653	32%	0.0	\$0.42	0.1
2016	No	26	96%	5.3	97%	\$16,224,528	97%	2,425,917	68%	0.0	\$6.69	2.2
2016	Total	27	100%	5.5	100%	\$16,711,392	100%	3,588,570	100%	0.0	\$4.66	1.5
2017	Yes	3	10%	2.5	22%	\$7,100,532	20%	1,150,554	32%	0.0	\$6.17	2.2

**CONNECTICUT GREEN BANK
6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE**

Fiscal Year	Distressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Population	% Population Distribution	Project Units / 1,000 People	Total Investment/ Population	Watts / Population
2017	No	27	90%	9.1	78%	\$27,778,234	80%	2,443,924	68%	0.0	\$11.37	3.7
2017	Total	30	100%	11.6	100%	\$34,878,766	100%	3,594,478	100%	0.0	\$9.70	3.2
2018	Yes	8	28%	4.0	50%	\$12,875,130	52%	1,130,773	32%	0.0	\$11.39	3.5
2018	No	21	72%	4.1	50%	\$12,117,080	48%	2,450,731	68%	0.0	\$4.94	1.7
2018	Total	29	100%	8.1	100%	\$24,992,210	100%	3,581,504	100%	0.0	\$6.98	2.3
2019	Yes	5	26%	0.5	14%	\$1,600,885	14%	1,102,584	31%	0.0	\$1.45	0.4
2019	No	14	74%	3.1	86%	\$10,103,485	86%	2,478,920	69%	0.0	\$4.08	1.3
2019	Total	19	100%	3.6	100%	\$11,704,370	100%	3,581,504	100%	0.0	\$3.27	1.0
2020	Yes	1	17%	0.1	12%	\$329,908	12%	1,102,584	31%	0.0	\$0.30	0.1
2020	No	5	83%	0.7	88%	\$2,389,238	88%	2,478,920	69%	0.0	\$0.96	0.3
2020	Total	6	100%	0.8	100%	\$2,719,145	100%	3,581,504	100%	0.0	\$0.76	0.2
Total	Yes	20	16%	7.4	22%	\$22,809,319	22%	1,102,584	31%	0.0	\$20.69	6.7
Total	No	107	84%	25.7	78%	\$79,744,127	78%	2,478,920	69%	0.0	\$32.17	10.4
Total	Total	127	100%	33.1	100%	\$102,553,445	100%	3,581,504	100%	0.0	\$28.63	9.2

**CONNECTICUT GREEN BANK
6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE**

TABLE 78. RESIDENTIAL SOLAR LEASE ACTIVITY IN DISTRESSED COMMUNITIES BY FY CLOSED

Fiscal Year	Distressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Population	% Population Distribution	Total Investment / Population	Watts / Population	Total Households	% Total Household Distribution	Total Investment / Total Household	Watts / Total Household
2012	Yes	0	0%	0.0	0%	\$0	0%	1,171,385	33%	\$0.00	0.0	447,962	33%	\$0.00	0.0
2012	No	0	0%	0.0	0%	\$0	0%	2,400,828	67%	\$0.00	0.0	912,222	67%	\$0.00	0.0
2012	Total	0	0%	0.0	0%	\$0	0%	3,572,213	100%	\$0.00	0.0	1,360,184	100%	\$0.00	0.0
2013	Yes	0	0%	0.0	0%	\$0	0%	1,124,923	31%	\$0.00	0.0	426,564	31%	\$0.00	0.0
2013	No	0	0%	0.0	0%	\$0	0%	2,458,638	69%	\$0.00	0.0	929,285	69%	\$0.00	0.0
2013	Total	0	0%	0.0	0%	\$0	0%	3,583,561	100%	\$0.00	0.0	1,355,849	100%	\$0.00	0.0
2014	Yes	15	14%	0.1	12%	\$533,309	12%	1,106,027	31%	\$0.48	0.1	416,415	31%	\$1.28	0.2
2014	No	92	86%	0.7	88%	\$3,791,145	88%	2,486,026	69%	\$1.52	0.3	939,791	69%	\$4.03	0.8
2014	Total	107	100%	0.8	100%	\$4,324,454	100%	3,592,053	100%	\$1.20	0.2	1,356,206	100%	\$3.19	0.6
2015	Yes	95	16%	0.7	15%	\$3,504,032	15%	1,122,550	31%	\$3.12	0.6	423,559	31%	\$8.27	1.7
2015	No	515	84%	4.2	85%	\$20,168,561	85%	2,470,672	69%	\$8.16	1.7	929,024	69%	\$21.71	4.5
2015	Total	610	100%	4.9	100%	\$23,672,592	100%	3,593,222	100%	\$6.59	1.4	1,352,583	100%	\$17.50	3.6
2016	Yes	97	21%	0.8	20%	\$3,601,098	20%	1,162,653	32%	\$3.10	0.6	438,710	32%	\$8.21	1.7
2016	No	375	79%	3.1	80%	\$14,724,342	80%	2,425,917	68%	\$6.07	1.3	916,003	68%	\$16.07	3.4
2016	Total	472	100%	3.8	100%	\$18,325,440	100%	3,588,570	100%	\$5.11	1.1	1,354,713	100%	\$13.53	2.8
Total	Yes	207	17%	1.6	16%	\$7,638,439	16%	1,162,653	32%	\$6.57	1.4	438,710	32%	\$17.41	3.6
Total	No	982	83%	8.0	84%	\$38,684,047	84%	2,425,917	68%	\$15.95	3.3	916,003	68%	\$42.23	8.7
Total	Total	1,189	100%	9.6	100%	\$46,322,487	100%	3,588,570	100%	\$12.91	2.7	1,354,713	100%	\$34.19	7.1

CONNECTICUT GREEN BANK

6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE

Societal Impacts

Ratepayers in Connecticut receive the societal benefits of the CT Green Bank PPA and CT Solar Lease. Over the course of its existence, the program has supported the creation of 1,366 job years and avoided the lifetime emission of 375,065 tons of carbon dioxide, 703,299 pounds of nitrous oxide, 615,827 pounds of sulfur oxide, and 58,316 pounds of particulate matter as illustrated by Table 79 and Table 81. The Green Bank’s PPA’s and leases have generated more than \$5.2 million in tax revenue for the state since inception as demonstrated in Table 80. The value of the lifetime public health impacts of the Solar Lease programs is estimated to be between \$23.3 and \$52.7 million as seen in Table 82.

TABLE 79. CT GREEN BANK PPA, COMMERCIAL SOLAR LEASE, AND RESIDENTIAL SOLAR LEASE JOB YEARS SUPPORTED BY FY CLOSED

Fiscal Year	Direct Jobs	Indirect and Induced Jobs	Total Jobs
2012	0	0	0
2013	0	0	0
2014	19	31	50
2015	152	244	395
2016	145	232	378
2017	113	147	260
2018	77	100	177
2019	37	48	86
2020	8	11	19
Total	552	813	1,366

TABLE 80. CT GREEN BANK PPA, COMMERCIAL SOLAR LEASE, AND RESIDENTIAL SOLAR LEASE TAX REVENUES GENERATED BY FY CLOSED

Fiscal Year	Individual Income Tax Revenue Generated	Corporate Tax Revenue Generated	Sales Tax Revenue Generated	Total Tax Revenue Generated
2012	\$0	\$0	\$0	\$0
2013	\$0	\$0	\$0	\$0
2014	\$110,473	\$109,845	\$0	\$220,317
2015	\$782,978	\$796,649	\$0	\$1,579,627
2016	\$726,083	\$748,181	\$0	\$1,474,264
2017	\$588,998	\$389,371	\$0	\$978,369
2018	\$441,040	\$180,155	\$0	\$621,195
2019	\$128,351	\$132,797	\$30,537	\$291,686
2020	\$16,796	\$18,166	\$0	\$34,962
Total	\$2,794,719	\$2,375,164	\$30,537	\$5,200,420

CONNECTICUT GREEN BANK

6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE

TABLE 81. CT GREEN BANK PPA, COMMERCIAL SOLAR LEASE, AND RESIDENTIAL SOLAR LEASE AVOIDED EMISSIONS BY FY CLOSED

Fiscal Year	CO2 Emissions Avoided (tons)		NOx Emissions Avoided (pounds)		SOx Emissions Avoided (pounds)		PM 2.5 (pounds)	
	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime
2012	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0
2014	518	12,863	728	18,205	876	21,779	38	1,169
2015	5,459	136,284	6,655	165,927	6,685	166,757	454	11,949
2016	5,976	149,711	6,412	159,931	5,073	126,541	510	13,142
2017	7,278	181,944	6,858	171,456	5,568	139,205	621	15,521
2018	5,073	126,813	4,902	122,555	4,216	105,390	432	10,794
2019	2,171	54,284	2,100	52,494	1,808	45,194	185	4,620
2020	527	13,166	509	12,732	438	10,961	45	1,121
Total	27,001	675,065	28,164	703,299	24,664	615,827	2,284	58,316

TABLE 82. CT GREEN BANK PPA, COMMERCIAL SOLAR LEASE, AND RESIDENTIAL SOLAR LEASE VALUE OF PUBLIC HEALTH BY FY CLOSED

Fiscal Year	Annual		Lifetime	
	Low	High	Low	High
2012	\$0	\$0	\$0	\$0
2013	\$0	\$0	\$0	\$0
2014	\$18,052	\$40,756	\$451,294	\$1,018,901
2015	\$185,071	\$417,841	\$4,626,780	\$10,446,029
2016	\$205,570	\$464,123	\$5,139,261	\$11,603,074
2017	\$256,927	\$580,072	\$6,423,171	\$14,501,799
2018	\$178,063	\$402,019	\$4,451,584	\$10,050,483
2019	\$79,770	\$180,100	\$1,994,260	\$4,502,505
2020	\$10,627	\$23,994	\$265,687	\$599,850
Total	\$934,081	\$2,108,906	\$23,352,037	\$52,722,640

Financing Program

The CT Solar Lease 2 fund was a financing structure developed in partnership with a tax equity investor (i.e., US Bank) and a syndicate of local lenders (i.e. Key Bank and Webster Bank) that used a credit enhancement (i.e., \$3,500,000 loan loss reserve),¹¹⁰ in combination with \$2.3 million in subordinated debt and \$11.5 million in sponsor equity from the Connecticut Green Bank as the “member manager” to provide approximately \$80 million in lease financing for residential and commercial solar PV projects. Through the product, the Connecticut Green Bank lowered the barriers to Connecticut residential and commercial customers seeking to install solar PV with no up-front investment, thus increasing demand, while at the same time reducing the market’s reliance on subsidies through the RSIP or being more

¹¹⁰ From repurposed American Recovery and Reinvestment Act funds

CONNECTICUT GREEN BANK

6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE

competitive in a reverse auction through the Zero Emission Renewable Energy Credit (ZREC) program. As a lease (or PPA for certain commercial customers), capital provided to consumers through the CT Solar Lease is now being returned to the Connecticut Green Bank, the tax equity investor and the lenders – it is not a subsidy. The financial structure of the CT Solar Lease product, both historically and on an ongoing basis through the CT Solar Lease 3 fund, includes origination by contractors, servicing of lease and PPA payments, insurance and “one call” system performance and insurance resolution, and financing features in combination with the support of the Connecticut Green Bank, whereas under the partnership with Onyx Renewables, the Connecticut Green Bank originates projects together with local contractors, but Onyx Renewables then provides the long-term financing and holds the ongoing asset management responsibilities.

Financial Performance

To date there are no defaults and as of June 30, 2020 there are 21 delinquencies totaling \$32,307 in the Commercial Solar Lease and CT Green Bank PPA portfolio.

To date there are 9 defaults with an original principal balance of \$230,815 or 0.83% of the Residential Solar Lease portfolio and as of June 30, 2020 there are 22 delinquencies.

The household customers that accessed the CT Solar Lease since its launch in 2014 had varying credit scores – see Table 83.

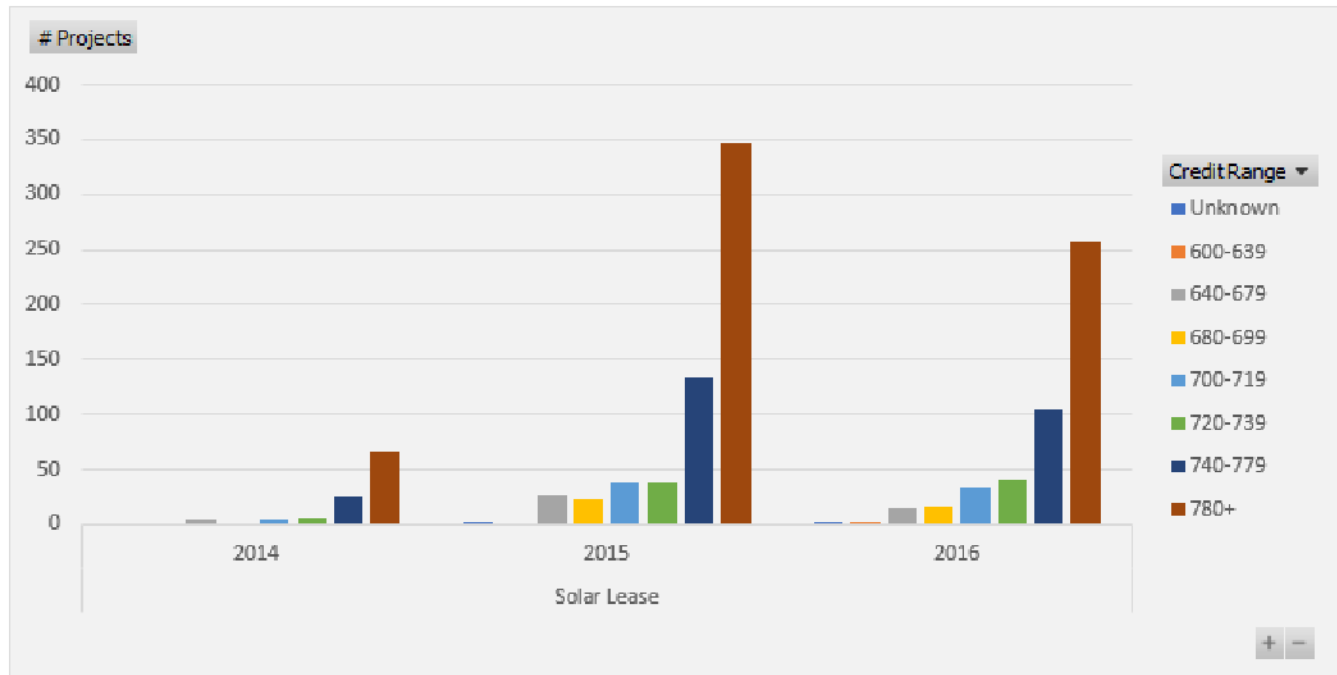
TABLE 83. CREDIT SCORE RANGES OF HOUSEHOLD CUSTOMERS USING THE CT SOLAR LEASE BY FY CLOSED

Fiscal Year	Unknown	580-599	600-639	640-679	680-699	700-719	720-739	740-779	780+	Grand Total
2012	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	4	-	5	6	25	67	107
2015	2	-	-	26	23	39	38	134	348	610
2016	2	-	1	15	16	34	41	105	258	472
Total	4	-	1	45	39	78	85	264	673	1,189
	0%	-	0%	4%	3%	7%	7%	22%	57%	100%

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6. PROGRAMS – CT GREEN BANK PPA AND CT SOLAR LEASE

FIGURE 7. CREDIT SCORE RANGES OF HOUSEHOLD CUSTOMERS USING THE CT SOLAR LEASE BY FY CLOSED



Marketing

To accelerate deployment of residential solar PV through the RSIP and the uptake of the CT Residential Solar Lease financing product, the Connecticut Green Bank implemented the Solarize Connecticut program. Green Bank-sponsored Solarize programs utilize group purchasing, time-limited offers, and grassroots outreach, and local clean energy advocates who volunteer and coordinate with their towns to help speed the process – see Table 84. The Green Bank also implemented channel marketing through residential and commercial solar installers who gained the ability to grow their businesses by providing the CT Residential Solar Lease product to their customers.

TABLE 84. NUMBER OF RESIDENTIAL PROJECTS, INVESTMENT, AND INSTALLED CAPACITY THROUGH GREEN BANK SOLARIZE CONNECTICUT FOR THE CT SOLAR LEASE FINANCING PRODUCT

Solarize	# of Projects	Total Investment	Installed Capacity (MW)
Solarize	325	\$12,418,840	2.5
Not Solarize	864	\$33,903,647	7.0
Total	1,189	\$46,322,487	9.6
% Solarize	27%	27%	27%

The Green Bank Solarize Connecticut program provided a marketing channel and origination catalyst for the CT Residential Solar Leases comprising 27 percent of the total projects, investment, and installed capacity.

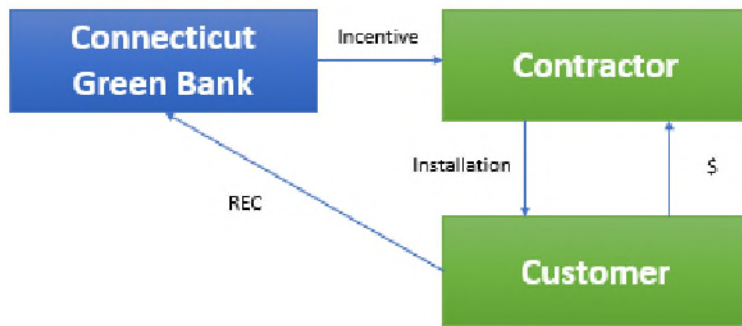
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6. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM

Case 3 – Residential Solar Investment Program

Description

The RSIP is a subsidy program that provides incentives to reduce the cost for homeowners to own solar photovoltaic (PV) systems or for third party owners (TPOs) to provide clean electricity from solar PV systems through leases or power purchase agreements (PPAs) with homeowners. Incentives are provided either upfront (i.e., through an expected performance-based buy-down or EPBB) for homeowner-owned systems or are paid out over time¹¹¹ based on system production (i.e., through a performance-based incentive or PBI and a low to moderate income performance-based incentive or LMI-PBI) for third-party owned projects. With either incentive type, the Renewable Energy Credits (RECs) are owned by the Connecticut Green Bank.

FIGURE 8. LEGAL STRUCTURE AND FLOWS OF CAPITAL FOR THE RSIP¹¹²



The subsidy under the RSIP has decreased over time – see Table 85, supporting the goal of reducing market reliance on incentives while moving it towards innovative low-cost financing and sustained orderly development.

TABLE 85. RSIP SUBSIDY BY STEP AND INCENTIVE TYPE

RSIP Subsidy by Step	Start Date	EPBB (\$/W)			PBI (\$/kWh)		LMI (\$/kWh)	
		≤5 kW	5 to 10 kW	>10 kW, ≤ 20 kW	≤10 kW	>10 kW, ≤ 20 kW	≤10 kW	>10 kW, ≤ 20 kW
Step 1	3/2/2012	\$2.450	\$1.250	\$0.000	\$0.300	\$0.000	N/A	N/A
Step 2	5/8/2012	\$2.275	\$1.075	\$0.000	\$0.300	\$0.000	N/A	N/A
Step 3	1/4/2013 EPBB, 4/1/2013 PBI	\$1.750	\$0.550	\$0.000	\$0.225	\$0.000	N/A	N/A
Step 4	1/6/2014	\$1.250	\$0.750	\$0.000	\$0.180	\$0.000	N/A	N/A
Step 5	9/1/2014	\$0.800		\$0.400	\$0.125	\$0.060	N/A	N/A

¹¹¹ The PBI is paid out quarterly over a period of six years.

¹¹² The Green Bank incentive is issued to the Contractor on behalf of the Customer. In the case of Third-Party Owned systems, RECs flow from the Contractor to the Connecticut Green Bank.

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RSIP Subsidy by Step	Start Date	EPBB (\$/W)			PBI (\$/kWh)		LMI (\$/kWh)	
		≤5 kW	5 to 10 kW	>10 kW, ≤ 20 kW	≤10 kW	>10 kW, ≤ 20 kW	≤10 kW	>10 kW, ≤ 20 kW
Step 6	1/1/2015	\$0.675		\$0.400	\$0.080	\$0.060	N/A	N/A
Step 7	4/11/2015	\$0.540		\$0.400	\$0.064	\$0.060	N/A	N/A
Step 8	8/8/2015	\$0.540		\$0.400	\$0.054		\$0.110	\$0.055
Step 9	2/1/2016	\$0.513		\$0.400	\$0.046		\$0.110	\$0.055
Step 10	9/1/2016	\$0.487		\$0.400	\$0.039		\$0.110	\$0.055
Step 11	8/1/2017	\$0.487		\$0.400	\$0.039		\$0.110	\$0.055
Step 12	1/15/2018	\$0.463		\$0.400	\$0.035		\$0.110	\$0.055
Step 13	6/1/2018	\$0.463		\$0.400	\$0.035		\$0.090	\$0.045
Step 14	9/24/2018	\$0.463		\$0.400	\$0.035		\$0.090	\$0.045
Step 15	1/15/2020	\$0.426		\$0.328	\$0.030		\$0.081	\$0.041

Key Performance Indicators

The Key Performance Indicators for RSIP closed activity are reflected in Table 86 through Table 91. These illustrate the volume of projects by year, investment, generation capacity installed, and the amount of energy saved and/or produced. They also present the volume of projects by energy efficiency, renewable generation, or both. It should be noted that for all RSIP requires that, as part of the requirements for receiving an RSIP incentive, an energy efficiency assessment be conducted through the utility-administered Home Energy Solutions (HES) program, the DOE Home Energy Score, or RSIP-approved alternatives such as audits performed by BPI-certified professionals.¹¹³ Consequently, each RSIP project from solar PV (i.e. RE project) also includes EE. The benefits from the EE measures (e.g., investment, savings, etc.) have not been calculated, as approximately 90% of energy efficiency assessments are conducted through the HES program for which benefits are tracked by the Connecticut Energy Efficiency Fund.¹¹⁴ The Key performance Indicators for RSIP only include the investment and impact of the renewable energy installation and not those stemmed from the energy audits.

TABLE 86. RSIP PROJECT TYPES AND INVESTMENT BY FY CLOSED

Fiscal Year	# Projects	Total Investment	Green Bank Investment ¹¹⁵	Private Investment	Leverage Ratio
2012	288	\$9,901,511	\$3,401,642	\$6,499,869	2.9
2013	1,109	\$35,426,043	\$11,915,456	\$23,510,587	3.0
2014	2,382	\$73,853,653	\$20,049,114	\$53,804,539	3.7
2015	6,397	\$214,705,219	\$33,191,989	\$181,513,230	6.5
2016	6,804	\$218,107,091	\$18,842,814	\$199,264,277	11.6
2017	4,465	\$120,797,529	\$11,600,036	\$109,197,493	10.4
2018	5,202	\$149,130,705	\$12,739,818	\$136,390,887	11.7
2019	6,955	\$210,489,564	\$16,089,664	\$194,399,900	13.1
2020	7,921	\$235,505,360	\$16,849,620	\$218,655,740	14.0

¹¹³ Non-HES audits were performed by Building Performance Institute (BPI) certified auditors, Home Energy Rating System (HERS) raters, other certified energy managers or were exempt due to being new construction or having a health and safety exemption.

¹¹⁴ RSIP-wide, an estimated 90% of audits performed were either HES audits or DOE Home Energy Scores (HES). In FY20, 95% of audits were either HES or DOE HES.

¹¹⁵ Includes incentives, interest rate buydowns and loan loss reserves.

CONNECTICUT GREEN BANK

6. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM

Fiscal Year	# Projects	Total Investment	Green Bank Investment ¹¹⁵	Private Investment	Leverage Ratio
Total	41,523	\$1,267,916,674	\$144,680,151	\$1,123,236,523	8.8

TABLE 87. RSIP PROJECT CAPACITY, GENERATION AND SAVINGS BY FY CLOSED

Fiscal Year	Installed Capacity (kW)	Expected Annual Generation (kWh)	Expected Lifetime Savings or Generation (MWh)	Annual Saved / Produced (MMBtu)	Lifetime Saved / Produced (MMBtu)	Annual Cost Savings	Lifetime Cost Savings
2012	1,940.2	2,209,534	55,238	7,539	188,473	\$345,254	\$8,631,360
2013	7,889.9	8,984,961	224,624	30,657	766,417	\$1,329,469	\$33,236,730
2014	17,125.1	19,502,075	487,552	66,541	1,663,527	\$2,855,542	\$71,388,540
2015	48,745.9	55,511,854	1,387,796	189,406	4,735,161	\$7,668,724	\$191,718,090
2016	53,340.1	60,743,706	1,518,593	207,258	5,181,438	\$8,156,635	\$203,915,880
2017	34,759.8	39,584,494	989,612	135,062	3,376,557	\$5,352,642	\$133,816,050
2018	42,372.3	48,253,598	1,206,340	164,641	4,116,032	\$6,236,158	\$155,903,940
2019	59,250.5	67,474,458	1,686,861	230,223	5,755,571	\$8,337,654	\$208,441,350
2020	66,271.3	75,469,756	1,886,744	257,503	6,437,570	\$9,495,695	\$237,392,370
Total	331,695.1	377,734,437	9,443,361	1,288,830	32,220,747	\$49,777,772	\$1,244,444,310

TABLE 88. RSIP PROJECT AVERAGES BY FY CLOSED

Fiscal Year	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)	Average Incentive Amount	Total Average Investment	Average Incentive (\$/W)	Average Installed Cost (\$/W) ¹¹⁶	Incentive % of Cost	Net Cost to Customer after RSIP Incentive
2012	6.7	26	\$11,811	\$34,380	\$1.75	\$5.13	34%	\$22,569
2013	7.1	28	\$10,744	\$31,944	\$1.51	\$4.32	34%	\$21,200
2014	7.2	28	\$8,417	\$31,005	\$1.17	\$4.07	27%	\$22,588
2015	7.6	30	\$5,189	\$33,563	\$0.68	\$3.92	15%	\$28,375
2016	7.8	30	\$2,769	\$32,056	\$0.35	\$3.41	9%	\$29,286
2017	7.8	30	\$2,598	\$27,054	\$0.33	\$3.33	10%	\$24,456
2018	8.1	32	\$2,449	\$28,668	\$0.30	\$3.41	9%	\$26,219
2019	8.5	33	\$2,313	\$30,264	\$0.27	\$3.45	8%	\$27,951
2020	8.4	33	\$2,127	\$29,732	\$0.25	\$3.48	7%	\$27,605
Total	8.0	31	\$3,484	\$30,535	\$0.44	\$3.54	11%	\$27,051

¹¹⁶ Average Installed Cost per Watt figures include reported installed costs without including those projects where financing costs for some third-party ownership installers are included as part of the installed cost and projects that include battery storage costs. Total Average Investment, Incentive % of Cost and Net Cost to Customer are calculated based on Average Installed Cost.

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6. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM

TABLE 89. RSIP PROJECT APPLICATION YIELD¹¹⁷ BY FY RECEIVED

Fiscal Year	Applications Received	Applications in Review	Applications Approved	Applications Withdrawn	Applications Denied	Applications Cancelled	Approved Rate	Denied Rate
2012	382	0	291	0	39	52	76%	10%
2013	1,279	0	1,137	0	17	125	89%	1.3%
2014	2,797	0	2,516	0	15	266	90%	0.5%
2015	7,872	0	6,420	0	20	1,432	82%	0.3%
2016	8,711	0	6,741	0	30	1,940	77%	0.3%
2017	5,309	0	4,425	0	35	849	83%	0.7%
2018	6,612	0	5,128	51	38	1,395	78%	0.6%
2019	9,009	0	7,034	87	12	1,876	79%	0.1%
2020	9,135	2	7,835	82	4	1,212	87%	0.0%
Total	51,106	2	41,527	220	210	9,147	82%	0.4%

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¹¹⁷ Applications Received are applications for incentives submitted to RSIP for review. Applications in Review are submitted applications yet to be reviewed, approved or rejected. Applications Withdrawn are those that have been withdrawn by the submitter due to the need for corrections. Applications Denied are those that are not approved for an incentive because the project does not meet RSIP requirements. Applications Cancelled include projects that: (1) were rejected due to need for corrections and not resubmitted and successfully approved, (2) expired before the project was installed, or (3) did not move forward (e.g., customer cancellation) and the contractor cancelled the project. The Approved Rate reflects the number of Applications Approved relative to the number of Applications Received.

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TABLE 90. RSIP SYSTEMS CLOSED THROUGH THE SUBSIDY BY STEP

RSIP Subsidy by Step	Installed Capacity (kW)	Incentive Amount	Total Investment	Average Incentive (\$/W)	Average Installed Cost (\$/W) ¹¹⁸	Incentive % of Cost	Net Cost to Customer	ZREC Equivalent Incentive (\$/MWh)
Step 1	1,380.8	\$2,470,307	\$7,222,670	\$1.79	\$5.27	34%	\$4,752,363	\$139
Step 2	5,998.5	\$9,767,901	\$27,018,842	\$1.63	\$4.34	36%	\$17,250,941	\$121
Step 3	13,101.2	\$16,097,888	\$55,880,576	\$1.23	\$4.11	29%	\$39,782,688	\$94
Step 4	19,283.7	\$19,909,430	\$84,856,444	\$1.03	\$4.06	23%	\$64,947,014	\$77
Step 5	13,373.8	\$9,966,420	\$59,676,421	\$0.75	\$3.96	17%	\$49,710,001	\$58
Step 6	12,221.2	\$6,262,639	\$54,119,436	\$0.51	\$3.93	12%	\$47,856,798	\$42
Step 7	19,078.8	\$7,626,405	\$83,043,466	\$0.40	\$3.67	9%	\$75,417,060	\$32
Step 8	27,133.9	\$9,664,139	\$111,952,544	\$0.36	\$3.41	9%	\$102,288,405	\$29
Step 9	26,108.3	\$8,670,386	\$99,040,378	\$0.33	\$3.36	9%	\$90,369,992	\$25
Step 10	30,015.9	\$9,761,560	\$103,423,914	\$0.33	\$3.29	9%	\$93,662,354	\$22
Step 11	18,119.7	\$5,868,381	\$63,621,686	\$0.32	\$3.40	9%	\$57,753,305	\$23
Step 12	16,148.6	\$4,517,203	\$57,298,221	\$0.28	\$3.43	8%	\$52,781,018	\$20
Step 13	19,143.3	\$5,148,925	\$67,156,787	\$0.27	\$3.40	8%	\$62,007,861	\$19
Step 14	84,483.4	\$22,934,370	\$299,983,203	\$0.27	\$3.46	8%	\$277,048,833	\$20
Step 15	26,068.2	\$5,996,805	\$93,474,548	\$0.23	\$3.52	6%	\$87,477,742	\$17
Unknown	36.0	\$17,390	\$147,537	\$0.48	\$3.76	12%	\$130,147	\$42
Total	331,695.1	\$144,680,151	\$1,267,916,674	\$0.44	\$3.54	11%	\$1,123,236,523	\$32

TABLE 91. RSIP THIRD PARTY OWNED (PBI) VS HOMEOWNER-OWNED SYSTEMS (EPBB)

Fiscal Year	# of PBI Projects	% PBI Projects	# of EPBB Projects	% EPBB Projects	Total
2012	58	20%	230	80%	288
2013	346	31%	763	69%	1,109
2014	1,168	49%	1,214	51%	2,382
2015	4,628	72%	1,769	28%	6,397
2016	5,841	86%	963	14%	6,804
2017	3,384	76%	1,081	24%	4,465
2018	3,892	75%	1,310	25%	5,202
2019	5,526	79%	1,429	21%	6,955
2020	6,382	81%	1,539	19%	7,921
Total	31,225	75%	10,298	25%	41,523

There are 31,225 PBI systems (owned by a third party) representing 75% of closed RSIP projects, and 10,298 EPBB or homeowner-owned projects, representing 25% of closed RSIP volume.

¹¹⁸ Average Installed Cost per Watt figures include reported installed costs without including those projects where financing costs for some third-party ownership installers are included as part of the installed cost and projects that include battery storage costs. Incentive % of Cost is calculated based on Average Installed Cost.

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Area Median Income Band Penetration

For a breakdown of RSIP project volume and investment by census tracts categorized by Area Median Income (AMI) bands – see Table 92. It should be noted that RSIP is not an income targeted program. However, following the UCONN study¹¹⁹ in December of 2014, the Green Bank Board of Directors approved the Income-Targeted incentive to better penetrate these tracts and to create inclusive prosperity. This special incentive is one of the methods through which the Green Bank has expanded its reach of previously underserved communities. Table 93 shows that starting in fiscal year 2016, the percent distribution of solar PV projects in the low to moderate income bands, i.e., < 60%, 60-80%, and 80-100% AMI, exceeded the percent distribution of those income bands among owner-occupied 1-4 unit households, and this holds for RSIP overall as illustrated by the totals in Table 93.

TABLE 92. RSIP ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS BY FY CLOSED¹²⁰

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner Occupied 1-4 Unit Households	% Owner Occupied 1-4 Unit Household Distribution	Project Units / 1,000 Owner Occupied 1-4 Unit Households	Total Investment / Owner Occupied 1-4 Unit Household	Watts / Owner Occupied 1-4 Unit Household
2012	<60%	10	3%	0.1	3%	\$227,144	2%	62,689	7%	0.2	\$3.62	0.8
2012	60%-80%	6	2%	0.0	2%	\$144,970	1%	102,178	12%	0.1	\$1.42	0.3
2012	80%-100%	66	23%	0.4	21%	\$2,125,276	21%	150,685	17%	0.4	\$14.10	2.8
2012	100%-120%	77	27%	0.5	26%	\$2,689,978	27%	216,484	25%	0.4	\$12.43	2.4
2012	>120%	129	45%	0.9	48%	\$4,714,144	48%	349,212	40%	0.4	\$13.50	2.7
2012	Total	288	100%	1.9	100%	\$9,901,511	100%	881,248	100%	0.3	\$11.24	2.2
2013	<60%	32	3%	0.2	2%	\$850,831	2%	61,004	7%	0.5	\$13.95	3.1
2013	60%-80%	55	5%	0.3	4%	\$1,559,072	4%	109,967	13%	0.5	\$14.18	3.0
2013	80%-100%	195	18%	1.3	16%	\$5,934,297	17%	149,676	17%	1.3	\$39.65	8.5
2013	100%-120%	223	20%	1.5	19%	\$7,316,674	21%	202,827	23%	1.1	\$36.07	7.5
2013	>120%	604	54%	4.6	58%	\$19,765,168	56%	350,708	40%	1.7	\$56.36	13.0
2013	Total	1,109	100%	7.9	100%	\$35,426,043	100%	874,182	100%	1.3	\$40.52	9.0
2014	<60%	112	5%	0.7	4%	\$2,891,690	4%	59,294	7%	1.9	\$48.77	11.0

¹¹⁹The memo, titled 7cii_Role of a Green Bank_Market Analysis_Low Income Solar and Housing_Memo_121214, can be found amongst board meeting materials here: https://www.ctgreenbank.com/wp-content/uploads/2017/07/CGB_BOD_Online-Meeting-Materials_121914_redacted.pdf
¹²⁰ Excludes projects in unknown bands.

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Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner Occupied 1-4 Unit Households	% Owner Occupied 1-4 Unit Household Distribution	Project Units / 1,000 Owner Occupied 1-4 Unit Households	Total Investment / Owner Occupied 1-4 Unit Household	Watts / Owner Occupied 1-4 Unit Household
2014	60%-80%	162	7%	1.0	6%	\$4,543,322	6%	104,528	12%	1.5	\$43.47	9.6
2014	80%-100%	573	24%	4.0	23%	\$17,439,117	24%	148,846	17%	3.8	\$117.16	26.8
2014	100%-120%	586	25%	4.3	25%	\$18,744,057	25%	208,912	24%	2.8	\$89.72	20.6
2014	>120%	949	40%	7.2	42%	\$30,235,467	41%	347,779	40%	2.7	\$86.94	20.6
2014	Total	2,382	100%	17.1	100%	\$73,853,653	100%	869,359	100%	2.7	\$84.95	19.7
2015	<60%	362	6%	2.2	4%	\$9,548,009	4%	66,632	8%	5.4	\$143.29	32.9
2015	60%-80%	748	12%	5.2	11%	\$22,634,538	11%	96,059	11%	7.8	\$235.63	54.0
2015	80%-100%	1,433	22%	10.5	22%	\$47,458,460	22%	165,205	19%	8.7	\$287.27	63.7
2015	100%-120%	1,629	25%	12.5	26%	\$55,141,516	26%	183,629	21%	8.9	\$300.29	67.8
2015	>120%	2,225	35%	18.4	38%	\$79,922,696	37%	352,053	41%	6.3	\$227.02	52.2
2015	Total	6,397	100%	48.7	100%	\$214,705,219	100%	863,578	100%	7.4	\$248.62	56.4
2016	<60%	614	9%	4.0	8%	\$16,012,915	7%	63,056	7%	9.7	\$253.95	64.2
2016	60%-80%	1,158	17%	8.1	15%	\$32,983,866	15%	99,073	12%	11.7	\$332.92	82.1
2016	80%-100%	1,576	23%	12.0	23%	\$49,147,172	23%	165,012	19%	9.6	\$297.84	72.8
2016	100%-120%	1,611	24%	12.7	24%	\$52,710,636	24%	187,129	22%	8.6	\$281.68	68.0
2016	>120%	1,845	27%	16.4	31%	\$67,252,501	31%	344,577	40%	5.4	\$195.17	47.7
2016	Total	6,804	100%	53.3	100%	\$218,107,091	100%	858,847	100%	7.9	\$253.95	62.1
2017	<60%	533	12%	3.4	10%	\$12,312,139	10%	64,755	7%	8.2	\$190.13	52.6
2017	60%-80%	966	22%	6.7	19%	\$23,809,050	20%	97,455	11%	9.9	\$244.31	68.9
2017	80%-100%	1,005	23%	7.7	22%	\$26,283,623	22%	155,414	18%	6.5	\$169.12	49.4
2017	100%-120%	869	19%	7.3	21%	\$24,814,636	21%	209,484	24%	4.1	\$118.46	34.6
2017	>120%	1,092	24%	9.7	28%	\$33,578,080	28%	339,362	39%	3.2	\$98.94	28.6
2017	Total	4,465	100%	34.8	100%	\$120,797,529	100%	866,470	100%	5.2	\$139.41	40.1
2018	<60%	570	11%	3.7	9%	\$14,083,755	9%	62,247	7%	9.2	\$226.26	60.2
2018	60%-80%	1,094	21%	8.0	19%	\$28,492,795	19%	109,142	13%	10.0	\$261.06	73.3
2018	80%-100%	1,205	23%	9.7	23%	\$33,803,919	23%	145,988	17%	8.3	\$231.55	66.5
2018	100%-120%	1,029	20%	8.6	20%	\$29,822,878	20%	204,880	24%	5.0	\$145.56	41.8
2018	>120%	1,304	25%	12.3	29%	\$42,927,358	29%	343,989	40%	3.8	\$124.79	35.9

**CONNECTICUT GREEN BANK
6. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM**

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner Occupied 1-4 Unit Households	% Owner Occupied 1-4 Household Distribution	Project Units /1,000 Owner Occupied 1-4 Unit Households	Total Investment/ Owner Occupied 1-4 Unit Household	Watts / Owner Occupied 1-4 Unit Household
2018	Total	5,202	100%	42.4	100%	\$149,130,705	100%	866,246	100%	6.0	\$172.16	48.9
2019	<60%	769	11%	5.3	9%	\$19,767,214	9%	62,247	7%	12.4	\$317.56	84.4
2019	60%-80%	1,410	20%	10.5	18%	\$37,462,136	18%	109,142	13%	12.9	\$343.24	96.0
2019	80%-100%	1,670	24%	13.9	24%	\$49,284,274	23%	145,988	17%	11.4	\$337.59	95.4
2019	100%-120%	1,453	21%	12.9	22%	\$45,443,874	22%	204,880	24%	7.1	\$221.81	62.8
2019	>120%	1,653	24%	16.7	28%	\$58,532,066	28%	343,989	40%	4.8	\$170.16	48.6
2019	Total	6,955	100%	59.3	100%	\$210,489,564	100%	866,246	100%	8.0	\$242.99	68.4
2020	<60%	862	11%	5.6	8%	\$20,489,009	9%	62,247	7%	13.8	\$329.16	89.3
2020	60%-80%	1,526	19%	11.1	17%	\$40,068,857	17%	109,142	13%	14.0	\$367.13	101.9
2020	80%-100%	1,824	23%	15.0	23%	\$53,681,079	23%	145,988	17%	12.5	\$367.71	102.5
2020	100%-120%	1,578	20%	13.6	21%	\$48,358,598	21%	204,880	24%	7.7	\$236.03	66.4
2020	>120%	2,131	27%	21.0	32%	\$72,907,817	31%	343,989	40%	6.2	\$211.95	61.1
2020	Total	7,921	100%	66.3	100%	\$235,505,360	100%	866,246	100%	9.1	\$271.87	76.5
Total	<60%	3,864	9%	25.1	8%	\$96,192,706	8%	62,247	7%	62.1	\$1,545.18	403.3
Total	60%-80%	7,125	17%	51.0	15%	\$191,698,606	15%	109,142	13%	65.3	\$1,756.41	467.3
Total	80%-100%	9,547	23%	74.5	22%	\$285,157,217	22%	145,988	17%	65.4	\$1,953.29	510.3
Total	100%-120%	9,055	22%	73.8	22%	\$285,042,847	22%	204,880	24%	44.2	\$1,391.27	360.3
Total	>120%	11,932	29%	107.3	32%	\$409,835,298	32%	343,989	40%	34.7	\$1,191.42	311.8
Total	Total	41,523	100%	331.7	100%	\$1,267,916,674	100%	866,246	100%	47.9	\$1,463.69	382.9

CONNECTICUT GREEN BANK
6. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM

TABLE 93. RSIP ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS ABOVE OR BELOW 100% BY FY CLOSED¹²¹

Fiscal Year	# Project Units			MW			Total Investment				% at 100% or Below
	Total	Over 100% AMI	Below 100% AMI	% at 100% or Below	Total	Over 100% AMI	Below 100% AMI	Total	Over 100% AMI	Below 100% AMI	
2012	288	206	82	28%	1.9	1.4	0.5	\$9,901,511	\$7,404,122	\$2,497,389	25%
2013	1,109	827	282	25%	7.9	6.1	1.8	\$35,426,043	\$27,081,843	\$8,344,200	24%
2014	2,382	1,535	847	36%	17.1	11.5	5.6	\$73,853,653	\$48,979,524	\$24,874,129	34%
2015	6,397	3,854	2,543	40%	48.7	30.8	17.9	\$214,705,219	\$135,064,211	\$79,641,008	37%
2016	6,804	3,456	3,348	49%	53.3	29.1	24.2	\$218,107,091	\$119,963,138	\$98,143,953	45%
2017	4,465	1,961	2,504	56%	34.8	17.0	17.8	\$120,797,529	\$58,392,717	\$62,404,813	52%
2018	5,202	2,333	2,869	55%	42.4	20.9	21.5	\$149,130,705	\$72,750,236	\$76,380,469	51%
2019	6,955	3,106	3,849	55%	59.3	29.6	29.7	\$210,489,564	\$103,975,940	\$106,513,624	51%
2020	7,921	3,709	4,212	53%	66.3	34.6	31.6	\$235,505,360	\$121,266,415	\$114,238,945	49%
Total	41,523	20,987	20,536	49%	331.7	181.1	150.6	\$1,267,916,674	\$694,878,145	\$573,038,529	45%

Distressed Community Penetration

For a breakdown of RSIP project volume and investment by census tracts categorized by Distressed Communities – see Table 94. It should be noted that RSIP is not an income targeted program.

TABLE 94. RSIP ACTIVITY IN DISTRESSED COMMUNITIES BY FY CLOSED

Fiscal Year	Distressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
2012	Yes	34	12%	0.2	10%	\$980,813	10%	447,962	33%	0.1	\$2.19	0.4
2012	No	254	88%	1.7	90%	\$8,920,698	90%	912,222	67%	0.3	\$9.78	1.9
2012	Total	288	100%	1.9	100%	\$9,901,511	100%	1,360,184	100%	0.2	\$7.28	1.4
2013	Yes	112	10%	0.7	9%	\$3,230,720	9%	426,564	31%	0.3	\$7.57	1.6
2013	No	997	90%	7.2	91%	\$32,195,323	91%	929,285	69%	1.1	\$34.65	7.7

¹²¹ Excludes projects in unknown bands.

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6. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM**

Fiscal Year	Distressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment/ Total Household	Watts / Total Household
2013	Total	1,109	100%	7.9	100%	\$35,426,043	100%	1,355,849	100%	0.8	\$26.13	5.8
2014	Yes	400	17%	2.7	16%	\$11,711,383	16%	416,415	31%	1.0	\$28.12	6.4
2014	No	1,982	83%	14.5	84%	\$62,142,270	84%	939,791	69%	2.1	\$66.12	15.4
2014	Total	2,382	100%	17.1	100%	\$73,853,653	100%	1,356,206	100%	1.8	\$54.46	12.6
2015	Yes	1,340	21%	9.1	19%	\$40,716,394	19%	423,559	31%	3.2	\$96.13	21.5
2015	No	5,057	79%	39.6	81%	\$173,988,825	81%	929,024	69%	5.4	\$187.28	42.6
2015	Total	6,397	100%	48.7	100%	\$214,705,219	100%	1,352,583	100%	4.7	\$158.74	36.0
2016	Yes	2,073	30%	14.8	28%	\$60,726,516	28%	438,710	32%	4.7	\$138.42	33.8
2016	No	4,731	70%	38.5	72%	\$157,380,574	72%	916,003	68%	5.2	\$171.81	42.0
2016	Total	6,804	100%	53.3	100%	\$218,107,091	100%	1,354,713	100%	5.0	\$161.00	39.4
2017	Yes	1,502	34%	10.6	31%	\$36,684,453	30%	435,595	32%	3.4	\$84.22	24.3
2017	No	2,963	66%	24.2	69%	\$84,113,076	70%	926,160	68%	3.2	\$90.82	26.1
2017	Total	4,465	100%	34.8	100%	\$120,797,529	100%	1,361,755	100%	3.3	\$88.71	25.5
2018	Yes	485	9%	3.4	8%	\$11,863,257	8%	430,098	31%	1.1	\$27.58	7.9
2018	No	4,717	91%	39.0	92%	\$137,267,448	92%	937,276	69%	5.0	\$146.45	41.6
2018	Total	5,202	100%	42.4	100%	\$149,130,705	100%	1,367,374	100%	3.8	\$109.06	31.0
2019	Yes	2,041	29%	15.4	26%	\$56,752,785	27%	420,071	31%	4.9	\$135.10	36.6
2019	No	4,914	71%	43.9	74%	\$153,736,779	73%	947,303	69%	5.2	\$162.29	46.3
2019	Total	6,955	100%	59.3	100%	\$210,489,564	100%	1,367,374	100%	5.1	\$153.94	43.3
2020	Yes	2,569	33%	18.4	28%	\$66,985,281	29%	420,071	31%	6.1	\$159.46	43.7
2020	No	5,333	67%	47.8	72%	\$168,012,162	71%	947,303	69%	5.6	\$177.36	50.4
2020	Total	7,902	100%	66.1	100%	\$234,997,443	100%	1,367,374	100%	5.8	\$171.86	48.4
Total	Yes	10,556	25%	75.2	23%	\$289,651,601	23%	420,071	31%	25.1	\$689.53	179.1
Total	No	30,948	75%	256.3	77%	\$977,757,155	77%	947,303	69%	32.7	\$1,032.15	270.6
Total	Total	41,504	100%	331.6	100%	\$1,267,408,757	100%	1,367,374	100%	30.4	\$926.89	242.5

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Societal Impacts

RSIP is a driver of job creation and cleaner air in the state of Connecticut. Over the course of its existence, the program has supported the creation of 14,711 job years and avoided the lifetime emission of tons of 5,264,274 carbon dioxide, 5,484,262 pounds of nitrous oxide, 4,846,392 pounds of sulfur oxide, and 454,447 pounds of particulate matter as illustrated by Table 95 and Table 97. The RSIP has generated more than \$40.1 million in tax revenue for the state since inception as demonstrated in Table 96. The value of the lifetime public health impacts of the RSIP is estimated to be between \$166.7 and \$376.5 million as seen in Table 98.

TABLE 95. RSIP JOB YEARS SUPPORTED BY FY CLOSED

Fiscal Year	Direct Jobs	Indirect and Induced Jobs	Total Jobs
2012	58	93	151
2013	209	333	542
2014	435	694	1,130
2015	1,267	2,018	3,285
2016	1,288	2,050	3,337
2017	472	615	1,087
2018	582	759	1,341
2019	821	1,072	1,893
2020	843	1,102	1,946
Total	5,975	8,736	14,711

TABLE 96. RSIP TAX REVENUES GENERATED BY FY CLOSED

Fiscal Year	Individual Income Tax Revenue Generated	Corporate Tax Revenue Generated	Sales Tax Revenue Generated	Total Tax Revenue Generated
2012	\$267,742	\$79,970	\$0	\$347,712
2013	\$957,938	\$286,122	\$0	\$1,244,060
2014	\$1,997,039	\$596,486	\$0	\$2,593,526
2015	\$5,805,738	\$1,734,089	\$0	\$7,539,826
2016	\$5,897,726	\$1,761,563	\$0	\$7,659,289
2017	\$2,522,036	\$975,633	\$0	\$3,497,669
2018	\$3,113,582	\$1,204,469	\$0	\$4,318,051
2019	\$4,394,645	\$1,700,038	\$0	\$6,094,682
2020	\$4,916,929	\$1,902,081	\$0	\$6,819,010
Total	\$29,873,375	\$10,240,451	\$0	\$40,113,826

TABLE 97. RSIP AVOIDED EMISSIONS BY FY CLOSED

Fiscal Year	CO2 Emissions Avoided (tons)		NOx Emissions Avoided (pounds)		SOx Emissions Avoided (pounds)		PM 2.5 (pounds)	
	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime
2012	1,242	31,043	1,638	40,958	2,117	52,930	111	2,772
2013	5,108	127,693	7,477	186,921	9,478	236,961	451	11,273

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Fiscal Year	CO2 Emissions Avoided (tons)		NOx Emissions Avoided (pounds)		SOx Emissions Avoided (pounds)		PM 2.5 (pounds)	
	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime
2014	10,960	273,991	14,468	361,708	16,082	402,049	978	24,446
2015	31,779	794,485	37,798	944,959	36,715	917,887	2,780	69,488
2016	34,319	857,974	36,755	918,871	29,417	735,422	3,009	75,214
2017	21,601	540,035	19,648	491,207	13,405	335,130	1,863	46,571
2018	26,553	663,819	25,182	629,552	20,863	521,579	2,262	56,562
2019	37,295	932,375	36,065	901,618	31,048	776,193	3,174	79,359
2020	41,714	1,042,858	40,339	1,008,467	34,730	868,240	3,550	88,762
Total	210,571	5,264,274	219,370	5,484,262	193,856	4,846,392	18,178	454,447

TABLE 98. RSIP PUBLIC HEALTH IMPACT BY FY CLOSED

Fiscal Year	Annual		Lifetime	
	Low	High	Low	High
2012	\$42,865	\$96,778	\$1,071,624	\$2,419,440
2013	\$174,308	\$393,541	\$4,357,706	\$9,838,532
2014	\$378,340	\$854,191	\$9,458,507	\$21,354,772
2015	\$1,076,979	\$2,431,529	\$26,924,464	\$60,788,223
2016	\$1,178,357	\$2,660,413	\$29,458,913	\$66,510,330
2017	\$767,833	\$1,733,560	\$19,195,818	\$43,339,011
2018	\$935,944	\$2,113,110	\$23,398,588	\$52,827,739
2019	\$1,301,510	\$2,938,461	\$32,537,749	\$73,461,516
2020	\$814,693	\$1,839,358	\$20,367,317	\$45,983,943
Total	\$6,670,827	\$15,060,940	\$166,770,686	\$376,523,507

Marketing

Project volume was strong in FY20 overall, but in particular through Q3 FY20 (until the market was impacted by the COVID pandemic). Despite significant impacts to the market starting in March 2020 and into Q4 FY20, the following factors contributed to high overall project volume in FY20 for the solar PV market.

- RSIP incentive levels were reduced with the approval of Step 15 by the Board of Directors in July 2019, but not steeply enough to impact project volume. Step 15 levels represented 10%, 15%, and 10% reductions for EPBB, PBI, and LMI PBI projects respectively, with no further reductions in FY20, thereby providing market continuity.
- The anticipated end of net metering, which had been scheduled to take place at the end of RSIP, but which was delayed until December 31, 2021 by PA 19-35.
- The scheduled step-down in the Federal Investment Tax Credit (ITC) from 30% to 26% starting in 2020, which will be followed by a step down to 22% in 2021, and a final step down to 0% for homeowner-owned projects and 10% for third-party owned projects in 2022.
- Another mild winter allowing for higher industry activity.
- Continued growth in the strength and number of local and national solar PV companies in Connecticut through Q3 FY20.

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- Despite significant COVID impacts, the residential solar industry began adapting its sales and installation practices to allow for continued operation during the pandemic, albeit at a reduced level compared to usual spring and summer volume.
- Growth in the residential battery storage industry in New England and nationwide, helping to create new buzz for clean energy technology deployment.

Nearly 80% of FY20 RSIP projects are third party owned (TPO), led by Sunnova with approximately 53% of RSIP market share, followed by Sunrun (16%), PosiGen (12%), Vivint (10%), SunPower (7%), and IGS Solar (2%). The highest volume Installers of homeowner-owned projects collectively deployed approximately 20% of RSIP volume in FY20, with the top 15 deploying 82% of homeowner-owned projects, including SunPower, Vivint, CES Danbury (formerly Ross Solar), Earthlight, Trinity Solar, EcoSmart, Momentum Solar, Sunlight Solar, C-TEC Solar, SolarCity, Sunrun, Venture Solar, Palmetto Solar, Aegis, and Green Power Energy. Trinity Solar was RSIP’s highest volume participant in FY20, having installed nearly 43% of RSIP projects in FY20, of which nearly 98% used third party financing and 2.5% were homeowner owned. The RSIP continues to be successful in reaching low to moderate income households. Adoption has largely been driven by the Green Bank’s Solar for All partnership with PosiGen and complemented by efforts supported by a U.S. Department of Energy grant, “State Strategies for Solar Adoption in Low-and-Moderate Income Communities.”

RSIP is estimated to reach 350 MW possibly as early as October of 2020, after which time only net metering (and the federal ITC) would be available to support the solar PV market through December 31, 2021, unless an RSIP extension is considered and approved by the CT General Assembly, as proposed by staff and approved by the Green Bank Board of Directors at its April 24, 2020 Board meeting¹²². Beginning in 2022, a production based (per kWh) tariff compensation is anticipated to be offered to solar PV customers, based on the requirements stipulated by Section 7 in PA 18-50, amended by PA 19-35, and as developed and determined by PURA and stakeholders through continued docket processes.

TABLE 99. RSIP VOLUME, CAPACITY AND COST DATA BY FY CLOSED AND SOLARIZE PARTICIPATION¹²³

Fiscal Year	CGB Solarize Type	# Projects	Installed Capacity (kW)	Green Bank Incentive Amount	Total Investment	Average Incentive (\$/W) ¹²⁴	Average Installed Cost (\$/W) ¹²⁵	Incentive % of Cost	Net Cost to Customer
2012	No	288	1,940.2	\$3,401,642	\$9,901,511	\$1.75	\$5.13	34%	\$6,499,869

¹²² https://ctgreenbank.com/wp-content/uploads/2020/05/board-of-directors-of-the-connecticut-green-bank_042420_redacted.pdf

¹²³ Public supported Solarize ended in 2015. Projects are attributed to years based on the year their application was approved. Solarize projects assigned to years later than 2017 are the result of solarize efforts supported by the Green Bank in 2015 or before. Privately-supported Solarize is associated with years 2016-2019. Note that the difference in average installed costs across RSIP for Solarize vs non-Solarize projects also reflects a larger prevalence of homeowner-owned (i.e., EPBB) projects participating in Solarize vs third-party owned (i.e., PBI) projects. Because the average installed cost for EPBB projects is higher than for PBI projects, some years show a higher Solarize than non-Solarize price at least in part because more of the Solarize projects are EPBB projects. For EPBB projects only, the average installed cost across all years of RSIP is \$3.86/W for Solarize projects vs \$4.02/W for non-Solarize projects.

¹²⁴ Average Incentive, Average Installed Cost, and Incentive % of Cost represent the averages by fiscal year and are not differentiated for Solarize versus non-Solarize.

¹²⁵ Average Installed Cost per Watt figures include reported installed costs without including those projects where financing costs for some third-party ownership installers are included as part of the installed cost and projects that include battery storage costs. Incentive % of Cost is calculated based on Average Installed Cost.

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Fiscal Year	CGB Solarize Type	# Projects	Installed Capacity (kW)	Green Bank Incentive Amount	Total Investment	Average Incentive (\$/W) ¹²⁴	Average Installed Cost (\$/W) ¹²⁵	Incentive % of Cost	Net Cost to Customer
2012 Total		288	1,940.2	\$3,401,642	\$9,901,511	\$1.75	\$5.13	34%	\$6,499,869
2013	No	785	5,465.7	\$8,398,948	\$26,127,846	\$1.54	\$4.64	32%	\$17,728,898
	Yes	324	2,424.1	\$3,516,508	\$9,298,197	\$1.45	\$3.84	38%	\$5,781,689
2013 Total		1,109	7,889.8	\$11,915,456	\$35,426,043	\$1.51	\$4.32	34%	\$23,510,587
2014	No	1,674	12,102.7	\$14,257,270	\$54,757,574	\$1.18	\$4.27	26%	\$40,500,304
	Yes	708	5,022.4	\$5,791,844	\$19,096,079	\$1.15	\$3.80	30%	\$13,304,235
2014 Total		2,382	17,125.1	\$20,049,114	\$73,853,653	\$1.17	\$4.07	27%	\$53,804,539
2015	No	5,497	41,230.6	\$27,605,344	\$185,448,437	\$0.67	\$3.93	15%	\$157,843,093
	Yes	900	7,515.3	\$5,586,645	\$29,256,782	\$0.74	\$3.89	19%	\$23,670,137
2015 Total		6,397	48,745.9	\$33,191,989	\$214,705,219	\$0.68	\$3.92	15%	\$181,513,230
2016	No	6,709	52,505.7	\$18,491,300	\$214,905,407	\$0.35	\$3.40	9%	\$196,414,107
	Yes	95	834.4	\$351,514	\$3,201,684	\$0.42	\$3.84	11%	\$2,850,170
2016 Total		6,804	53,340.1	\$18,842,814	\$218,107,091	\$0.35	\$3.41	9%	\$199,264,277
2017	No	4,422	34,391.7	\$11,450,640	\$119,511,428	\$0.33	\$3.33	10%	\$108,060,788
	Yes	43	368.2	\$149,396	\$1,286,101	\$0.41	\$3.49	12%	\$1,136,705
2017 Total		4,465	34,759.8	\$11,600,036	\$120,797,529	\$0.33	\$3.33	10%	\$109,197,493
2018	No	5,195	42,321.7	\$12,720,045	\$148,951,805	\$0.30	\$3.41	9%	\$136,231,760
	Yes	7	50.6	\$19,773	\$178,900	\$0.39	\$3.53	11%	\$159,127
2018 Total		5,202	42,372.3	\$12,739,818	\$149,130,705	\$0.30	\$3.41	9%	\$136,390,887
2019	No	6,955	59,250.5	\$16,089,664	\$210,489,564	\$0.27	\$3.45	8%	\$194,399,900
2019 Total		6,955	59,250.5	\$16,089,664	\$210,489,564	\$0.27	\$3.45	8%	\$194,399,900
2020	No	7,921	66,271.3	\$16,849,620	\$235,505,360	\$0.25	\$3.48	7%	\$218,655,740
2020 Total		7,921	66,271.3	\$16,849,620	\$235,505,360	\$0.25	\$3.48	7%	\$218,655,740
Total		41,523	331,695.2	\$144,680,151	\$1,267,916,674	\$0.44	\$3.54	11%	\$1,123,236,523

SHREC Program

Legislation enacted by the General Assembly enables the Connecticut Green Bank to recover the costs of the RSIP by aggregating and monetizing the Solar Home Renewable Energy Credits (SHRECs) earned for solar energy generated by systems whose owners received RSIP incentives.¹²⁶ The SHRECs are sold through long-term contracts to the state’s two investor-owned utilities, as mandated by the law. Through the SHREC Master Purchase Agreement, the Green Bank has thus far sold its Tranche 1, Tranche 2, Tranche 3 and Tranche 4 SHRECs to the utilities – for a total of just over 207 MW of residential solar PV projects supported through the RSIP. Tranches 1 and 2, totaling over 107 MW, were included in the Green Bank’s first securitization of SHREC revenues, closing in March 2019, for \$38.6 million. Tranche 3, which was just over 39 MW, was included in the Green Bank’s second securitization of SHREC revenues, in the form of Green Liberty Bonds, which sold out on July 15, 2020 for over \$16 million.

¹²⁶ RSIP projects with an incentive approved on or after January 1, 2015 can provide SHRECs. Approximately 56 MW of RSIP projects approved prior to 2015 can provide non-SHREC RECs.

Market Transformation

The Connecticut Green Bank contracted with Cadmus Group, Inc., to conduct a cost-effectiveness analysis¹²⁷ of its Residential Solar Investment Program (RSIP), completed in March 2016.¹²⁸ The findings of the study were: (1) RSIP is cost-effective from the perspective of program participants, the Connecticut Green Bank (as program administrator), from a total resource perspective, and for society as a whole. (2) RSIP has increasingly made efficient use of program funds by reducing incentives while supporting market growth through financing, marketing, outreach and education. (3) RSIP benefits sufficiently outweigh costs to allow for bundling of residential solar PV with emerging technologies such as energy storage, while maintaining cost-effectiveness. The study included data from RSIP steps 1 through 7, for which cost-effectiveness was found to increase with progressive steps as incentives were reduced. Cadmus noted that incentives represented the large majority of program costs. Therefore, the general pattern of increasing cost-effectiveness would be expected to continue as incentives were reduced further.

Residential battery storage paired with solar PV is an emerging market in Connecticut with an estimated 226 battery storage systems came through RSIP, associated with solar PV projects approved for incentives in FY20 (26% in FY20 and the majority in the last three fiscal years). The solar PV was incentivized through RSIP, but no incentive was provided for the battery storage. The projects were purchased by customers primarily for the purpose of backup power though it is possible that some customers are participating in a pilot demand response program, Connected Solutions,¹²⁹ that has been implemented by Eversource, modeled on their Massachusetts program.

For the past two fiscal years, the Green Bank has been seeking funding to administer a battery storage incentive program. In FY19, the Green Bank contracted with Navigant Consulting, Inc., to conduct cost-effectiveness analysis for Green Bank's application submission to PURA's Electric Efficiency Partners Program (EEPP) in December 2018, proposing an incentive program for residential battery storage installed with solar PV. The program was originally designed so that a customer would be required to charge the battery with solar PV during the day and discharge the battery to meet on-site load during ISO New England summer peak hours using a "Set it and Forget it" strategy. The Navigant analysis showed that battery storage utilized in this way provides peak reduction benefits to the grid as well as being available to the customer for backup power during outage events. The benefit/cost ratios calculated for battery storage for the overall program are over 2:1 (UCT of 2.75 at 5.5% discount rate, UCT of 3.38 at 3% discount rate) assuming a declining incentive block structure and total program capacity of 30 MW deployed over 5 years.¹³⁰ While the application was not approved, as decision

¹²⁷ The cost-effectiveness tests include the Utility Cost Test/Program Administrator Cost Test (UCT/PACT), Participant Cost Test (PCT), Societal Cost Test (SCT), Total Resource Cost Test (TRC), and Ratepayer Impact Measure (RIM).
<https://www.nationalenergyscreeningproject.org/national-standard-practice-manual>

¹²⁸ <https://ctgreenbank.com/about-us/studies-and-reports/>

¹²⁹ <https://www.eversource.com/content/ct-c/residential/save-money-energy/manage-energy-costs-usage/demand-response/battery-storage-demand-response>

¹³⁰ The benefit/cost ratios represent the incremental benefits and costs of battery storage installed with solar PV.

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makers wanted more time to consider battery storage policy more broadly, the results show that residential battery storage provides peak demand reduction value to the grid, in addition to being attractive to customers with resiliency concerns.

Table 100 shows the anticipated benefit/cost ratios of deploying solar PV plus battery storage, including the benefits and costs for both technologies. Table 100 assumes an incentive for battery storage similar to what had been proposed for the EEPP, an anticipated RSIP Step 15¹³¹ incentive for solar PV about 13% lower on average across incentive types as compared to the RSIP Step 14, 4 MW of battery storage deployment in one year, and shows scenarios for “Set it and Forget it” vs “Utility Dispatch”¹³², as well as scenarios assuming the same C&LM benefit categories as in the EEPP application versus benefits that exclude regional benefits.¹³³ Take-aways from Table 100 include: (1) The UCT for solar PV is higher than for battery storage so it makes sense to combine battery storage with solar PV from a cost-effectiveness perspective. Even with a “set it and forget it” strategy and exclusion of regional benefits, the UCT ratio for solar PV plus storage is 3.16. (2) In the scenario in which regional benefits are not excluded, the RIM for battery storage is higher than for solar PV and reflects the ability of battery storage to socialize benefits to non-participants. (3) Utility dispatch provides higher benefit/cost ratios than a “set it and forget it” strategy.

TABLE 100. BENEFIT/COST RATIOS FOR SOLAR PV PLUS BATTERY STORAGE

	Solar PV			Battery Storage			Solar PV + Battery Storage		
	UCT	PCT	RIM	UCT	PCT	RIM	UCT	PCT	RIM
Set it and Forget it									
C&LM benefits	13.16	4.91	0.82	1.83	0.81	1.00	6.04	2.11	0.88
C&LM benefits less PTF, ROP DRIPE	7.48	4.91	0.47	0.60	0.81	0.33	3.16	2.11	0.46
Utility Dispatch									
C&LM benefits	n/a	n/a	n/a	3.20	0.81	1.74	6.90	2.11	1.01
C&LM benefits less PTF, ROP DRIPE	n/a	n/a	n/a	1.07	0.81	0.58	3.45	2.11	0.50

In FY20 the Green Bank again partnered with Guidehouse to prepare submission of a battery storage incentive program proposal¹³⁴ into PURA’s Equitable Modern Grid docket 17-12-03RE03. The program design proposed to deploy 50 MW of battery storage paired with new or existing solar PV by 2025, reaching an estimated 10,000 households. The program design includes: (1) a declining upfront incentive block structure administered by the Green Bank, in exchange for passive dispatch to meet on-

¹³¹ Anticipated to begin January 15, 2020. The RSIP Step 15 incentive is assumed to be 13% lower than the Step 14 incentive, calculated using a weighted average of the incentive reductions of 10% for EPBB, 15% for PBI and 10% for LMI PBI based on estimated 20%, 75% and 5% deployment shares, respectively.

¹³² The “Utility Dispatch” scenario assumes that the utility will anticipate peak hours or events (e.g., one day ahead) and will dispatch the battery to meet on-site load. For example, this scenario could apply if a customer agrees to participate in a utility demand response program for battery storage in exchange for a performance-based incentive.

¹³³ The regional benefits include Pooled Transmission Facilities (PTF) and Rest of Pool DRIPE.

¹³⁴ <https://ctgreenbank.com/strategy-impact/planning/> (submitted July 31, 2020)

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site load during specified hours (e.g., ISO-NE summer peak hours), and (2) a performance-based incentive administered by the utility companies modelled on the Eversource Connected Solutions demand response program, whereby customers allow their batteries to dispatch to meet on-site load and export to the grid during scheduled peak events. Program-wide, the design delivers benefit to cost ratios greater than one for all cost-effectiveness tests, as shown in Table 101.

TABLE 101. BENEFIT/COST RATIOS FOR BATTERY STORAGE AS CALCULATED FOR GREEN BANK “SOLARIZE STORAGE” PROPOSAL IN DOCKET 17-12-03RE03¹³⁵

Incentive Step	Capacity Block (MW)	PACT	PCT	SCT	TRC	RIM
1	2.0	1.23	1.13	1.22	1.22	1.07
2	3.5	1.68	1.00	1.66	1.67	1.50
3	6.5	2.03	0.99	2.00	2.01	1.83
4	13.0	2.44	0.99	2.39	2.40	2.24
5	25.0	2.75	0.98	2.66	2.67	2.55
Total	50.0	2.37	1.00	2.32	2.33	2.15

In summary, cost-effectiveness analyses show that deploying solar PV or solar PV plus battery storage provides benefits to the grid. Battery storage also provides resiliency benefits to customers and supports higher levels of solar PV deployment by better integrating solar PV with the grid.

¹³⁵ The UCT ratios were calculated by installed energy storage capacity block, proposed with incentives that decreased over each block (similar to the RSIP structure), modeled using discount rates of 5.5% and 3.0%, the latter based on the CT 2019-2021 C&LM Plan discount rate scheduled to go into effect March 1, 2019. The UCT ratios represent the incremental benefits and costs of battery storage installed with solar PV.

Case 4 – Smart-E Loan

Description

The Smart-E residential loan program is a financing program developed in partnership with Energize CT and local lenders that uses a credit enhancement (i.e., \$1,741,705 loan loss reserve).¹³⁶ to stimulate the market for residential energy efficiency, solar, storage, and health and safety loans in Connecticut. Through the product, the Connecticut Green Bank lowers the cost of capital for Connecticut residential customers seeking to install solar PV, high efficiency heating and cooling equipment, insulation or other home energy upgrades and reduces the loan performance risks to lenders. The \$1.7 million loan loss reserve is used to encourage lenders to offer below market interest rates and longer terms for unsecured loans, mitigates their losses, and encourages customers to undertake measures that would prove uneconomical at higher interest rates. In Fiscal year 2019, Inclusive Prosperity Capital (IPC) began managing the day to day operations of the Smart-E Loan program. With support from the Hewlett Foundation, and in partnership with Michigan Saves, IPC developed a new online platform for contractors and lenders. In doing so, IPC is soliciting other Green Banks and similar organizations around the country, to use the new platform to bring overall costs down for all programs.

The Smart-E Loan was designed to make it easy and affordable for homeowners to make energy efficiency and clean energy improvements to their homes with no out-of-pocket cash and at interest rates low enough and repayment terms long enough to make the improvements “cash flow positive.” At the same time, the Green Bank was intentional in opening conversations with local lenders to demonstrate the value of loans that would help their existing customers with burdensome energy costs and serve as an effective marketing tool to attract new relationships. In return for a “second loss” reserve which would be available beyond an agreed “normal” level of loan losses, lenders agreed to lengthen their terms and lower their rates. The end result is a successful loan product that has enabled thousands of homeowners throughout the state to lower energy costs and make their homes more comfortable in the summer heat or the depths of winter.

The financial structure of the Smart-E Loan product includes origination,¹³⁷ servicing,¹³⁸ and financing features in combination with the support of the Connecticut Green Bank.

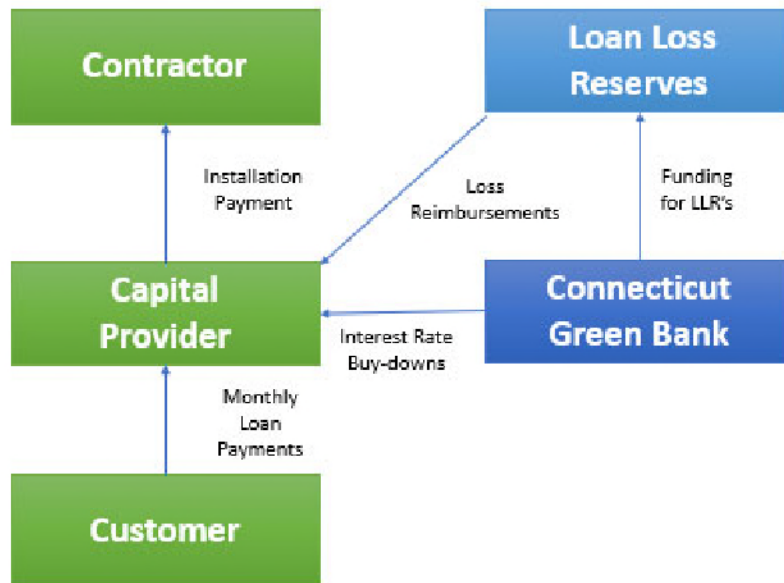
¹³⁶ During FY2017, the Green Bank, in an effort to optimize its resources, now holds the Loan Loss Reserve on its balance sheet. The total calculated loan loss reserve as of 6/30/20 is \$3,568,563, of which the Green Bank holds \$1.74M on its balance sheet.

¹³⁷ Network of participating community banks and credit unions with local contractors.

¹³⁸ Network of participating community banks and credit unions.

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FIGURE 9. LEGAL STRUCTURE AND FLOWS OF CAPITAL FOR THE SMART-E LOAN



Key Performance Indicators

The Key Performance Indicators for Smart-E closed activity are reflected in Table 102 through

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Table 105. These illustrate the volume of projects by year, investment, generation capacity installed, and the amount of energy saved and/or produced. It also breaks down the volume of projects by energy efficiency, renewable generation, or both.

TABLE 102. SMART-E LOAN PROJECT TYPES AND INVESTMENT BY FY CLOSED

Fiscal Year	EE	RE	RE/E E	Other	# Projects	Amount Financed	Total Investment	Green Bank Investment¹³⁹	Private Investment	Leverage Ratio
2012	0	0	0	0	0	\$0	\$0	\$0	\$0	0
2013	1	2	0	0	3	\$55,400	\$71,924	\$1,584	\$70,340	45.4
2014	94	39	4	6	143	\$1,781,207	\$2,486,507	\$45,524	\$2,440,983	54.6
2015	121	79	69	9	278	\$5,303,959	\$7,663,425	\$436,166	\$7,227,258	17.6
2016	102	52	65	2	221	\$4,508,381	\$6,145,939	\$360,765	\$5,785,174	17.0
2017	368	68	79	7	522	\$8,611,135	\$10,748,716	\$1,053,942	\$9,694,774	10.2
2018	1,330	258	146	15	1,749	\$27,432,920	\$34,175,021	\$4,243,505	\$29,931,516	8.1
2019	720	98	8	6	832	\$10,737,249	\$11,336,982	\$0	\$11,336,982	100
2020	613	102	7	15	737	\$10,007,846	\$11,544,201	\$0	\$11,544,201	100
Total	3,349	698	378	60	4,485	\$68,438,096	\$84,172,715	\$6,141,486	\$78,031,228	13.7

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¹³⁹ Includes incentives and interest rate buydowns. It does not include the loan loss reserves for Smart-E of \$1,741,705

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TABLE 103. SMART-E LOAN PROJECT CAPACITY, GENERATION AND SAVINGS BY FY CLOSED

Fiscal Year	Installed Capacity (kW)	Expected Annual Generation (kWh)	Expected Lifetime Savings or Generation (MWh)	Annual Saved / Produced (MMBtu)	Lifetime Saved / Produced (MMBtu)	Annual Cost Savings	Lifetime Cost Savings
2012	0.0	0	0	0	0	\$0	\$0
2013	16.8	23,077	557	68	1,633	\$2,748	\$66,955
2014	336.4	789,994	17,873	2,504	56,188	\$86,169	\$1,975,393
2015	1,312.6	2,393,743	56,898	7,050	166,210	\$263,227	\$6,236,278
2016	955.5	2,004,902	47,518	6,012	141,419	\$227,787	\$5,311,162
2017	1,290.4	3,852,350	88,263	11,941	271,056	\$394,660	\$8,933,545
2018	3,876.0	11,349,900	255,621	34,471	765,768	\$1,107,697	\$24,798,741
2019	908.5	3,707,959	80,540	11,704	251,100	\$374,188	\$8,037,511
2020	961.0	8,320,780	178,628	27,697	592,453	\$727,879	\$15,520,077
Total	9,657.1	32,442,704	725,898	101,447	2,245,827	\$3,184,354	\$70,879,662

TABLE 104. SMART-E LOAN PROJECT AVERAGES BY FY CLOSED

Fiscal Year	Average Total Investment	Average Amount Financed	Average Installed Capacity (kW)	Average Number of Measures	Average Annual Saved / Produced (MMBtu)	Average Finance Term At Origination (months)	Average Finance Rate	Average DTI	Average FICO Score
2012	\$0	\$0	0.0	0	0	0	0.00	0	0
2013	\$23,975	\$18,467	5.6	1	23	100	5.33	51	748
2014	\$17,388	\$12,456	2.5	1	18	90	5.02	32	751
2015	\$27,566	\$19,079	4.9	2	25	100	4.10	31	757
2016	\$27,810	\$20,400	4.3	2	27	100	4.02	32	756
2017	\$20,591	\$16,496	2.5	2	23	102	2.70	20	749
2018	\$19,540	\$15,685	2.2	2	20	102	1.96	16	751
2019	\$13,626	\$12,905	1.1	2	14	89	4.58	15	734
2020	\$15,664	\$13,579	1.3	1	38	87	4.57	15	737
Total	\$18,768	\$15,259	2.2	2	23	97	3.30	18	746

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TABLE 105. SMART-E LOAN PROJECT APPLICATION YIELD¹⁴⁰ BY FY RECEIVED

Fiscal Year	Applications Received	Applications in Review	Applications Approved	Applications Withdrawn	Applications Denied	Approved Rate	Denied Rate
2012	0	0	0	0	0	0%	0%
2013	22	0	16	1	5	77%	23%
2014	290	0	175	45	70	76%	24%
2015	548	0	300	103	145	74%	26%
2016	407	0	212	65	130	68%	32%
2017	1,105	0	664	198	243	78%	22%
2018	2,964	1	1,669	580	714	76%	24%
2019	1,813	31	839	358	585	67%	33%
2020	1,662	42	838	226	556	66%	34%
Total	8,811	74	4,713	1,576	2,448	72%	28%

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¹⁴⁰ Applications received are applications submitted by the homeowner to a participating lending institution for credit approval. Applications in review are submitted applications yet to be reviewed, approved or rejected. Applications withdrawn are applications that have been cancelled by the submitter due to the project not moving forward. Applications denied are applications that are not approved because the customer does not meet underwriting requirements.

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6. PROGRAMS – SMART-E LOAN**

Area Median Income Band Penetration

For a breakdown of Smart-E loan volume and investment by census tracts categorized by Area Median Income (AMI) bands – see Table 106. It should be noted that Smart-E is not an income targeted program and only in the second half of FY17 began offering the expanded credit-challenged version of the program, opening new opportunities to partner with mission-oriented lenders focused on reaching consumers in underserved lower income markets.

TABLE 106. SMART-E LOAN ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS BY FY CLOSED¹⁴¹

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner Occupied 1-4 Unit Households	% Owner Occupied 1-4 Unit Household Distribution	Project Units / 1,000 Owner Occupied 1-4 Unit Households	Total Investment / Owner Occupied 1-4 Unit Household	Watts / Owner Occupied 1-4 Unit Household
2012	<60%	0	0%	0.0	0%	\$0	0%	62,689	7%	0.0	\$0.00	0.0
2012	60%-80%	0	0%	0.0	0%	\$0	0%	102,178	12%	0.0	\$0.00	0.0
2012	80%-100%	0	0%	0.0	0%	\$0	0%	150,685	17%	0.0	\$0.00	0.0
2012	100%-120%	0	0%	0.0	0%	\$0	0%	216,484	25%	0.0	\$0.00	0.0
2012	>120%	0	0%	0.0	0%	\$0	0%	349,212	40%	0.0	\$0.00	0.0
2012	Total	0	0%	0.0	0%	\$0	0%	881,248	100%	0.0	\$0.00	0.0
2013	<60%	0	0%	0.0	0%	\$0	0%	61,004	7%	0.0	\$0.00	0.0
2013	60%-80%	0	0%	0.0	0%	\$0	0%	109,967	13%	0.0	\$0.00	0.0
2013	80%-100%	0	0%	0.0	0%	\$0	0%	149,676	17%	0.0	\$0.00	0.0
2013	100%-120%	1	33%	0.0	36%	\$34,389	48%	202,827	23%	0.0	\$0.17	0.0
2013	>120%	2	67%	0.0	64%	\$37,535	52%	350,708	40%	0.0	\$0.11	0.0
2013	Total	3	100%	0.0	100%	\$71,924	100%	874,182	100%	0.0	\$0.08	0.0
2014	<60%	13	9%	0.0	6%	\$177,163	7%	59,294	7%	0.2	\$2.99	0.3
2014	60%-80%	17	12%	0.0	7%	\$241,567	10%	104,528	12%	0.2	\$2.31	0.2
2014	80%-100%	20	14%	0.1	18%	\$397,130	16%	148,846	17%	0.1	\$2.67	0.4
2014	100%-120%	24	17%	0.1	26%	\$511,020	21%	208,912	24%	0.1	\$2.45	0.4
2014	>120%	69	48%	0.1	43%	\$1,159,627	47%	347,779	40%	0.2	\$3.33	0.4
2014	Total	143	100%	0.3	100%	\$2,486,507	100%	869,359	100%	0.2	\$2.86	0.4

¹⁴¹ Excludes projects in unknown bands.

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Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner Occupied 1-4 Unit Households	% Owner Occupied 1-4 Unit Household Distribution	Project Units /1,000 Owner Occupied 1-4 Unit Households	Total Investment/ Owner Occupied 1-4 Unit Household	Watts / Owner Occupied 1-4 Unit Household
2015	<60%	15	5%	0.0	0%	\$142,596	2%	66,632	8%	0.2	\$2.14	0.0
2015	60%-80%	29	10%	0.1	6%	\$539,055	7%	96,059	11%	0.3	\$5.61	0.8
2015	80%-100%	37	13%	0.1	8%	\$948,061	11%	165,205	19%	0.2	\$5.13	0.7
2015	100%-120%	62	22%	0.4	29%	\$2,206,558	29%	183,629	21%	0.3	\$12.02	2.1
2015	>120%	135	49%	0.7	56%	\$3,927,156	51%	352,053	41%	0.4	\$11.16	2.1
2015 Total		278	100%	1.3	100%	\$7,663,425	100%	863,578	100%	0.3	\$8.87	1.5
2016	<60%	14	6%	0.0	0%	\$173,756	3%	63,056	7%	0.2	\$2.76	0.0
2016	60%-80%	23	10%	0.1	7%	\$482,940	8%	99,073	12%	0.2	\$4.87	0.7
2016	80%-100%	27	12%	0.1	11%	\$657,968	11%	165,012	19%	0.2	\$3.99	0.6
2016	100%-120%	49	22%	0.2	20%	\$1,324,910	22%	187,129	22%	0.3	\$7.08	1.0
2016	>120%	108	49%	0.6	62%	\$3,506,365	57%	344,577	40%	0.3	\$10.18	1.7
2016 Total		221	100%	1.0	100%	\$6,145,939	100%	858,847	100%	0.3	\$7.16	1.1
2017	<60%	39	7%	0.1	6%	\$723,259	7%	64,755	7%	0.6	\$11.17	1.3
2017	60%-80%	53	10%	0.1	6%	\$817,809	8%	97,455	11%	0.5	\$8.39	0.7
2017	80%-100%	77	15%	0.2	14%	\$1,358,692	13%	155,414	18%	0.5	\$8.74	1.2
2017	100%-120%	136	26%	0.4	31%	\$3,111,565	29%	209,484	24%	0.6	\$14.85	1.9
2017	>120%	217	42%	0.6	43%	\$4,737,391	44%	339,362	39%	0.6	\$13.96	1.6
2017 Total		522	100%	1.3	100%	\$10,748,716	100%	866,470	100%	0.6	\$12.41	1.5
2018	<60%	121	7%	0.1	2%	\$1,736,310	5%	62,247	7%	1.9	\$27.89	1.2
2018	60%-80%	205	12%	0.3	7%	\$3,380,711	10%	109,142	13%	1.9	\$30.98	2.5
2018	80%-100%	283	16%	0.5	13%	\$4,850,078	14%	145,988	17%	1.9	\$33.22	3.4
2018	100%-120%	395	23%	0.9	24%	\$7,906,323	23%	204,880	24%	1.9	\$38.59	4.6
2018	>120%	745	43%	2.1	54%	\$16,301,600	48%	343,989	40%	2.2	\$47.39	6.1
2018 Total		1,749	100%	3.9	100%	\$34,175,021	100%	866,246	100%	2.0	\$39.45	4.5
2019	<60%	56	7%	0.0	2%	\$693,684	6%	62,247	7%	0.9	\$11.14	0.3
2019	60%-80%	110	13%	0.1	7%	\$1,232,662	11%	109,142	13%	1.0	\$11.29	0.6
2019	80%-100%	140	17%	0.1	9%	\$1,684,841	15%	145,988	17%	1.0	\$11.54	0.6
2019	100%-120%	200	24%	0.2	24%	\$2,676,877	24%	204,880	24%	1.0	\$13.07	1.1
2019	>120%	326	39%	0.5	58%	\$5,048,918	45%	343,989	40%	0.9	\$14.68	1.5

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6. PROGRAMS – SMART-E LOAN**

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner Occupied 1-4 Unit Households	% Owner Occupied 1-4 Unit Household Distribution	Project Units / 1,000 Owner Occupied 1-4 Unit Households	Total Investment/ Owner Occupied 1-4 Unit Household	Watts / Owner Occupied 1-4 Unit Household
2019	Total	832	100%	0.9	100%	\$11,336,982	100%	866,246	100%	1.0	\$13.09	1.0
2020	<60%	60	8%	0.0	3%	\$789,436	7%	62,247	7%	1.0	\$12.68	0.4
2020	60%-80%	76	10%	0.0	4%	\$911,265	8%	109,142	13%	0.7	\$8.35	0.3
2020	80%-100%	107	15%	0.1	15%	\$1,514,380	13%	145,988	17%	0.7	\$10.37	1.0
2020	100%-120%	206	28%	0.4	37%	\$3,362,082	29%	204,880	24%	1.0	\$16.41	1.7
2020	>120%	284	39%	0.4	42%	\$4,927,569	43%	343,989	40%	0.8	\$14.32	1.2
2020	Total	733	100%	1.0	100%	\$11,504,734	100%	866,246	100%	0.8	\$13.28	1.1
Total	<60%	318	7%	0.2	2%	\$4,436,203	5%	62,247	7%	5.1	\$71.27	3.6
Total	60%-80%	513	11%	0.6	6%	\$7,606,010	9%	109,142	13%	4.7	\$69.69	5.6
Total	80%-100%	691	15%	1.2	12%	\$11,311,149	13%	145,988	17%	4.7	\$77.48	8.0
Total	100%-120%	1,073	24%	2.6	27%	\$21,133,724	25%	204,880	24%	5.2	\$103.15	12.6
Total	>120%	1,886	42%	5.1	53%	\$39,646,161	47%	343,989	40%	5.5	\$115.25	14.7
Total	Total	4,481	100%	9.7	100%	\$84,133,248	100%	866,246	100%	5.2	\$97.12	11.1

TABLE 107. SMART-E LOAN ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS ABOVE OR BELOW 100% BY FY CLOSED¹⁴²

Fiscal Year	# Project Units			MW			Total Investment		
	Over 100% AMI	100% or Below AMI	% at 100% or Below	Over 100% AMI	100% or Below AMI	% at 100% or Below	Over 100% AMI	100% or Below AMI	% at 100% or Below
2012	0	0	0%	0.0	0.0	0%	\$0	\$0	0%
2013	3	0	0%	0.0	0.0	0%	\$71,924	\$0	0%
2014	143	50	35%	0.3	0.1	31%	\$2,486,507	\$1,670,647	33%
2015	278	81	29%	1.3	0.2	15%	\$7,663,425	\$6,133,713	20%
2016	221	157	29%	1.0	0.2	18%	\$6,145,939	\$4,831,275	21%
2017	522	353	32%	1.3	0.3	26%	\$10,748,716	\$7,848,956	27%
2018	1,749	1,140	35%	3.9	0.8	22%	\$34,175,021	\$24,207,923	29%

¹⁴² Excludes projects in unknown bands.

**CONNECTICUT GREEN BANK
6. PROGRAMS – SMART-E LOAN**

Fiscal Year	# Project Units			MW			Total Investment		
	Over 100% AMI	100% or Below AMI	% at 100% or Below	Over 100% AMI	100% or Below AMI	% at 100% or Below	Over 100% AMI	100% or Below AMI	% at 100% or Below
	Total	Total	Total	Total	Total	Total	Total	Total	Total
2019	832	526	37%	0.9	0.7	18%	\$7,725,795	\$3,611,187	32%
2020	733	490	33%	1.0	0.8	21%	\$8,289,652	\$3,215,082	28%
Total	4,481	2,959	34%	9.7	7.6	21%	\$84,133,248	\$60,779,885	28%

Distressed Community Penetration

For a breakdown of Smart-E project volume and investment by census tracts categorized by Distressed Communities – see Table 108. It should be noted that Smart-E is not an income targeted program.

TABLE 108. SMART-E LOAN ACTIVITY IN DISTRESSED COMMUNITIES BY FY CLOSED

Fiscal Year	Distressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
2012	Yes	0	0%	0.0	0%	\$0	0%	447,962	33%	0.0	\$0.00	0.0
2012	No	0	0%	0.0	0%	\$0	0%	912,222	67%	0.0	\$0.00	0.0
2012	Total	0	0%	0.0	0%	\$0	0%	1,360,184	100%	0.0	\$0.00	0.0
2013	Yes	1	33%	0.0	36%	\$34,389	48%	426,564	31%	0.0	\$0.08	0.0
2013	No	2	67%	0.0	64%	\$37,535	52%	929,285	69%	0.0	\$0.04	0.0
2013	Total	3	100%	0.0	100%	\$71,924	100%	1,355,849	100%	0.0	\$0.05	0.0
2014	Yes	25	17%	0.1	25%	\$532,141	21%	416,415	31%	0.1	\$1.28	0.2
2014	No	118	83%	0.3	75%	\$1,954,366	79%	939,791	69%	0.1	\$2.08	0.3
2014	Total	143	100%	0.3	100%	\$2,486,507	100%	1,356,206	100%	0.1	\$1.83	0.2
2015	Yes	45	16%	0.1	6%	\$734,328	10%	423,559	31%	0.1	\$1.73	0.2
2015	No	233	84%	1.2	94%	\$6,929,096	90%	929,024	69%	0.3	\$7.46	1.3
2015	Total	278	100%	1.3	100%	\$7,663,425	100%	1,352,583	100%	0.2	\$5.67	1.0
2016	Yes	66	30%	0.1	15%	\$1,426,930	23%	438,710	32%	0.2	\$3.25	0.3
2016	No	155	70%	0.8	85%	\$4,719,009	77%	916,003	68%	0.2	\$5.15	0.9
2016	Total	221	100%	1.0	100%	\$6,145,939	100%	1,354,713	100%	0.2	\$4.54	0.7
2017	Yes	116	22%	0.2	18%	\$1,893,280	18%	435,595	32%	0.3	\$4.32	0.5

**CONNECTICUT GREEN BANK
6. PROGRAMS – SMART-E LOAN**

Fiscal Year	Distressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
2017	No	406	78%	1.1	82%	\$8,865,437	82%	926,160	68%	0.4	\$9.57	1.1
2017	Total	522	100%	1.3	100%	\$10,748,716	100%	1,361,755	100%	0.4	\$7.89	0.9
2018	Yes	152	9%	0.1	3%	\$2,352,116	7%	430,098	31%	0.4	\$5.47	0.3
2018	No	1,597	91%	3.7	97%	\$31,822,905	93%	937,276	69%	1.7	\$33.95	4.0
2018	Total	1,749	100%	3.9	100%	\$34,175,021	100%	1,367,374	100%	1.3	\$24.99	2.8
2019	Yes	94	11%	0.1	8%	\$1,300,022	11%	420,071	31%	0.2	\$3.09	0.2
2019	No	738	89%	0.8	92%	\$10,036,960	89%	947,303	69%	0.8	\$10.60	0.9
2019	Total	832	100%	0.9	100%	\$11,336,982	100%	1,367,374	100%	0.6	\$8.29	0.7
2020	Yes	158	21%	0.2	19%	\$2,078,508	18%	420,071	31%	0.4	\$4.95	0.4
2020	No	577	79%	0.8	81%	\$9,451,392	82%	947,303	69%	0.6	\$9.98	0.8
2020	Total	735	100%	1.0	100%	\$11,529,900	100%	1,367,374	100%	0.5	\$8.43	0.7
Total	Yes	657	15%	0.9	10%	\$10,341,714	12%	420,071	31%	1.6	\$24.62	2.2
Total	No	3,826	85%	8.7	90%	\$73,816,700	88%	947,303	69%	4.0	\$77.92	9.2
Total	Total	4,483	100%	9.7	100%	\$84,158,414	100%	1,367,374	100%	3.3	\$61.55	7.1

CONNECTICUT GREEN BANK
6. PROGRAMS – SMART-E LOAN

Societal Impacts

Ratepayers in Connecticut enjoy the societal benefits of the Smart-E Loan. Over the course of its existence, the program has supported the creation of 1,033 job years, avoided the lifetime emission of 375,375 tons of carbon dioxide, 339,873 pounds of nitrous oxide, 284,604 pounds of sulfur oxide, and 30,705 pounds of particulate matter as illustrated by Table 109 and Table 111. Since Inception, Smart-E has generated \$4.8 million in tax revenues as shown in Table 110. The lifetime economic value of the public health impacts of the Smart-E program is estimated to be between \$10.8 and \$24.4 million as seen in Table 112.

TABLE 109. SMART-E LOAN JOB YEARS SUPPORTED BY FY CLOSED

Fiscal Year	Direct Jobs	Indirect and Induced Jobs	Total Jobs
2012	0	0	0
2013	0	1	1
2014	18	28	46
2015	56	89	145
2016	45	72	117
2017	49	65	114
2018	148	193	341
2019	58	75	132
2020	59	77	136
Total	433	600	1,033

TABLE 110. SMART-E LOAN TAX REVENUES GENERATED BY FY CLOSED

Fiscal Year	Individual Income Tax Revenue Generated	Corporate Tax Revenue Generated	Sales Tax Revenue Generated	Total Tax Revenue Generated
2012	\$0	\$0	\$0	\$0
2013	\$2,242	\$518	\$258	\$3,018
2014	\$111,194	\$33,190	\$33,817	\$178,200
2015	\$262,929	\$68,704	\$50,230	\$381,863
2016	\$225,988	\$67,481	\$50,851	\$344,320
2017	\$247,581	\$146,849	\$155,732	\$550,162
2018	\$772,133	\$477,363	\$545,991	\$1,795,487
2019	\$310,312	\$217,549	\$262,279	\$790,139
2020	\$316,740	\$218,430	\$245,608	\$780,778
Total	\$2,249,118	\$1,230,082	\$1,344,767	\$4,823,968

TABLE 111. SMART-E LOAN AVOIDED EMISSIONS BY FY CLOSED

Fiscal Year	CO2 Emissions Avoided (tons)		NOx Emissions Avoided (pounds)		SOx Emissions Avoided (pounds)		PM 2.5 (pounds)	
	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime
2012	0	0	0	0	0	0	0	0

CONNECTICUT GREEN BANK
6. PROGRAMS – SMART-E LOAN

Fiscal Year	CO2 Emissions Avoided (tons)		NOx Emissions Avoided (pounds)		SOx Emissions Avoided (pounds)		PM 2.5 (pounds)	
	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime
2013	13	307	12	292	10	252	1	26
2014	422	9,604	401	9,195	362	8,319	35	795
2015	1,286	30,912	1,378	33,276	1,314	31,740	108	2,606
2016	1,059	25,460	1,098	26,488	926	22,329	88	2,128
2017	1,896	44,330	1,580	37,087	1,072	25,181	155	3,630
2018	5,699	130,548	4,977	114,660	4,022	92,843	466	10,699
2019	1,846	40,781	1,653	36,685	1,442	31,986	150	3,315
2020	4,318	93,434	3,788	82,190	3,318	71,955	346	7,506
Total	16,538	375,375	14,887	339,873	12,467	284,604	1,349	30,705

TABLE 112. SMART-E LOAN PUBLIC HEALTH IMPACT BY FY CLOSED

Fiscal Year	Annual		Lifetime	
	Low	High	Low	High
2012	\$0	\$0	\$0	\$0
2013	\$436	\$985	\$10,572	\$23,873
2014	\$13,790	\$31,151	\$315,746	\$713,220
2015	\$44,319	\$100,089	\$1,058,313	\$2,389,955
2016	\$35,586	\$80,370	\$847,773	\$1,914,627
2017	\$68,036	\$153,700	\$1,568,319	\$3,542,850
2018	\$199,697	\$451,154	\$4,532,354	\$10,238,888
2019	\$63,315	\$143,073	\$1,385,123	\$3,129,773
2020	\$47,474	\$107,280	\$1,086,665	\$2,455,515
Total	\$472,653	\$1,067,801	\$10,804,866	\$24,408,701

Financial Performance

As of 6/30/20, there have been 68 defaults, 61 of which have been charged off by the lenders, with original principal balances totaling \$1,028,199 or 1.73% of the portfolio, and 53 delinquencies with original principal balances totaling \$663,440 or 1.12% of the portfolio. Based on the total principal outstanding, as of 6/30/20, there were charged off defaults of \$747,241 or 1.77% and delinquencies of \$549,978 or 1.3%. To date the secondary loan loss reserve has been used to reimburse two participating lenders for nine defaulted loans totaling \$73,542 or 0.12% of the portfolio or 0.17% of the outstanding principal.

The household customers that accessed the Smart-E Loan since its launch in 2013 had varying credit scores – see Table 113.

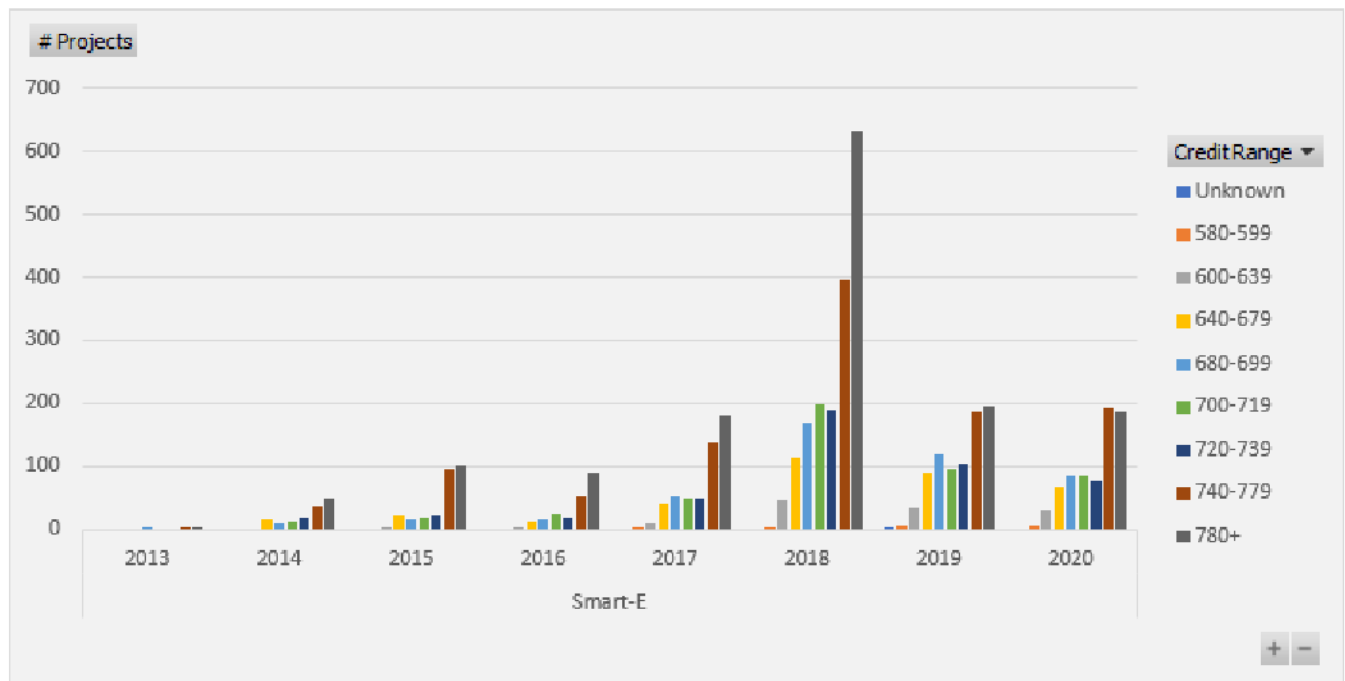
TABLE 113. CREDIT SCORE RANGES OF HOUSEHOLD CUSTOMERS USING THE SMART-E LOAN BY FY CLOSED

Fiscal Year	Unknown	580-599	600-639	640-679	680-699	700-719	720-739	740-779	780+	Grand Total
2012	-	-	-	-	-	-	-	-	-	-
2013					1			1	1	3
2014				15	10	12	18	39	49	143

CONNECTICUT GREEN BANK
6. PROGRAMS – SMART-E LOAN

Fiscal Year	Unknown	580-599	600-639	640-679	680-699	700-719	720-739	740-779	780+	Grand Total
2015			1	24	15	19	23	95	101	278
2016			3	13	15	27	19	54	90	221
2017		4	10	41	52	50	49	137	179	522
2018		5	46	114	167	199	190	396	632	1,749
2019	1	6	34	90	120	96	105	186	194	832
2020		8	32	67	87	87	78	193	185	737
Total	1	23	126	364	467	490	482	1,101	1,431	4,485
	0%	1%	3%	8%	10%	11%	11%	25%	32%	100%

FIGURE 10. CREDIT SCORE RANGES OF HOUSEHOLD CUSTOMERS USING THE SMART-E LOAN BY FY CLOSED



Of the Smart-E Loans approved and closed with household customers, Table 114 presents the lenders offering the financing products in this program with accompanying data.

TABLE 114. SMART-E LOAN LENDERS

Lender	# of Loans	Total Amount Financed	% of Loans	Min Loan Amount	Max Loan Amount	Average Loan Amount	Average Interest Rate	Average Term (months)	Decline Rate
Capital For Change	2,168	\$28,845,281	48.3%	\$954	\$45,000	\$13,305	3.36	96	28%
CorePlus Federal Credit Union	392	\$5,205,826	8.7%	\$1,993	\$45,107	\$13,280	3.98	84	11%
Eastern Connecticut Savings Bank	354	\$8,139,692	7.9%	\$1,800	\$50,000	\$22,993	3.25	108	34%

CONNECTICUT GREEN BANK
6. PROGRAMS – SMART-E LOAN

Lender	# of Loans	Total Amount Financed	% of Loans	Min Loan Amount	Max Loan Amount	Average Loan Amount	Average Interest Rate	Average Term (months)	Decline Rate
First National Bank of Suffield	71	\$1,341,987	1.6%	\$3,778	\$45,000	\$18,901	2.66	109	7%
Ion Bank	122	\$1,441,811	2.7%	\$2,720	\$25,000	\$11,818	4.03	94	29%
Liberty Bank	23	\$307,434	0.5%	\$4,550	\$25,000	\$13,367	4.87	85	26%
Mutual Security Credit Union	429	\$8,615,176	9.6%	\$0	\$45,000	\$20,082	2.65	106	15%
Nutmeg State Financial Credit Union	718	\$11,571,250	16.0%	\$1,802	\$40,000	\$16,116	2.95	96	35%
Patriot Bank	73	\$1,036,115	1.6%	\$5,000	\$25,000	\$14,193	3.48	89	30%
Quinnipac Bank & Trust	7	\$84,056	0.2%	\$8,550	\$16,556	\$12,008	4.71	98	20%
Thomaston Savings Bank	46	\$558,252	1.0%	\$3,099	\$25,000	\$12,136	3.67	93	25%
Union Savings Bank	65	\$971,758	1.4%	\$4,100	\$25,000	\$14,950	3.54	96	41%
Workers Federal Credit Union	17	\$319,459	0.4%	\$7,000	\$40,000	\$18,792	3.12	88	0%
Grand Total	4,485	\$68,438,096	100.0%	\$0	\$50,000	\$15,259	3.30	97	28%

Marketing

To accelerate the deployment of natural gas conversions in the state, the Smart-E program was launched in 2014 with an Energize Norwich campaign in partnership with Norwich Public Utilities and 2 local lenders. Building on that success, and to accelerate the deployment of residential solar PV through the RSIP and the uptake of the Smart-E Loan financing product, the Connecticut Green Bank implemented “Solarize Connecticut” through the end of 2015. Green Bank Solarize Connecticut programs were town based and designed to use a combination of group purchasing, time-limited offers, and grassroots outreach. The Green Bank deployed ARRA dollars into interest rate buydown programs to support market transformation efforts for key technologies that support the state’s climate change mitigation goals. A 0.99% promotion in FY18 resulted in significant volume for measures such as heat pumps and solar + energy efficiency bundles. The Green Bank’s own digital marketing and earned media initiatives constitute a key driver of volume in FY20 along with ongoing, in person and webinar trainings and support, for contractors.

TABLE 115. SMART-E LOAN PROJECT CHANNELS

Channel	# of Projects	Total Investment	Installed Capacity (MW)
EV	3	\$9,719	0.0
Health and Safety	1	\$10,020	0.0
Home Performance	488	\$7,534,431	0.0
HVAC	2,919	\$40,543,153	0.0
Solar	1,021	\$35,196,947	9.7
Unknown	53	\$878,446	0.0
Grand Total	4,485	\$84,172,715	9.7

CONNECTICUT GREEN BANK
6. PROGRAMS – SMART-E LOAN

TABLE 116. SMART-E LOAN MEASURES

# of Measures	# of Projects
Unknown	53
1	2,630
2	1,187
3	394
4	114
5	67
6	25
7	9
8	3
9	2
10	1
Total	4,485

In FY 2018, building on the success of the traditional Smart-E Loan program, the Green Bank gained experience in the automotive lending market by initiating a pilot program to extend the Smart-E Loan brand to cover new and used electric vehicles. Working with three regional credit union lenders, the Green Bank used an interest rate buydown to 0.99% and then 1.99% to save customers an average of \$900 on used EVs and \$2000 on new EVs. This allowed the Green Bank to test the effectiveness of a vehicle financing offer with an IRB and inform the design of future scalable programs, with an aim of also keeping more pre-owned EVs in operation in the state. The pilot concluded with 121 loans. Following the conclusion of the pilot, one Smart-E lender created an EV-specific auto loan.¹⁴³

In FY20, in response to requests from contractors and utility partners to address barriers to completing home energy assessments that lead to deeper energy efficiency projects, health and safety measures (i.e., asbestos and mold remediation) were reclassified as standalone Smart-E measures that can be financed in full, up to \$25,000. Health and safety measures had previously been limited to 25% of the total loan amount.

¹⁴³ For reference: <https://www.mscu.net/borrow/green-loans>

Case 5 – Low Income Solar Lease and Energy-Efficiency Energy Savings Agreement (ESA)

Description

Through the solar developer PosiGen, a respondent to the Connecticut Green Bank's 2015 RFP soliciting solar financing solutions to address underserved markets, the Green Bank supports solar and energy efficiency deployment targeted at the state's low- to moderate-income (LMI) population. In Connecticut, PosiGen develops and originates these solar projects as project sponsor, utilizing tax equity from multiple investors, senior debt capital from private lenders, and subordinated debt from the Green Bank. Initially the Green Bank supplied a debt advance of \$5,000,000 (followed by another \$3.5 million), which was subordinated to an additional \$8,500,000 advanced by private lenders Enhanced Capital and Stonehenge Capital to leverage over \$46 million in value for solar projects targeting LMI homeowners. The RSIP program's tiered LMI performance-based incentive (PBI) provides PosiGen a higher incentive for customers demonstrating these income requirements. In FY2019, The Green Bank partnered with Inclusive Prosperity Capital to help manage the Green Bank's investment and engagement with PosiGen.

To continue to expand the program, in FY'19 the Green Bank and LibreMax closed on a \$90 million credit facility designed to allow PosiGen to continue to provide affordable solar system and energy efficiency leases to residential customers nationally, including low-to-moderate income homeowners in Connecticut. Of the \$20 million portion of the credit facility available to the PosiGen, the Green Bank allocated up to \$15 million for its own funding. This was coupled with up to \$5 million from Inclusive Prosperity Capital.

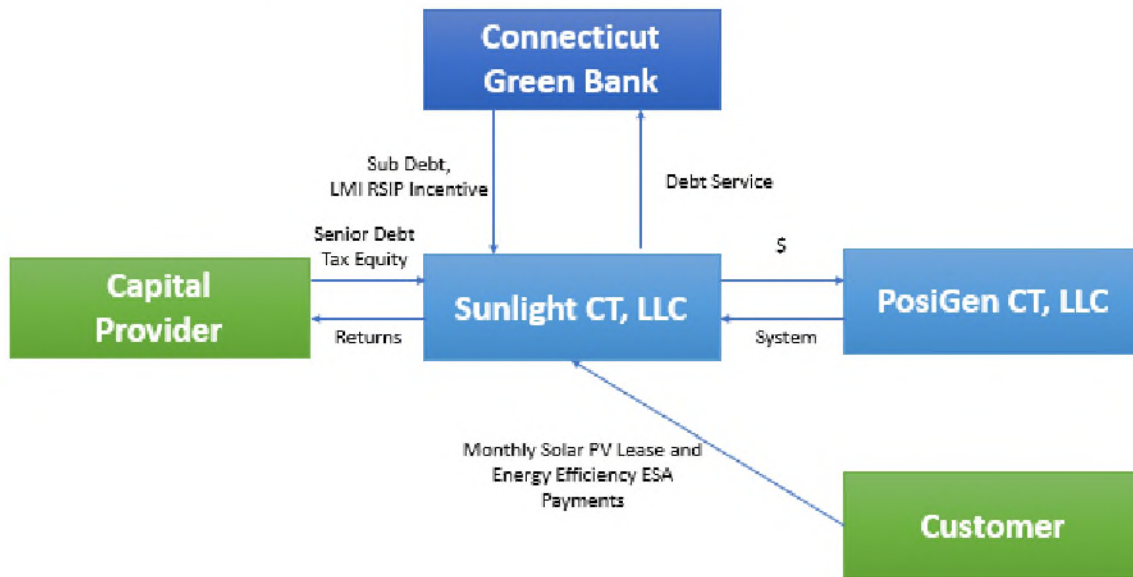
Through the partnership with PosiGen, the Connecticut Green Bank lowers the financial barriers to Connecticut LMI residential customers seeking to install solar PV with no up-front investment and energy efficiency measures. PosiGen's model also includes an alternative underwriting approach that does not rely on credit scores and a community-based marketing approach – two key ingredients for targeting this underserved market segment. Capital provided to PosiGen to be able to offer consumers a solar PV lease and energy efficiency "Energy Savings Agreement" is repaid to the Connecticut Green Bank, the tax equity investor and the lenders through consumer lease repayments. This contrasts with traditional energy program subsidies targeted to LMI homeowners, which are typically in the form of grants only.

The financial structure of the Low-Income Solar Lease product includes origination, servicing, and financing features¹⁴⁴ in combination with the support of the Connecticut Green Bank.

¹⁴⁴ Origination, servicing and financing managed by PosiGen.

CONNECTICUT GREEN BANK
6. PROGRAMS – LOW INCOME SOLAR LEASE

FIGURE 11. LEGAL STRUCTURE AND FLOWS OF CAPITAL FOR THE LOW INCOME SOLAR LEASE



Connecticut represented the first expansion for PosiGen outside of its initial market in Louisiana, where starting in 2011, it paired solar leasing and energy efficiency services to maximize savings for LMI customers. Given the strategic emphasis the Green Bank has placed on driving investment for lower income homeowners, the organization developed a flexible funding structure to rapidly bring PosiGen to market. The concept started with the Green Bank providing “anchor capital” for PosiGen in the form of low-cost debt, together with PosiGen’s own resources and tax equity from U.S. Bank (U.S. Bank was already an investor in the Connecticut market through the Green Bank’s CT Solar Lease). Documentation was structured to facilitate funding by a senior lender, providing for the subordination of the Green Bank’s loans once this senior lender could be secured. With initial capital requirements underwritten by the Green Bank, PosiGen had the financial backing and capital flexibility it needed to confidently secure its base of operation in Bridgeport, hire management and local staff, pursue local partnerships with existing energy efficiency and solar PV contractors, and resolve supply chain issues. By using its balance sheet as an initial source of low-cost debt capital, the Green Bank made it possible for a developer that had proven its business model in another market to bring its innovative approach to Connecticut to build investment in solar and energy efficiency for homeowners of more modest means. The investment had the intended impact: PosiGen could establish operations and get a market started, and its rapid success in Connecticut enabled the Green Bank and PosiGen to secure senior lenders and new sources of tax equity to enable operations to expand to several cities throughout Connecticut.

CONNECTICUT GREEN BANK
6. PROGRAMS – LOW INCOME SOLAR LEASE

Key Performance Indicators

The Key Performance Indicators for the Low-Income Solar Lease’s closed projects are reflected in Table 117 through Table 119. These illustrate the volume of projects by year, investment, generation capacity installed, and the amount of energy saved and/or produced.

TABLE 117. LOW INCOME SOLAR LEASE PROJECT TYPES AND INVESTMENT BY FY CLOSED¹⁴⁵

Fiscal Year	EE	RE	RE/EE ¹⁴⁶	# Projects	Total Investment	Green Bank Investment ¹⁴⁷	Private Investment	Leverage Ratio
2012	0	0	0	0	\$0	\$0	\$0	0
2013	0	0	0	0	\$0	\$0	\$0	0
2014	0	0	0	0	\$0	\$0	\$0	0
2015	0	4	0	4	\$109,380	\$36,000	\$73,380	3.0
2016	0	179	164	343	\$9,817,459	\$3,087,000	\$6,730,459	3.2
2017	0	251	418	669	\$18,326,615	\$6,021,000	\$12,305,615	3.0
2018	0	277	379	656	\$18,244,551	\$5,904,000	\$12,340,551	3.1
2019	0	197	652	849	\$24,863,979	\$7,641,000	\$17,222,979	3.3
2020	0	44	763	807	\$20,449,252	\$7,263,000	\$13,186,252	2.8
Total	0	952	2,376	3,328	\$91,811,236	\$29,952,000	\$61,859,236	3.1

TABLE 118. LOW INCOME SOLAR LEASE PROJECT CAPACITY, GENERATION AND SAVINGS BY FY CLOSED

Fiscal Year	Installed Capacity (kW)	Expected Annual Generation (kWh)	Expected Lifetime Savings or Generation (MWh)	Annual Saved / Produced (MMBtu) ¹⁴⁸	Lifetime Saved / Produced (MMBtu)	Annual Cost Savings	Lifetime Cost Savings
2012	0.0	0	0	0	0	\$0	\$0
2013	0.0	0	0	0	0	\$0	\$0
2014	0.0	0	0	0	0	\$0	\$0
2015	25.0	44,093	1,102	162	2,720	\$4,795	\$119,880
2016	2,235.9	3,885,928	97,148	13,902	233,240	\$411,188	\$10,279,710
2017	4,249.0	7,451,632	186,291	27,115	454,920	\$801,997	\$20,049,930
2018	4,360.0	7,848,250	196,206	27,683	446,080	\$786,413	\$19,660,320
2019	5,956.8	10,514,891	262,872	35,828	577,320	\$1,017,781	\$25,444,530
2020	5,065.3	9,315,131	232,878	34,055	548,760	\$967,432	\$24,185,790
Total	21,892.0	39,059,924	976,498	138,745	2,263,040	\$3,989,606	\$99,740,160

¹⁴⁵ Note that this investment is exclusive of Green Bank investments into PosiGen’s lease funds and represents just the incentives paid for the systems participating in the lease.

¹⁴⁶ All projects that receive an RSIP incentive are required to do an energy audit/assessment.

¹⁴⁷ Includes incentives, interest rate buydowns and loan loss reserves.

¹⁴⁸ Includes only the MMBtus for the HES audit. MMTBtus for other ECMs are not included.

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TABLE 119. LOW INCOME SOLAR LEASE PROJECT AVERAGES BY FY CLOSED

Fiscal Year	Average Total Investment	Average Amount Financed	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)	Average Finance Term (months)	Average Lease Price per Month	Average ESA Price per month¹⁴⁹
2012	\$0	\$0	0.0	0	0	-	-
2013	\$0	\$0	0.0	0	0	-	-
2014	\$0	\$0	0.0	0	0	-	-
2015	\$27,345	\$27,345	6.3	41	240	\$79	\$10
2016	\$28,622	\$28,622	6.5	41	240	\$80	\$10
2017	\$27,394	\$27,394	6.4	41	240	\$80	\$10
2018	\$27,812	\$27,812	6.6	42	240	\$88	\$10
2019	\$29,286	\$29,286	7.0	42	240	\$91	\$0
2020	\$25,340	\$25,340	6.3	42	240	\$83	0
Total	\$27,588	\$27,588	6.6	42	240	\$84	\$10

In fiscal year 2019 PosiGen changed their lease structure so that all customers now receive in depth energy efficiency services that were previously part of an optional, \$10 a month energy savings agreement. This change helps ensure PosiGen customers are maximizing the benefits of their PV system to reduce total energy burden.

¹⁴⁹ PosiGen’s ESA provides energy efficiency measures valued at over \$2000 to lessees for between \$10-\$15 a month.

**CONNECTICUT GREEN BANK
6. PROGRAMS – LOW INCOME SOLAR LEASE**

Area Median Income Band Penetration

For a breakdown of PosiGen Solar for All volume and investment by census tracts categorized by Area Median Income bands – see Table 120. As an income-targeted program, this table illustrates the degree to which the goal of serving consumers in lower income communities is being met.

TABLE 120. LOW INCOME SOLAR LEASE ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS BY FY CLOSED¹⁵⁰

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner Occupied 1-4 Unit Households	% Owner Occupied 1-4 Household Distribution	Project Units / 1,000 Owner Occupied 1-4 Unit Households	Total Investment / Owner Occupied 1-4 Unit Household	Watts / Owner Occupied 1-4 Unit Household
2012	<60%	0	0%	0.0	0%	\$0	0%	62,689	7%	0.0	\$0.00	0.0
2012	60%-80%	0	0%	0.0	0%	\$0	0%	102,178	12%	0.0	\$0.00	0.0
2012	80%-100%	0	0%	0.0	0%	\$0	0%	150,685	17%	0.0	\$0.00	0.0
2012	100%-120%	0	0%	0.0	0%	\$0	0%	216,484	25%	0.0	\$0.00	0.0
2012	>120%	0	0%	0.0	0%	\$0	0%	349,212	40%	0.0	\$0.00	0.0
2012	Total	0	0%	0.0	0%	\$0	0%	881,248	100%	0.0	\$0.00	0.0
2013	<60%	0	0%	0.0	0%	\$0	0%	61,004	7%	0.0	\$0.00	0.0
2013	60%-80%	0	0%	0.0	0%	\$0	0%	109,967	13%	0.0	\$0.00	0.0
2013	80%-100%	0	0%	0.0	0%	\$0	0%	149,676	17%	0.0	\$0.00	0.0
2013	100%-120%	0	0%	0.0	0%	\$0	0%	202,827	23%	0.0	\$0.00	0.0
2013	>120%	0	0%	0.0	0%	\$0	0%	350,708	40%	0.0	\$0.00	0.0
2013	Total	0	0%	0.0	0%	\$0	0%	874,182	100%	0.0	\$0.00	0.0
2014	<60%	0	0%	0.0	0%	\$0	0%	59,294	7%	0.0	\$0.00	0.0
2014	60%-80%	0	0%	0.0	0%	\$0	0%	104,528	12%	0.0	\$0.00	0.0
2014	80%-100%	0	0%	0.0	0%	\$0	0%	148,846	17%	0.0	\$0.00	0.0
2014	100%-120%	0	0%	0.0	0%	\$0	0%	208,912	24%	0.0	\$0.00	0.0
2014	>120%	0	0%	0.0	0%	\$0	0%	347,779	40%	0.0	\$0.00	0.0
2014	Total	0	0%	0.0	0%	\$0	0%	869,359	100%	0.0	\$0.00	0.0

¹⁵⁰ Excludes projects in unknown bands.

**CONNECTICUT GREEN BANK
6. PROGRAMS – LOW INCOME SOLAR LEASE**

Fiscal Year	MSA_AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner Occupied 1-4 Households	% Owner Occupied 1-4 Household Distribution	Project Units / 1,000 Owner Occupied 1-4 Unit Households	Total Investment / Owner Occupied 1-4 Unit Household	Watts / Owner Occupied 1-4 Unit Household
2015	<60%	2	50%	0.0	56%	\$60,330	55%	66,632	8%	0.0	\$0.91	0.2
2015	60%-80%	1	25%	0.0	20%	\$22,050	20%	96,059	11%	0.0	\$0.23	0.1
2015	80%-100%	0	0%	0.0	0%	\$0	0%	165,205	19%	0.0	\$0.00	0.0
2015	100%-120%	0	0%	0.0	0%	\$0	0%	183,629	21%	0.0	\$0.00	0.0
2015	>120%	1	25%	0.0	24%	\$27,000	25%	352,053	41%	0.0	\$0.08	0.0
2015	Total	4	100%	0.0	100%	\$109,380	100%	863,578	100%	0.0	\$0.13	0.0
2016	<60%	116	34%	0.7	32%	\$3,200,576	33%	63,056	7%	1.8	\$50.76	11.5
2016	60%-80%	86	25%	0.6	25%	\$2,492,419	25%	99,073	12%	0.9	\$25.16	5.7
2016	80%-100%	51	15%	0.3	15%	\$1,479,553	15%	165,012	19%	0.3	\$8.97	2.0
2016	100%-120%	46	13%	0.3	14%	\$1,351,795	14%	187,129	22%	0.2	\$7.22	1.7
2016	>120%	44	13%	0.3	13%	\$1,293,116	13%	344,577	40%	0.1	\$3.75	0.9
2016	Total	343	100%	2.2	100%	\$9,817,459	100%	858,847	100%	0.4	\$11.43	2.6
2017	<60%	243	36%	1.4	34%	\$6,342,929	35%	64,755	7%	3.8	\$97.95	22.4
2017	60%-80%	154	23%	1.0	23%	\$4,169,243	23%	97,455	11%	1.6	\$42.78	9.9
2017	80%-100%	121	18%	0.8	19%	\$3,394,040	19%	155,414	18%	0.8	\$21.84	5.1
2017	100%-120%	71	11%	0.5	12%	\$2,087,415	11%	209,484	24%	0.3	\$9.96	2.3
2017	>120%	80	12%	0.6	13%	\$2,332,989	13%	339,362	39%	0.2	\$6.87	1.6
2017	Total	669	100%	4.2	100%	\$18,326,615	100%	866,470	100%	0.8	\$21.15	4.9
2018	<60%	218	33%	1.4	32%	\$5,813,163	32%	62,247	7%	3.5	\$93.39	22.1
2018	60%-80%	159	24%	1.0	24%	\$4,354,938	24%	109,142	13%	1.5	\$39.90	9.5
2018	80%-100%	126	19%	0.9	20%	\$3,545,734	19%	145,988	17%	0.9	\$24.29	5.8
2018	100%-120%	80	12%	0.6	13%	\$2,377,915	13%	204,880	24%	0.4	\$11.61	2.8
2018	>120%	73	11%	0.5	12%	\$2,152,801	12%	343,989	40%	0.2	\$6.26	1.5
2018	Total	656	100%	4.4	100%	\$18,244,551	100%	866,246	100%	0.8	\$21.06	5.0
2019	<60%	235	28%	1.5	26%	\$6,360,043	26%	62,247	7%	3.8	\$102.17	24.6
2019	60%-80%	222	26%	1.5	25%	\$6,282,867	25%	109,142	13%	2.0	\$57.57	13.8
2019	80%-100%	132	16%	0.9	15%	\$3,807,603	15%	145,988	17%	0.9	\$26.08	6.3
2019	100%-120%	133	16%	1.0	17%	\$4,170,474	17%	204,880	24%	0.6	\$20.36	4.9

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Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner Occupied 1-4 Unit Households	% Owner Occupied 1-4 Unit Household Distribution	Project Units / 1,000 Owner Occupied 1-4 Unit Households	Total Investment / Owner Occupied 1-4 Unit Household	Watts / Owner Occupied 1-4 Unit Household
2019	>120%	127	15%	1.0	17%	\$4,242,992	17%	343,989	40%	0.4	\$12.33	2.9
2019	Total	849	100%	6.0	100%	\$24,863,979	100%	866,246	100%	1.0	\$28.70	6.9
2020	<60%	208	26%	1.2	23%	\$4,681,545	23%	62,247	7%	3.3	\$75.21	18.6
2020	60%-80%	182	23%	1.1	22%	\$4,454,580	22%	109,142	13%	1.7	\$40.81	10.2
2020	80%-100%	160	20%	1.0	20%	\$4,026,590	20%	145,988	17%	1.1	\$27.58	6.8
2020	100%-120%	118	15%	0.8	16%	\$3,204,181	16%	204,880	24%	0.6	\$15.64	3.8
2020	>120%	137	17%	1.0	20%	\$4,036,147	20%	343,989	40%	0.4	\$11.73	2.9
2020	Total	805	100%	5.1	100%	\$20,403,044	100%	866,246	100%	0.9	\$23.55	5.8
Total	<60%	1,022	31%	6.2	29%	\$26,458,587	29%	62,247	7%	16.4	\$425.06	100.4
Total	60%-80%	804	24%	5.2	24%	\$21,776,096	24%	109,142	13%	7.4	\$199.52	47.6
Total	80%-100%	590	18%	3.9	18%	\$16,253,520	18%	145,988	17%	4.0	\$111.33	26.6
Total	100%-120%	448	13%	3.2	14%	\$13,191,781	14%	204,880	24%	2.2	\$64.39	15.4
Total	>120%	462	14%	3.4	16%	\$14,085,044	15%	343,989	40%	1.3	\$40.95	9.9
Total	Total	3,326	100%	21.9	100%	\$91,765,028	100%	866,246	100%	3.8	\$105.93	25.3

TABLE 121. LOW INCOME SOLAR LEASE ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIUM INCOME (AMI) BANDS ABOVE OR BELOW 100% BY FY CLOSED¹⁵¹

Fiscal Year	# Project Units			MW			Total Investment		
	Over 100% AMI	100% or Below AMI	% at 100% or Below	Over 100% AMI	100% or Below AMI	% at 100% or Below	Over 100% AMI	100% or Below AMI	% at 100% or Below
2012	0	0	0%	0.0	0.0	0%	\$0	\$0	0%
2013	0	0	0%	0.0	0.0	0%	\$0	\$0	0%
2014	0	0	0%	0.0	0.0	0%	\$0	\$0	0%
2015	4	1	75%	0.0	0.0	76%	\$109,380	\$27,000	75%

¹⁵¹ Excludes projects in unknown bands.

**CONNECTICUT GREEN BANK
6. PROGRAMS – LOW INCOME SOLAR LEASE**

Fiscal Year	# Project Units			MW			Total Investment			% at 100% or Below
	Total	Over 100% AMI	100% or Below AMI	Total	Over 100% AMI	100% or Below AMI	Total	Over 100% AMI	100% or Below AMI	
2016	343	90	253	2.2	0.6	1.6	\$9,817,459	\$2,644,911	\$7,172,548	73%
2017	669	151	518	4.2	1.1	3.2	\$18,326,615	\$4,420,403	\$13,906,211	76%
2018	656	153	503	4.4	1.1	3.3	\$18,244,551	\$4,530,717	\$13,713,835	75%
2019	849	260	589	6.0	2.0	3.9	\$24,863,979	\$8,413,466	\$16,450,513	66%
2020	805	255	550	5.1	1.8	3.3	\$20,403,044	\$7,240,328	\$13,162,716	65%
Total	3,326	910	2,416	21.9	6.6	15.3	\$91,765,028	\$27,276,825	\$64,488,203	70%

The Green Bank has made great progress in its penetration of underserved markets and the low-income lease and ESA through PosiGen has been key to reaching these markets.

Distressed Community Penetration

For a breakdown of Low-Income Solar Lease project volume and investment by census tracts categorized by Distressed Communities – see Table 122. As an income-targeted program, this table illustrates the degree to which the goal of serving consumers in lower income communities is being met.

TABLE 122. LOW INCOME SOLAR LEASE ACTIVITY IN DISTRESSED COMMUNITIES BY FY CLOSED

Fiscal Year	Distressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
2012	Yes	0	0%	0.0	0%	\$0	0%	447,962	33%	0.0	\$0.00	0.0
2012	No	0	0%	0.0	0%	\$0	0%	912,222	67%	0.0	\$0.00	0.0
2012	Total	0	0%	0.0	0%	\$0	0%	1,360,184	100%	0.0	\$0.00	0.0
2013	Yes	0	0%	0.0	0%	\$0	0%	426,564	31%	0.0	\$0.00	0.0
2013	No	0	0%	0.0	0%	\$0	0%	929,285	69%	0.0	\$0.00	0.0
2013	Total	0	0%	0.0	0%	\$0	0%	1,355,849	100%	0.0	\$0.00	0.0
2014	Yes	0	0%	0.0	0%	\$0	0%	416,415	31%	0.0	\$0.00	0.0
2014	No	0	0%	0.0	0%	\$0	0%	939,791	69%	0.0	\$0.00	0.0
2014	Total	0	0%	0.0	0%	\$0	0%	1,356,206	100%	0.0	\$0.00	0.0
2015	Yes	2	50%	0.0	44%	\$49,500	45%	423,559	31%	0.0	\$0.12	0.0

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Fiscal Year	Distressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
2015	No	2	50%	0.0	56%	\$59,880	55%	929,024	69%	0.0	\$0.06	0.0
2015	Total	4	100%	0.0	100%	\$109,380	100%	1,352,583	100%	0.0	\$0.08	0.0
2016	Yes	198	58%	1.3	57%	\$5,611,562	57%	438,710	32%	0.5	\$12.79	2.9
2016	No	145	42%	1.0	43%	\$4,205,897	43%	916,003	68%	0.2	\$4.59	1.1
2016	Total	343	100%	2.2	100%	\$9,817,459	100%	1,354,713	100%	0.3	\$7.25	1.7
2017	Yes	401	60%	2.5	59%	\$10,759,337	59%	435,595	32%	0.9	\$24.70	5.7
2017	No	268	40%	1.8	41%	\$7,567,277	41%	926,160	68%	0.3	\$8.17	1.9
2017	Total	669	100%	4.2	100%	\$18,326,615	100%	1,361,755	100%	0.5	\$13.46	3.1
2018	Yes	208	32%	1.4	31%	\$5,697,177	31%	430,098	31%	0.5	\$13.25	3.1
2018	No	448	68%	3.0	69%	\$12,547,374	69%	937,276	69%	0.5	\$13.39	3.2
2018	Total	656	100%	4.4	100%	\$18,244,551	100%	1,367,374	100%	0.5	\$13.34	3.2
2019	Yes	213	25%	1.4	24%	\$5,995,642	24%	420,071	31%	0.5	\$14.27	3.4
2019	No	636	75%	4.5	76%	\$18,868,337	76%	947,303	69%	0.7	\$19.92	4.8
2019	Total	849	100%	6.0	100%	\$24,863,979	100%	1,367,374	100%	0.6	\$18.18	4.4
2020	Yes	445	57%	2.7	54%	\$10,710,177	54%	420,071	31%	1.1	\$25.50	6.3
2020	No	338	43%	2.3	46%	\$9,124,754	46%	947,303	69%	0.4	\$9.63	2.4
2020	Total	783	100%	4.9	100%	\$19,834,930	100%	1,367,374	100%	0.6	\$14.51	3.6
Total	Yes	1,467	44%	9.2	42%	\$38,823,395	43%	420,071	31%	3.5	\$92.42	22.0
Total	No	1,837	56%	12.5	58%	\$52,373,519	57%	947,303	69%	1.9	\$55.29	13.2
Total	Total	3,304	100%	21.7	100%	\$91,196,914	100%	1,367,374	100%	2.4	\$66.69	15.9

CONNECTICUT GREEN BANK
6. PROGRAMS – LOW INCOME SOLAR LEASE

Societal Impacts

Over the course of its existence, the program has supported the creation of 888 job years, avoided the lifetime emission of 538,431 tons of carbon dioxide, 514,609 pounds of nitrous oxide, 421,292 pounds of sulfur oxide, and 46,004 pounds of particulate matter as illustrated by Table 123 and Table 125. The Low-Income Solar Lease has generated \$2.2 million in tax revenues for the state since its inception as shown in Table 124. The lifetime economic value of the public health impacts from the Green Bank’s partnership with PosiGen programs is estimated to be between \$16.4 and \$37.1 as seen in Table 126.

TABLE 123. LOW INCOME SOLAR LEASE JOB YEARS SUPPORTED BY FY CLOSED

Fiscal Year	Direct Jobs	Indirect and Induced Jobs	Total Jobs
2012	0	0	0
2013	0	0	0
2014	0	0	0
2015	1	1	2
2016	58	92	150
2017	71	94	165
2018	72	92	164
2019	97	127	223
2020	79	105	184
Total	378	510	888

TABLE 124. LOW INCOME SOLAR LEASE TAX REVENUES GENERATED BY FY CLOSED

Fiscal Year	Individual Income Tax Revenue Generated	Corporate Tax Revenue Generated	Sales Tax Revenue Generated	Total Tax Revenue Generated
2012	\$0	\$0	\$0	\$0
2013	\$0	\$0	\$0	\$0
2014	\$0	\$0	\$0	\$0
2015	\$2,958	\$369	\$0	\$3,327
2016	\$265,469	\$33,121	\$0	\$298,590
2017	\$382,626	\$61,830	\$0	\$444,456
2018	\$380,914	\$61,553	\$0	\$442,467
2019	\$519,115	\$83,885	\$0	\$603,000
2020	\$426,943	\$68,990	\$0	\$495,933
Total	\$1,978,026	\$309,747	\$0	\$2,287,773

CONNECTICUT GREEN BANK
6. PROGRAMS – LOW INCOME SOLAR LEASE

TABLE 125. LOW INCOME SOLAR LEASE AVOIDED EMISSIONS BY FY CLOSED

Fiscal Year	CO2 Emissions Avoided (tons)		NOx Emissions Avoided (pounds)		SOx Emissions Avoided (pounds)		PM 2.5 (pounds)	
	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime
2012	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0
2015	25	620	25	634	18	453	2	54
2016	2,160	53,991	2,118	52,960	1,512	37,810	188	4,703
2017	4,057	101,432	3,662	91,554	2,643	66,077	348	8,690
2018	4,337	108,420	4,189	104,725	3,588	89,691	369	9,232
2019	5,811	145,264	5,613	140,324	4,816	120,400	495	12,367
2020	5,148	128,705	4,976	124,412	4,274	106,862	438	10,957
Total	21,537	538,431	20,584	514,609	16,852	421,292	1,840	46,004

TABLE 126. LOW INCOME SOLAR LEASE PUBLIC HEALTH IMPACT BY FY CLOSED

Fiscal Year	Annual		Lifetime	
	Low	High	Low	High
2012	\$0	\$0	\$0	\$0
2013	\$0	\$0	\$0	\$0
2014	\$0	\$0	\$0	\$0
2015	\$855	\$1,931	\$21,385	\$48,281
2016	\$74,986	\$169,298	\$1,874,650	\$4,232,457
2017	\$144,052	\$325,232	\$3,601,309	\$8,130,790
2018	\$151,404	\$341,831	\$3,785,111	\$8,545,766
2019	\$201,304	\$454,491	\$5,032,610	\$11,362,285
2020	\$85,187	\$192,330	\$2,129,684	\$4,808,257
Total	\$657,790	\$1,485,113	\$16,444,749	\$37,127,836

Financial Performance

To date there have been eleven defaults with an original principal balance of \$184,778 or 0.425% of the portfolio, of which one charge-off with original principal balance of \$16,798 or 0.039% of the portfolio. As of 6/30/2020¹⁵² there are 146 delinquencies totaling \$2,627,779 of original principal balance¹⁵³ or 5.65% of the portfolio. This performance is consistent with expectations for a low-to-moderate income targeted product using an alternative underwriting approach.

¹⁵² July 2020 loan servicing report

¹⁵³ Based on average lease price in PosiGen Pipeline Reporting July 2019

Marketing

To build the pipeline of projects for the lease, Connecticut Green Bank supports PosiGen's community-based marketing campaigns, leveraging the institution's market analysis and local experience and connections. The Green Bank also co-brands the program so partnering community organizations and consumers know there is governmental involvement, especially critical given the targeting of underserved communities and homeowners. This includes assisting with PosiGen's outreach efforts through its Solar for All campaigns which are modeled after Green Bank Solarize campaigns.

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Case 6 – Multifamily Programs

Description

Defined as buildings with 5 or more units, the Green Bank provides a suite of financing options that support property owners to assess, design, fund, and monitor high impact green energy upgrades for multifamily properties. The Green Bank contracted with Inclusive Prosperity Capital (IPC), to manage and administer these programs on behalf of CGB.

The Green Bank encourages owners to take a holistic approach to their buildings by implementing energy upgrades that will deliver a high return on investment over the long term through energy and operating cost savings, increased property values, and improvement of resident health, safety and living environment. The organization partners with building owners to finance a project design approach that is both technology and fuel agnostic – whereby owners identify the combination of renewable energy and energy efficiency measures/technology approaches that will deliver the most benefits and highest impact. This holistic approach and focus on deeper efficiency measures is particularly important in Connecticut due to the need of the state's old and aging housing stock need for significant capital improvements and health and safety remediation. We are catalyzing holistic projects that reap the benefits of significant energy and operating cost savings, which can be used to finance other capital improvements like full roof replacements and remediation of mold, asbestos, lead, etc.

The Green Bank Multifamily programs primarily target the low- and moderate-income market in Connecticut, for all ownership types, including private and non-profit owned apartments, condominiums, cooperatives, and state and federally funded affordable housing developments, including senior and assisted living facilities.

Pre-development resources

In a traditionally difficult sector to address, multifamily projects have a significant need for pre-development financing, trusted technical support, and streamlined access to funding programs. In 2015, the Green Bank developed pre-development energy loan programs to support property owners in identifying high-quality technical assistance providers, and fund the work needed to scope and secure financing for deeper, cost effective energy upgrades. Eligible assessment and design services funded under the pre-development Navigator loan include those for energy and water efficiency, efficient fuel conversion, renewable energy systems, energy storage and EV fueling stations, qualified health and safety measures, and performance benchmarking.

The Green Bank is working to change the model of pre-development and technical assistance from one that is primarily grant-funded in the low- and moderate-income housing space to one that is loan driven and financially sustainable.

This program is supported by a revolving loan fund for loans of 1.99% to 3.99% and up to two-year terms. The affordable multifamily version of this program is housed at the Housing Development Fund, a local CDFI, and part of a \$5 million program-related investment from the MacArthur Foundation is used to support the program.

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- **Navigator Pre-Development Energy Loan**¹⁵⁴ funds pre-development costs for building owners to assess, scope and design their project.

Term Financing Solutions

The Green Bank offers the following term financing options for project implementation¹⁵⁵.

- **Low Income Multifamily Energy (LIME) Loan**¹⁵⁶ funds energy improvement projects for low- and moderate-income properties (where at least 60% of units serve renters at 80% or lower of Area Median Income) and is geared towards mid-cycle energy improvements. The LIME Loan program is delivered through a partnership with Capital for Change, a local CDFI (formerly known as Connecticut Housing Investment Fund) and provides alternatively secured loans (not secured by mortgages) that cover 100% of project costs, require no money down, and are repaid from energy cost savings for terms up to 20 years. Projected energy savings are used to cover the debt service of the loan. The Green Bank supports LIME with a \$325,000 loan loss reserve and provided \$3.5 million to capitalize the initial \$5 million loan fund. When it is necessary to lower the overall cost of capital to close a loan, funds from the \$5 million program-related investment from the MacArthur Foundation, housed at HDF, may be used to support the program.
- **CT Green Bank Power Purchase Agreements**¹⁵⁷ offer solar-only financing allows owners to go solar and lock in lower long-term electricity rates with no upfront cost and without the risk or hassle of purchasing and maintaining a system. Solar financing is available for multifamily properties through the Green Bank's solar power purchase agreement facilities. See the Case 2 – CT Green Bank PPA & Solar Lease for more information.
- **Commercial Property Assessed Clean Energy**¹⁵⁸ (C-PACE) funds 100% of project costs with no money down. C-PACE loans are for a term of up to 20 years and are secured by using a benefit assessment on the borrower's property tax bill. The program serves market rate as well as affordable multifamily properties; however, to-date, given difficulties acquiring lender consent, multifamily C-PACE financing continues to be limited. See Case 1 – C-PACE for more information.
- **EnergizeCT Health & Safety Revolving Loan Fund**¹⁵⁹ funds health and safety improvements necessary to allow subsequent energy improvements in existing properties. The program is funded by \$1.5 million from DEEP and provides low-interest, 2.99% fixed rate loans made available on a rolling application basis.

¹⁵⁴ Navigator Pre-Development Energy Loan: <https://www.ctgreenbank.com/programs/multifamily/navigator/>

¹⁵⁵ Owners are also encouraged to seek other sources of capital if they can be secured under more favorable terms than those offered by the Green Bank.

¹⁵⁶ Low Income Multifamily Energy (LIME) Loan: <https://ctgreenbank.com/programs/multifamily/lime/>

¹⁵⁷ Solar Power Purchase Agreement: <https://ctgreenbank.com/programs/multifamily/solarppa/>

¹⁵⁸ Commercial Property Assessed Clean Energy: <http://www.CPACE.com/>

¹⁵⁹ <https://ctgreenbank.com/programs/multifamily/energizect-health-safety-loan/>

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Key Performance Indicators

The Key Performance Indicators for Multifamily programs closed activity are reflected in Table 127 through Table 129. These illustrate the volume of projects by year, investment, generation capacity installed, and the amount of energy saved and/or produced. It also breaks down the volume of projects by energy efficiency, renewable generation, or both.

TABLE 127. MULTIFAMILY PROJECT TYPES AND INVESTMENT BY FY CLOSED

Fiscal Year	EE	RE	RE/EE	Other	# Projects	# Project Units	Amount Financed	Total Investment ¹⁶⁰	Green Bank Investment ¹⁶¹	Private Investment	Leverage Ratio
2012	0	0	0	0	0	0	\$0	\$0	\$0	\$0	-
2013	0	0	0	0	0	0	\$0	\$0	\$0	\$0	-
2014	1	0	0	0	1	120	\$250,000	\$420,000	\$0	\$420,000	-
2015	3	4	0	0	7	408	\$5,550,204	\$6,282,061	\$4,921,542	\$1,360,520	1.3
2016	14	15	1	1	31	1,767	\$28,041,912	\$34,005,715	\$1,256,148	\$32,749,567	27.1
2017	8	8	1	2	19	1,535	\$9,778,782	\$10,895,117	\$2,150,058	\$8,745,059	5.1
2018	6	2	1	10	19	1,792	\$8,979,221	\$9,493,247	\$158,914	\$9,334,333	59.7
2019	2	4	1	12	19	2,181	\$31,729,947	\$32,789,800	\$1,219,124	\$31,570,677	26.9
2020	4	7	5	2	18	1,284	\$8,850,101	\$9,305,699	\$1,843,523	\$7,462,176	5.0
Total	38	40	9	27	114	9,087	\$93,180,167	\$103,191,639	\$11,549,308	\$91,642,331	8.9

TABLE 128. MULTIFAMILY PROJECT CAPACITY, GENERATION AND SAVINGS BY FY CLOSED

Fiscal Year	Installed Capacity (kW)	Expected Annual Generation (kWh)	Expected Lifetime Savings or Generation (MWh)	Annual Saved / Produced (MMBtu)	Lifetime Saved / Produced (MMBtu)	Annual Cost Savings	Lifetime Cost Savings
2012	0.0	0	0	0	0	\$0	\$0
2013	0.0	0	0	0	0	\$0	\$0
2014	0.0	17,873	214	61	733	\$69,534	\$834,408
2015	1,030.0	4,147,155	101,912	5,450	130,331	\$243,673	\$5,918,657
2016	1,286.7	2,209,496	45,563	7,100	144,480	\$531,098	\$10,320,114
2017	2,278.8	2,620,026	63,326	11,557	105,941	\$370,090	\$6,926,347
2018	135.2	1,475,091	19,703	5,412	72,259	\$269,666	\$3,389,711
2019	403.3	275,772	6,894	2,215	33,217	\$81,008	\$866,069
2020	1,995.1	8,078,159	149,920	7,575	176,428	\$244,780	\$5,568,901
Total	7,129.1	18,823,572	387,531	39,369	663,390	\$1,809,850	\$33,824,208

¹⁶⁰ This number includes financing and investment for the entire project supported including clean energy, health and safety remediation, and project design.

¹⁶¹ Includes incentives, interest rate buydowns and loan loss reserves.

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TABLE 129. MULTIFAMILY PROJECT AVERAGES BY FY CLOSED

Fiscal Year	Average Total Investment	Average Amount Financed	Average Amount Financed per Unit	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)	Average Finance Term (months)	Average Finance Rate
2012	\$0	\$0	\$0	0.0	0	0	0.00
2013	\$0	\$0	\$0	0.0	0	0	0.00
2014	\$420,000	\$250,000	\$2,083	0.0	61	9	6.00
2015	\$897,437	\$792,886	\$13,603	257.5	779	27	6.00
2016	\$1,096,959	\$904,578	\$15,870	80.4	229	13	4.29
2017	\$573,427	\$514,673	\$6,371	253.2	608	12	4.23
2018	\$499,645	\$472,591	\$5,011	45.1	285	11	2.73
2019	\$1,725,779	\$1,669,997	\$14,548	100.8	117	12	3.60
2020	\$516,983	\$491,672	\$6,893	221.7	421	18	6.17
Total	\$905,190	\$817,370	\$10,254	158.4	345	14	4.14

As the Green Bank’s Multifamily programs are predominantly income-targeted, Table 122 shows a breakdown of projects completed in a year by property type and reflects the number of units impacted.

TABLE 130. MULTIFAMILY PROJECTS BY LOW TO MODERATE INCOME (LMI) OR MARKET RATE PROPERTY BY FY CLOSED

Fiscal Year	Affordable		Market Rate		Total	
	# of Projects	# Units	# of Projects	# Units	# of Projects	# Units
2014	1	120			1	120
2015	5	326	2	82	7	408
2016	30	1,576	1	191	31	1,767
2017	18	1,435	1	100	19	1,535
2018	19	1,792			19	1,792
2019	18	2,049	1	132	19	2,181
2020	15	1,170	3	114	18	1,284
Grand Total	106	8,468	8	619	114	9,087

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Area Median Income Band Penetration

For a breakdown of Multifamily volume and investment by census tracts categorized by Area Median Income bands – see Table 131. As a program predominantly focused on properties that serve low-to-moderate income residents, this table doesn't reflect the degree to which the goal of serving lower income residents is being met. The program is equally focused on affordable housing properties located in more affluent communities and census tracts that are housing families of lower incomes as it is on affordable housing properties in lower income census tracts.

TABLE 131. MULTIFAMILY ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS BY FY CLOSED¹⁶²

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner/Rental Occupied 5+ Households	% Owner/Rental Occupied 5+ Household Distribution	Project Units / 1,000 Owner/Rental Occupied 5+ Households	Total Investment / Owner/Rental Occupied 5+ Household	Watts / Owner/Rental Occupied 5+ Unit Household
2012	<60%	0	0%	0.0	0%	\$0	#DIV/0!	70,561	35%	0.0	\$0.00	0.0
2012	60%-80%	0	0%	0.0	0%	\$0	#DIV/0!	43,788	22%	0.0	\$0.00	0.0
2012	80%-100%	0	0%	0.0	0%	\$0	#DIV/0!	39,234	20%	0.0	\$0.00	0.0
2012	100%-120%	0	0%	0.0	0%	\$0	#DIV/0!	27,834	14%	0.0	\$0.00	0.0
2012	>120%	0	0%	0.0	0%	\$0	#DIV/0!	19,133	10%	0.0	\$0.00	0.0
2012	Total	0	0%	0.0	0%	\$0	#DIV/0!	200,555	100%	0.0	\$0.00	0.0
2013	<60%	0	0%	0.0	0%	\$0	#DIV/0!	68,381	35%	0.0	\$0.00	0.0
2013	60%-80%	0	0%	0.0	0%	\$0	#DIV/0!	45,202	23%	0.0	\$0.00	0.0
2013	80%-100%	0	0%	0.0	0%	\$0	#DIV/0!	39,451	20%	0.0	\$0.00	0.0
2013	100%-120%	0	0%	0.0	0%	\$0	#DIV/0!	25,294	13%	0.0	\$0.00	0.0
2013	>120%	0	0%	0.0	0%	\$0	#DIV/0!	19,303	10%	0.0	\$0.00	0.0
2013	Total	0	0%	0.0	0%	\$0	#DIV/0!	197,636	100%	0.0	\$0.00	0.0
2014	<60%	0	0%	0.0	0%	\$0	0%	68,722	35%	0.0	\$0.00	0.0
2014	60%-80%	0	0%	0.0	0%	\$0	0%	44,830	23%	0.0	\$0.00	0.0
2014	80%-100%	120	100%	0.0	0%	\$420,000	100%	36,752	18%	3.3	\$11.43	0.0
2014	100%-120%	0	0%	0.0	0%	\$0	0%	28,263	14%	0.0	\$0.00	0.0

¹⁶² Excludes projects in unknown bands.

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Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner/Rental Occupied 5+ Households	% Owner/Rental Occupied 5+ Household Distribution	Project Units / 1,000 Owner/Rental Occupied 5+ Households	Total Investment / Owner/Rental Occupied 5+ Household	Watts / Owner/Rental Occupied 5+ Household
2014	>120%	0	0%	0.0	0%	\$0	0%	20,384	10%	0.0	\$0.00	0.0
2014	Total	120	100%	0.0	0%	\$420,000	100%	198,956	100%	0.6	\$2.11	0.0
2015	<60%	16	4%	0.0	0%	\$33,234	1%	84,158	37%	0.2	\$0.39	0.0
2015	60%-80%	41	10%	0.0	0%	\$445,000	7%	44,668	19%	0.9	\$9.96	0.0
2015	80%-100%	113	29%	0.0	0%	\$540,000	9%	53,494	23%	2.1	\$10.09	0.0
2015	100%-120%	16	4%	0.0	1%	\$58,782	1%	24,388	11%	0.7	\$2.41	0.6
2015	>120%	222	54%	1.0	99%	\$5,205,046	83%	23,491	10%	9.5	\$221.58	43.3
2015	Total	408	100%	1.0	100%	\$6,282,061	100%	230,204	100%	1.8	\$27.29	4.5
2016	<60%	295	17%	0.1	6%	\$19,758,029	58%	86,225	37%	3.4	\$229.15	0.9
2016	60%-80%	193	11%	0.1	11%	\$1,815,713	5%	45,398	19%	4.3	\$40.00	3.2
2016	80%-100%	553	31%	0.5	38%	\$7,046,916	21%	49,125	21%	11.3	\$143.45	10.0
2016	100%-120%	672	39%	0.5	42%	\$5,290,361	16%	30,753	13%	21.9	\$172.03	17.7
2016	>120%	54	3%	0.0	2%	\$94,696	0%	22,618	10%	2.4	\$4.19	1.1
2016	Total	1,767	100%	1.3	100%	\$34,005,715	100%	234,119	100%	7.5	\$145.25	5.5
2017	<60%	653	43%	1.5	65%	\$4,410,412	40%	86,272	37%	7.6	\$51.12	17.2
2017	60%-80%	314	20%	0.3	14%	\$3,611,545	33%	43,920	19%	7.1	\$82.23	7.4
2017	80%-100%	455	30%	0.0	2%	\$1,558,600	14%	51,444	22%	8.8	\$30.30	0.8
2017	100%-120%	81	5%	0.3	11%	\$898,560	8%	32,673	14%	2.5	\$27.50	7.7
2017	>120%	32	2%	0.2	8%	\$416,000	4%	21,018	9%	1.5	\$19.79	8.3
2017	Total	1,535	100%	2.3	100%	\$10,895,117	100%	235,327	100%	6.5	\$46.30	9.7
2018	<60%	1,689	94%	0.0	27%	\$8,936,053	94%	83,249	35%	20.3	\$107.34	0.4
2018	60%-80%	6	0%	0.0	0%	\$50,000	1%	55,429	23%	0.1	\$0.90	0.0
2018	80%-100%	41	2%	0.0	0%	\$179,194	2%	45,080	19%	0.9	\$3.98	0.0
2018	100%-120%	32	2%	0.0	30%	\$170,000	2%	34,590	14%	0.9	\$4.91	1.2
2018	>120%	24	1%	0.1	43%	\$158,000	2%	21,753	9%	1.1	\$7.26	2.7
2018	Total	1,792	100%	0.1	100%	\$9,493,247	100%	240,101	100%	7.5	\$39.54	0.6
2019	<60%	1,427	65%	0.3	80%	\$28,259,147	86%	83,249	35%	17.1	\$339.45	3.9
2019	60%-80%	104	5%	0.0	0%	\$361,149	1%	55,429	23%	1.9	\$6.52	0.0

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Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner/Rental Occupied 5+ Households	% Owner/Rental Occupied 5+ Household Distribution	Project Units / 1,000 Owner/Rental Occupied 5+ Households	Total Investment / Owner/Rental Occupied 5+ Household	Watts / Owner/Rental Occupied 5+ Unit Household
2019	80%-100%	559	26%	0.0	0%	\$1,105,251	3%	45,080	19%	12.4	\$24.52	0.0
2019	100%-120%	60	3%	0.1	20%	\$2,704,426	8%	34,590	14%	1.7	\$78.19	2.4
2019	>120%	31	1%	0.0	0%	\$359,828	1%	21,753	9%	1.4	\$16.54	0.0
2019	Total	2,181	100%	0.4	100%	\$32,789,800	100%	240,101	100%	9.1	\$136.57	1.7
2020	<60%	264	24%	0.6	32%	\$4,737,755	54%	83,249	35%	3.2	\$56.91	7.6
2020	60%-80%	170	15%	0.4	18%	\$1,754,119	20%	55,429	23%	3.1	\$31.65	6.5
2020	80%-100%	208	19%	0.1	5%	\$489,397	6%	45,080	19%	4.6	\$10.86	2.3
2020	100%-120%	425	38%	0.9	45%	\$1,516,500	17%	34,590	14%	12.3	\$43.84	26.0
2020	>120%	41	4%	0.0	0%	\$300,000	3%	21,753	9%	1.9	\$13.79	0.0
2020	Total	1,108	100%	2.0	100%	\$8,797,771	100%	240,101	100%	4.6	\$36.64	8.3
Total	<60%	4,344	49%	2.6	36%	\$66,134,630	64%	89,249	35%	52.2	\$794.42	30.7
Total	60%-80%	828	9%	0.8	12%	\$8,037,525	8%	55,429	23%	14.9	\$145.01	15.0
Total	80%-100%	2,049	23%	0.6	9%	\$11,339,358	11%	45,080	19%	45.5	\$251.54	14.0
Total	100%-120%	1,286	14%	1.8	26%	\$10,638,629	10%	34,590	14%	37.2	\$307.56	53.0
Total	>120%	404	5%	1.3	18%	\$6,533,570	6%	21,753	9%	18.6	\$300.35	58.6
Total	Total	8,911	100%	7.1	100%	\$102,683,711	100%	240,101	100%	37.1	\$427.67	29.7

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TABLE 132. MULTIFAMILY ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS ABOVE OR BELOW 100% BY FY CLOSED¹⁶³

Fiscal Year	# Project Units			MW			Total Investment					
	Total	Over 100% AMI	100% or Below AMI	% at 100% or Below	Total	Over 100% AMI	100% or Below AMI	% at 100% or Below	Total	Over 100% AMI	100% or Below AMI	% at 100% or Below
2012	0	0	0	0%	0.0	0.0	0.0	0%	\$0	\$0	\$0	0%
2013	0	0	0	0%	0.0	0.0	0.0	0%	\$0	\$0	\$0	0%
2014	120	0	120	100%	0.0	0.0	0.0	0%	\$420,000	\$0	\$420,000	100%
2015	408	238	170	42%	1.0	1.0	0.0	0%	\$6,282,061	\$5,263,827	\$1,018,234	16%
2016	1,767	726	1,041	59%	1.3	0.6	0.7	56%	\$34,005,715	\$5,385,057	\$28,620,658	84%
2017	1,535	113	1,422	93%	2.3	0.4	1.9	81%	\$10,895,117	\$1,314,560	\$9,580,556	88%
2018	1,792	56	1,736	97%	0.1	0.1	0.0	27%	\$9,493,247	\$328,000	\$9,165,247	97%
2019	2,181	91	2,090	96%	0.4	0.1	0.3	80%	\$32,789,800	\$3,064,254	\$29,725,547	91%
2020	1,108	466	642	58%	2.0	0.9	1.1	55%	\$8,797,771	\$1,816,500	\$6,981,271	79%
Total	8,911	1,690	7,221	81%	7.1	3.1	4.0	56%	\$102,683,711	\$17,172,198	\$85,511,513	83%

¹⁶³ Excludes projects in unknown bands.

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Distressed Community Penetration

For a breakdown of Multifamily project volume and investment by census tracts categorized by Distressed Communities – see Table 133. As a program predominantly focused on properties that serve low-to-moderate income residents, this table doesn't reflect the degree to which the goal of serving lower income residents is being met. The program is equally focused on affordable housing properties located in more affluent communities and census tracts that are housing families of lower incomes as it is on affordable housing properties in lower income census tracts.

TABLE 133. MULTIFAMILY ACTIVITY IN DISTRESSED COMMUNITIES BY FY CLOSED

Fiscal Year	Distressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
2012	Yes	0	0%	0.0	0%	\$0	0%	447,962	33%	0.0	\$0.00	0.0
2012	No	0	0%	0.0	0%	\$0	0%	912,222	67%	0.0	\$0.00	0.0
2012	Total	0	0%	0.0	0%	\$0	0%	1,360,184	100%	0.0	\$0.00	0.0
2013	Yes	0	0%	0.0	0%	\$0	0%	426,564	31%	0.0	\$0.00	0.0
2013	No	0	0%	0.0	0%	\$0	0%	929,285	69%	0.0	\$0.00	0.0
2013	Total	0	0%	0.0	0%	\$0	0%	1,355,849	100%	0.0	\$0.00	0.0
2014	Yes	0	0%	0.0	0%	\$0	0%	416,415	31%	0.0	\$0.00	0.0
2014	No	120	100%	0.0	0%	\$420,000	100%	939,791	69%	0.1	\$0.45	0.0
2014	Total	120	100%	0.0	0%	\$420,000	100%	1,356,206	100%	0.1	\$0.31	0.0
2015	Yes	252	62%	0.9	87%	\$5,718,234	91%	423,559	31%	0.6	\$13.50	2.1
2015	No	156	38%	0.1	13%	\$563,827	9%	929,024	69%	0.2	\$0.61	0.1
2015	Total	408	100%	1.0	100%	\$6,282,061	100%	1,352,583	100%	0.3	\$4.64	0.8
2016	Yes	341	20%	0.3	26%	\$20,319,907	60%	438,710	32%	0.8	\$46.32	0.8
2016	No	1,402	80%	1.0	74%	\$13,685,808	40%	916,003	68%	1.5	\$14.94	1.0
2016	Total	1,743	100%	1.3	100%	\$34,005,715	100%	1,354,713	100%	1.3	\$25.10	0.9
2017	Yes	579	38%	1.4	63%	\$4,053,099	37%	435,595	32%	1.3	\$9.30	3.3
2017	No	956	62%	0.8	37%	\$6,842,018	63%	926,160	68%	1.0	\$7.39	0.9
2017	Total	1,535	100%	2.3	100%	\$10,895,117	100%	1,361,755	100%	1.1	\$8.00	1.7
2018	Yes	1,507	84%	0.0	27%	\$4,889,924	52%	430,098	31%	3.5	\$11.37	0.1
2018	No	285	16%	0.1	73%	\$4,603,323	48%	937,276	69%	0.3	\$4.91	0.1

**CONNECTICUT GREEN BANK
6. PROGRAMS – MULTIFAMILY PROGRAMS**

Fiscal Year	Distressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
2018	Total	1,792	100%	0.1	100%	\$9,493,247	100%	1,367,374	100%	1.3	\$6.94	0.1
2019	Yes	1,847	85%	0.2	40%	\$28,997,027	88%	420,071	31%	4.4	\$69.03	0.4
2019	No	334	15%	0.2	60%	\$3,792,774	12%	947,303	69%	0.4	\$4.00	0.3
2019	Total	2,181	100%	0.4	100%	\$32,789,800	100%	1,367,374	100%	1.6	\$23.98	0.3
2020	Yes	859	67%	1.8	89%	\$8,388,274	90%	420,071	31%	2.0	\$19.97	4.2
2020	No	425	33%	0.2	11%	\$917,425	10%	947,303	69%	0.4	\$0.97	0.2
2020	Total	1,284	100%	2.0	100%	\$9,305,699	100%	1,367,374	100%	0.9	\$6.81	1.5
Total	Yes	5,385	59%	4.6	66%	\$72,366,465	70%	420,071	31%	12.8	\$172.27	11.0
Total	No	3,678	41%	2.5	35%	\$30,825,175	30%	947,303	69%	3.9	\$32.54	2.6
Total	Total	9,063	100%	7.1	100%	\$103,191,639	100%	1,367,374	100%	6.6	\$75.47	5.2

CONNECTICUT GREEN BANK
6. PROGRAMS – MULTIFAMILY PROGRAMS

Societal Impacts

Over the course of its existence, the Green Bank’s Multifamily Program has supported the creation of 2,528 job years, avoided the lifetime emission of 190,513 tons of carbon dioxide, 185,007 pounds of nitrous oxide, 156,403 pounds of sulfur oxide, and 7,440 pounds of particulate matter as illustrated by Table 134 and Table 136. Multifamily programs are estimated to have generated \$14 million in tax revenues since inception as shown in Table 135. The lifetime economic value of the public health impacts of these programs are estimated between \$2.9 and \$6.7 million as illustrated in Table 137.

TABLE 134. MULTIFAMILY JOB YEARS SUPPORTED BY FY CLOSED

Fiscal Year	Direct Jobs	Indirect and Induced Jobs	Total Jobs
2012	0	0	0
2013	0	0	0
2014	5	9	14
2015	28	45	73
2016	380	606	986
2017	207	314	521
2018	151	197	348
2019	213	288	501
2020	35	51	86
Total	1,019	1,509	2,528

TABLE 135. MULTIFAMILY TAX REVENUES GENERATED BY FY CLOSED

Fiscal Year	Individual Income Tax Revenue Generated	Corporate Tax Revenue Generated	Sales Tax Revenue Generated	Total Tax Revenue Generated
2012	\$0	\$0	\$0	\$0
2013	\$0	\$0	\$0	\$0
2014	\$28,346	\$8,258	\$24,487	\$61,092
2015	\$187,446	\$209,860	\$277,195	\$674,501
2016	\$1,965,119	\$703,277	\$1,533,106	\$4,201,501
2017	\$665,067	\$434,807	\$1,124,438	\$2,224,312
2018	\$777,572	\$530,210	\$1,557,411	\$2,865,193
2019	\$983,605	\$682,928	\$1,897,759	\$3,564,293
2020	\$142,863	\$132,789	\$185,754	\$461,406
Total	\$4,750,017	\$2,702,129	\$6,600,151	\$14,052,297

CONNECTICUT GREEN BANK
6. PROGRAMS – MULTIFAMILY PROGRAMS

TABLE 136. MULTIFAMILY AVOIDED EMISSIONS BY FY CLOSED

Fiscal Year	CO2 Emissions Avoided (tons)		NOx Emissions Avoided (pounds)		SOx Emissions Avoided (pounds)		PM 2.5 (pounds)	
	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime
2012	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0
2014	10	116	8	100	7	88	1	9
2015	2,166	53,182	1,851	45,168	1,708	41,482	13	258
2016	1,229	25,375	1,214	25,196	1,005	20,288	104	2,164
2017	1,427	34,484	1,287	31,150	967	23,270	121	2,941
2018	801	10,723	701	9,477	614	8,289	64	865
2019	152	3,811	147	3,685	127	3,173	13	324
2020	2,653	62,823	3,933	70,230	3,206	59,812	35	877
Total	8,438	190,513	9,141	185,007	7,635	156,403	352	7,440

TABLE 137. MULTIFAMILY ECONOMIC VALUE OF PUBLIC HEALTH IMPACT BY FY CLOSED

Fiscal Year	Annual		Lifetime	
	Low	High	Low	High
2012	\$0	\$0	\$0	\$0
2013	\$0	\$0	\$0	\$0
2014	\$295	\$667	\$3,539	\$8,000
2015	\$5,115	\$11,555	\$98,720	\$222,960
2016	\$40,706	\$91,939	\$858,016	\$1,937,594
2017	\$50,343	\$113,670	\$1,222,697	\$2,760,618
2018	\$24,786	\$56,022	\$336,256	\$759,928
2019	\$8,910	\$20,117	\$222,761	\$502,934
2020	\$9,416	\$21,259	\$235,403	\$531,478
Total	\$139,572	\$315,228	\$2,977,392	\$6,723,512

Financial Performance

To date there have been no defaults and as of 6/30/2020 there were 2 delinquencies representing \$1,445,752 of original principal, 0.14% of the portfolio. All delinquent projects were PPA's.

Marketing

The Green Bank's multifamily programs are built on partnerships with key housing organizations in Connecticut that support the Green Bank's multifamily programs in marketing, outreach, demonstration, and education programs to build awareness and customer demand by property owners. Our approach is to leverage and collaborate with these well-established organizations, building on their initiatives and programs, as we work to scale and "mainstream" holistic clean energy improvements in the multifamily sector. Key partners include the Affordable Housing Alliance, (formerly the Connecticut Housing Coalition), Department of Housing, Connecticut Housing Finance Authority and the HUD Connecticut Field Office, as well as the utility

companies. These organizations partner with us at conferences as well as other outreach and education activities organized by the Green Bank.

We also conduct direct outreach to property owners through a sales consultant who has a strong network of relationships with multifamily property owners and managers.

In 2017 we established a Multifamily Peer-to-Peer network where advanced practitioners, including owners, developers, architects, professional service providers and funders, gather on a monthly basis to exchange information and discuss their projects – with the goal of building greater professional capacity in the sector and awareness of Green Bank programs.

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CONNECTICUT GREEN BANK
6. PROGRAMS – STRATEGIC INVESTMENTS

Case 7 – Strategic Investments

Description

As opportunities present themselves, the Green Bank’s financial resources are considered for part of the capital stack of projects that are outside any of the organization’s existing programs. These projects are selected based on the opportunity to expand the organization’s experience with specific technologies, to advance economic development in a specific locale, or to drive adoption of clean energy that would otherwise not occur.

Key Performance Indicators

The Key Performance Indicators for the Strategic Program closed activity are reflected in Table 138 through Table 140.

TABLE 138. STRATEGIC PROJECT TYPES AND INVESTMENT BY FY CLOSED

Fiscal Year	EE	RE	RE/EE	Other	# Projects	Total Investment	Green Bank Investment ¹⁶⁴	Private Investment	Leverage Ratio
2012	-	-	-	-	-	-	-	-	-
2013	-	1	-	-	1	\$70,800,000	\$5,800,000	\$65,000,000	12.2
2014	-	-	-	-	-	-	-	-	-
2015	1	1	-	1	2	\$56,500,000	\$3,227,000	\$53,273,000	17.5
2016	-	-	-	-	-	-	-	-	-
2017	-	1	-	-	1	\$4,538,212	\$3,900,000	\$638,212	1.2
2018	-	-	-	-	-	-	-	-	-
2019	-	1	-	-	1	\$6,503,800	\$1,200,000	\$5,303,800	5.4
2020	-	2	-	-	2	\$20,738,702	\$6,723,188	\$14,015,514	-3.1
Total	1	6			7	\$159,080,714	\$20,850,188	\$138,230,526	7.6

TABLE 139. STRATEGIC PROJECT CAPACITY, GENERATION AND SAVINGS BY FY CLOSED

Fiscal Year	Installed Capacity (kW)	Expected Annual Generation (kWh)	Expected Lifetime Savings or Generation (MWh)	Annual Saved / Produced (MMBtu)	Lifetime Saved / Produced (MMBtu)
2012	-	-	-	-	-
2013	14,800.0	116,683,200	1,166,832	398,123	3,981,231
2014	-	-	-	-	-
2015	5,000.0	136,494,997	1,661,591	465,850	403,503
2016	-	-	-	-	-
2017	193.0	828,433	20,711	2,827	70,665
2018	-	-	-	-	-
2019	997.7	4,282,527	107,063	3,876	96,900
2020	7,700.0	60,444,000	614,952	29,919	305,015
Total	28,690.7	318,733,060	3,571,149	900,594	10,124,702

¹⁶⁴ Includes incentives, interest rate buydowns and loan loss reserves.

CONNECTICUT GREEN BANK
6. PROGRAMS – STRATEGIC INVESTMENTS

TABLE 140. STRATEGIC PROJECT AVERAGES BY FY CLOSED

Fiscal Year	Average Total Investment	Average Amount Financed	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)
2012	-	-	-	-
2013	\$70,800,000	\$5,800,000	14,800.0	398,123
2014	-	-	-	-
2015	\$28,250,000	\$1,613,500	2,500.0	232,925
2016	-	-	-	-
2017	\$4,538,212	\$3,900,000	193.0	2,827
2018	-	-	-	-
2019	\$6,503,800	\$6,503,800	997.7	-
2020	\$10,369,351	\$10,369,351	3,850.0	-
Total	\$22,725,816	\$5,738,500	4,781.8	216,700

Societal Impacts

Ratepayers in Connecticut enjoy of the societal benefits of Strategic Investments. Over the course of its existence, the program has supported the creation of 2,096 job years, avoided the lifetime emission of 1,089,248 tons of carbon dioxide, 1,798,303 pounds of nitrous oxide, 1,454,162 pounds of sulfur oxide, and 17,794 pounds of particulate matter as illustrated by Table 141 and Table 143. These projects are estimated to have generated \$15 million in tax revenues for the state of CT since inception as shown in Table 142. The lifetime economic value of the public health impacts of these projects are estimated between \$15 and \$34 million as illustrated in Table 144.

TABLE 141. STRATEGIC JOB YEARS SUPPORTED BY FY CLOSED

Fiscal Year	Direct Jobs	Indirect and Induced Jobs	Total Jobs
2012	-	-	-
2013	340	779	1,119
2014	-	-	-
2015	279	360	639
2016	-	-	-
2017	28	36	64
2018	-	-	-
2019	38	49	87
2020	75	111	187
Total	760	1,336	2,096

CONNECTICUT GREEN BANK
6. PROGRAMS – STRATEGIC INVESTMENTS

TABLE 142. STRATEGIC TAX REVENUES GENERATED BY FY CLOSED

Fiscal Year	Individual Income Tax Revenue Generated	Corporate Tax Revenue Generated	Sales Tax Revenue Generated	Total Tax Revenue Generated
2012	\$0	\$0	\$0	\$0
2013	\$1,782,886	\$503,246	\$3,907,840	\$6,193,972
2014	\$0	\$0	\$0	\$0
2015	\$2,001,357	\$1,253,139	\$3,036,598	\$6,291,094
2016	\$0	\$0	\$0	\$0
2017	\$148,127	\$176,704	\$237,072	\$561,903
2018	\$0	\$0	\$0	\$0
2019	\$212,284	\$253,238	\$339,752	\$805,275
2020	\$452,443	\$127,944	\$1,150,259	\$1,730,646
Total	\$4,597,097	\$2,078,414	\$8,792,602	\$15,468,113

TABLE 143. STRATEGIC AVOIDED EMISSIONS BY FY CLOSED

Fiscal Year	CO2 Emissions Avoided (tons)		NOx Emissions Avoided (pounds)		SOx Emissions Avoided (pounds)		PM 2.5 (pounds)	
	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime
2012	-	-	-	-	-	-	-	-
2013	7,876	78,761	63,009	630,089	45,623	456,231	0	0
2014	-	-	-	-	-	-	-	-
2015	74,261	904,728	65,253	798,227	58,574	719,983	5,897	71,794
2016	-	-	-	-	-	-	-	-
2017	430	10,759	356	8,906	323	8,077	0	0
2018	-	-	-	-	-	-	-	-
2019	2,225	55,619	1,841	46,037	1,670	41,755	-	-
2020	3,938	39,381	31,504	315,045	22,812	228,116	-	-
Total	88,730	1,089,248	161,964	1,798,303	129,002	1,454,162	5,897	71,794

TABLE 144. STRATEGIC PUBLIC HEALTH IMPACT BY FY CLOSED

Fiscal Year	Annual		Lifetime	
	Low	High	Low	High
2012	-	-	-	-
2013	\$839,171	\$1,896,841	\$8,391,713	\$18,968,414
2014	-	-	-	-
2015	\$124,567	\$280,670	\$1,868,508	\$4,210,056
2016	-	-	-	-
2017	-	-	-	-
2018	-	-	-	-
2019	\$29,353	\$66,348	\$733,821	\$1,658,711

CONNECTICUT GREEN BANK
6. PROGRAMS – STRATEGIC INVESTMENTS

Fiscal Year	Annual		Lifetime	
	Low	High	Low	High
2020	\$419,586	\$948,421	\$4,195,856	\$9,484,207
Total	\$1,412,677	\$3,192,281	\$15,189,898	\$34,321,389

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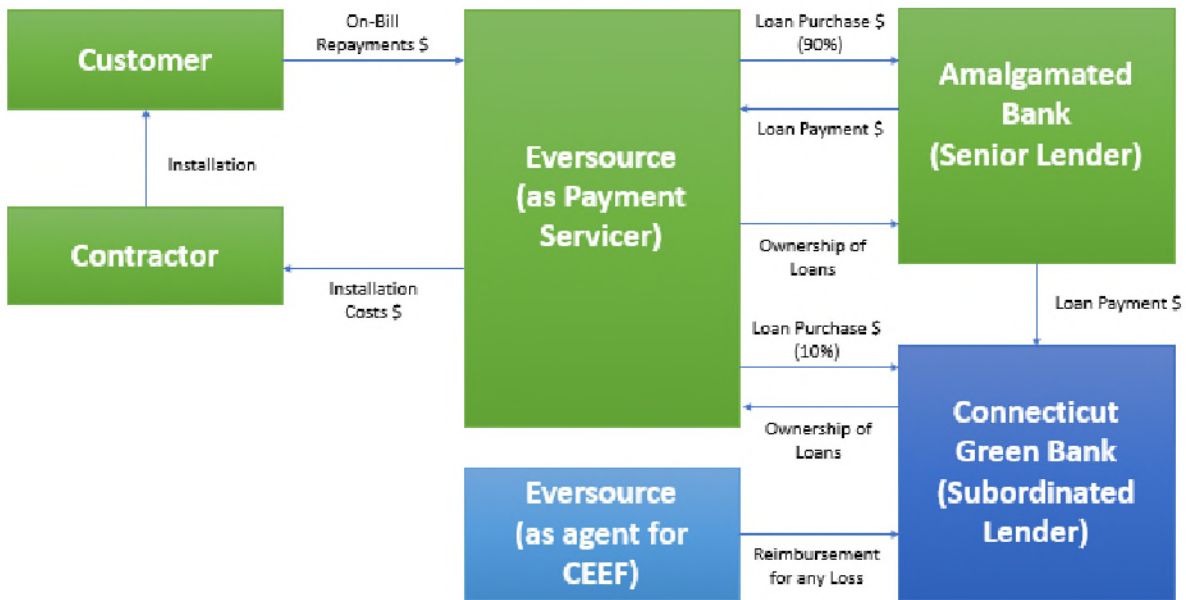
Case 8 – SBEA

Description

The Small Business Energy Advantage program was created in partnership by the United Illuminating and Eversource under the guidance of the Energy Efficiency Board. The program enables small businesses, who have an average 12-month peak demand between 10 and 200 kw to reduce their energy costs by addressing energy efficiency opportunities in their office, shops, restaurants, and factories. Participants can borrow up to \$100,000 to address these measures, at zero interest and repay their financing on their electric bills.

In 2019, the Green Bank closed on a financing structure that brought cheaper capital from the market to the program, thereby reducing the ratepayer's subsidy it, by lowering the cost of capital in the program through a public-private partnership between the Green Bank and Amalgamated Bank.

FIGURE 12. LEGAL STRUCTURE AND FLOWS OF CAPITAL FOR SBEA



Key Performance Indicators

The Key Performance Indicators for SBEA closed activity are reflected in Table 145 and Table 146. These illustrate the volume of projects by year, investment, and generation capacity installed. It also breaks down the volume of projects by energy efficiency, renewable generation, or both.

CONNECTICUT GREEN BANK
6. PROGRAMS – SBEA

TABLE 145. SBEA PROJECT TYPES AND INVESTMENT BY FY CLOSED

Fiscal Year	EE	# Projects	Total Investment	Green Bank Investment	Private Investment	Leverage Ratio
2012	-	-	-	-	-	-
2013	-	-	-	-	-	-
2014	-	-	-	-	-	-
2015	-	-	-	-	-	-
2016	-	-	-	-	-	-
2017	-	-	-	-	-	-
2018	-	-	-	-	-	-
2019	4,339	4,339	\$47,681,205	\$4,486,648	\$43,194,557	10.6
2020	617	617	\$10,912,879	\$1,011,807	\$9,901,072	10.8
Total	4,956	4,956	\$58,594,084	\$5,498,455	\$53,095,629	10.7

TABLE 146. SBEA PROJECT CAPACITY, GENERATION AND SAVINGS BY FY CLOSED¹⁶⁵

Fiscal Year	Installed Capacity (kW)	Expected Annual Generation (kWh)	Expected Lifetime Savings or Generation (MWh)	Annual Saved / Produced (MMBtu)	Lifetime Saved / Produced (MMBtu)	Annual Cost Savings	Lifetime Cost Savings
2012	0.0	0	0	0	0	\$0	\$0
2013	0.0	0	0	0	0	\$0	\$0
2014	0.0	0	0	0	0	\$0	\$0
2015	0.0	0	0	0	0	\$0	\$0
2016	0.0	0	0	0	0	\$0	\$0
2017	0.0	0	0	0	0	\$0	\$0
2018	0.0	0	0	0	0	\$0	\$0
2019	0.0	122,046,294	1,464,556	0	0	\$0	\$0
2020	0.0	17,354,820	208,258	0	0	\$0	\$0
Total	0.0	139,401,113	1,672,813	0	0	\$0	\$0

Societal Impacts

Over the course of its existence, the program has supported the creation of 709 job years, avoided the lifetime emission of 906,918 tons of carbon dioxide, 782,852 pounds of nitrous oxide, 687,756 pounds of sulfur oxide, and 72,215 pounds of particulate matter as illustrated by Table 147 and Table 148. SBEA has generated \$6.2 million in tax revenues for the state since its inception as shown in Table 149.

¹⁶⁵ Energy Savings numbers for SBEA are provided by to the Green Bank by Eversource using their established methodology. These savings numbers are not included in overall Green Bank impact numbers.

CONNECTICUT GREEN BANK
6. PROGRAMS – SBEA

TABLE 147. SBEA JOB YEARS SUPPORTED BY FY CLOSED¹⁶⁶

Fiscal Year	Direct Jobs	Indirect and Induced Jobs	Total Jobs
2012	0	0	0
2013	0	0	0
2014	0	0	0
2015	0	0	0
2016	0	0	0
2017	0	0	0
2018	0	0	0
2019	253	324	577
2020	58	74	132
Total	311	398	709

TABLE 148. SBEA AVOIDED EMISSIONS BY FY CLOSED¹⁶⁷

Fiscal Year	CO2 Emissions Avoided (tons)		NOx Emissions Avoided (pounds)		SOx Emissions Avoided (pounds)		PM 2.5 (pounds)	
	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime
2012	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	66,168	794,011	57,116	685,391	50,178	602,133	5,269	63,225
2020	9,409	112,907	8,122	97,462	7,135	85,623	749	8,990
Total	75,576	906,918	65,238	782,852	57,313	687,756	6,018	72,215

TABLE 149. SBEA TAX REVENUES GENERATED BY FY CLOSED

Fiscal Year	Individual Income Tax Revenue Generated	Corporate Tax Revenue Generated	Sales Tax Revenue Generated	Total Tax Revenue Generated
2012	\$0	\$0	\$0	\$0
2013	\$0	\$0	\$0	\$0
2014	\$0	\$0	\$0	\$0
2015	\$0	\$0	\$0	\$0

¹⁶⁶ These jobs estimates were calculated using the established Green Bank methodology but are not included in overall Green Bank impact numbers.

¹⁶⁷ These avoided emissions are provided by Eversource and are excluded from the Green Bank's total emissions avoided

CONNECTICUT GREEN BANK
6. PROGRAMS – SBEA

Fiscal Year	Individual Income Tax Revenue Generated	Corporate Tax Revenue Generated	Sales Tax Revenue Generated	Total Tax Revenue Generated
2016	\$0	\$0	\$0	\$0
2017	\$0	\$0	\$0	\$0
2018	\$0	\$0	\$0	\$0
2019	\$1,373,552	\$937,508	\$2,779,957	\$5,091,018
2020	\$314,367	\$214,569	\$636,254	\$1,165,190
Total	\$1,687,920	\$1,152,077	\$3,416,211	\$6,256,208

Financing Program

SBEA offer participants zero-interest, on-bill financing for up to 4 years. Business are eligible for up to \$100,000 per meter, with higher limits for municipalities and the state. The Connecticut Green Bank and Amalgamated Bank have partnered together to supply capital for Eversource's SBEA financing. The loans are originally funded by Eversource. Connecticut Green Bank and Amalgamated Bank purchase these loans on a quarterly basis at a rate discounted to bring their customer-facing rate to 0%. Connecticut Green Bank contributes 10% of the capital for these purchases and the remaining 90% comes from Amalgamated Bank. Loan losses are backed by the Connecticut Energy Efficiency Fund.

Financial Performance

As of June 30, 2019, there were 148 delinquent SBEA loans with a balance of \$ \$1,058,669.57 or 3.7% of the outstanding balance. These delinquencies represent 1.8% of the original balance.

Marketing

SBEA is marketed by the utilities through a network of authorized contractors. They offer a free energy assessment and incentives, in addition to the financing. At present, the Green Bank is not involved with efforts to market SBEA.

Case 9 – Anaerobic Digestion and Combined Heat and Power Pilot Programs

Description

These pilot programs were initiated in 2011 per Public Act 11-80 Section 103, the Green Bank is to develop a three-year pilot program for AD and CHP by setting aside \$2 million a year for each pilot for three years – for a total of \$12 million. Funds to support the pilot programs could be used as grants, power purchase agreements or loans. There were to be no more than five (5) AD projects, each no more than 3 MW in size, and no more than 50 MW of CHP projects each not to exceed 5 MW in size. Both pilot programs supported projects at no more than \$450 per kW on a grant basis; Seven projects were supported over the duration of these pilots (see Table 143 below). Due to the Connecticut General Assembly’s reallocation of monies from the Clean Energy Fund to the General Fund in 2017, the Green Bank cancelled existing commitments for these pilots the following year.

Key Performance Indicators

The Key Performance Indicators for the AD and CHP Pilot Programs closed activity are reflected in Table 150 through Table 152. These illustrate the volume of projects by year, investment, generation capacity installed, and the amount of energy saved and/or produced. It also breaks down the volume of projects by energy efficiency, renewable generation, or both.

TABLE 150. AD AND CHP PILOT PROJECT TYPES AND INVESTMENT BY FY CLOSED

Fiscal Year	EE	RE	RE/EE	# Projects	Total Investment	Green Bank Investment ¹⁶⁸	Private Investment	Leverage Ratio
2012	-	-	-	-	-	-	-	-
2013		2		2	\$3,189,000	\$304,500	\$2,884,500	10.5
2014		1		1	\$6,300,000	\$630,000	\$5,670,000	10.0
2015		2		2	\$642,578	\$60,750	\$581,828	10.6
2016		1		1	\$10,500,000	\$1,997,403	\$8,502,597	5.3
2017		1		1	\$3,401,392	\$502,860	\$2,898,532	6.8
2018	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-
Total		7		7	\$24,032,970	\$3,495,513	\$20,537,457	6.9

¹⁶⁸ Includes incentives, interest rate buydowns and loan loss reserves.

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6. PROGRAMS – PILOT PROGRAMS

TABLE 151. AD AND CHP PILOT PROJECT CAPACITY, GENERATION AND SAVINGS BY FY CLOSED

Fiscal Year	Installed Capacity (kW)	Expected Annual Generation (kWh)	Expected Lifetime Savings or Generation (MWh)	Annual Saved / Produced (MMBtu)	Lifetime Saved / Produced (MMBtu)	Annual Food/Organic Waste (tons/year)
2012	-	-	-	-	-	-
2013	685.0	5,400,540	81,008	32,533	488,002	-
2014	3,000.0	23,652,000	354,780	142,482	2,137,234	-
2015	135.0	1,064,340	15,965	4,000	60,001	-
2016	1,010.0	7,078,080	106,171	44,949	674,240	40,000
2017	795.0	6,267,780	94,017	304,445	4,566,675	-
2018	-	-	-	-	-	-
2019	-	-	-	-	-	-
2020	-	-	-	-	-	-
Total	5,625.0	43,462,740	651,941	528,410	7,926,152	40,000

TABLE 152. AD AND CHP PILOT PROJECT AVERAGES BY FY CLOSED

Fiscal Year	Total Average Investment	Average Amount Financed	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)
2012	-	-	-	-
2013	\$1,594,500	\$0	342.5	16,267
2014	\$6,300,000	\$0	3,000.0	142,482
2015	\$321,289	\$0	67.5	2,000
2016	\$10,500,000	\$1,997,403	1,010.0	44,949
2017	\$3,401,392	\$502,860	795.0	304,445
2018	-	-	-	-
2019	-	-	-	-
2020	-	-	-	-
Total	\$3,433,281	\$1,250,132	803.6	75,487

Societal Impacts

Ratepayers in Connecticut continue to enjoy the societal benefits of the AD and CHP Programs despite its closure. Over the course of its existence, these programs have supported the creation of 188 job years as illustrated by Table 153. These projects have generated over \$2 million in tax revenues as shown in Table 154. We have not included environmental or public health impacts for these pilots as the Avert and CoBRA models do not consider the technologies of these pilots.

TABLE 153. AD AND CHP PILOT JOB YEARS SUPPORTED BY FY CLOSED

Fiscal Year	Direct Jobs	Indirect and Induced Jobs	Total Jobs
2012	-	-	-
2013	12	20	32
2014	25	39	64
2015	3	4	6

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 6. PROGRAMS – PILOT PROGRAMS

Fiscal Year	Direct Jobs	Indirect and Induced Jobs	Total Jobs
2016	20	32	51
2017	13	21	34
2018	-	-	-
2019	-	-	-
2020	-	-	-
Total	73	115	188

TABLE 154. AD AND CHP TAX REVENUES GENERATED BY FY CLOSED

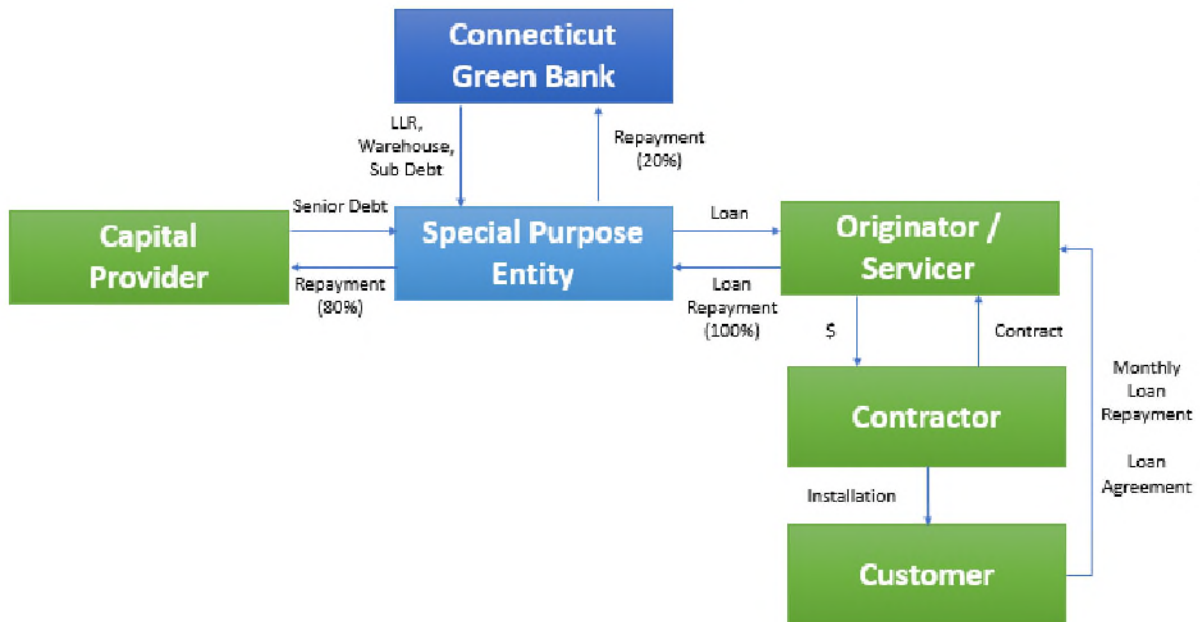
Fiscal Year	Individual Income Tax Revenue Generated	Corporate Tax Revenue Generated	Sales Tax Revenue Generated	Total Tax Revenue Generated
2012	\$0	\$0	\$0	\$0
2013	\$103,438	\$84,824	\$174,572	\$362,834
2014	\$204,347	\$167,574	\$344,873	\$716,794
2015	\$20,843	\$17,092	\$35,176	\$73,110
2016	\$101,777	\$0	\$600,933	\$702,709
2017	\$73,820	\$90,474	\$186,198	\$350,492
2018	\$0	\$0	\$0	\$0
2019	\$0	\$0	\$0	\$0
2020	\$0	\$0	\$0	\$0
Total	\$504,225	\$359,963	\$1,341,752	\$2,205,940

Case 10 – CT Solar Loan (Graduated)

Description

The Connecticut Solar Loan was a \$5 million pilot public-private partnership between the Green Bank and Sungage Financial resulting in the first crowd-funded solar loan program in the country. It was the first of the Green Bank’s ventures to be retired and graduated from the Green Bank’s funding to a \$100 million pool of capital from the Digital Federal Credit Union to enable citizens to own solar PV systems installed on their homes.

FIGURE 13. LEGAL STRUCTURE AND FLOWS OF CAPITAL FOR THE CT SOLAR LOAN



The CT Solar Loan yields an appropriate rate of return to the capital providers commensurate with the risks they are taking, provided 19 contractors with an important sales tool, and gave nearly 300 customers the ability to own solar PV through low-interest and long-term financing along with access to the federal ITC and state incentives (i.e., the RSIP Expected Performance Based Buydown). Of the \$6.0 million invested by the Connecticut Green Bank into the CT Solar Loan, \$1.0 million has been sold to the crowd-funding platform Mosaic, \$2.6 million to a Community Development Financial Institution in The Reinvestment Fund, and the remaining is on the balance sheet of the Connecticut Green Bank.

In structuring the solar loan product, the Green Bank’s objective was to enable homeowners of varying financial means to own their own solar PV systems. Prior to the CT Solar Loan’s creation, a homeowner would need to use their own savings or their own home equity (most often though a home equity line of credit) to pay for the system, which, at that time, often required an investment exceeding \$25,000. The requirement for such a level of personal financial resources dramatically constrained the “ownership” market for solar PV. So, the Green Bank with its partner Sungage Financial, developed the CT Solar Loan which made 15-year

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65. PROGRAMS – CT SOLAR LOAN

financing available at affordable interest rates without the need to have a lien on the home or limit the purchase to certain manufacturers who offered financing solely for their panels. In developing the CT Solar Loan, the Green Bank had to overcome the risk of being unable to sell the loans to private investors which would have tied up capital resources of the Green Bank and limited its ability to deploy investment of additional clean energy. Ultimately, the Green Bank became confident that a sufficient rate of return could be offered to enable the investments to “clear” the market without a discount (or loss) to the Green Bank. The combination of crowdsourced funding and a structured private placement enabled the Green Bank to sell the investments with recourse limited to the underlying consumer loans as well as a limited loan loss reserve using American Recovery and Reinvestment Act funds from the US Department of Energy.

The CT Solar Loan was the Connecticut Green Bank’s first residential product graduation. It started off being the first crowd-funded residential solar PV transaction with Sungage Financial through Mosaic.¹⁶⁹ And then it graduated to a partnership between Sungage Financial and Digital Federal Credit Union – with no resources from the Connecticut Green Bank.¹⁷⁰ The loan offering from Sungage Financial now includes 5, 10, and 20 year maturity terms at affordable interest rates and is being offered in California, Florida, Massachusetts, New Jersey, New York, and Texas – along with solar PV contractors in Connecticut.

Key Performance Indicators

The Key Performance Indicators for the CT Solar Loan closed activity are reflected in Table 155 through

¹⁶⁹ <http://www.businesswire.com/news/home/20140206005031/en/Sungage-Financial-CEFIA-Mosaic-Announce-5-Million#.VgRTgVIXL4Y>

¹⁷⁰ <http://www.ctgreenbank.com/ct-solar-loan-partner-graduates-connecticut-green-bank/>

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Table 158. These illustrate the volume of projects by year, investment, generation capacity installed, and the amount of energy saved and/or produced. It also breaks down the volume of projects by energy efficiency, renewable generation, or both.

TABLE 155. CT SOLAR LOAN PROJECT TYPES AND INVESTMENT BY FY CLOSED

Fiscal Year	EE ¹⁷¹	RE	RE/EE	# Projects	Total Investment	Green Bank Investment ¹⁷²	Private Investment	Leverage Ratio
2012	-	-	-	-	-	-	-	-
2013	-	3	-	3	\$91,924	\$5,025	\$86,899	18.3
2014	-	140	-	140	\$4,461,833	\$232,100	\$4,229,733	19.2
2015	-	136	-	136	\$4,505,386	\$222,549	\$4,282,838	20.2
2016	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-
Total		279		279	\$9,059,143	\$459,674	\$8,599,469	19.7

TABLE 156. CT SOLAR LOAN PROJECT CAPACITY, GENERATION AND SAVINGS BY FY CLOSED

Fiscal Year	Installed Capacity (kW)	Expected Annual Generation (kWh)	Expected Lifetime Savings or Generation (MWh)	Annual Saved / Produced (MMBtu)	Lifetime Saved / Produced (MMBtu)	Annual Cost Savings	Lifetime Cost Savings
2012	-	-	-	-	-	-	-
2013	17.0	19,407	485	66	1,655	\$3,596	\$89,910
2014	1,107.9	1,261,626	31,541	4,305	107,617	\$167,832	\$4,195,800
2015	1,067.2	1,215,364	30,384	4,147	103,671	\$163,037	\$4,075,920
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-
Total	2,192.1	2,496,398	62,410	8,518	212,943	\$334,465	\$8,361,630

TABLE 157. CT SOLAR LOAN PROJECT AVERAGES BY FY CLOSED

Fiscal Year	Total Average Investment	Average Amount Financed	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)	Average Finance Term (months)	Average Finance Rate	Average DTI	Average FICO Score

¹⁷¹ All projects that receive an RSIP incentive are required to do an energy audit/assessment.

¹⁷² Includes incentives, interest rate buydowns and loan loss reserves.

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2012	-	-	-	-	-	-	-	-
2013	\$30,641	\$19,658	5.7	22	180	5.58	0	758
2014	\$31,870	\$19,819	7.9	31	180	5.57	0	771
2015	\$33,128	\$22,942	7.8	30	180	3.34	0	771
2016	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-
Total	\$32,470	\$21,340	7.9	31	180	4.48	0	771

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CONNECTICUT GREEN BANK
65. PROGRAMS – CT SOLAR LOAN

TABLE 158. CT SOLAR LOAN PROJECT APPLICATION YIELD¹⁷³ BY FY RECEIVED

Fiscal Year	Applications Received	Applications Approved	Applications Withdrawn	Applications Denied	Approved Rate	Denied Rate
2012	-	-	-	-	-	-
2013	14	7	5	2	86%	14%
2014	284	163	54	67	76%	24%
2015	164	109	37	18	89%	11%
2016	-	-	-	-	-	-
2017	-	-	-	-	-	-
2018	-	-	-	-	-	-
2019	-	-	-	-	-	-
2020	-	-	-	-	-	-
Total	462	279	96	87	81%	19%

¹⁷³ Applications received are applications submitted to Sungage Financial (servicer of the CT Solar Loan) for credit approval. Applications approved are applications that have met the credit requirements for the program and can move to loan closing, pending formal technical approval of the solar equipment by the Residential Solar Investment Program. Applications withdrawn are applications that have been cancelled by the submitter due to the project not moving forward. Applications denied are applications that are not approved because the customer does not meet underwriting requirements.

**CONNECTICUT GREEN BANK
65. PROGRAMS – CT SOLAR LOAN**

Area Median Income Band Penetration

For a breakdown of the CT Solar Loan volume and investment by census tracts categorized by Area Median Income bands – see Table 159. It should be noted that the CT Solar Loan is not an income-targeted program.

TABLE 159. CT SOLAR LOAN ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS BY FY CLOSED¹⁷⁴

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner Occupied 1-4 Unit Households	% Owner Occupied 1-4 Unit Household Distribution	Project Units / 1,000 Owner Occupied 1-4 Unit Households	Total Investment / Owner Occupied 1-4 Unit Household	Watts / Owner Occupied 1-4 Unit Household
2012	<60%	0	0%	0.0	0%	\$0	0%	61,168	7%	0.0	\$0.00	0.0
2012	60%-80%	0	0%	0.0	0%	\$0	0%	101,640	12%	0.0	\$0.00	0.0
2012	80%-100%	0	0%	0.0	0%	\$0	0%	151,346	17%	0.0	\$0.00	0.0
2012	100%-120%	0	0%	0.0	0%	\$0	0%	216,988	25%	0.0	\$0.00	0.0
2012	>120%	0	0%	0.0	0%	\$0	0%	350,196	40%	0.0	\$0.00	0.0
2012	Total	0	0%	0.0	0%	\$0	0%	881,338	100%	0.0	\$0.00	0.0
2013	<60%	0	0%	0.0	0%	\$0	0%	59,494	7%	0.0	\$0.00	0.0
2013	60%-90%	1	33%	0.0	31%	\$33,775	37%	109,189	12%	0.0	\$0.31	0.0
2013	80%-100%	0	0%	0.0	0%	\$0	0%	150,603	17%	0.0	\$0.00	0.0
2013	100%-120%	1	33%	0.0	47%	\$38,249	42%	203,157	23%	0.0	\$0.19	0.0
2013	>120%	1	33%	0.0	22%	\$19,900	22%	351,633	40%	0.0	\$0.06	0.0
2013	Total	3	100%	0.0	100%	\$91,924	100%	874,076	100%	0.0	\$0.11	0.0
2014	<60%	1	1%	0.0	0%	\$9,948	0%	57,673	7%	0.0	\$0.17	0.0
2014	60%-80%	3	2%	0.0	2%	\$89,796	2%	103,934	12%	0.0	\$0.86	0.2
2014	80%-100%	24	17%	0.2	14%	\$637,228	14%	149,038	17%	0.2	\$4.28	1.1
2014	100%-120%	49	35%	0.4	37%	\$1,624,516	36%	209,561	24%	0.2	\$7.75	2.0
2014	>120%	63	45%	0.5	47%	\$2,100,345	47%	348,270	40%	0.2	\$6.03	1.5
2014	Total	140	100%	1.1	100%	\$4,461,833	100%	868,476	100%	0.2	\$5.14	1.3
2015	<60%	1	1%	0.0	0%	\$22,510	0%	64,361	7%	0.0	\$0.35	0.1

¹⁷⁴ Excludes projects in unknown bands.

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65. PROGRAMS – CT SOLAR LOAN**

Fiscal Year	MSA AMI Band	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Owner Occupied 1-4 Unit Households	% Owner Occupied 1-4 Unit Household Distribution	Project Units / 1,000 Owner Occupied 1-4 Unit Households	Total Investment / Owner Occupied 1-4 Unit Household	Watts / Owner Occupied 1-4 Unit Household
2015	60%-80%	10	7%	0.1	6%	\$286,560	6%	96,305	11%	0.1	\$2.98	0.7
2015	80%-100%	18	13%	0.1	13%	\$603,685	13%	164,873	19%	0.1	\$3.66	0.8
2015	100%-120%	30	22%	0.2	23%	\$1,008,757	22%	184,613	21%	0.2	\$5.46	1.3
2015	>120%	77	57%	0.6	58%	\$2,583,874	57%	352,621	41%	0.2	\$7.33	1.7
2015 Total		136	100%	1.1	100%	\$4,505,386	100%	862,773	100%	0.2	\$5.22	1.2
Total	<60%	2	1%	0.0	0%	\$32,458	0%	60,769	7%	0.0	\$0.53	0.1
Total	60%-80%	14	5%	0.1	4%	\$410,131	5%	99,220	12%	0.1	\$4.13	0.9
Total	80%-100%	42	15%	0.3	14%	\$1,240,913	14%	165,331	19%	0.3	\$7.51	1.8
Total	100%-120%	80	29%	0.7	30%	\$2,671,522	29%	187,463	22%	0.4	\$14.25	3.5
Total	>120%	141	51%	1.1	52%	\$4,704,119	52%	345,311	40%	0.4	\$13.62	3.3
Total		279	100%	2.2	100%	\$9,059,143	100%	858,094	100%	0.3	\$10.56	2.6

TABLE 160. CT SOLAR LOAN ACTIVITY IN METROPOLITAN STATISTICAL AREA (MSA) AREA MEDIAN INCOME (AMI) BANDS ABOVE OR BELOW 100% BY FY CLOSED¹⁷⁵

Fiscal Year	# Project Units			MW			Total Investment				
	Total	Over 100% or Below AMI	100% or Below AMI	Total	Over 100% or Below AMI	100% or Below AMI	Total	Over 100% or Below AMI	100% or Below AMI		
2012	0	0	0	0.0	0.0	0.0	\$0	\$0	\$0	0%	0%
2013	3	2	1	0.0	0.0	0.0	\$91,924	\$58,149	\$33,775	31%	37%
2014	140	112	28	1.1	0.9	0.2	\$4,461,833	\$3,724,861	\$736,971	16%	17%
2015	136	107	29	1.1	0.9	0.2	\$4,505,386	\$3,592,631	\$912,755	20%	20%
2016	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-

¹⁷⁵ Excludes projects in unknown bands.

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2019	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-
Total	279	221	58	21%	2.2	1.8	0.4	18%	\$9,059,143	\$7,375,641	\$1,683,502	19%

Distressed Community Penetration

For a breakdown of the CT Solar Loan project volume and investment by census tracts categorized by Distressed Communities – see Table 161. It should be noted that the CT Solar Loan is not an income-targeted program.

TABLE 161. CT SOLAR LOAN ACTIVITY IN DISTRESSED COMMUNITIES BY FY CLOSED

Fiscal Year	Distressed	# of Project Units	% Project Distribution	Installed Capacity (MW)	% MW Distribution	Total Investment	% Investment Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Total Investment / Total Household	Watts / Total Household
2012	Yes	0	0%	0.0	0%	\$0	0%	447,962	33%	0.0	\$0.00	0.0
2012	No	0	0%	0.0	0%	\$0	0%	912,222	67%	0.0	\$0.00	0.0
2012	Total	0	0%	0.0	0%	\$0	0%	1,360,184	100%	0.0	\$0.00	0.0
2013	Yes	2	67%	0.0	78%	\$72,024	78%	426,564	31%	0.0	\$0.17	0.0
2013	No	1	33%	0.0	22%	\$19,900	22%	929,285	69%	0.0	\$0.02	0.0
2013	Total	3	100%	0.0	100%	\$91,924	100%	1,355,849	100%	0.0	\$0.07	0.0
2014	Yes	26	19%	0.2	18%	\$757,309	17%	416,415	31%	0.1	\$1.82	0.5
2014	No	114	81%	0.9	82%	\$3,704,523	83%	939,791	69%	0.1	\$3.94	1.0
2014	Total	140	100%	1.1	100%	\$4,461,833	100%	1,356,206	100%	0.1	\$3.29	0.8
2015	Yes	18	13%	0.1	11%	\$483,091	11%	423,559	31%	0.0	\$1.14	0.3
2015	No	118	87%	1.0	89%	\$4,022,296	89%	929,024	69%	0.1	\$4.33	1.0
2015	Total	136	100%	1.1	100%	\$4,505,386	100%	1,352,583	100%	0.1	\$3.33	0.8
Total	Yes	46	16%	0.3	15%	\$1,312,424	14%	435,595	32%	0.1	\$3.01	0.7
Total	No	233	84%	1.9	85%	\$7,746,719	86%	926,160	68%	0.3	\$8.36	2.0
Total	Total	279	100%	2.2	100%	\$9,059,143	100%	1,361,755	100%	0.2	\$6.65	1.6

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Societal Impacts

Ratepayers in Connecticut continue to enjoy the societal benefits of the CT Solar Loan Program despite its closure. Over the course of its existence, the program has led to the creation of 132 job years, avoided the lifetime emission of 35,015 tons of carbon dioxide, 46,896 pounds of nitrous oxide, 53,064 pounds of sulfur oxide, and 3,131 pounds of particulate matter as illustrated by Table 162 and Table 164. The Solar loan is estimated to have generated \$463,746 million in tax revenue for the state of CT as shown in Table 163. The lifetime economic value of the public health impacts of this program are estimated between \$1.2 and 2.7 million as illustrated in Table 165.

TABLE 162. CT SOLAR LOAN JOB YEARS SUPPORTED BY FY CLOSED

Fiscal Year	Direct Jobs	Indirect and Induced Jobs	Total Jobs
2012	-	-	-
2013	1	1	1
2014	25	40	65
2015	25	41	66
2016	-	-	-
2017	-	-	-
2018	-	-	-
2019	-	-	-
2020	-	-	-
Total	51	82	132

TABLE 163. CT SOLAR LOAN TAX REVENUES GENERATED BY FY CLOSED

Fiscal Year	Individual Income Tax Revenue Generated	Corporate Tax Revenue Generated	Sales Tax Revenue Generated	Total Tax Revenue Generated
2012	\$0	\$0	\$0	\$0
2013	\$2,350	\$2,336	\$0	\$4,686
2014	\$114,374	\$113,724	\$0	\$228,098
2015	\$115,810	\$115,152	\$0	\$230,962
2016	\$0	\$0	\$0	\$0
2017	\$0	\$0	\$0	\$0
2018	\$0	\$0	\$0	\$0
2019	\$0	\$0	\$0	\$0
2020	\$0	\$0	\$0	\$0
Total	\$232,534	\$231,212	\$0	\$463,746

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TABLE 164. CT SOLAR LOAN AVOIDED EMISSIONS BY FY CLOSED

Fiscal Year	CO2 Emissions Avoided (tons)		NOx Emissions Avoided (pounds)		SOx Emissions Avoided (pounds)		PM 2.5 (pounds)	
	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime
2012	-	-	-	-	-	-	-	-
2013	10	277	17	417	22	537	0	24
2014	706	17,541	980	24,519	1,163	29,008	51	1,583
2015	686	17,200	879	21,964	939	23,519	44	1,518
2016	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-
Total	1,402	35,018	1,876	46,900	2,124	53,064	95	3,125

TABLE 165. CT SOLAR LOAN PUBLIC HEALTH IMPACT BY FY CLOSED

Fiscal Year	Annual		Lifetime	
	Low	High	Low	High
2012	-	-	-	-
2013	\$377	\$850	\$9,413	\$21,251
2014	\$24,476	\$55,259	\$611,889	\$1,381,481
2015	\$23,578	\$53,233	\$589,451	\$1,330,823
2016	-	-	-	-
2017	-	-	-	-
2018	-	-	-	-
2019	-	-	-	-
2020	-	-	-	-
Total	\$48,430	\$109,342	\$1,210,753	\$2,733,555

Financing Program

Launched in March of 2013, the CT Solar Loan provided up to \$55,000 per loan, with 15-year maturity terms and affordable 6.49% interest rates (including 0.25% ACH payment benefit) to provide homeowners with the upfront capital they needed to finance residential solar PV projects. The program ended in FY2015.

The program involved a financing product developed in partnership with Sungage Financial¹⁷⁶ that used credit enhancements (i.e., \$300,000 loan loss reserve and \$168,000 interest rate buy-downs)¹⁷⁷ in combination with a \$5 million warehouse of funds and \$1 million of subordinated

¹⁷⁶ Sungage Financial (<http://www.sungagefinancial.com/>) won a competitive RFP through the Connecticut Green Bank's Financial Innovation RFP to support a residential solar PV loan program

¹⁷⁷ From repurposed American Recovery and Reinvestment Act funds

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debt from the Connecticut Green Bank. Through this product, the Connecticut Green Bank lowered the barriers to Connecticut homeowners seeking to install solar PV installations thus increasing demand while at the same time reducing the market’s reliance on subsidies being offered through the RSIP. The CT Solar Loan was the first dedicated residential solar loan product not secured by a lien on the home or tied to a particular PV equipment OEM supplier. As a loan, capital provided to consumers for the CT Solar Loan is returned to the Connecticut Green Bank – it is not a subsidy. In fact, approximately 80% of the loan value was sold to retail investors through a “crowd funding” platform or to institutional investors without recourse to the Connecticut Green Bank. The financial structure of the CT Solar Loan product includes origination,¹⁷⁸ servicing,¹⁷⁹ and financing features in combination with the support of the Connecticut Green Bank.

Financial Performance

To date there has been 1 default with an original principal balance of \$26,698 or 0.44% of the portfolio, and as of 6/30/2020 there are 3 delinquencies with original principal balances totaling \$90,377 or 1.50% of the portfolio.

The household customers that accessed the CT Solar Loan since its launch in 2013 had varying credit scores – see Table 166.

TABLE 166. CREDIT SCORE RANGES OF HOUSEHOLD CUSTOMERS USING THE CT SOLAR LOAN BY FY CLOSED

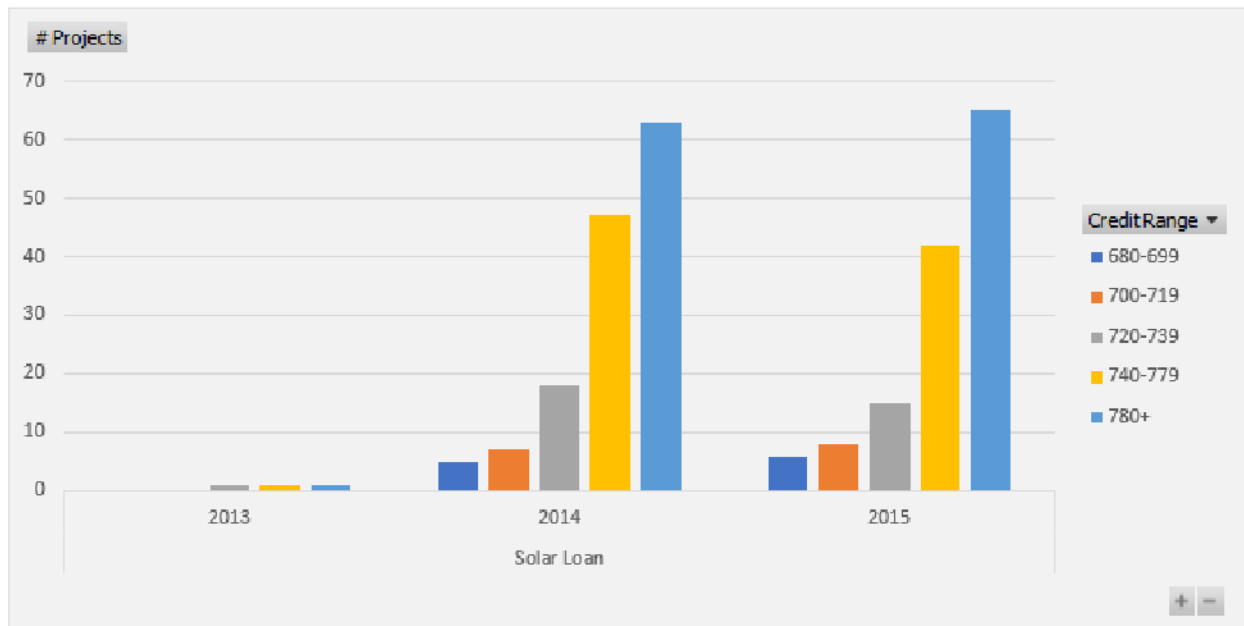
Fiscal Year	Unknown	580-599	600-639	640-679	680-699	700-719	720-739	740-779	780+	Grand Total
2012	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	1	1	1	3
2014	-	-	-	-	5	7	18	47	63	140
2015	-	-	-	-	6	8	15	42	65	136
Total	-	-	-	-	11	15	34	90	129	279
					4%	5%	12%	32%	46%	100%

¹⁷⁸ Sungage Financial in partnership with local contractors

¹⁷⁹ Concord Servicing Corporation

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FIGURE 14. CREDIT SCORE RANGES OF HOUSEHOLD CUSTOMERS USING THE CT SOLAR LOAN BY FY CLOSED



Marketing

To accelerate the deployment of residential solar PV through the RSIP and the uptake of the CT Solar Loan financing product, the Connecticut Green Bank implemented Solarize Connecticut. Green Bank Solarize programs are designed to use a combination of group purchasing, time-limited offers, and grassroots outreach, while local clean energy advocates volunteer and coordinate with their towns to help speed the process – see Table 167.

TABLE 167. NUMBER OF PROJECTS, INVESTMENT, AND INSTALLED CAPACITY THROUGH GREEN BANK SOLARIZE CONNECTICUT FOR THE CT SOLAR LOAN FINANCING PRODUCT

	# of Projects	Total Investment	Installed Capacity (MW)
Solarize	168	\$5,209,925	1.3
Not Solarize	111	\$3,849,218	0.9
Total	279	\$9,059,143	2.2
% Solarize	60%	58%	59%

The Green Bank Solarize Connecticut program provided a significant marketing channel to catalyze origination for the CT Solar Loan comprising nearly 60 percent of the total projects, investment, and installed capacity.

7. Appendix

Terms and Definitions

The following is meant to serve as guide to the reader of common terms used in this section and to illustrate how the Green Bank defines these terms:

Applications Received - This is the number of applications submitted to CGB seeking an incentive or financing during a specific period regardless of whether they were approved or rejected. The specific metric is calculated by subtracting the total number of applications received at the beginning of the time period from the total number of applications received at the end of the time period. This indicates interest in our program.

Approved - An approved project is one whose application has been reviewed by Green Bank staff and has been authorized to proceed to the funding stage, involving the project's requested CGB financing and/or incentives. The number of approvals in one period is an indicator of potential completed projects in subsequent periods.

Closed - A "Closed" project is one that has been approved by the CGB and for which CGB financing and/or incentives have been mobilized. For RSIP projects, once a project is approved, it is considered closed. This status also suggests that physical work is in progress or is imminent.

Completed – is a project that is generating or saving energy and has been deemed completed by the Green Bank and contractors based on program specific standards.

Gross Investment - This is the total system costs for all clean and renewable energy installations and/or the total costs of all energy efficiency projects during the specified time period, regardless of how much of the projects are being financed. Closing costs for CGB financing are not included in this total.

Principal Amount Financed - This is the total amount of money that is being borrowed regardless of whether it is wholly or partially from the CGB. For some programs, this amount will be greater than the gross investment, to include closing costs that are rolled into the loans. Principal Amount Financed equals Gross Investment plus closing costs that are financed, minus any part of the projects paid upfront by the borrowers:

$$\text{Principal Amount Financed} = \text{Gross Investment} + \text{Fees Financed} - \text{Owners' Contributions}$$

This should also equal CGB investment plus third party investment:

$$\text{Principal Amount Financed} = \text{CGB Investment} + \text{Third Party Financing}$$

CGB Investment - Green Bank investment activity is broken down into two categories, presented below as separate metrics.

$$\text{CGB Investment} = \text{CGB Incentives} + \text{CGB Financing}$$

CGB Incentives - CGB incentives are funds that are not intended to be repaid by the recipient and are used to reduce the cost of a specific product or technology. At present, RSIP is the only active incentive program administered by CGB.

CGB Financing - CGB financing includes the total funds deployed by the Green Bank during the specified time period with the intention either that the funds will be repaid or to bolster the creditworthiness of borrowers. CGB Financing is the sum of the types of financing below, each of which is its own metric.

$$\text{CGB Financing} = \text{CGB Loans and Leases} + \text{CGB Credit Enhancements}$$

CGB Loans and Leases - Loans and leases are the types of CGB financing in which capital is directly lent to fund projects. It does not include third party lending.

CGB Credit Enhancements - Credit enhancements involve the deployment of CGB capital to bolster the credit of borrowers. This financing category is comprised of the three categories of funds below, each as its own metric.

$$\text{CGB Credit Enhancements} = \text{Loan Loss Reserves} + \text{Guarantees} + \text{Interest Rate Buy-Downs}$$

Loan Loss Reserves - Loan Loss Reserves are capital that the CGB has segregated as part of a program to ensure against losses incurred by participating lenders due to the failure of borrowers to repay loans.

Guarantees - Guarantees reflect a specified dollar commitment that CGB has made to external lenders for repayment of specific transactions in the event one or more borrowers fail to repay the lenders.

Interest Rate Buy-Downs - Interest rate buy-downs involve the deployment of CGB capital by paying a portion of the interest on borrowers' loans to decrease their cost of capital.

Third Party Financing - This metric captures the amount of project financing that is provided by parties other than the CGB and project owner. It is this type of financing that the CGB seeks to grow in relation to its own financing.

Leverage Ratio

This metric presents the relationship between private financing and CGB's direct financing.

$$\text{Leverage Ratio} = \text{Gross Investment} / \text{CGB Investment}$$

Mobilization Ratio

This metric presents the relationship between private financing and CGB's direct investment (both financing and incentives).

$$\text{Mobilization Ratio} = \text{Third-Party Financing Amount} / \text{CGB Investment}$$

Community Activity Table

See the Municipality Tables in here.¹⁸⁰

Contractor Activity Table

See the Contractor Tables in here.¹⁸¹

Trained Contractor Table

See the Trained Contractor table in here.¹⁸²

Calculations and Assumptions

TABLE 168. CAPACITY FACTORS AND EXPECTED USEFUL LIFE (EUL) BY TECHNOLOGY

Technology	Capacity Factor	EUL
AD	0.80	15
CHP	0.90	15
EE	0.0	12
Fuel Cell	0.90	10
Geothermal	0.0	25
Hydro	0.49	25
PV	0.13	25
PV/Biomass	0.13	25
Solar Thermal	0.0	20
Wind	0.18	15

TABLE 169. JOB YEAR FACTORS BY YEAR APPROVED BY TECHNOLOGY

	2009 Factors - Approved prior to 6/30/2016			2016 Factors - Approved after 7/1/2016			2018 Factors - Approved after 7/1/2018		
	Direct Job Years	Indirect and Induced Jobs	Total Job Years per \$1M Invested	Direct Job Years	Indirect and Induced Jobs	Total Job Years per \$1M Invested	Direct Job Years	Indirect and Induced Jobs	Total Job Years per \$1M Invested
Renewable Energy									
Fuel Cell R&D/Engineering	2.9	4.6	7.5	2.9	3.8	6.7	2.8	3.7	6.5
Fuel Cell Manufacturing	4.8	11.0	15.8	4.9	6.4	11.3	3.9	5.8	9.7
Solar PV - Residential	5.9	9.4	15.3	3.9	5.1	9.0	3.9	5.1	9.0
Solar PV - Non-Residential	3.4	5.4	8.8	3.1	4.0	7.1	3.1	4.0	7.1

¹⁸⁰ <http://www.ctgreenbank.com/fy17-cafr-nfs-appendix/>

¹⁸¹ <http://www.ctgreenbank.com/fy17-cafr-nfs-appendix/>

¹⁸² <http://www.ctgreenbank.com/fy17-cafr-nfs-appendix/>

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	2009 Factors - Approved prior to 6/30/2016			2016 Factors - Approved after 7/1/2016			2018 Factors - Approved after 7/1/2018		
	Direct Job Years	Indirect and Induced Jobs	Total Job Years per \$1M Invested	Direct Job Years	Indirect and Induced Jobs	Total Job Years per \$1M Invested	Direct Job Years	Indirect and Induced Jobs	Total Job Years per \$1M Invested
Renewable Energy									
Ductless Split Heat Pump	6.7	10.7	17.4	6.7	8.7	15.4	6.5	8.5	15.0
Geothermal	8.3	13.3	21.6	6.7	8.7	15.4	6.7	8.7	15.4
Solar Thermal	7.6	12.2	19.8	5.6	7.3	12.9	5.6	7.3	12.9
Wind Installation	6.2	9.9	16.1	6.2	8.0	14.2	5.8	7.6	13.4
Hydro Installation	6.2	9.9	16.1	6.2	8.0	14.2	5.8	7.6	13.4
EV Charging Stations - Installation	3.1	5.0	8.1	3.1	4.0	7.1	2.9	3.8	6.7
Storage Installation	2.2	3.5	5.7	2.2	2.9	5.1	2.2	2.9	5.1
Utility Scale Storage	2.1	3.4	5.5	2.1	2.7	4.9	2.1	2.7	4.9
AD	1.9	3.0	4.9	1.9	2.5	4.4	1.9	2.5	4.4
CHP	3.9	6.2	10.1	3.9	5.0	8.9	3.9	5.0	8.9
Energy Efficiency									
Residential	12.9	20.6	33.5	0.0	0.0	0.0	0.0	0.0	0.0
Residential Lighting ¹	0.0	0.0	0.0	7.7	10.0	17.7	7.5	9.7	17.2
Residential Home Energy Solutions (HES) - Audits ¹	7.7	12.3	20.0	7.8	10.2	18.0	7.7	10.0	17.7
Residential HES - Weatherization & HVAC	0.0	0.0	0.0	5.6	7.3	12.9	5.4	7.0	12.5
Residential Gas Conversion	0.0	0.0	0.0	5.6	7.3	12.9	5.4	7.0	12.5
Small Business Energy Advantage	9.1	14.6	23.7	6.2	8.0	14.2	5.8	7.5	13.3
Large Commercial and Industrial	7.6	12.2	19.8	5.6	7.3	12.9	5.3	6.8	12.1

TABLE 170. RESIDENTIAL SINGLE FAMILY ANNUAL AND LIFETIME MMBTUS AND COST SAVINGS¹⁸³

Improvement Type	Average Annual Savings MMBTUs	Average Lifetime Savings MMBTUs	Average Annual \$ Savings	Average Lifetime \$ Savings	Average Expected Useful Life (EUL)
Air Source Heat Pump	10	190	\$419	\$8,374	20
Boiler	18	370	\$372	\$7,441	20
Central AC	3	58	\$142	\$2,552	18
Ductless Heat Pump	10	176	\$443	\$7,975	18
Furnace	15	295	\$357	\$7,136	20
Geothermal Heat Pump	5	104	\$1,593	\$31,860	20
Heat Pump Water Heater	6	78	\$215	\$2,584	12
Insulation	19	471	\$413	\$10,328	25

¹⁸³ This chart was developed in conjunction with utility staff as a guide for the Residential Sector based on utility program savings documents from 2016-17.

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Other	7	138	\$154	\$3,075	20
Solar Hot Water Heater	6	157	\$150	\$3,740	25
Solar PV ¹	27	680	\$1,199	\$29,970	25
Water Heater	5	102	\$78	\$1,564	20
Windows	8	197	\$134	\$3,362	25

1. Used for other residential market programs.

TABLE 171. AVERAGE EMISSION RATES BY YEAR COMPLETED BY TECHNOLOGY

	Year Completed						
	2018 ⁴	2017	2016	2015	2014	2013	2012 ⁵
CO2 tons							
AD	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHP	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EE Only ¹	0.542	0.530	0.543	0.570	0.549	0.555	0.536
Fuel Cell ²	0.068	0.068	0.068	0.068	0.068	0.068	0.068
Geothermal ²	0.400	0.400	0.400	0.400	0.400	0.400	0.400
Hydro ²	0.520	0.520	0.520	0.520	0.520	0.520	0.520
Solar PV ¹	0.553	0.539	0.562	0.575	0.551	0.572	0.558
Solar Thermal ²	0.547	0.547	0.547	0.547	0.547	0.547	0.547
Wind ¹	0.539	0.528	0.537	0.575	0.562	0.558	0.523
NOX pounds							
AD	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHP	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EE Only ¹	0.468	0.400	0.480	0.648	0.739	0.741	0.548
Fuel Cell ²	0.540	0.540	0.540	0.540	0.540	0.540	0.540
Geothermal ²	0.335	0.335	0.335	0.335	0.335	0.335	0.335
Hydro ²	0.430	0.430	0.430	0.430	0.430	0.430	0.430
Solar PV ¹	0.535	0.463	0.575	0.697	0.790	0.859	0.689
Solar Thermal ²	0.453	0.453	0.453	0.453	0.453	0.453	0.453
Wind ¹	0.422	0.367	0.428	0.642	0.760	0.737	0.469
SO2 pounds							
AD	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHP	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EE Only ¹	0.411	0.261	0.340	0.665	0.890	0.952	0.732
Fuel Cell ²	0.391	0.391	0.391	0.391	0.391	0.391	0.391
Geothermal ²	0.297	0.297	0.297	0.297	0.297	0.297	0.297
Hydro ²	0.390	0.390	0.390	0.390	0.390	0.390	0.390
Solar PV ¹	0.460	0.303	0.411	0.698	0.956	1.107	0.911
Solar Thermal ²	0.411	0.411	0.411	0.411	0.411	0.411	0.411
Wind ¹	0.405	0.267	0.333	0.723	1.012	1.000	0.643
PM2.5 pounds³							
AD	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHP	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EE Only ¹	0.043	0.042	0.043	0.045	0.045	0.045	0.045
Fuel Cell ²	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Geothermal ²	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hydro ²	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Solar PV ¹	0.047	0.046	0.049	0.050	0.050	0.050	0.050
Solar Thermal ²	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wind ¹	0.041	0.040	0.039	0.044	0.044	0.044	0.044

1. Average Emission Rates from AVERT Model.
2. Average Emission Rates from 2007 New England Marginal Emission Rate Analysis.
3. PM 2.5 Rates for 2012 - 2014 are unavailable and use the 2015 rates.
4. 2018 rates are used for projects completed in 2019,2020 and those pending completion.
5. 2012 rates are used for projects completed prior to 2012.

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TABLE 172. TAX GENERATION RATES PER \$1 MILLION DEPLOYED BY TECHNOLOGY AND PRODUCT STRUCTURE

Technology and Program	2010-2016			2017 and later		
	Personal Income Tax Factor	Corporate Tax Factor	Sales Tax Factor	Personal Income Tax Factor	Corporate Tax Factor	Sales Tax Factor
Anaerobic Digestion Pilot	\$9,693.00	-	\$57,231.69	\$10,823.00	-	\$57,231.69
Biomass - CPACE	\$9,693.00	-	\$57,231.69	\$10,823.00	-	\$57,231.69
CHP - Pilot/Strategic Investments	\$32,436.00	\$26,599.00	\$54,741.79	\$21,703.00	\$26,599.00	\$54,741.79
Energy Efficiency - CPACE	\$39,888.00	\$19,662.00	\$58,303.00	\$28,807.00	\$19,662.00	\$58,303.00
Energy Efficiency - Home Energy Solutions Audits (HES)	\$96,903.00	\$5,152.00	\$18,694.00	\$40,976.00	\$5,152.00	\$18,694.00
Energy Efficiency - Multifamily (non-CPACE)	\$67,491.00	\$19,662.00	\$58,303.00	\$28,807.00	\$19,662.00	\$58,303.00
Energy Efficiency (non HES) - Smart-E	\$67,491.00	\$22,910.00	\$30,773.00	\$28,908.00	\$22,910.00	\$30,773.00
Fuel Cell - Strategic Investments	\$25,182.00	\$7,108.00	\$55,195.48	\$23,489.00	\$7,108.00	\$55,195.48
Geothermal - CPACE	\$43,515.00	\$26,887.00	-	\$35,791.22	\$26,887.00	-
Geothermal - Smart-E	\$43,515.00	\$26,887.00	-	\$35,791.00	\$26,887.00	-
Hydro - CPACE	\$28,674.00	\$38,937.00	\$52,239.00	\$32,640.00	\$38,937.00	\$52,239.00
Other - CPACE	\$28,674.00	\$19,662.00	\$58,303.00	\$28,807.00	\$19,662.00	\$58,303.00
Solar PV - CEBS	\$15,435.00	\$41,893.01	-	\$15,641.23	\$41,893.01	-
Solar PV - Clean Energy Communities	\$15,435.00	\$41,893.01	-	\$15,641.23	\$41,893.01	-
Solar PV - CPACE	\$15,435.00	\$41,893.01	-	\$15,641.23	\$41,893.01	-
Solar PV - CPACE Onyx	\$15,435.00	\$16,916.65	-	\$15,641.23	\$16,916.65	-
Solar PV - CPACE SL2	\$15,435.00	\$16,916.65	-	\$15,641.23	\$16,916.65	-
Solar PV - CPACE SL3	\$27,040.50	\$3,373.73	-	\$20,878.21	\$3,373.73	-
Solar PV - Low Income - PosiGen	\$27,040.50	\$3,373.73	-	\$20,878.21	\$3,373.73	-
Solar PV - Multi-Family (blank)	\$15,435.00	\$14,617.00	-	\$15,641.00	\$14,617.00	-
Solar PV - OSDG	\$15,435.00	\$41,893.01	-	\$15,641.23	\$41,893.01	-
Solar PV - RSIP	\$27,040.50	\$8,076.60	-	\$20,878.21	\$8,076.60	-
Solar PV - Smart-E	\$27,040.50	\$5,250.00	-	\$20,878.21	\$5,250.00	-

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Technology and Program	2010-2016			2017 and later		
	Personal Income Tax Factor	Corporate Tax Factor	Sales Tax Factor	Personal Income Tax Factor	Corporate Tax Factor	Sales Tax Factor
Solar PV - Solar Lease SL2	\$27,040.50	\$26,886.74	-	\$20,878.21	\$26,886.74	-
Solar PV - Solar Loan	\$27,040.50	\$26,886.74	-	\$20,878.21	\$26,886.74	-
Solar PV - Solar PV - Lease Onyx	\$15,435.00	\$16,916.65	-	\$15,641.23	\$16,916.65	-
Solar PV - Solar PV - Lease SL2	\$15,435.00	\$16,916.65	-	\$15,641.23	\$16,916.65	-
Solar PV - Solar PV - Lease SL3	\$27,040.50	\$ 3,373.73	-	\$20,878.21	\$ 3,373.73	-
Solar Thermal - CPACE	\$39,888.00	\$26,887.00	-	\$29,826.00	\$26,887.00	-
Solar Thermal - Smart-E and Pilots	\$39,888.00	\$26,887.00	-	\$29,826.00	\$26,887.00	-
Waste Heat Recovery - CPACE	\$39,888.00	\$26,599.00	\$54,741.79	\$21,703.00	\$26,599.00	\$54,741.79
Wind - Strategic	\$28,674.00	\$15,501.00	\$52,239.00	\$32,640.00	\$15,501.00	\$52,239.00

TABLE 173. PUBLIC HEALTH SAVINGS RATES PER TON OF POLLUTANT AVOIDED

Ton avoided	PM _{2.5} - Low	PM _{2.5} - High	SO _x - Low	SO _x - High	NO _x - Low	NO _x - High
1	\$120,799	\$273,010	\$28,665	\$64,794	\$5,881	\$13,293



Memo

To: Board of Directors of the Connecticut Green Bank

From: Bryan Garcia (President and CEO), Sergio Carrillo (Director of Incentive Programs), and Selya Price (Senior Advisor to the President and CEO)

Date: October 23, 2020

Re: Residential Solar Investment Program Extension – Steps 16 and 17 Recommendations

Please see the “Residential Solar Investment Program – Towards 350 MW Public Policy Goal while Fostering the Sustained, Orderly Development of the Local Solar Industry” memo provided to the Board of Directors at the September 23, 2020 meeting in Board Effect for background information.

Update

The following is an update on the progress made towards the cost recovery mechanisms identified at the September 23, 2020 special meeting of the Board of Directors towards the Residential Solar Investment Program and RSIP Extension (RSIP and RSIP-E):

- **REC Aggregation** – REC aggregation for residential solar PV systems would be required for the Green Bank to be able to financially support RSIP and RSIP-E.

On October 1, PURA filed a Motion into Docket Nos. 17-12-03RE09 (i.e., Equitable Modern Grid) and 20-07-01 (i.e., Renewable Energy Tariff) including the Green Bank’s Written Comments provided on September 17, 2020 requesting the ability to continue to aggregate residential solar PV systems underneath the Class I RPS policy. On October 15th, PURA issued a Motion Ruling in support of the Green Bank’s request for residential aggregation – see Appendix I.

This is an important and positive development.

- **Class I REC Price Target** – an average 15-year REC price of \$20 was established by staff to cost recover incentives provided by the Green Bank through RSIP and RSIP-E.

On September 30, the staff of the Green Bank spoke to the EDCs about providing them with a “right of first refusal” (ROFR) with respect to the Class I RECs coming through the RSIP and RSIP-E projects. The EDCs made it clear that although they understand the current situation of the local solar industry, that (1) their suppliers already include Class I RECs for RPS compliance alongside energy being procured for Standard Offer customers, and (2) if they were to consider purchasing RECs from the Green Bank that they would need prior approval of PURA to seek full cost

recovery. It would seem unlikely that EDCs would be willing to move forward with a purchase in a timely manner.

On October 16th, the Green Bank subsequently provided the EDCs with an official ROFR – see Appendix II. This time-bound offer, if accepted, would achieve an average \$25/REC – which is \$5 above the Green Bank target of \$20.

It should be noted that Class I RECs are currently trading in the open market for years 2022 through 2024 at around \$35 – which is \$15 above the Green Bank target of \$20. If the EDCs do not respond to the Green Bank’s ROFR by the close of business on October 30, then the Green Bank will go to the open market and offer its RECs for years 2022 through 2024 to reduce the risk of cost recovery.¹

These are important and positive developments.

The final piece to ameliorating the risk of cost recovery from the RSIP-E is reducing incentives through Steps 16 and 17, while continuing to support the sustained, orderly development of the local industry to stabilize from the impacts of COVID-19.

Proposal – Steps 16 and 17 of RSIP and RSIP-E

Table 1 summarizes the capacity over the RSIP statutory target of 350 MW that was approved by the Board of Directors at the September 23, 2020 special meeting, including up to 10 MW to account for RSIP cancellations (i.e., to achieve the 350 MW deployment goal of the public policy), and an additional 22 MW to support the residential solar PV industry toward achieving sustained, orderly development in the context of COVID-19 impacts. The Green Bank will therefore approve up to an additional 32 MW of capacity, for a total of 382 MW, within RSIP and RSIP-E. Approving Step 16 and 17 projects within both RSIP and RSIP-E provides flexibility for cost-recovery, with respect to RSIP cancellations and a potential, future legislative extension to RSIP.

Table 1. Summary of Step 16 and 17 Capacity to be Approved

Capacity ²	Program	Incentive Step	Incentive Level	Terms and Conditions (T&C) to be Signed by Customer
Remaining capacity up to 350 MW	RSIP	Step 15	Step 15	RSIP T&C (11/1/16)
Capacity above 350 and up to 360 MW (i.e., an additional 10 MW)	RSIP and RSIP-E	Step 16	Same as Step 15	RSIP and RSIP-E T&C (10/19/20), including any additional paperwork needed for REC monetization
Capacity above 360 and up to 382 MW (i.e., an additional 22 MW)	RSIP and RSIP-E	Step 17	20% EPBB reduction, 10% LMI-PBI reduction	

¹ It should be noted that the Green Bank will continue to pursue an RSIP extension in the 2021 legislative session.

² Capacity thresholds for Steps 16 and 17 are estimated and may differ slightly from the table shown here since incentive step transitions are generally set on specific dates when the capacity thresholds are estimated to be reached.

Table 2 provides proposed incentive levels for Steps 16 and 17 in comparison to Step 15. Step 16 would be the same as Step 15 and a portion of Step 16 projects would therefore be cost-recovered through RSIP based on anticipated cancellations. Step 17 would be a 20% incentive reduction for EPBB projects and a 10% incentive reduction for LMI PBI projects. In proposing the Step 17 incentive levels, consideration was given to the incentive levels as a percentage of installed costs, which are already lowest for PBI projects at 5.6% of installed cost. The proposed reductions for EPBB and LMI PBI projects would lower the percentages for these incentive types to 7.7% and 13.5% of installed costs, respectively, and where the LMI PBI incentive would still be higher than the PBI, by a multiple of 2.4.

Consideration was also given to the higher incentive reduction already applied to the PBI in the change from Step 14 to Step 15, where the PBI was reduced 15% as compared to a 10% reduction for the EPBB and 10% reduction for the LMI PBI. The incentive reductions from Step 14 to 15 were such that program volume was maintained at similar levels to the prior year. The proposed incentive reductions are anticipated to continue the program's declining incentive block structure design, while supporting the sustained, orderly development of the local solar industry to stabilize from the ongoing impacts of COVID-19.

Table 2. Proposed Step 16 and 17 Incentive Levels, Compared to Step 15

Step	Capacity (MW)	Incentive Type	Incentive Reduction from Step 15 (%)	Incentive as % of Installed Cost	Incentive (\$/W)	Average System Size (kW)	Average Incentive (\$)
16	10	EPBB	0%	9.6%	\$0.3485	9.93	\$3,461
		PBI LMI	0%	15.0%	\$0.5207	6.03	\$3,140
		PBI	0%	5.6%	\$0.1941	8.18	\$1,588
17	22	EPBB	20%	7.7%	\$0.2788	9.93	\$2,768
		PBI LMI	10%	13.5%	\$0.4686	6.03	\$2,826
		PBI	0%	5.6%	\$0.1941	8.18	\$1,588

Table 3 provides estimated program costs and ZREC equivalents to indicate the REC values needed to cost recover these incentive levels based on estimated program shares, showing that a selling price of approximately \$20/REC would be sufficient to recover incentive costs.

Table 3. Proposed Step 16 and 17 Incentive Levels - Program Costs, ZREC Equivalence

Step	Capacity to be Approved (MW)	Incentive Type	Estimated Program Cost (\$)	Approx. Program Share (%)	Total Estimated Program Cost (\$)	ZREC Equivalent (\$/REC)	ZREC Equivalent (\$/REC)
16	10	EPBB	\$871,250	25%	\$2,490,300	\$26.40	\$18.94
		PBI LMI	\$260,350	5%		\$39.60	
		PBI	\$1,358,700	70%		\$14.80	
17	22	EPBB	\$1,533,400	25%	\$5,038,000	\$21.20	\$17.44
		PBI LMI	\$515,460	5%		\$35.60	
		PBI	\$2,989,140	70%		\$14.80	
					\$7,528,300		

Table 4 shows the proposed maximum incentive levels that for Steps 16 and 17 associated with the 20% reduction for the EPBB and 10% reduction for the LMI PBI, in comparison to historical incentive levels. These maximum levels are expected to result in the average incentive levels calculated and proposed based on the actual RSIP data provided in Table 2. Note that the EPBB incentive reduction for the first tier of the incentive (up to 10 kW) is 16% or approximately half of the incentive reduction of 37% for the second tier of the incentive (over 10 kW and up to 20 kW), resulting in an overall EPBB incentive reduction of approximately 20% based on incentive volume for the first tier accounting for 81% versus 19% for the second tier.

Table 4. Proposed Step 16 and 17 Incentive Levels - Maximum Proposed and Historical Values and Estimated Start Dates, and Program Volume by Step (as of Oct.12, 2020)

RSIP Incentive Step	Start Date	EPBB (\$/W)			PBI (\$/kWh)			LMI PBI (\$/kWh)		Approved Projects	
	Start Date	≤5 kW	5 to 10 kW	>10kW, <20kW	Start Date	≤10 kW	>10 kW	≤10 kW	>10 kW	Capacity (MW)	# Projects
1	3/2/2012	\$2.450	\$1.250	\$0.000	3/2/2012	\$0.300	\$0.000	-	-	1.4	206
2	5/18/2012	\$2.275	\$1.075	\$0.000	5/18/2012	\$0.300	\$0.000	-	-	6.0	843
3	1/4/2013	\$1.750	\$0.550	\$0.000	4/1/2013	\$0.225	\$0.000	-	-	13.1	1,838
4	1/6/2014	\$1.250	\$0.750	\$0.000	1/6/2014	\$0.180	\$0.000	-	-	19.3	2,587
5	9/1/2014	\$0.800	\$0.400	\$0.000	9/1/2014	\$0.125	\$0.060	-	-	13.3	1,734
6	1/1/2015	\$0.675	\$0.400	\$0.000	1/1/2015	\$0.080	\$0.060	-	-	12.2	1,571
7	3/11/2015	\$0.540	\$0.400	\$0.000	3/11/2015	\$0.064	\$0.060	-	-	19.1	2,558
8	8/8/2015	\$0.540	\$0.400	\$0.000	8/8/2015	\$0.054	\$0.110	\$0.055		27.0	3,407
9	2/1/2016	\$0.513	\$0.400	\$0.000	2/1/2016	\$0.046	\$0.110	\$0.055		26.0	3,261
10	9/1/2016	\$0.487	\$0.400	\$0.000	9/1/2016	\$0.039	\$0.110	\$0.055		29.7	3,861
11	8/15/2017	\$0.487	\$0.400	\$0.000	8/15/2017	\$0.039	\$0.110	\$0.055		18.0	2,194
12	1/15/2018	\$0.463	\$0.400	\$0.000	1/15/2018	\$0.035	\$0.100	\$0.050		15.9	1,974
13	6/1/2018	\$0.463	\$0.400	\$0.000	6/1/2018	\$0.035	\$0.090	\$0.045		17.7	2,147
14	9/24/2018	\$0.463	\$0.400	\$0.000	9/24/2018	\$0.035	\$0.090	\$0.045		78.6	9,207
15	1/15/2020	\$0.426	\$0.328	\$0.000	1/15/2019	\$0.030	\$0.081	\$0.041		49.2	5,773
Proposed 16	10/28/2020	\$0.426	\$0.328	\$0.000	10/28/2020	\$0.030	\$0.081	\$0.041		n/a	n/a
Proposed 17	12/15/2020	\$0.358	\$0.207	\$0.000	12/15/2020	\$0.030	\$0.073	\$0.036		n/a	n/a
Total										346.5	43,161

Deleted: ¶

RSIP Incentive Step	Start Date	EPBB (\$/W)			Star
	Start Date	≤5 kW	5 to 10 kW	>10kW, <20kW	Star
1	3/2/2012	\$2.450	\$1.250	\$0.000	3/2/2012
2	5/18/2012	\$2.275	\$1.075	\$0.000	5/18/2012
3	1/4/2013	\$1.750	\$0.550	\$0.000	4/1/2013
4	1/6/2014	\$1.250	\$0.750	\$0.000	1/6/2014
5	9/1/2014	\$0.800	\$0.400	\$0.000	9/1/2014
6	1/1/2015	\$0.675	\$0.400	\$0.000	1/1/2015
7	3/11/2015	\$0.540	\$0.400	\$0.000	3/11/2015
8	8/8/2015	\$0.540	\$0.400	\$0.000	8/8/2015
9	2/1/2016	\$0.513	\$0.400	\$0.000	2/1/2016
10	9/1/2016	\$0.487	\$0.400	\$0.000	9/1/2016
11	8/15/2017	\$0.487	\$0.400	\$0.000	8/15/2017
12	1/15/2018	\$0.463	\$0.400	\$0.000	1/15/2018
13	6/1/2018	\$0.463	\$0.400	\$0.000	6/1/2018
14	9/24/2018	\$0.463	\$0.400	\$0.000	9/24/2018
15	1/15/2020	\$0.426	\$0.328	\$0.000	1/15/2020
Proposed 16	11/1/2020	\$0.426	\$0.328	\$0.000	11/1/2020
Proposed 17	12/15/2020	\$0.389	\$0.252	\$0.000	12/15/2020
Total					

Resolution

WHEREAS, Public Act 19-35, “An Act Concerning a Green Economy and Environmental Protection” (the “Act”) updates Connecticut General Statutes 16-245ff and 16-245gg to require the Connecticut Green Bank (“Green Bank”) to design and implement a Residential Solar Photovoltaic (“PV”) Investment Program (“Program”) that results in no more than three hundred and fifty (350) megawatts of new residential PV installation in Connecticut on or before December 31, 2022 and extends through December 31, 2022 or after deployment of 350 MW the ability to create Solar Home Renewable Energy Credits (“SHRECs”) that the electric distribution companies are required to purchase through 15-year contracts;

WHEREAS, as of October 12, 2020, the Program has thus far resulted in nearly three hundred and forty-seven (346.5) megawatts of new residential PV installation application approvals and nearly three hundred and nine (308.6) MW of completed projects in Connecticut;

WHEREAS, at the September 23, 2020 special meeting, the Green Bank Board of Directors approved up to 32 MW of total additional capacity to be approved for incentives beyond RSIP's statutory 350 MW target, including up to 10 MW to account for RSIP cancellations, and an additional 22 MW, to support the residential solar PV industry toward achieving sustained, orderly development in the context of COVID-19 impacts. The Green Bank will therefore approve up to a total of 382 MW, to be cost recovered through REC sales as described in this memo.

WHEREAS, at the September 23, 2020 special meeting, the Green Bank Board of Directors requested that the Staff return with a recommendation at a future meeting for review and approval of the incentive level for RSIP beyond 350 MW (e.g., reducing the residential solar PV incentives beyond the current Step 15 levels of the RSIP).

NOW, therefore be it:

RESOLVED, that the Board, [including the Department of Energy and Environmental Protection through its Board designee](#), approves of the RSIP Schedule of Incentives set forth in Tables 2 through 4 in the memo "Residential Solar Investment Program – Steps 16 and 17 Recommendations" dated October 23, 2020, reflecting the following incentive reductions for RSIP Step 17 as compared to Step 16:

- 20% for EPBB overall (consisting of a 16% reduction for capacity ≤10 kW and an 37% reduction for capacity >10 kW)
- 10% for LMI PBI

APPENDIX I



STATE OF CONNECTICUT
PUBLIC UTILITIES REGULATORY AUTHORITY

October 15, 2020
In reply, please refer to:
Docket Nos. 20-07-01 and 17-12-03RE09
Motion Nos. 16 and 18, respectively

Bryan Garcia
President and Chief Executive Officer
Connecticut Green Bank
845 Brook Street
Rocky Hill, CT 06067

Re: Docket No. 20-07-01 – PURA Implementation of Section 3 of Public Act 19-35,
Renewable Energy Tariffs and Procurement Plans

Docket No. 17-12-03RE09 – PURA Investigation into Distribution System Planning of
the Electric Distribution Companies – Clean and Renewable Energy Resource Analysis
and Program Reviews

Dear Mr. Garcia:

The Public Utilities Regulatory Authority (Authority or PURA) acknowledges receiving the Written Comments filed by the Connecticut Green Bank (CGB) on September 17, 2020, in Docket No. 17-12-03RE09. Included in those Written Comments was an implicit motion request that the Authority continue to allow the aggregation of renewable energy credits (RECs) from residential solar PV systems by the CGB following the expiration of the Residential Solar Incentive Program (RSIP). The Authority addressed this implicit motion request for continued REC aggregation by posting the Written Comments as a Motion for CGB Residential Solar REC Aggregation (Motion) in Docket Nos. 20-07-01 and 17-12-03RE09 as Motion Nos. 16 and 18, respectively. This ruling narrowly addresses the topic of continued REC aggregation by the CGB. The Authority does not plan to take up any other substantive or procedural matters raised by the CGB in their Written Comments through this Motion, but may do so elsewhere in the above-captioned proceedings.

In their Written Comments, the CGB states that if allowed to continue the aggregation of residential solar PV system RECs following the conclusion of the RSIP, the CGB will be able to continue to provide incentives to residential end-use solar PV customers. The CGB asserts that the continuation of such incentives will: (1) enable “the sustained orderly development of the local solar industry” as the industry manages

through the economy-wide impacts of the COVID-19 pandemic; (2) support the market's transition from net metering to a tariff structure; (3) reduce Class I RPS compliance costs; and (4) help the CGB recover the administrative and financing costs associated with providing incentives to residential end-use customers. CGB Written Comments, p. 3. Through Docket Nos. 16-06-06 and 16-06-07, the Authority approved the CGB's aggregation of residential solar PV systems, and the associated RECs, to support the efficient and effective implementation of the RSIP policy. Id., p. 2. According to the CGB, the previous decision by PURA to allow for small project aggregation established a precedent for the market – easing the administrative burden on PURA, supporting the efficient and effective administration of the RSIP by the CGB, and providing access to the REC market by thousands-and-thousands of residential end-use customers to support the implementation of Connecticut's Class I RPS policy. Id.

Pursuant to Conn. Agencies Regs. §16-245a-2, each generation unit is required to apply to the Authority for Class I renewable energy source certification. The Authority's current rules and regulations require PURA to certify generation facilities on an individual basis, as this practice helps to avoid the possible double-counting of RECs. According to the Authority's prior Decisions,³ the CGB was allowed to aggregate the RECs collected from residential solar PV facilities through the RSIP by attaching a project-specific spreadsheet per application for Class I renewable energy source certification. It is essential that each generation facility is assigned an individual NEPOOL-GIS ID No. and that each assigned NEPOOL-GIS ID No. is linked only to the CGB's Connecticut (CT) Renewable Portfolio Standard (RPS) Registration Number. The Authority issues a single CT RPS Registration Number per batch of aggregated RECs and assigns it to each application that pertains to the aggregation of the RSIP facilities.

In anticipation of reaching the 350 MW of approved capacity of the RSIP, the Authority permits the CGB to continue to aggregate the RECs associated with residential solar PV systems. The Authority will allow such aggregation for all residential solar PV systems to which the CGB provides an incentive before January 1, 2022, the statutory deadline for the new residential solar PV tariffs to be in place. This will allow the CGB to provide incentives to the residential solar PV facilities while transitioning the solar industry from net metering to an approved tariff allowing for the sustained, orderly development of the local solar industry. Importantly, such aggregation is contingent upon the CGB continuing to follow the procedure set forth in

³ See Final Decisions in Docket No. 13-02-03, Application of the Clean Energy Finance and Investment Authority for Qualification of the Clean Energy Finance and Investment Authority as a Class I Renewable Energy Source, dated May 1, 2013; Docket No. 13-02-03RE01, Application of The Connecticut Green Bank f/k/a The Clean Energy Finance and Investment Authority for Qualification of The Connecticut Green Bank as a Class I Renewable Energy Source, dated April 20, 2016; Docket No. 16-06-06, Application of The Connecticut Green Bank for Qualification of Residential Solar Investment Program (RSIP) Facilities as Class I Renewable Energy Sources – Original 30 MW, dated August 3, 2016; Docket No. 16-06-07, Application of The Connecticut Green Bank for Qualification of Residential Solar Investment Program (RSIP) Facilities as Class I Renewable Energy Sources – 14.45 MW of Additional 30 MW, dated August 3, 2016.

the regulations and the Authority's current application process for the certification and aggregation of RECs from residential solar PV facilities. Further, for ease of any future regulatory action or processes involving aggregated RECs not associated with the RSIP, the CGB shall not submit RSIP and non-RSIP generation facilities for certification together under a single application.

Any participant or stakeholder in the above-captioned dockets that seeks to file a motion for reconsideration shall do so within 30 calendar days of this ruling. Should the CGB require further clarification or rulings to effectuate the continued aggregation of the RECs associated with residential solar PV systems, the CGB should file a subsequent motion requesting such clarification(s) or additional ruling(s).

Sincerely,

PUBLIC UTILITIES REGULATORY AUTHORITY

A handwritten signature in black ink, appearing to read 'Jeffrey R. Gaudiosi', written in a cursive style.

Jeffrey R. Gaudiosi
Executive Secretary

cc: Service List

APPENDIX II

Draft Term Sheet for the Purchase and Sale of E-SHRECs

October 16, 2020

This Term Sheet is for informational purposes only. It does not constitute binding or legally enforceable contract terms and does not impose any legally binding obligations whatsoever on any party but is intended for the purpose of generally outlining the terms pursuant to which a definitive Purchase and Sales Agreement (SPA) may ultimately be entered into at the discretion of the parties.

Seller and Buyer fully understand and agree that any costs or obligations incurred as a result of, pursuant to, or during the course of negotiation of, or other associated work on, this Term Sheet shall be the sole responsibility of each individual party itself and shall not implicate the other party for any costs whatsoever.

Seller:	Green Bank or a special purpose entity wholly-owned (directly or indirectly) by Green Bank (the "Seller").
Buyer:	The Connecticut Light and Power Company dba Eversource Energy or The United Illuminating Company
RSIP-E Program:	New program called the Residential Solar Investment Program Extension (RSIP-E) of up to 32 MW of solar PV projects that may be approved by the Green Bank and deployed by contractors and that will serve as additional capacity beyond the 350 MW Residential Solar Investment Program (RSIP). Of the 32 MW of additional approvals, an estimated 7 MW of projects may be included in RSIP as a result of cancellations, leaving approximately 25 MW of projects to generate RECs outside of RSIP.
E-SHREC:	Means a Connecticut Class I renewable energy credit created by the production of one megawatt hour of electricity generated by one or more qualifying residential solar photovoltaic systems with an approved incentive from the Green Bank within the RSIP-E Program, and shall represent title to and claim over all Environmental Attributes associated with the specified MWh of generation.
Tranche:	For a given year, shall include all E-SHRECs generated by E-SHREC Projects that were not included in a prior Tranche that first begin producing E-SHRECs in time to be included in the Trading Period for the first quarter of such year. For example, the 2022 Tranche will include all E-SHRECs created in NEPOOL GIS on [July 15, 2022] and thereafter in accordance with NEPOOL GIS Operating Rules for the duration of the Tranche Delivery Term.

Tranche Purchase Price:	<p>With respect to a particular Tranche, the purchase price to be paid by Buyer to Seller for each E-SHREC delivered by Seller to Buyer under such Tranche during the applicable Tranche Delivery Term as agreed between Buyer and Seller, as set forth below:</p> <ul style="list-style-type: none"> • Years 1-5 - \$30 (i.e., \$5 below current market price for 2022-2024) • Years 6-10 - \$25 • Years 11-15 - \$20 (i.e., 50% below ACP)
Volume of E-SHRECs:	TBD
Term:	The tranche delivery term starts on 1 January of a tranche year and continues for 15 years.
Buyer Cost Recovery:	The Parties recognize and agree that the SPA and the amounts to be paid to Seller for E-SHRECs to be delivered is subject to regulatory approval and pursuant to Connecticut General Statute 16-245a(f). The costs and fees incurred by Buyer associated with the SPA, are premised upon PURA approval of full cost recovery by Buyer pursuant to, inter alia, Conn Gen. Stat. Sec. 16-243p. If the Authority or other court or agency of competent jurisdiction fails to authorize or prohibits the Buyer's full cost recovery of these costs and fees, including all amounts paid for E-SHRECs, then Buyer may reduce its obligation to pay Seller to the extent of the Authority's failure to authorize Buyer's full cost recovery.
Right of First Refusal and Expiry Date:	The proposal herein shall not be a basis for negotiation unless a definitive term sheet for the documentation of the SPA is executed and delivered not later than October 30, 2020 (the "Expiry Date"). On or before the Expiry Date, before the Seller may offer to parties other than the Buyer proposals for the sale and purchase of E-SHRECs, the Seller and Buyer will negotiate in good faith to enter into a definitive term sheet for the documentation of the SPA.
Other Terms and Conditions:	To be defined within the SPA, but should expect: events of default, remedies, definition of force majeure, limitations of liability, indemnities, CT FOIA and other provisions substantially similar to the MPA.
Governing Law and Forum:	Connecticut

Memo

To: Connecticut Green Bank Board of Directors

From: Mackey Dykes, VP of Financing Programs

CC: Bryan Garcia, President and CEO; Bert Hunter, EVP and CIO; Brian Farnen, General Counsel and CLO

Date: October 16, 2020

Re: C-PACE Project at 55 Coogan Blvd, Mystic CT

Summary

In September of 2019, the Deployment Committee of the Green Bank Board of Directors approved a \$1.286 million dollar loan to the property at 55 Coogan Blvd, Mystic, CT, better known as the Mystic Aquarium. The memo for the approval is included as Exhibit A. Since that approval, COVID-19 has had a serious impact on the Mystic Aquarium and led to delays in implementing the project while the Aquarium addressed the more pressing issues of staying afloat. The pandemic caused them to shut down in March and reopen in July with reduced capacity. The resulting loss of revenue forced them to appeal to the State of Connecticut (“The State”) for assistance. The State agreed to provide assistance and closed on a \$7m loan in August. The loan is for 20 years at 3%.

The Aquarium remains interested in pursuing the C-PACE project first approved in September. The financing will allow them to replace equipment at the end of its life as well as install energy savings measures and solar PV that will generate additional cash flow. The energy efficiency project details remain similar to what was presented in September 2019. The amount of financing needed has been reduced thanks to larger incentives from Eversource. The Aquarium has added a 100kw solar project to the scope and, with this addition, the overall financed amount is similar to the original approval (\$1,259,862 now vs \$1,285,872 then).

Staff is requesting approval to move forward with the new project as outlined in Exhibit B at an interest rate that mirrors the State financing, 3%. The Green Bank has been working with the Aquarium and the State to ensure that clean energy is a part of the Aquarium’s go-forward plan. The State’s agreement with the Aquarium, while restricting additional debt broadly, references and allows Green Bank C-PACE financing as a means to achieve this. Given this and the important of the Aquarium to Connecticut, staff recommends aligning the terms of the C-PACE financing with the rest of the state support. Prior to closing, staff will refresh the underwrite of the Aquarium.

Resolutions

WHEREAS, pursuant to Section 157 of Public Act No. 12-2 of the June 12, 2012 Special Session of the Connecticut General Assembly and as amended (the "Act"), the Connecticut Green Bank (Green Bank) is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

WHEREAS, the Green Bank Board of Directors (the "Board") has approved a \$40,000,000 C-PACE construction and term loan program;

WHEREAS, the Green Bank Deployment Committee in September of 2019 approved a **\$1,285,872** construction and term loan under the C-PACE program to Sea Research Foundation, Inc., the building owner of 55 Coogan Blvd, Mystic, Connecticut, to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

WHEREAS, the Green Bank, subject to a revised scope of work seeks to provide a **\$1,259,862** construction and term loan under the C-PACE program at a concessional rate to Sea Research Foundation, Inc., the building owner of 55 Coogan Blvd, Mystic, Connecticut (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan as more fully explained in a memorandum submitted to the Board dated October 16, 2020 (the "Memorandum"); and

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the Memorandum , and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 180 days from the date of authorization by the Board of Directors;

RESOLVED, that before executing the Loan, the President of the Green Bank and any other duly authorized officer of the Green Bank shall receive confirmation that the C-PACE transaction meets the statutory obligations of the Act, including but not limited to the savings to investment ratio and lender consent requirements; and

RESOLVED, that the proper the Green Bank officers are authorized and empowered to do all other acts and execute and deliver all other documents and instruments as they shall deem necessary and desirable to effect the above-mentioned legal instruments.

Submitted by: Bryan Garcia, President and CEO, Bert Hunter, EVP and CIO, Mackey Dykes, Vice President, and Mike Yu, Director of Clean Energy Finance

Memo

To: Board of Directors, Connecticut Green Bank

From: Louise Della Pesca, Associate Director, Clean Energy Finance and Bert Hunter, EVP & CIO

CC: Bryan Garcia, President and CEO; Brian Farnen, General Counsel and CLO

Date: October 14, 2020

Re: Financing for a Senior Secured Term Loan to Special Purpose Vehicle owned by Skyview Ventures LLC: Expansion from \$3.5M to \$7.0M

Introduction – Background to Request for Facility Expansion

At the Connecticut Green Bank (“CGB”) Board of Directors (“Board”) meetings held on March 25 and April 24, 2020, resolutions were passed to enable CGB to enter into a senior secured term loan facility (“Term Loan”) with a special purpose vehicle (“SPV” or “Borrower”) that is wholly owned by Skyview Ventures, LLC (“Skyview”). At its March 25, 2020 meeting, the Board approved a facility size of \$2.3M, which was then expanded to \$3.5M on the same economic terms by resolutions passed at the April 24, 2020 meeting. The memorandum presented to the Board at the April 24, 2020 meeting, including detail on the economic terms, transaction structure, and risks and mitigants, is found in Appendix 1.

Since Board approval was granted, CGB has entered into loan documentation with the Skyview SPV (the “Existing Term Loan”) and \$2.1M of capital has been deployed in three separate advances. Beyond the projects being financed under the Existing Term Loan, Skyview has continued to develop a pipeline of high quality commercial solar power purchase agreement projects (“PPA Projects”) with primarily municipal off-takers in Connecticut. The PPA Projects are due to achieve commercial operations in the remaining months of 2020 and into 2021. Skyview has offered CGB the opportunity to advance debt against these PPA Projects on the same economic terms as the Existing Term Loan via an expansion from \$3.5M to \$7.0M (the “Expanded Term Loan”).

This memorandum offers an update to the Board on the economic and energy production performance of the Existing Term Loan to date, and makes a request for approval of the increased transaction size of the Expanded Term Loan.

Term Loan Performance

- Borrower is current on quarterly principal and interest payments

- Table 1 summarizes the energy production and off-taker payment performance of 20 PPA Projects¹ that CGB has advanced against to date.
- The weighted average energy production performance in the [year to date] is █% of expectation, which is consistent with CGB’s own portfolio of commercial solar projects in 2020.
- When structuring the Term Loan, CGB stress-tested expected production and found that a █% reduction in performance would still ensure a █x debt service coverage ratio (“DSCR”).
- All but one of the 20 off-takers is fully current on monthly payments. One off-taker is delinquent by a single month, when a change in personnel resulted in a miscommunication on invoicing. Skyview is confident that the delinquency will be resolved.

Table 1 – Energy Production and Payment Performance of 20 PPA Projects since start of Term Loan

PPA Project	Off-taker payment status	Actual energy production as % of expected	Notes

¹ One PPA Project that CGB has made a Term Loan advance against, Unquowa School, has only one month of operating history and has been excluded from the analysis in Table 1.

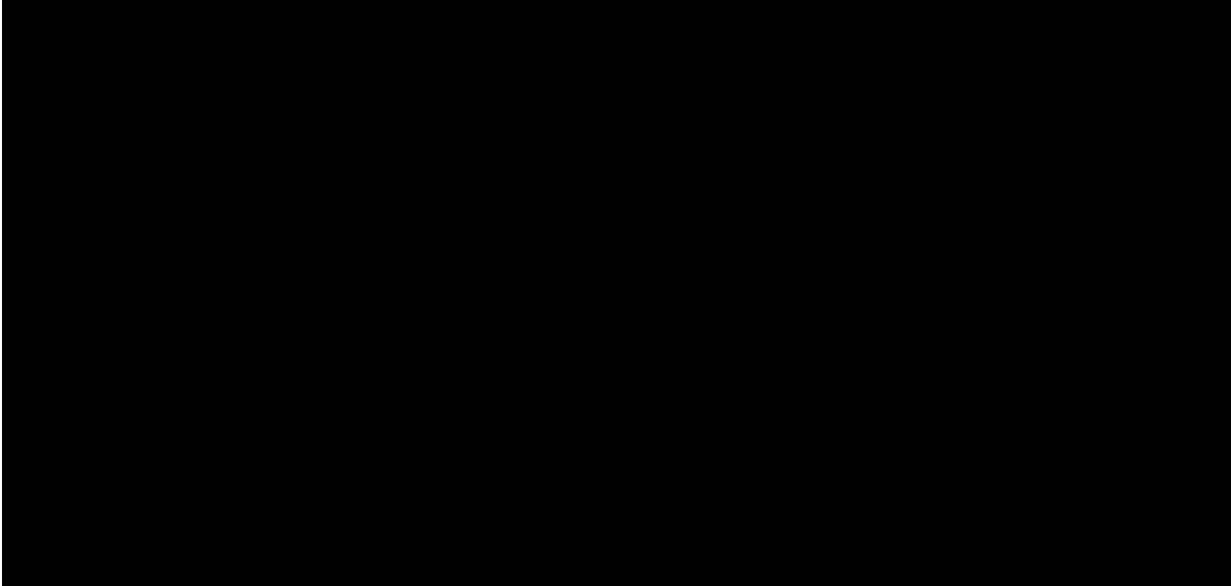
PPA Project	Off-taker payment status	Actual energy production as % of expected	Notes

Overview of Collateral - Update

When it was sized to \$3.5M, the Term Loan was projected to finance 26 PPA Projects. So far, 21 PPA Projects have been financed. Table 2 summarizes Skyview’s updated financeable pipeline of PPA Projects under and expanded Term Loan.

Table 2 – Skyview PPA Project Pipeline, 2020 and 2021

PPA Project	Size (kW)	Commercial Operations Target Date	Notes



CGB will conduct the same due diligence activities on PPA Projects in the expanded pipeline as it has on PPA Projects it has financed to date. CGB reserves the right in the loan documentation to not finance any PPA Project that does not meet its diligence requirements, including but not limited to:

- Lower of a ■■■x DSCR or a ■■% advance rate (using a discount factor of ■■■%)
- CGB review and approval of the major contracts associated with the PPA Projects (PPA, engineering, procurement and construction agreement, renewable energy credit contract)
- Use of 'tier 1' equipment in the construction of the PPA Projects
- CGB review and approval of operations and maintenance contracted program
- Underwriting of off-taker / review of evidence that off-taker has recently issued investment grade rated debt

Ratepayer Payback

How much clean energy is being produced (i.e. kWh over the projects lifetime) from the project versus the dollars of ratepayer funds at risk?

The portfolio is expected to produce 80,000,000 kWh of energy, over a 15 year period, and the Term Loan is up to \$7.0M. The kWh / \$ ratepayer funds at risk is forecast to be 11.4.

Capital Extended

How much of the ratepayer and other capital that Green Bank manages is being expended on the project?

The Expanded Term Loan will not exceed \$7.0M.

Recommendation

In conclusion, based on the good performance of the Existing Term Loan and the underlying assets that secure it, as well as the proposed due diligence approach for future PPA Projects which could be financed by the Expanded Term Loan, and in light of the resolutions of the Board at the meeting on April 24, 2020 to approve a loan facility not to exceed \$3.5M, Staff recommends approval of the Expanded Term Loan proposal, with a loan facility not to exceed \$7.0M.

Revised and Restated Resolutions

WHEREAS, the Connecticut Green Bank (“Green Bank”) has significant experience in the development and financing of commercial solar PPA projects in Connecticut;

WHEREAS, the Green Bank continually seeks new ways to work with private sector partners to meet the demonstrated need for flexible capital to continue expanding access to financing for commercial-scale customers looking to access solar and savings via a PPA;

WHEREAS, the Green Bank has established a working relationship with a private sector Connecticut solar developer, Skyview Ventures (“Skyview”), and through that relationship the Green Bank has an opportunity to deploy capital for the development of clean energy in Connecticut, and specifically toward commercial solar PPA projects developed by Skyview in Connecticut (“Skyview PPA Projects”);

WHEREAS, the Green Bank is implementing a Sustainability Plan that invests in various clean energy projects and products to generate a return to support its sustainability in the coming years

WHEREAS, based on diligence of Green Bank staff of the proposed senior secured loan facility (“Term Loan”) the Green Bank Deployment Committee (the “Deployment Committee”) passed resolutions at its meeting held on February 27, 2020 to recommend to the Green Bank Board of Directors (the “Board”) the approval of the Term Loan transaction in an amount not to exceed \$2.3M as a Strategic Selection and Award pursuant to the Green Bank Operating Procedures Section XII;

WHEREAS, the Board passed resolutions at its meeting held on March 25, 2020 to approve the Term Loan transaction in an amount not to exceed \$2.3M as a Strategic Selection and Award pursuant to the Green Bank Operating Procedures Section XII given the special capabilities, uniqueness, strategic importance, urgency and timeliness, and multi-phase characteristics of the Term Loan transaction;

WHEREAS, the Board passed resolutions at its meeting held on April 24, 2020 to expand the approved the Term Loan transaction to an amount not to exceed \$3.5M; and

WHEREAS, based on an expanding pipeline of Skyview PPA Projects and diligence of Green Bank staff, Green Bank staff proposes the Term Loan be increased.

NOW, therefore be it:

RESOLVED, that the Board hereby amends and restates its approval of the Term Loan transaction as described in the Project Qualification Memo submitted by the staff to the Board and dated October 14, 2020 (the "Memorandum") to increase the amount of the Term Loan from \$3.5 million to \$7.0 million and on terms and conditions substantially consistent with those described in the Memorandum as a Strategic Selection and Award pursuant to the Green Bank Operating Procedures Section XII given the special capabilities, uniqueness, strategic importance, urgency and timeliness, and multi-phase characteristics of the Term Loan transaction; and

RESOLVED, that the proper Green Bank officers are authorized and empowered to do all other acts and execute and deliver all other documents as they shall deem necessary and desirable to effect this Resolution.

Submitted by: Louise Della Pesca, Associate Director, Clean Energy Finance and Bert Hunter, EVP & CIO

Appendix 1: Memo to Board for approval of \$3.5M Term Loan

Memo

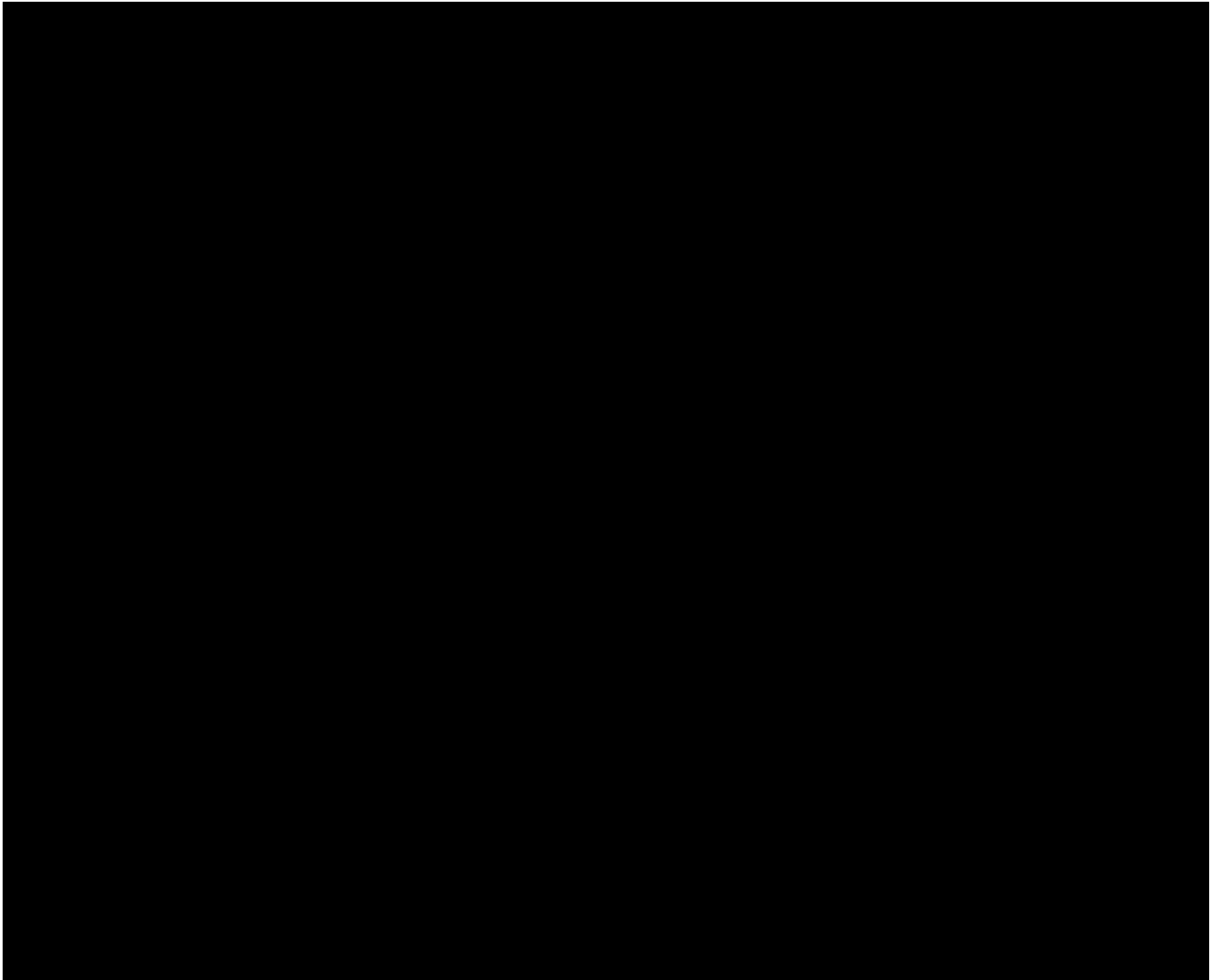
To: Board of Directors, Connecticut Green Bank

From: Louise Della Pesca, Associate Director, Clean Energy Finance; Desiree Miller, Senior Manager, Clean Energy Finance; Fiona Stewart, Manager, Clean Energy Finance; Mariana Cardenas Trief, Principal, Monte Verde Consulting LLC

CC: Bryan Garcia, President and CEO; Bert Hunter, EVP and CIO; Brian Farnen, General Counsel and CLO

Date: April 17, 2020

Re: Financing for a Senior Secured Term Loan to Special Purpose Vehicle owned by Skyview Ventures LLC in an amount not to exceed \$3.5M



² See schedule of Projects (Appendix F)

Investment Modification Memo

To: Connecticut Green Bank Board of Directors

CC: Bryan Garcia, President and CEO; Jane Murphy, Vice President of Accounting and Financial Reporting; Brian Farnen, General Counsel and CLO; Eric Shrago, Managing Director of Operations

From: Bert Hunter, EVP and CIO

Date: October 16, 2020

Re: PosiGen Investment Update / Participation in 2nd Lien Facility / New Warrant Coverage

Background

Connecticut Green Bank (“Green Bank”) staff last updated the Board of Directors (the “Board”) with respect to our strategic partner for LMI solar and energy efficiency, PosiGen Inc. (together with its subsidiaries, “PosiGen”) in March 2020, just as we were beginning to feel the initial impacts of COVID-19 here in Connecticut. At that time, it appeared that PosiGen was on the verge of closing a new equity capital round, and along with that equity round, the company was anticipating restructuring a significant portion of its corporate and asset-backed debt (including the Green Bank’s facility) in turn. Unfortunately, as a number of large investors backed away from the company as a result of COVID-related concerns about potential recessionary effects on LMI homeowners, PosiGen was unable to close its equity round in late spring / early summer, and its financing situation has thus remained more-or-less static since that time. Regardless, the company has performed remarkably well with respect to core sales and portfolio performance over the intervening months. As a result of those strong key performance indicators (“KPIs”), PosiGen is now back on track with an equity investment syndicate and related capital restructuring plans, which together merit Green Bank attention and action in a few key ways. To that end, this memo will cover the following:

- PosiGen performance update through COVID;
- Anticipated next steps with respect to the company’s corporate financing;
- The Green Bank’s existing 2nd lien facility and a potential new participant in that loan; and
- Equity upside for the Green Bank associated with a restructured warrant agreement with PosiGen.

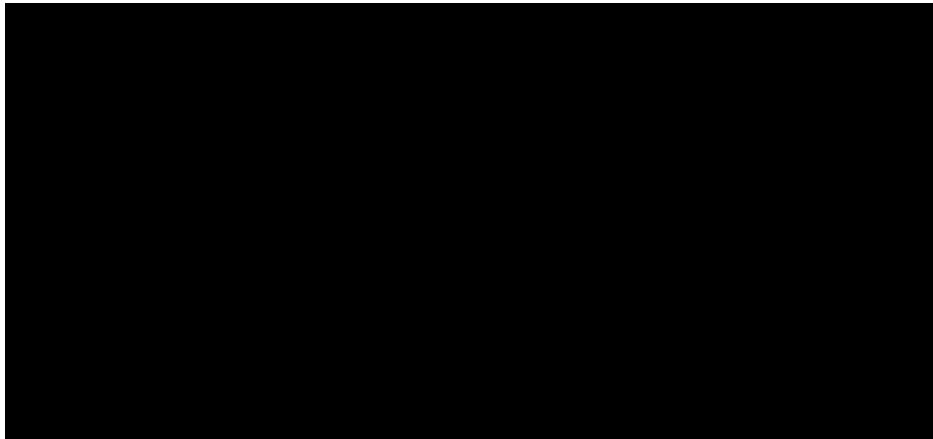
PosiGen Performance Update through COVID

The company has reported that over the course of the pandemic, demand for PosiGen’s solar + energy efficiency offering has increased significantly, and its existing customer base has performed quite well. PosiGen sold █ systems in September 2020, which was the fourth consecutive month of over █ sales, including breaking █ sales for the first time in the company’s history in the month of August. More importantly from a Connecticut perspective, PosiGen has clearly shifted its focus to our market, with new sales in Connecticut outperforming the company’s home market of Louisiana for three straight months; on a YTD basis, Connecticut’s █% share of sales leads Louisiana by █ percentage points, shown below:

Month	LA	CT	NJ	Deco	Total
[REDACTED]					

Installations trail sales, of course, but PosiGen’s deployment performance through 2020 has likewise been quite strong, with [REDACTED] projects installed in Connecticut YTD (about half of which qualify for the Green Bank’s elevated LMI incentive), and a backlog of ready-to-install systems in Connecticut that is now close to [REDACTED] projects.

Installation Backlog



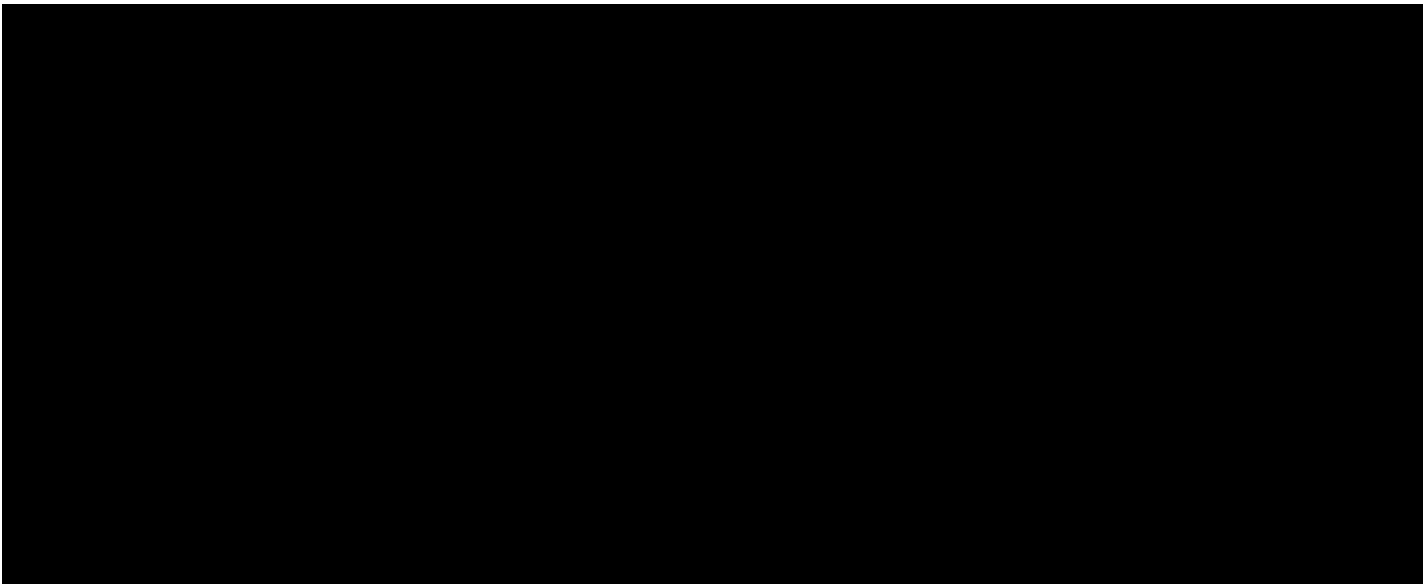
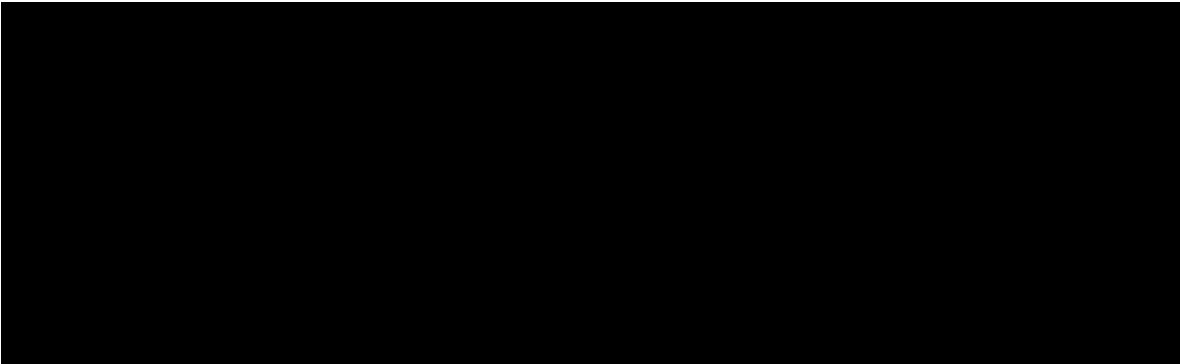
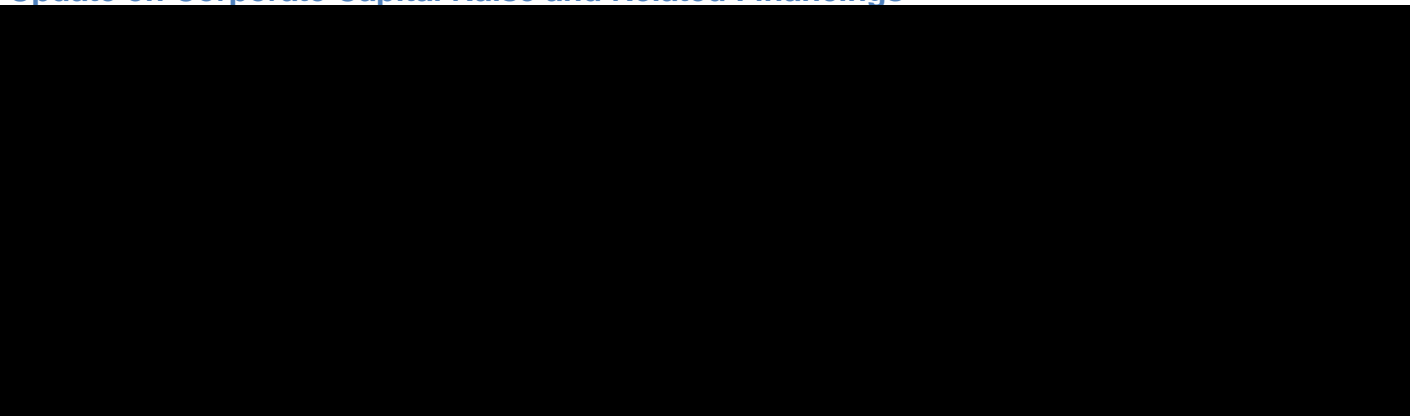
Over and above the sales and install figures, the principal reason that PosiGen has been able to reengage so successfully with its investors is the performance of its operating portfolio of installed leases. As reflected below, the company’s delinquencies have remained impressively low over the last seven months, despite the economic upheaval caused by COVID-19. On a YTD basis through September 2020, collections are [REDACTED]% current vs [REDACTED]% for the same period in 2019. As of September, the receivables aging is shown here:

Cumulative % of Customers by Aging Bucket in September 2020



This performance from a pool of LMI homeowners who were underwritten via energy savings – rather than FICO or other traditional credit metrics – is a testament to the power of the shared PosiGen / Green Bank approach to market expansion and clean energy access.

Update on Corporate Capital Raise and Related Financings



Participation in CT Green Bank 2nd Lien Facility

At the same time, as PosiGen continues to grow, and especially with an increasing focus on accelerating deployment in Connecticut, the company remains in need of further asset-backed financing sources. Recognizing that the Green Bank has no appetite for increased exposure, PosiGen has sourced another mission-aligned investor to participate in the Green Bank's existing credit facility. Convened by the investment advisor / manager the Candide Group, which bills itself as "directing capital away from an extractive global economy towards investments dedicated to social justice and sustainability," a small club of philanthropic foundations is now looking to invest between \$2.5 and \$5 million into the Green Bank's 2nd lien credit facility as a way to further support PosiGen's growth, conditional on the closing of the company's

Recommendation

Despite a somewhat bumpy road, staff is encouraged by the resilience PosiGen has shown during these challenging times, and by the company's demonstrated ability to attract capital to continue to serve LMI homeowners and pursue its "Solar for All" mandate in Connecticut and beyond. We are pleased that PosiGen has nearly completed its upcoming capital raise, and believe that a strengthened balance sheet will serve both the company and the Green Bank well as we pursue our shared objectives. Conditional upon the closing of new equity, therefore, staff recommends that a) the Green Bank allow for new participants in our existing 2nd lien credit facility in an amount not-to-exceed \$5 million, and b) exercise its renegotiated warrants (██████████) so that we can ourselves participate in any upside associated with the company's renewed growth trajectory.

Resolutions

WHEREAS, the Connecticut Green Bank (“Green Bank”) has an existing partnership with PosiGen, Inc. (together with its affiliates and subsidiaries, “PosiGen”) to support PosiGen in delivering a solar lease and energy efficiency financing offering to LMI households in Connecticut;

WHEREAS, the Green Bank Board of Directors (“Board”) previously authorized and later amended the Green Bank’s participation in a 2nd lien credit facility (the “BL Facility”) encompassing all of PosiGen’s solar PV system and energy efficiency leases in the United States as part of the company’s strategic growth plan, so long as Green Bank’s retained risk did not to exceed \$14 million;

WHEREAS, PosiGen is currently finalizing an equity round projected to raise approximately \$40 million;

WHEREAS, the Candide Group (“Candide”) would like to participate in the Green Bank’s BL Facility in an amount not-to-exceed \$5 million, such that the overall facility would be capped at \$19 million with the Green Bank’s retained risk not exceeding \$14 million as more fully explained in a memorandum submitted to the Board October 16, 2020 (the “Memorandum”);

WHEREAS, the Green Bank has warrants in PosiGen that require restructuring for PosiGen to complete its equity round but nonetheless provide the Green Bank a meaningful opportunity to participate in the company’s equity upside if renegotiated as explained in the Memorandum.

NOW, therefore be it:

RESOLVED, that the Board authorizes the Green Bank to enable Candide to participate in the BL Facility, subject to PosiGen closing its upcoming equity round, such that the BL Facility would be capped at \$19 million with the Green Bank’s retained risk not exceeding \$14 million;

RESOLVED, that the Board authorizes the Green Bank to renegotiate its existing warrant agreement with PosiGen to facilitate the closing of that round, so long as the Green Bank’s anticipated return profile is preserved in accordance with the Memorandum; and

RESOLVED, that the proper Green Bank officers are authorized and empowered to do all other acts and negotiate and deliver all other documents and instruments as they shall deem necessary and desirable to effect the above-mentioned legal instruments.

Submitted by: Bert Hunter, EVP and CIO

**TERM SHEET FOR THE PRIVATE PLACEMENT OF
SERIES D PREFERRED SHARES OF
PosiGen, Inc.**

THIS TERM SHEET SUMMARIZES THE PRINCIPAL TERMS OF THE PROPOSED FINANCING OF POSIGEN, INC. (THE “COMPANY”) AND IS FOR DISCUSSION PURPOSES ONLY. THERE IS NO OBLIGATION ON THE PART OF ANY NEGOTIATING PARTY UNTIL A DEFINITIVE PURCHASE AGREEMENT IS EXECUTED BY ALL PARTIES (THE “TRANSACTION”). THE TRANSACTIONS CONTEMPLATED BY THIS TERM SHEET ARE SUBJECT TO THE SATISFACTORY COMPLETION OF FINANCIAL AND LEGAL DUE DILIGENCE, AS WELL AS THE NEGOTIATION, EXECUTION AND DELIVERY OF DEFINITIVE DOCUMENTATION ACCEPTABLE TO THE INVESTORS. THIS TERM SHEET DOES NOT CONSTITUTE AN OFFER TO PURCHASE SECURITIES.

PROPOSED FINANCING TERMS

The Company: PosiGen, Inc. (the “Company”).

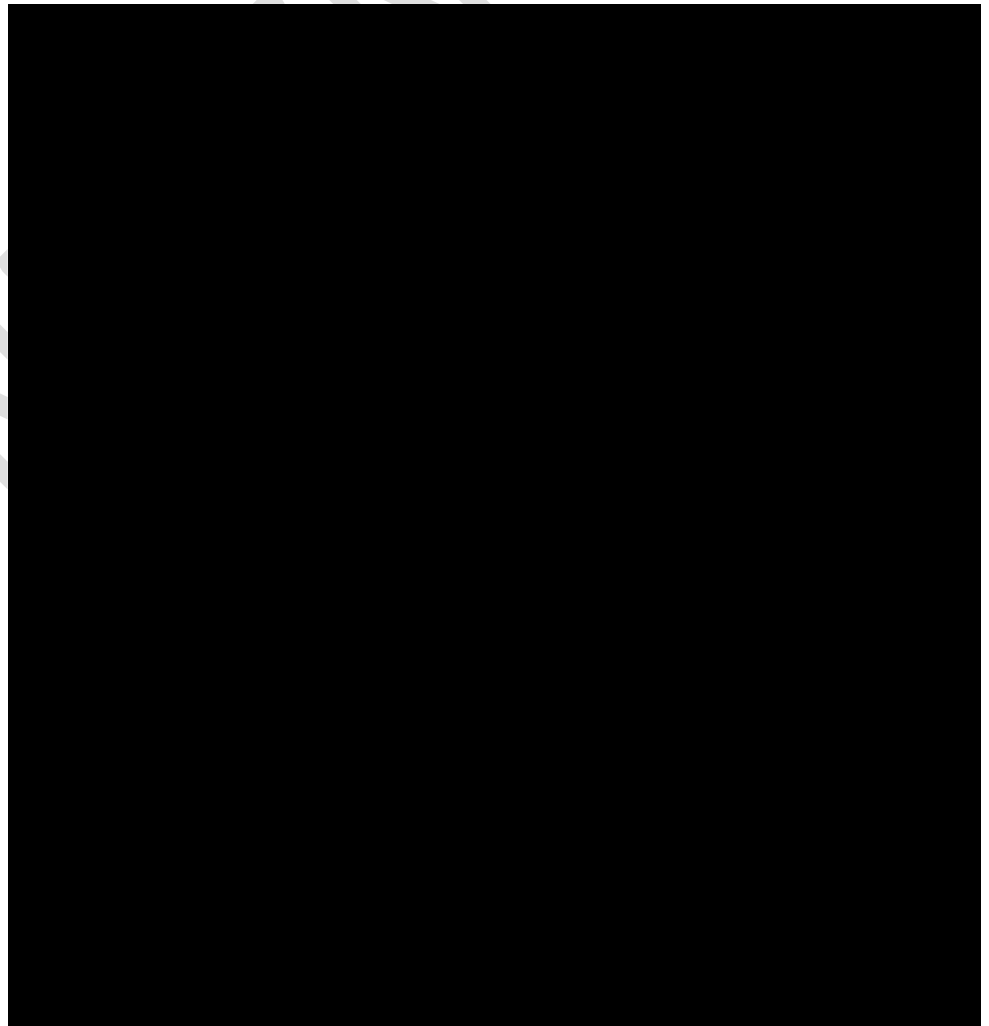
Investors:

Investment Amount:

Type of Security:

Pre-Money Valuation:

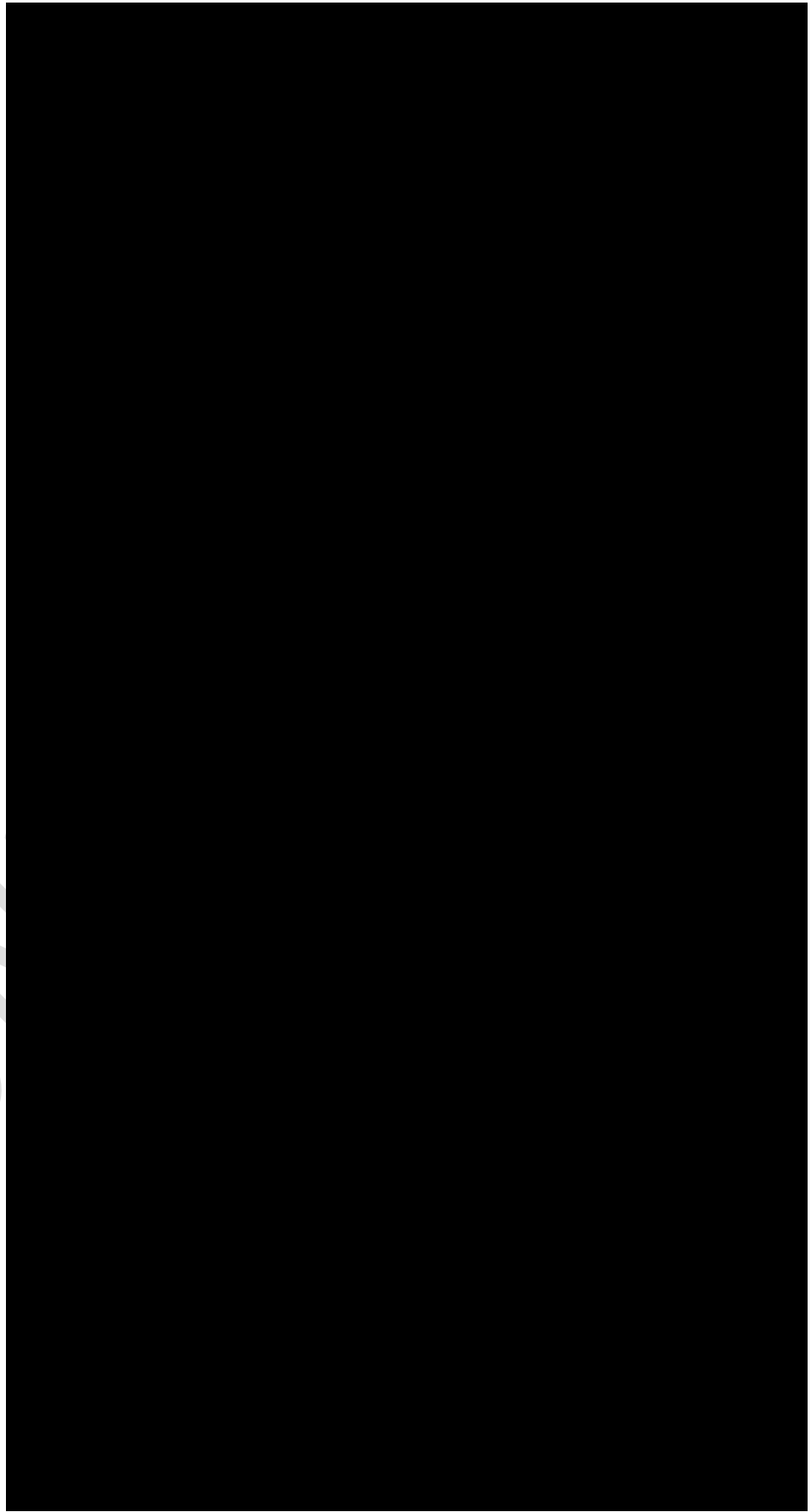
Use of Proceeds:



**Internal
Reorganization:**

**Management Incentive
Plan:**

**Senior Corporate
Debt:**



**Non-Participating
Liquidation Preference:**

Series D Redemption:

**Conversion Price and
Rate:**

Conversion Rights:

Automatic Conversion:

Preemptive Rights:

Drag-Along Rights:

Board of Directors:

**Series D Preferred Right
of First Refusal and Co-
Sale Agreement:**

Closing Date:

**Definitive
Documentation:**

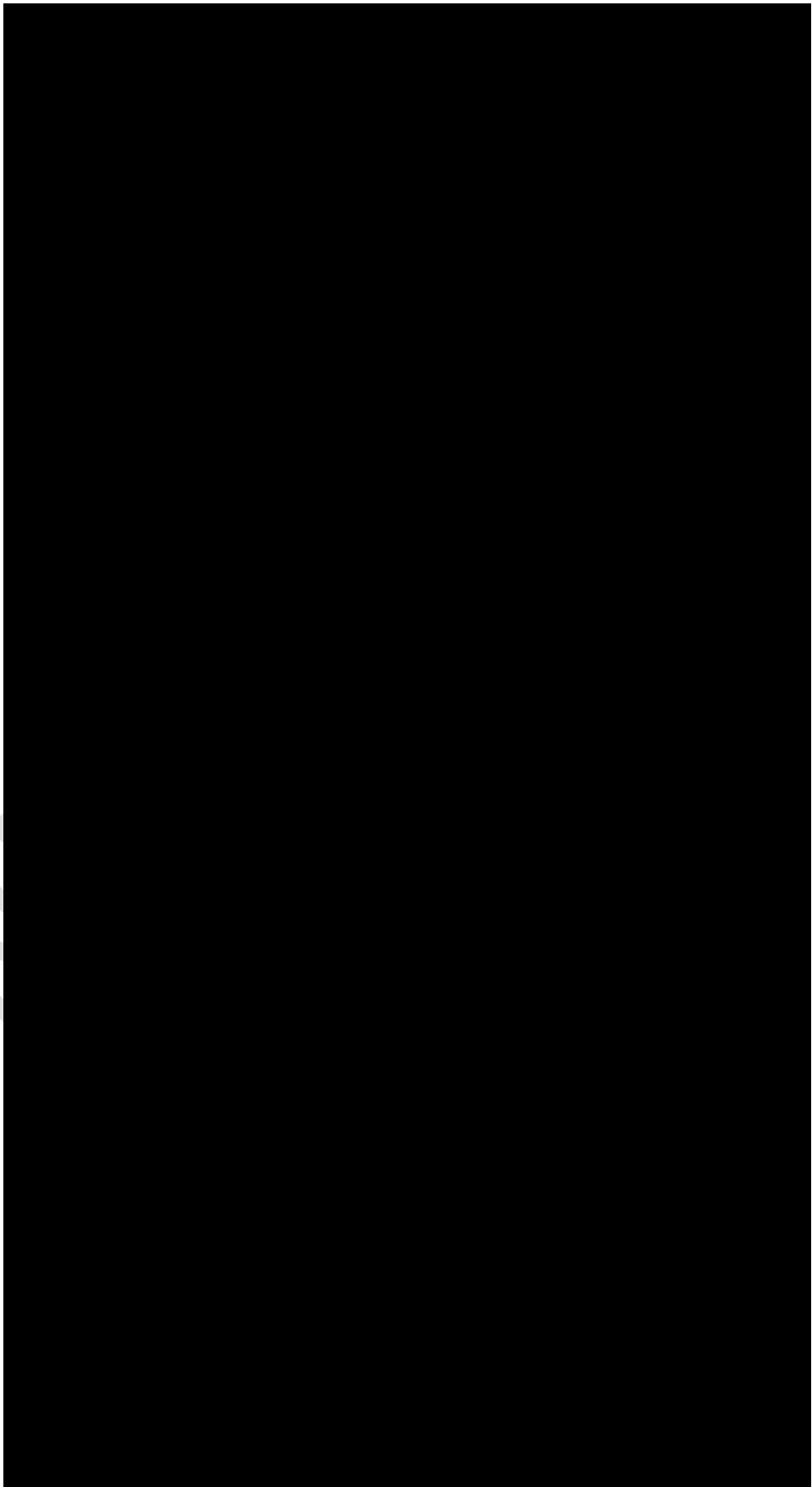
Access:

Voting Rights:

Protective Provisions:

CONFIDENTIAL

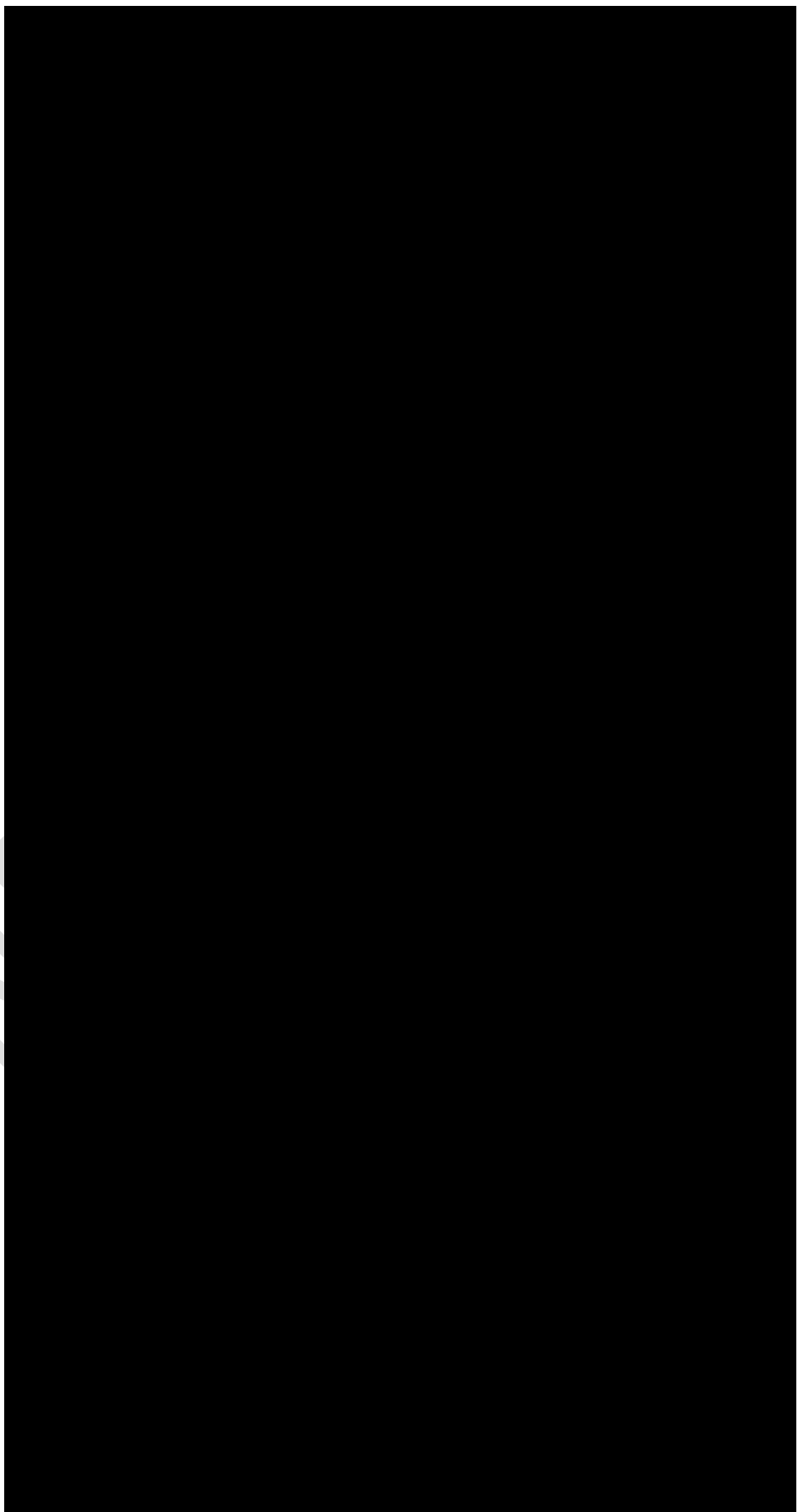
CONFIDENTIAL



Antidilution Provisions:

Information Rights:

Confidentiality:



Expenses:

Governing Law:

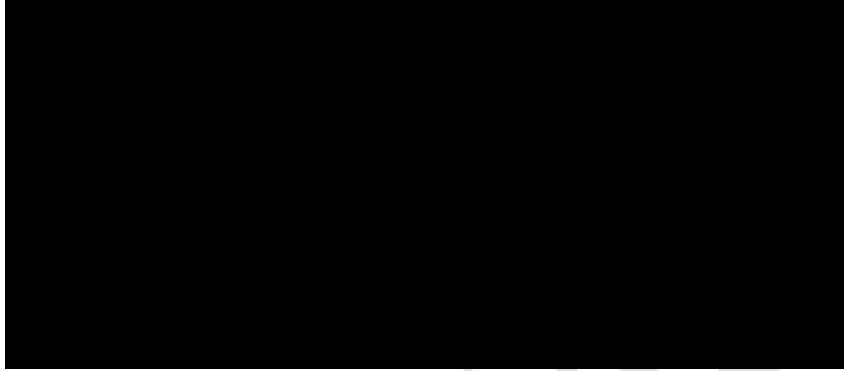
Non-Binding Terms:

CONFIDENTIAL

[Signature Page Follows]

CONFIDENTIAL

LEAD INVESTOR



ACCEPTED AND AGREED:

COMPANY

POSIGEN, INC.

By: _____

Name:

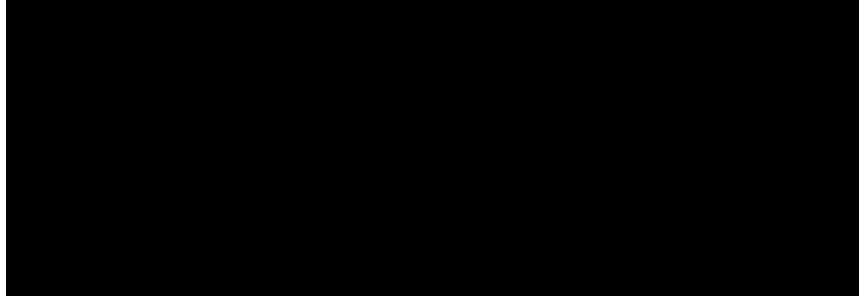
Title:

Date:

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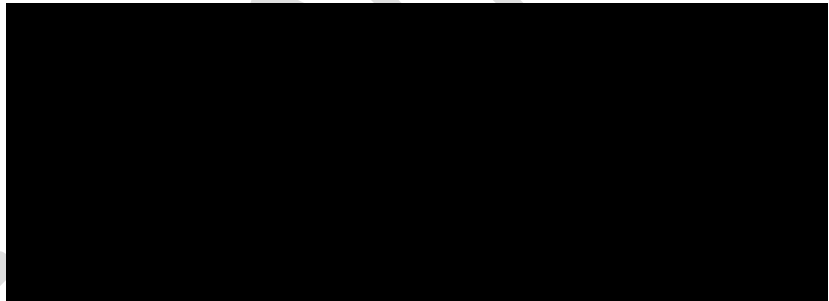
ACCEPTED AND AGREED:

INVESTOR



ACCEPTED AND AGREED:

INVESTOR



ACCEPTED AND AGREED:

INVESTOR

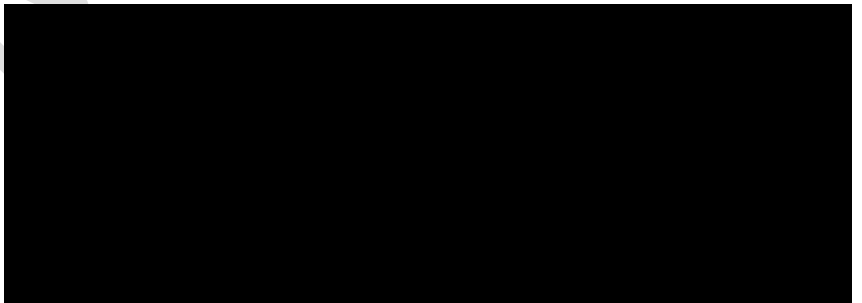
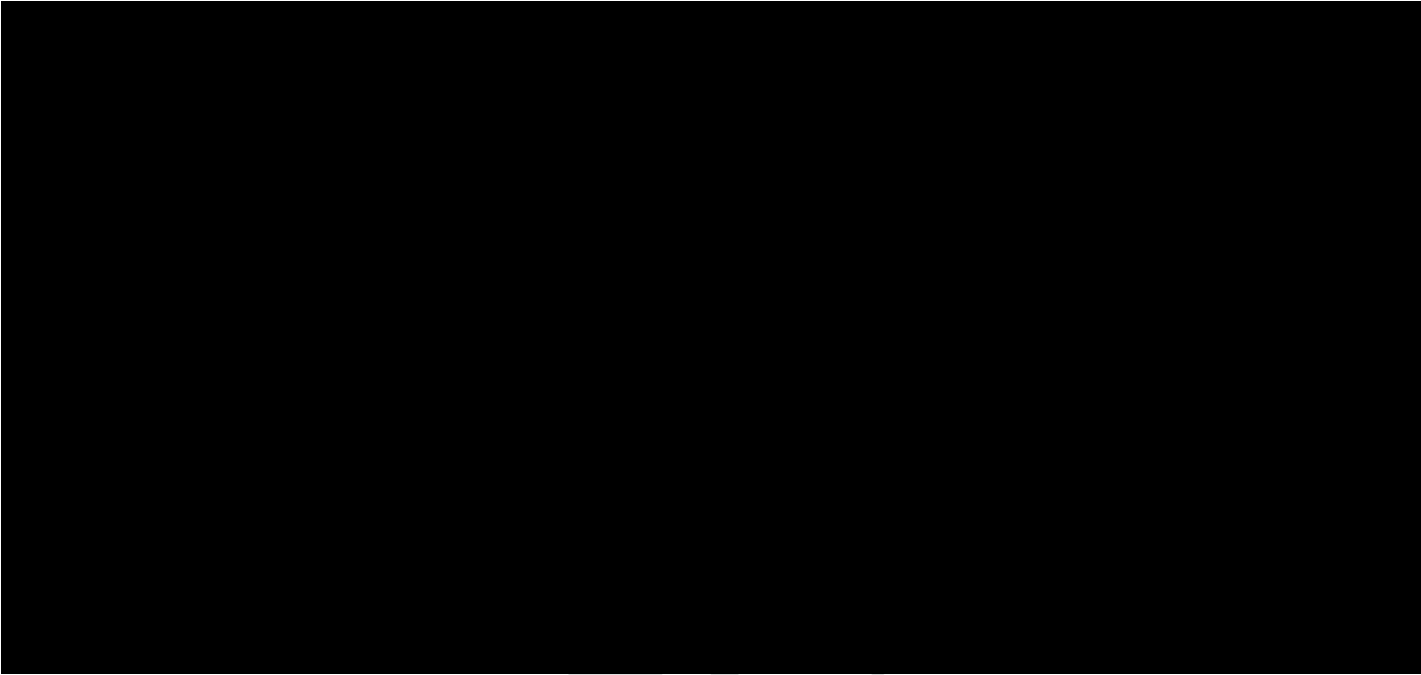


Exhibit A: Post-Series D Capitalization Table



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Rocky Hill, Connecticut 06067

300 Main Street, 4th Floor
Stamford, Connecticut 06901

T: 860.563.0015
F: 860.563.4877
www.ctcleanenergy.com

Memo

To: Connecticut Green Bank Board of Directors

From: Mariana Trief, Consultant, Clean Energy Finance; Bert Hunter, EVP and CIO

Cc: Bryan Garcia, President and CEO; Brian Farnen, General Counsel and CLO; Mackey Dykes, VP Financing Programs

Date: October 23, 2020

Re: Historic Cargill Falls Mill Redevelopment Project Update

Background

The C-PACE project at 58 Pomfret Street, Putnam, CT (the “Historic Cargill Falls Mill”, “HCFM” or “Project”) consists of an approximately 900 kW hydroelectric project (“Hydro Project”) and a portion of the various Energy Conservations Measures installed at the property along with a much larger redevelopment of an existing mill property into mixed-use residential and commercial space. A portion of these units have been designated for affordable housing.

The \$[REDACTED]M of approved capital includes \$6.2M from the Green Bank (excluding accrued interest) as a C-PACE secured loan along with the remainder of the funds coming from the Connecticut Department of Housing (“DOH”), Federal Urban Act funds (“Urban Act Funds”), state and historic tax credit equity investors, and developer equity.

Project Update

The Historic Cargill Falls Mill has continued construction throughout the spring and summer despite COVID-19. The multiple use development with a mix of market rate and affordable residential apartment units received its Certificate of Occupancy (“CO”) from the Town of Putnam on August 20, 2020. Pictures of the completed residential project are provided in Exhibit A.

Upon receipt of the CO, the Project engaged Konover Residential Corporation, a property management and leasing company, to help with leasing up of the residential units and managing the property. The market has responded with interest to the residential units and lease-up has progressed successfully. [REDACTED]

[REDACTED]

[REDACTED]

The Hydro Project consists of two turbines. The larger 600 kW turbine was placed in service in May 2017 and work to enable the smaller 300 kW unit to come online once was anticipated as part of the mill redevelopment. However, a permit from the Department of Transportation (“DOT Permit”) is required to complete the bifurcation work that will allow the 300 kW turbine to come online. Water from the Quinebaug River is channeled through large conduit that must split the flow – with a portion piped to the larger turbine and the balance going to the second turbine. This bifurcation also permits optimally running either turbine, as required, during low flow seasons. The DOT Permit was not granted in the fall as additional structural and engineering information was requested (and there were delays in processing this information due to COVID). The work will disturb the main thoroughfare into town from the west; DOT will not permit work that will encroach upon the winter or near winter season. Consequently, the DOT Permit is expected in the early spring and work on the smaller turbine will be finalized once the permit is granted. In the meantime, water will flow so that the larger 600 kW turbine can continue to operate.

Redevelopment Project Capital Stack Update

Having completed the majority of construction, the project team, including the general contractor (“GC”), expect final costs to increase by \$█M (equivalent to ~█% of the total original budget of \$█M) compared to the original budget estimates. Encountering cost overruns are common in the redevelopment of historic buildings as the full extent of the work is challenging to identify at the outset given the limited amount of information available about the underlying structure. The project team, GC and funders are jointly working to identify alternatives to address the funding gap associated with the increase in cost. We are also working with the project team to fine tune the financial and operating projections given today’s realities to have a reasonable forecast of operations and therefore understand what potential sources of funding would be available based on the property’s cash flow projections.

The Project is already pursuing an Urban Act Funds request for additional funding (\$█M in Urban Act Funds were already awarded in 2015 to the Project). An additional \$█M request from the Town of Putnam in Urban Act Funds was formally presented to the Connecticut Office of Policy and Management (“OPM”) and the project team is considering increasing the amount to \$█M to cover the majority of the funding gap. █

█
█
█
█

Conclusion

Historic Cargill Falls Mill is a truly unique redevelopment project that combines mixed-use, mixed-income mill redevelopment with renewable energy and energy efficiency. It will help revitalize downtown Putnam and provide much-needed affordable housing in a region of the state where high-quality workforce housing is in short supply. Most of the construction work for the Project is completed and the residential portion of the building already has a solid number of units leased.

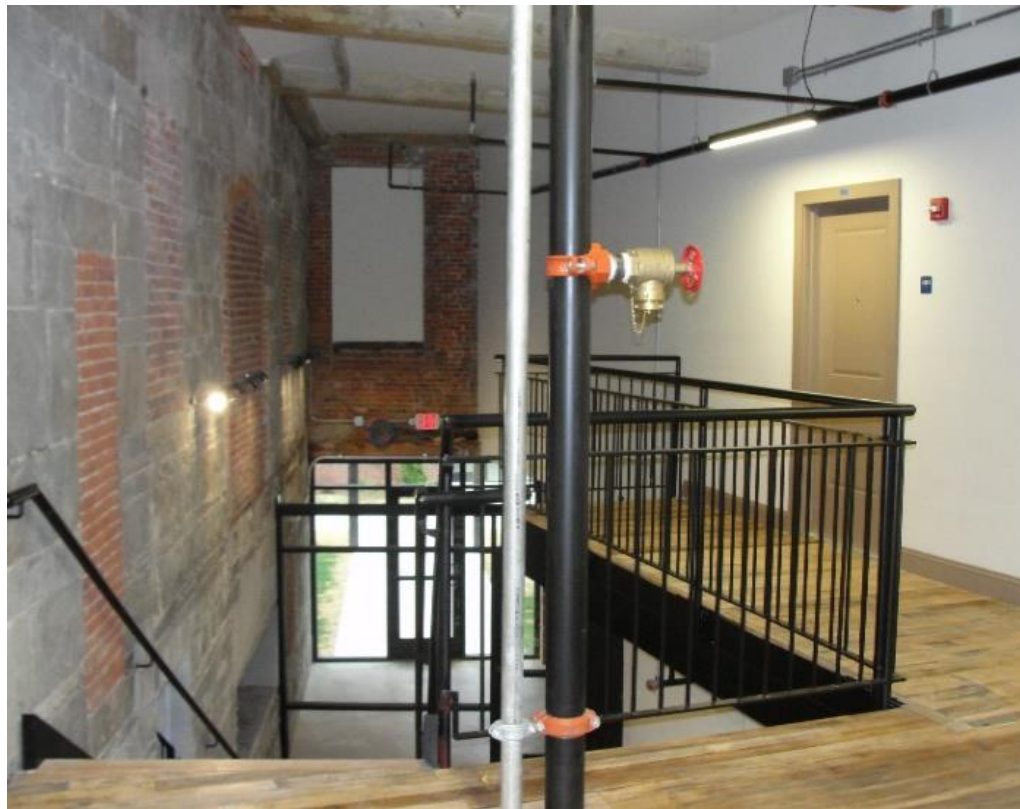
The Project has had numerous challenges and the Green Bank’s creativity, flexibility and active intervention have helped to shepherd this along with Green Bank being involved since 2014 and this being the country’s first PACE-secured hydro project. Green Bank will continue to be involved in the final completion stages of the Project and will work with the project team and funders to address the funding gap due to the ~█% increase in cost associated with the historic nature of the redevelopment. █

█.

BEFORE: Damaged and neglected interiors



AFTER: Completed interiors



AFTER: Completed interiors



BEFORE:

Building
facades and
exteriors.
Broken
windows and
neglected
landscaping



BEFORE: Building facades and exteriors. Broken windows and neglected landscaping





AFTER: Completed facades and exterior buildings



AFTER: Completed facades and exterior buildings



Mapping Household Energy & Transportation Affordability in Connecticut

Authored by

Justine Sears & Leslie Badger

Research for and support from:



October 2020



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October 16, 2020

The Connecticut Green Bank's mission is to confront climate change and provide all of society a healthier and more prosperous future by increasing and accelerating the flow of private capital into markets that energize the green economy. We do this with the goal of reducing energy burdens for families and businesses across Connecticut and achieving inclusive prosperity through clean energy.

The mission of Operation Fuel is to ensure equitable access to energy for all by providing year-round energy assistance, promoting energy independence, and advocating for affordable energy. Adding to that, we believe in Environmental Justice. Equal access to transportation, goes back to the Civil Rights movement, launched by Rosa Parks, as she unapologetically refused to give up her seat. In addition to that, government investments in our transportation infrastructure largely focused on moving motor vehicles, not people. We now know that to be problematic for our environment and people. That is the intersectionality that this study achieves.

According to the US Energy Information Administration, energy costs in Connecticut are amongst the highest in the nation, creating a crippling burden on our low- and moderate-income households. Previous studies on energy affordability commissioned by Operation Fuel estimated Connecticut's aggregate energy affordability gap -- the difference between an affordable energy expenditure and actual energy costs -- at \$450 million. While over 430,000 households in Connecticut meet the eligibility requirements for energy bill assistance, only 18.7% are served through available funding. We need more comprehensive and sustainable solutions to helping low income families in Connecticut afford their energy costs.

Beyond energy, low income households in Connecticut also face high transportation and housing costs, which, when all combined, can make up over 45% of household income. A comprehensive understanding of these cumulative costs demonstrates the disproportionate burden our low- and moderate-income households face just to meet basic needs.

The Connecticut Green Bank is proud to build on Operation Fuel's critical research by sponsoring this report from VEIC. We hope that this analysis demonstrates the need for collaborative approaches to overcoming the barriers our low-income households face, and the opportunities clean energy solutions present for reducing our state's affordability gap. Together we can solve these complex problems.

Sincerely,

Handwritten signatures of Bryan Garcia and Brenda Watson in blue ink.

Bryan Garcia
President & CEO
Connecticut Green Bank

Brenda Watson
Executive Director
Operation Fuel

Executive Summary

Low- and moderate-income households spend a larger percentage of income on energy than higher income households. Preserving energy affordability is critical to the ability of these households to not only meet basic needs but also build wealth. To understand current patterns in energy affordability in Connecticut, we analyzed spending on building energy (heating and electricity)¹ and transportation² across the state. Our analysis of transportation spending includes all transportation-related costs (vehicle ownership, maintenance, fuel, and transit costs), even those beyond energy, since these are the true costs households face to meet their mobility needs. We also considered spending on housing in our analysis because housing and transportation costs are often closely related.

We calculated two metrics of building energy and transportation affordability by U.S. census tract:

1. **Burden:** Spending expressed as percentage of household income. We calculated building energy burden, transportation burden, and a combined burden of energy, transportation, and housing.
2. **Affordability gap:** The difference between an affordable level³ of spending in a given census tract, and actual levels of spending.

We also calculated a combined affordability gap that included building energy, transportation, and housing costs. We used an affordability threshold of 45% of household income: spending levels above 45% in all three categories combined, were considered unaffordable.

We estimate an aggregate building energy affordability gap of \$444 million, statewide. Among households earning less than 60% of state median income, this gap was approximately \$1,010 annually. The building energy affordability gap is most acute in the state's urban areas: Hartford, New Haven, Waterbury, and Bridgeport, where the *mean* affordability gap in some census tracts exceeded \$1,000 per household per year. In most other areas of the state, building energy spending was within affordable levels (up to 6% of area median income; AMI). **The combination of energy efficiency and solar, such as the CT Green Bank's Solar for All program, can provide enough savings to close the affordability gap entirely for many households: approximately \$1,315 in average savings annually.**

¹ Available through the DOE LEAD Tool: <https://www.energy.gov/eere/slsc/maps/lead-tool>.

² Available through the Housing and Transportation Affordability Index developed by the Center for Neighborhood Technology: <https://htaindex.cnt.org/>.

³ We used four affordability thresholds to calculate affordability gap(s): 6% building energy burden based on widely used analysis by Fisher Sheehan & Colton: www.homeenergyaffordabilitygap.com; 15% transportation burden based on the Housing and Transportation Affordability Index; 30% housing burden (inclusive of building energy), see analysis by the US Census Bureau: <https://www.census.gov/housing/census/publications/who-can-afford.pdf>, and 45% combined building energy, transportation, and housing burden developed by the Center for Neighborhood Technology.

Transportation spending was consistently unaffordable, averaging 20% of household income statewide, above the 15% affordability threshold. Again, this affordability gap was most acute in the state's urban areas where transportation affordability gaps were as high as \$7,000 in areas of Bridgeport, New Haven, and Waterbury. Although these areas are among the densest and transit-rich in the state, a vehicle is still needed to maintain a minimum level of mobility, driving transportation costs up. Even within higher income bands, gaps in transportation affordability were present. In more rural areas of the state, even wealthier census tracts exhibited unaffordable transportation burdens (e.g., in Litchfield and New London counties), due primarily to high costs of vehicle ownership and fuel costs for traveling longer distances.

Combined spending levels on energy, housing, and transportation were also unaffordable throughout the state, due to high levels of spending on transportation. Again, the highest affordability gaps clustered in Connecticut's urban areas: New Haven, Bridgeport, and Waterbury, and exceeded \$12,000 annually in some areas. In census tracts with median incomes less than 60% of the metropolitan area's median income,⁴ combined spending on energy, transportation, and housing, made up 68% of household income, leaving these households less than \$1,000 each month to cover all other necessities, such as food, childcare, medical care, and incidental costs.

Our results suggest that a range of policies and programs are needed to maintain affordability for Connecticut's households across energy and transportation sectors. The combination of efficiency and solar can close the building energy affordability gap for most qualifying households in the state that own their dwelling, dramatically reducing annual energy costs. Fewer options are available to renting households, although existing programs, like Energize Connecticut Home Energy Solutions, do substantially reduce building energy burden. The state could consider a program offering for renters modeled off of the Solar for All program: one that combines energy efficiency upgrades with community solar installations, rather than individual rooftop arrays. Addressing Connecticut's high transportation burden is absolutely critical to keeping the state affordable.

Transportation costs were high throughout the state: in urban, suburban, and rural areas, and across income levels. We recommend two strategies to reduce transportation burden for Connecticut's households: minimize reliance on private vehicles through increased access to high quality public transit and electric bikes; and increase adoption of electric vehicles to reduce fuel costs for households that do own vehicles.

Providing Connecticut households mobility without reliance on private vehicles would be a transformative way of reducing transportation burden, especially for low- and moderate- income households, improving the equity of the state's transportation system. In rural and suburban areas, where reliance on private vehicles is unavoidable, access to affordable electric vehicles provides

⁴ U.S. Census Metropolitan Statistical Area (MSA).

reliable transportation with lower fuel and maintenance costs relative to gasoline-powered vehicles.

Introduction

Research has consistently shown that low- and moderate-income households spend a larger percentage of income on energy than higher income households.^{5, 6, 7} As income inequality grows and real incomes stagnate, energy affordability is a pressing problem across the United States, and within Connecticut. Income inequality in Connecticut is the third highest in the nation, behind only Washington, D.C., and New York, and continues to grow.⁸ Preserving energy affordability is critical to the ability of low- and moderate-income households to not only meet basic needs but also build wealth. A 2016 report by the American Council for an Energy Efficient Economy (ACEEE) shows that energy burden is highest among low-income households, and that much of this additional burden could be relieved through increased building efficiency.⁹ Energy burden refers to the percentage of household income that is spent on energy.

A 2017 report released by Operation Fuel, Home Energy Affordability in Connecticut, found an energy affordability gap of \$450 million among Connecticut's low-income households.¹⁰ The authors defined affordable home energy bills as those that did not exceed 6% of household income (inclusive of electricity and heating fuel) and energy affordability gap as "the dollar difference between actual home energy bills and affordable home energy bills for a specified geographic area." This research estimates that over 320,000 households in Connecticut (approximately 25%) were facing unaffordable energy bills for heating and electricity.

Our analysis of energy burden and affordability in Connecticut builds on this critical research and expands the study to include transportation. This analysis considers all transportation-related costs since these are the true costs households face to meet their mobility needs. Transportation costs beyond fuel include costs associated with vehicle ownership and maintenance, and public transit.

Preserving energy affordability is critical to the ability of low- and moderate-income households to not only meet basic needs but also build wealth.

⁵ Fisher Sheehan & Colton. 2013. Home Energy Affordability Gap: www.homeenergyaffordabilitygap.com.

⁶ US DOE. 2018. Low-income energy burden varies among states: https://www.energy.gov/sites/prod/files/2019/01/f58/WIP-Energy-Burden_final.pdf

⁷ See the Low-income Energy Affordability Tool: <https://www.energy.gov/eere/slsc/maps/lead-tool>

⁸ US Census Bureau, analysis of Gini Index of Income Inequality by state.

⁹ ACEEE, 2016. Lifting the High Burden in America's Largest Cities: <https://www.aceee.org/research-report/u1602>.

¹⁰ <https://efficiencyforall.org/wordpress/2019/01/23/home-energy-affordability-in-connecticut-the-affordability-gap-2017/>.

In this analysis we build off Operation Fuel’s study of building energy costs to include transportation for a number of reasons:

- Transportation energy expenditures are generally more than either heating or electricity spending.
- Total transportation spending (inclusive of transit, fuel, and associated driving costs) are the second highest household expenditure, second only to housing.¹¹
- High transportation costs are most crippling for low- and moderate-income households, as some baseline level of household spending will invariably support nondiscretionary energy and transportation costs, regardless of a household’s ability to pay.
- The transportation sector is the number one contributor to greenhouse gases in Connecticut and improved efficiency in this sector is crucial to achieving the state’s sustainability and clean energy goals.¹²

According to the Bureau of Labor Statistics, nationally, the lowest earning 20% of the population spent nearly 30% of their household income on transportation vs. less than 10% for the highest earning 20% of the population.¹³ Our analysis also considers housing costs, in addition to energy and transportation burden, to gain a fuller picture of household spending levels needed to meet basic needs for shelter, heat, and mobility.

Definitions

Energy Burden: Energy spending expressed as a percentage of household income.

Energy Affordability Threshold: Energy burden above which is considered unaffordable.

Energy Affordability Gap: The difference between actual home energy bills and affordable home energy bills for a specified geographic area.

Existing Programs to Relieve Household Energy Burden

A range of programs exist in Connecticut to help households struggling with high energy costs. Direct fuel assistance programs, weatherization to improve homes’ efficiency, and the Solar for All program all contribute to reduced home energy burdens for Connecticut’s low- and moderate-

¹¹ Consumer Expenditure Survey, 2018: <https://www.bls.gov/news.release/cesan.nr0.htm>.

¹² Connecticut Office of Legislative Research, 2019: <https://www.cga.ct.gov/2019/rpt/pdf/2019-R-0287.pdf>.

¹³ BLS: Table 1101. Quintiles of income before taxes: Annual expenditure means, shares, standard errors, and coefficients of variation, Consumer Expenditure Survey, 2017: <https://www.bls.gov/cex/2017/combined/quintile.pdf>.

income households. Connecticut also provides plug-in electric vehicle (EV) rebates through the CHEAPR program.¹⁴ EVs can reduce transportation energy expenditures. Up-front purchase costs of EVs are generally higher and rebates and incentives, particularly for used EVs and Level 2 chargers, can mitigate these higher costs, somewhat. However, Connecticut does not provide increased EV incentives or EV adoption programs specifically targeted to low- and moderate-income households.

In 2017, Operation Fuel estimated a building energy affordability gap of \$450 million among the state's low-income households.¹⁵ Per household, this gap was \$1,400 annually. Current funding levels of existing programs suggest that they are not nearly high enough to close this gap for all

At current funding levels, existing programs cannot bridge the affordability gap: many households are faced with energy costs that exceed affordability thresholds.

households that need assistance, meaning that many households in Connecticut are faced with energy costs that exceed affordability thresholds. Low Income Home Energy Assistance Program (LIHEAP) funding in Connecticut totaled \$82 million in 2020. Operation Fuel has a budget of about \$2.1 million to put towards both direct bill assistance and interventions to reduce energy burdens for low-income households. In 2018, the average per household heating benefit through LIHEAP was \$677, covering approximately half of the energy affordability gap for participating households.¹⁶ In sum, not enough families who need it can participate; and families who do, don't get enough assistance. This problem will get worse the longer it is ignored. Some of this energy burden is past arrearage, which increases over time.

Other programs, such as Energize CT's Home Energy Solutions, a utility-run residential efficiency program, provide subsidized weatherization and energy efficiency upgrades. Home Energy Solutions (HES) saves households between \$200 and \$250 annually.¹⁷ After addressing basic energy efficiency upgrades with the HES program, which is required by the Connecticut Green Bank's Residential Solar Investment Program (RSIP), additional savings can be achieved through participation in the Solar for All program. The Solar For All Program, a combined efficiency and solar program, provides deeper efficiency measures on top of the efficiency measures through

¹⁴ <https://portal.ct.gov/DEEP/Air/Mobile-Sources/CHEAPR/CHEAPR---Home>.

¹⁵ In the 2017 Operation Fuel report, low-income households are defined as earning less than 200% of federal poverty level.

¹⁶ Public Utility Regulatory Authority Docket No. 17-12-03RE01 – PURA Investigation into System Planning of the Electric Distribution Companies – Energy Affordability, June 2020.

¹⁷ <https://www.energizect.com/your-home/solutions-list/home-energy-solutions-core-services>.

the HES program and packaged with solar photovoltaics (PV), saving households an estimated \$1,315 annually, enough to close the \$1,400 affordability gap entirely for many households.¹⁸ The combination of efficiency and solar dramatically improves energy affordability, however only homeowners are eligible to participate in the Solar for All program and landlord approval is required for renters to receive HES services. Additionally, many households with unaffordable energy burdens may not qualify for these programs due to either income requirements or health and safety barriers in the home.

Programs to assist households struggling with high transportation costs are less common, although access to reliable transportation is crucial to households' ability to reach employment and goods and services. Access to public transit, especially in urban and suburban areas can reduce reliance on private vehicles and improve the equity of the transportation system enormously by providing mobility for those who cannot afford a vehicle or are unable to drive. In rural areas, reliance on private vehicles is often unavoidable. Income-eligible EV programs, such as those in California and Oregon, can reduce spending on vehicle fuel and maintenance.

Through this analysis we sought to explore spatial patterns in energy burden in Connecticut and estimate the energy affordability gap for households, inclusive of spending on transportation. This analysis will allow us to identify areas in the greatest need of energy assistance and access to clean energy technologies that can reduce energy burden. Further, estimating the general magnitude of that need can guide programming and policy decisions. In contrast to the 2017 analysis, the scope of this report is all households in Connecticut but includes a special focus on energy affordability among the state's low- and moderate-income households.¹⁹

Methods

Geography

We examined energy and transportation burden and affordability in Connecticut at two geographic scales: county and U.S. Census tract. **Census tracts** are county subdivisions designated by the U.S. Census; each tract contains between 2,000 and 8,500 people. Connecticut contains 833 tracts. There were 823 tracts for which we had full data (spending on electricity, heating, transportation, housing, and median household income). In addition, we examined building

¹⁸ Connecticut Green Bank Low and Moderate Income Solar Program Savings Analysis. October, 2020, by VEIC with support from the Connecticut Green Bank and funding from Clean Energy States Alliance (CESA) under U.S. Department of Energy Solar Energy (DOE) Technologies Office Award Number DE-EE-0007667.

¹⁹ We define low-income households as those earning less than 80% AMI and moderate-income households as those earning between 80% AMI and 100% AMI.

energy burden and affordability gap statewide to allow for comparison to the 2017 Operation Fuel report noted above.²⁰

Household Spending Burden: Building Energy, Transportation, & Housing

We define **burden** as spending expressed as a percentage of household income. We calculated burden for building energy (spending on heating fuel and electricity), transportation, as well as the combined burden of spending on energy, transportation, and housing for each census tract in Connecticut. Our analysis considers housing affordability, although housing is not the focus of this report.

$$\text{Burden} = (\text{mean household spending}) / (\text{median household income}) * 100\%$$

Our estimates of household spending came from two key datasets: the **Low-income Affordability Data (LEAD) Tool**²¹ and the **Housing and Transportation Affordability (H&T) Index**.²² The LEAD Tool was developed by the US Department of Energy and provides estimates of residential spending on electricity, natural gas and other fuels for each county and census tract in the US. Our analysis also examines building energy burden by tenure type (renter vs. owner).

The H&T Index was developed by the Center for Neighborhood Technology and models transportation and housing-related statistics for each census tract in the U.S. H&T models are based primarily on local land use patterns, the density of housing and employment, availability of public transit, and travel and housing survey data.²³ **The H&T Index** provides household-level, tract-specific estimates of vehicle miles traveled, annual number of transit trips and levels of vehicle ownership. The Index also provides comprehensive estimates of spending on household transportation, including spending on public transit, vehicle fuel costs, and costs associated with vehicle ownership, such as insurance, vehicle maintenance, purchase, and financing. The Index estimates total transportation spending that would be required to provide an acceptable level of mobility in a given census tract: mobility to get to work, shopping, recreation, and medical appointments.

²⁰ <https://efficiencyforall.org/wordpress/2019/01/23/home-energy-affordability-in-connecticut-the-affordability-gap-2017/>.

²¹ <https://www.energy.gov/eere/slsr/maps/lead-tool/>; The LEAD Tool was updated in 2020 using data from the five year 2018 American Community Survey.

²² <https://htaindex.cnt.org/>; The H&T Index was updated in 2017 using the five year 2015 American Community Survey and 2014 Longitudinal Employer-Household Dynamics data.

²³ See: <https://htaindex.cnt.org/about/>

To calculate household **transportation burden**, we used these estimates of total transportation spending from the H&T Index, inclusive of all costs associated with both vehicle operation and ownership and public transit use.²⁴ (Ride hailing costs are not included in the **H&T Index**).

Our estimates of housing costs also came from the **H&T Index**: for each census tract the Index provides a weighted average of gross housing costs for renters and owners derived from the American Community Survey (ACS).

Household Median Income, the denominator of our burden calculations, came from the 2017 five-year ACS, which combines years 2013-2017 to increase sample size and reduce variability. The ACS is an annual survey conducted by the U.S. Census that covers a range of demographic and housing topics. Unless noted otherwise, all calculations of energy burden and affordability gap rely on tract-level area median income (AMI).²⁵

²⁴ The H&T Affordability Index does not account for EVs in its estimates of fuel costs. EVs currently make up <1% of Connecticut's fleet.

²⁵ We also report results by AMI band. Each census tract is assigned an income band, which shows how the median income within the tract compares to the median income of the greater Metropolitan Statistical Area (MSA). MSA is a geographic designation of the U.S. Census.

Household Affordability Gaps

As described above, the **building energy affordability gap** is the difference between actual spending on energy bills and affordable home energy bills for a specified geographic area. We calculated affordability gaps by census tract for building energy, transportation, housing, and all three spending categories combined (Table1).

Table 1. Affordability thresholds by spending category

$$\text{Affordability gap} = (\text{Affordability threshold}) \times (\text{Tract Median Household Income}) - (\text{Estimated spending})$$

Spending Category	What does it include?	Affordability Threshold (% HH income)
Building Energy	Household heating fuel and electricity	6% ²⁶
Transportation	Vehicle fuel, transit costs, and vehicle ownership costs (including vehicle purchase or lease, insurance, and maintenance)	15% ²⁷
Housing	Total shelter costs, inclusive of building energy , insurance, taxes, and association fees.	30% ²⁸
Energy, Transportation, & Housing	Total shelter costs (inclusive of building energy , insurance, taxes, and association fees) and transportation costs (vehicle fuel, transit, and vehicle ownership costs)	45% ²⁹

There is not a widely used threshold of transportation affordability. The H&T Index considers combined housing (inclusive of building energy) and transportation costs above 45% of household income to be unaffordable, building on the widely accepted threshold of housing affordability (30% of household income) acknowledging that these housing and transportation costs are often inversely related. In denser, urban areas, housing costs may be more and transportation costs lower due to reduced reliance on private vehicles.³⁰ According to the Consumer Expenditure Survey, transportation costs are the second highest household

²⁶ The 6% affordability threshold is based on the assumption that energy costs should not exceed 20% of total shelter costs and total shelter costs should not exceed 30% of income (20% of 30% is 6%); See: <http://www.homeenergyaffordabilitygap.com/> and <https://www.aceee.org/sites/default/files/energy-affordability.pdf>. The 6% threshold has become widely used within the housing and energy sectors. For instance, in 2016, New York State established an Energy Affordability Policy that set the goal of limiting energy costs for low-income utility customers to an average of no more than 6 percent of income: <https://www.nyserda.ny.gov/-/media/Files/Publications/PPSER/Program-Evaluation/2017ContractorReports/LMI-Special-Topic-Rpt---Energy-Burden.pdf>.

²⁷ This threshold is derived from the combined energy, transportation, and housing affordability threshold of 45%: using a 30% threshold for total shelter costs (energy and housing) leaves 15% of household income available for transportation-related expenses.

²⁸ This 30% threshold breaks down as 24% for housing and 6% for building energy costs. A 30% affordability threshold for total shelter costs is broadly used by housing programs nationally. Background on this threshold can be found here: <https://www.huduser.gov/portal/pdredge/pdr-edge-featd-article-081417.html> and in this commonly cited analysis by the US Census Bureau: <https://www.census.gov/housing/census/publications/who-can-afford.pdf>.

²⁹ Combined affordability threshold developed by the H&T Index.

³⁰ Note that in some Connecticut's urban areas, this pattern does not hold true.

expenditure, after housing, and average 13% of household expenditures nationwide.³¹ We used an affordability threshold of 15%, the difference between the combined Energy/Transportation/Housing affordability threshold and the housing threshold.

Affordability threshold and gap were calculated for each census tract. Table 2 provides an illustrative example scenario for a census tract in East Hartford. In this case, the median household income is \$32,156. If their spending was at an affordable level for all spending categories, it would not exceed \$14,470 annually (45% of household income). We estimate that spending is actually closer to 66% in this case, driven largely by high transportation costs.

Table 2. Example of affordability thresholds and estimated spending for a sample East Hartford census tract.

Spending Category	Affordable Level	Actual Level	Affordability Gap
Building Energy	\$1,929	\$2,605	\$676
Transportation	\$4,823	\$8,740	\$3,917
Housing (total shelter cost inclusive of building energy)	\$9,647	\$12,684	\$3,037
Combined Housing & Transportation	\$14,470	\$21,424	\$6,954

A comprehensive look at housing, energy, and transportation costs in relation to household income provides insight into whether households are able to meet basic needs: shelter, heat, mobility. As noted above some of these costs, such as shelter and transportation, are nondiscretionary. However energy spending can be minimized by operating homes at unhealthy temperatures or not running critical ventilation systems risking the occupants long term well-being. Mapping this affordability gap highlights clusters of census tracts that are most in need of programmatic support.

³¹ <https://www.bls.gov/news.release/cesan.nr0.htm>.

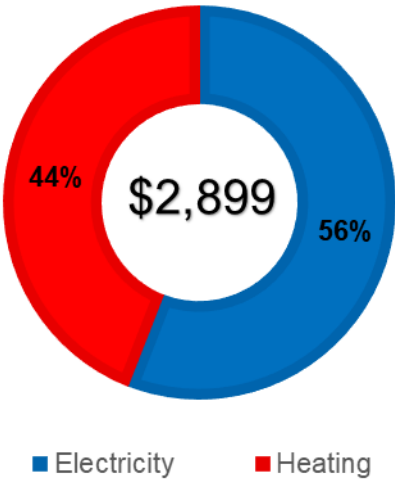
Results

Building Energy

Building Energy Spending and Burden

We estimate that the average household in Connecticut spends a total of \$2,899 on building energy and has a mean building energy burden of 4% (Figure 1, Table 3). Across most census tracts, spending on electricity was consistently higher than spending on heating fuel. High spending on electricity is driven in part by the 17% of households statewide that depend on electricity as their primary source of heat. **In twenty percent of Connecticut’s census tracts, the mean building energy burden is at or above the affordability threshold of 6%.** A total of 235,670 households live in these tracts. Because we are calculating burden using median household income, we assume that at least 50% of these households have energy costs in excess of 6%.

Figure 1. Connecticut household building energy spending by category.



Heating energy burden varied considerably less than electricity burden across the state. The maximum heating energy burden was 6% in a census tract in Hartford County, and the minimum 0.3% in a tract in New Haven County.³² By contrast electricity burdens ranged from 1% to 19%. The variability present in electricity burden may again be due to reliance on electricity as a primary heat source highlighting the need for direct assistance programs that alleviate year-round energy

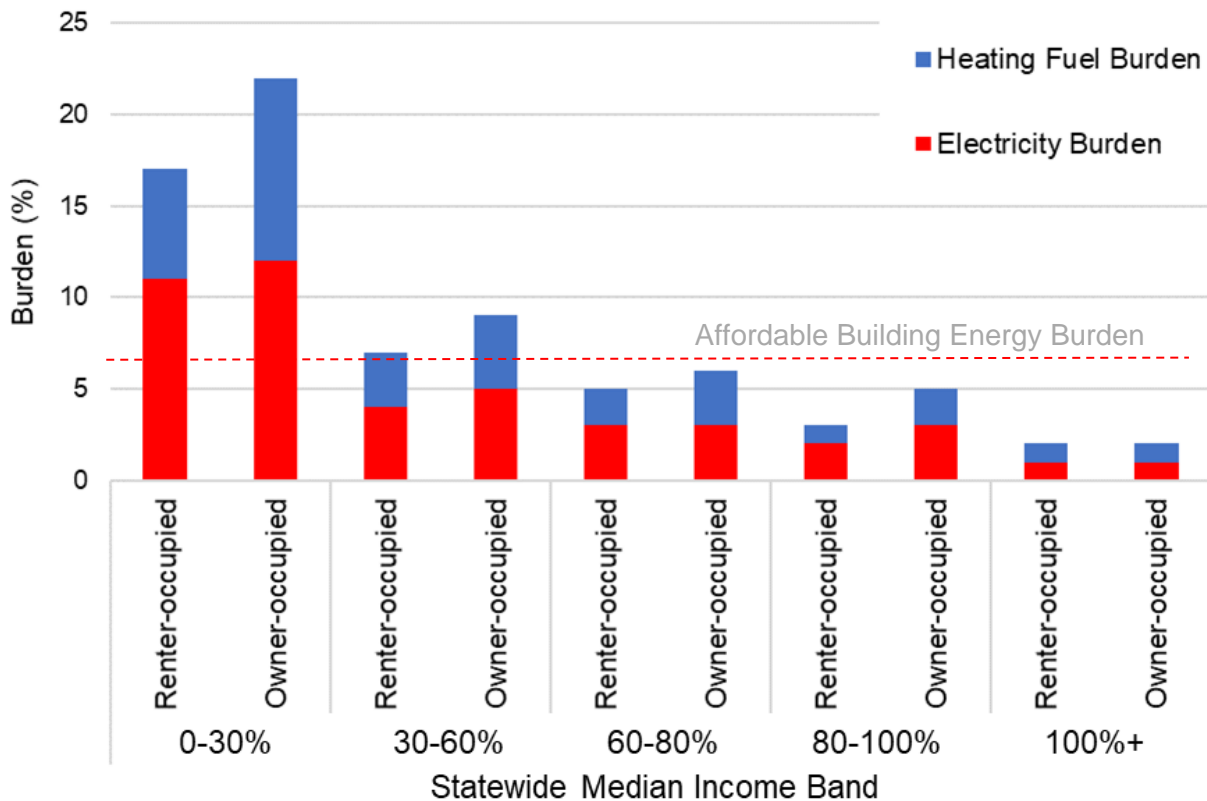
³² This is not one of the higher earning census tracts (median household income is \$69,787), but overall energy costs were estimated to be low in all categories, including transportation, due most likely to high density of housing.

costs rather than just winter heating costs. Heating oil is the most common primary heating fuel in Connecticut, followed by natural gas and electricity. A variety of programs are available to Connecticut household's facing high heating energy burdens. The Connecticut Energy Assistance Program (CEAP), funded through the federal LIHEAP program, offers bill assistance to offset the cost of heating fuels. Utilities also offer direct assistance in the way of arrearage assistance programs. In addition to direct bill assistance, ratepayer funded programs offered through utilities help improve a home's energy efficiency or add solar energy solutions that reduce long term energy costs.

Table 3. Mean annual spending and building energy burden across all census tracts in Connecticut.

	Annual Spending			Burden		
	Mean	Max	Min	Mean	Max	Min
Electricity	\$1,621	\$2,463	\$961	2%	19%	1%
Heating	\$1,278	\$2,513	\$189	2%	6%	<1%
Building Energy Total	\$2,899	\$4,859	\$1,150	4%	22%	1%

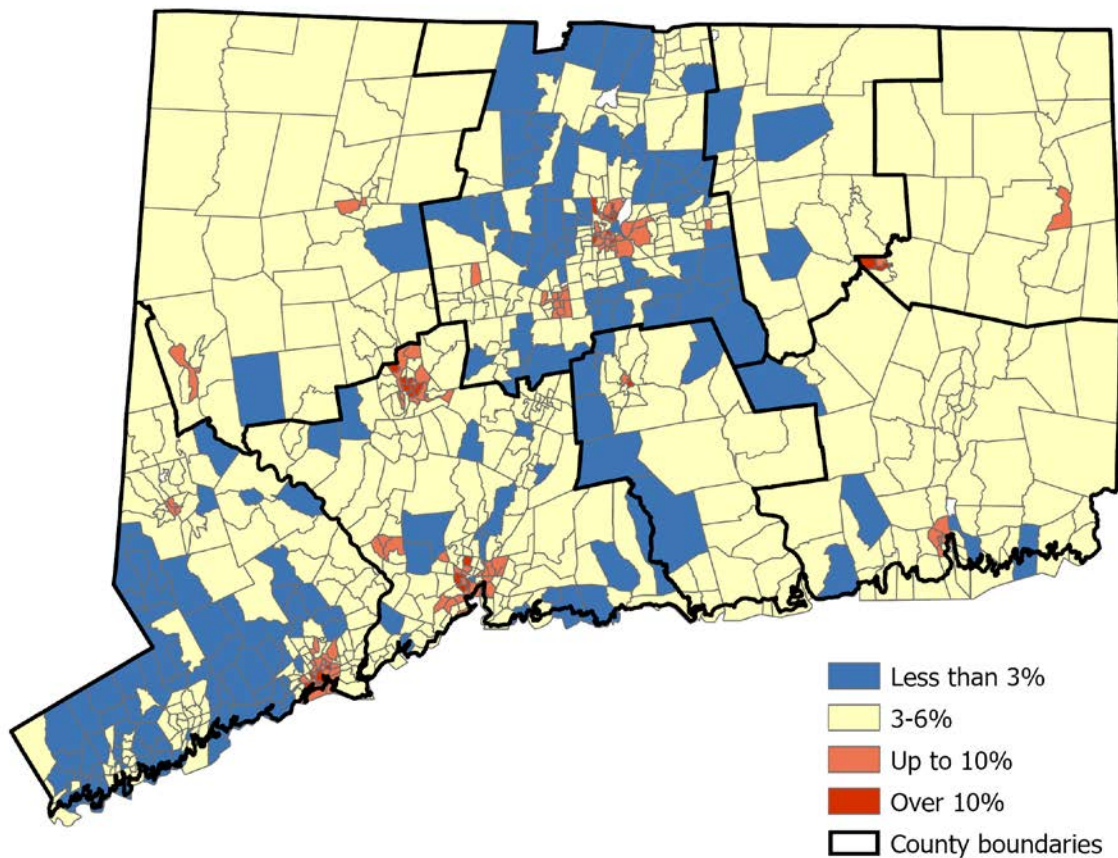
Figure 2. Statewide building energy burden, renters and owners.



Building energy burden was similar for renters and homeowners statewide, approximately 3 - 4%. Homeowners have a slightly higher burden across income all levels, most pronounced within the 0-30% AMI band (Figure 2). **Building energy burden among renters and owners earning <30% of the state median income is six to seven times higher than the statewide mean.** Renters are often faced with a split incentive: building owners may have access to energy efficiency incentives but have little inclination to take advantage of them because it's the renters who pay the energy bill. Split incentives can render low-income renters among the most vulnerable to high energy burdens.

A map of building energy burden by census tract reveals clusters of highly burdened tracts in Hartford, Waterbury, New Haven and Bridgeport (shown in red in Figure 3). Tracts with relatively low building energy burdens (shown in blue) are present in the southeastern portion of the state and Hartford's outer suburbs. Although overall spending was consistently higher than the statewide mean in the blue areas, it comprised a smaller portion of household income than in other areas of the state. Clusters of highly burdened tracts (shown in red) identify where households are struggling most with energy costs and can guide targeted programs to reduce energy burden.

Figure 3. Map of building energy burden by census tract.

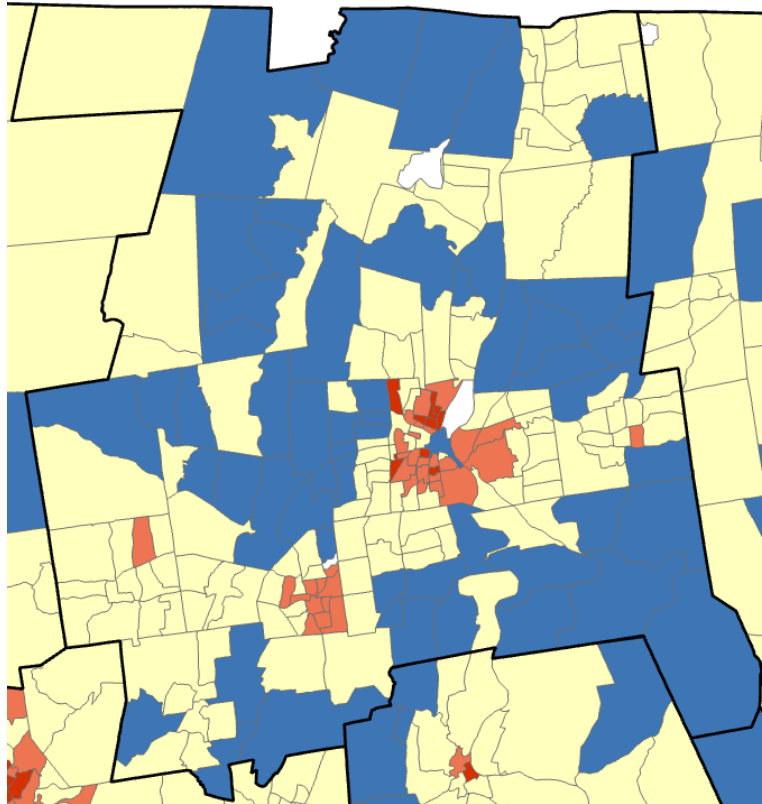


Building energy burden varied widely across the state. However, a county-based analysis revealed that much of this variation occurred within low-income households. Building energy costs for households earning above 80% AMI are not only within affordable levels but have much less variance than low-income households. Among households earning above 80% AMI, building energy burden ranged from about 1% to 5% with a mean burden of 3%. Among low-income households, building energy burden ranged from 2% to over 20% with a mean burden of 6%.

Understanding sources of this variation among low income households will be crucial to improving energy affordability.

A close-up of Hartford County reveals a clearer look at the variation among census tracts: highly burdened tracts (those with building energy burdens greater than 6% and in some cases even 10%) are clustered in the city center, one of the state's most densely populated areas. We identified 26 highly burdened tracts in Hartford County (these tracts are red on Figures 3 and 4). Together these tracts are home to nearly 33,000 households. In 25 of these tracts, median income was below \$40,000. There are 64 tracts with building energy burdens less than 3% (blue tracts on Figures 3 and 4). In contrast, nearly all 64 of these tracts have median incomes above the statewide median of \$76,348. Consistently, throughout Hartford County and the rest of Connecticut, the highest building energy burdens were present in the most densely populated tracts.

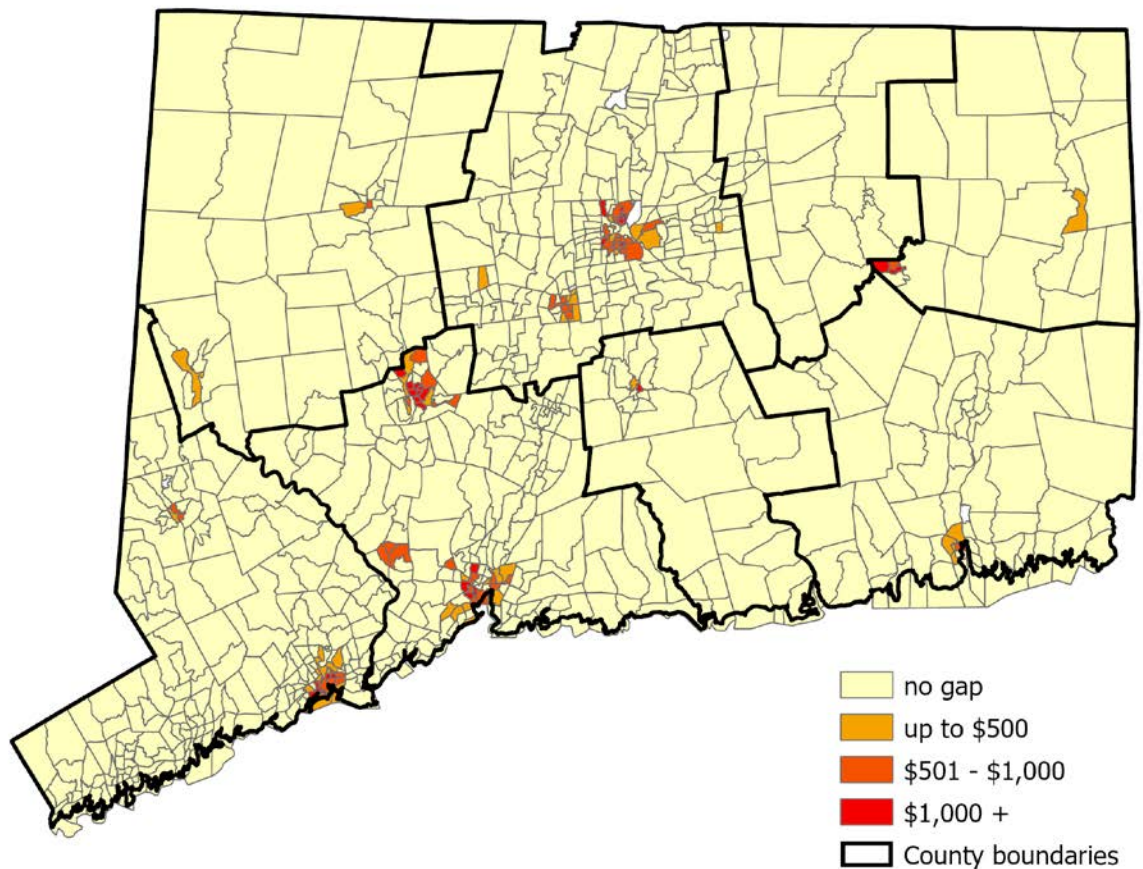
Figure 4. Building energy burden, Hartford County.



Building Energy Affordability Gap

We identified 80 census tracts with annual affordability gaps above \$500: an average household within these tracts faces energy bills that are \$500 above affordable levels. Thirty tracts have affordability gaps greater above \$1,000 (Figure 5). These tracts are scattered across the state with the bulk occurring in Hartford, New Haven, and Waterbury.

Figure 5. Building energy affordability gap by census tract.



The **LEAD tool** provides estimate of energy spending and burden by a variety of income levels. To allow comparison with Operation Fuel's 2017 report, which focused on households at and below 200% of federal poverty level (FPL), we also estimated building energy burden and affordability gap statewide (Table 4). We estimate that the statewide aggregate affordability gap

among these households is \$398 million, less than the 2017 report, which estimated a gap of \$450 among households at or below 200% FPL.³³

Table 4. Statewide building energy burden and affordability gap by Federal Poverty Level.

% Federal Poverty Level	# Households	Energy Spending	Burden	Household Income	Affordability Gap per Household
0 – 100	128,373	\$2,181	26%	\$8,388	\$1,678
>100 – 150	87,322	\$2,344	12%	\$19,533	\$1,173
>150 – 200	93,217	\$2,574	9%	\$28,600	\$858

An examination of the building energy affordability gap statewide revealed that gaps are primarily present in households earning <60% of the state median income (SMI) and that the burden and affordability gap is more than twice as high for the lowest income earners. (Table 5). Among all households earning less than 60% of SMI, average building energy affordability gap is \$1,010 annually. It is worth noting that for many of these households, this affordability gap could

effectively be closed by the Solar for All program, which combines deep energy efficiency retrofits and residential solar installations. In 2019, Solar For All achieved an average savings of \$1,315 annually per household.³⁴

The statewide aggregate gap of households earning <60% SMI included 439,164 households and totaled \$444 million. Calculating the aggregate gap by SMI band, rather than FPL, reduces the estimated gap per household, but increases the number of households included, increasing the statewide aggregate gap from \$398 million to \$444 million. Statewide, households earning above 60% of SMI, do not have an affordability gap.

Savings achieved through the Solar for All Program are enough to close the building energy affordability gap among households earning less than 60% AMI.

³³ There are some key differences between the LEAD tool and the Home Energy Affordability Gap model that formed the basis of the 2017 Operation Fuel report. Both models estimate household-level energy spending and burden. The LEAD tool relies primarily on ACS survey data, including data related to demographics, housing, primary heating fuel type and household energy spending, as well as household usage data available through electric and natural gas utilities. The tool models energy spending and burden for each census tract and county in the U.S. The Home Energy Affordability Gap also relies on ACS data, in addition to DOE’s Residential Energy Consumption Survey, and consideration of the number of heating and cooling degree days by county.

³⁴ Connecticut Green Bank Low and Moderate Income Solar Program Savings Analysis. October, 2020, by VEIC with support from the Connecticut Green Bank and funding from Clean Energy States Alliance (CESA) under U.S. Department of Energy Solar Energy (DOE) Technologies Office Award Number DE-EE-0007667.

Table 5. Statewide building energy burden and affordability gap by income band.

Income Band (% State Median Income)	# Households	Energy Spending	Burden	Household Income	Affordability Gap per Household
0-30	201,146	\$2,119	19%	\$11,152	\$1,450
>30-60	238,018	\$2,550	8%	\$31,875	\$638
>60-80	93,792	\$2,753	6%	\$45,883	No gap
>80-100	149,272	\$2,933	4%	\$73,325	No gap

Transportation

Transportation Spending and Burden

Total transportation burden, including vehicle ownership, fuel, and transit costs estimated at the household level for each tract, averaged 20% and ranged from 5% to 147%. Estimated transportation costs do not necessarily reflect actual spending, but rather the average transportation costs within a given census tract required for an acceptable level of mobility and access to employment, shopping, and medical services. Actual transportation burden may be much lower or higher for individual households, depending on factors like the number of vehicles owned and their choice of vehicle.

The largest component of transportation burden is costs associated with vehicle ownership, comprising 15% of household income, statewide (Table 6). A move away from reliance on private vehicle ownership would dramatically reduce transportation burden for all households and improve the equity of Connecticut's transportation system. Even in the state's most densely populated tracts, our data source, the **H&T Index**, concluded that households need at least one vehicle to achieve an acceptable level of mobility. These vehicle

costs make up the largest proportion of transportation costs overall and prevent even the most urban households from achieving substantial reductions in transportation burden. Vehicle miles traveled (VMT) is lower in urban areas, and transit use is higher, providing households some savings. CT's 4 largest cities (Bridgeport, Hartford, New Haven, Waterbury) all have low rates of car ownership. Zero car households are over 25% of the total households in each city. Though not the focus of this study, it's worth noting the opportunity cost of limited transportation options on individuals' health, economic, social, and other outcomes. Even in low income areas where

Even in Connecticut's most densely populated census tracts, households need at least one vehicle to achieve an acceptable level of mobility.

transportation spending is not overly burdensome, that may be because people are limiting their own mobility to places they can get to for free. This has larger consequences on CT's economy and opportunity for low income families to acquire wealth.

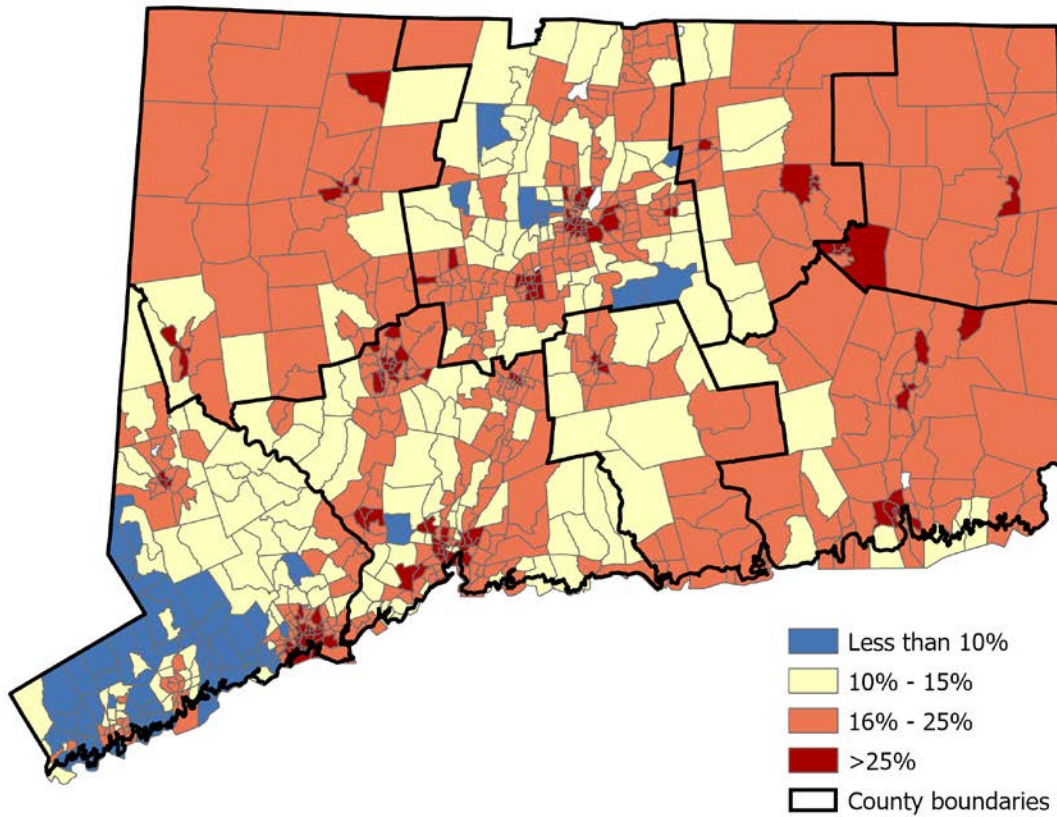
Table 6. Mean annual spending and transportation burden in Connecticut.

	Mean Annual Spending	Mean Burden
Vehicle Ownership	\$10,343	15%
Vehicle Fuel	\$2,524	4%
Public Transit	\$111	<1%
Total	\$12,978	20%

Compared to building energy, we identified a far higher number of census tracts where comprehensive spending on transportation exceeded the affordability threshold of 15%. **Three quarters of the state's census tracts have an average transportation burden above affordable levels** (628 tracts out of 823). Large swaths of the state are unaffordable, in both rural and urban areas (Figure 6). In urban areas, where the highest burdens are seen (those exceeding 25%) high burden is driven by relatively low household income. In more rural counties (Litchfield Tolland, Windham, New London), incomes are high relative to the statewide median, but transportation spending is also high. Spending on both fuel and vehicles tended to be higher in the state's rural areas, driving up burden.

The southeastern portion of the state in Fairfield County is one of the few clusters of affordable and even below affordable levels of transportation spending. These census tracts fall within the commuter-shed of New York City and the combination of high household income, average transportation spending and high transit use results in consistently low transportation burdens.

Figure 6. Transportation burden by census tract.



Transportation Affordability Gap

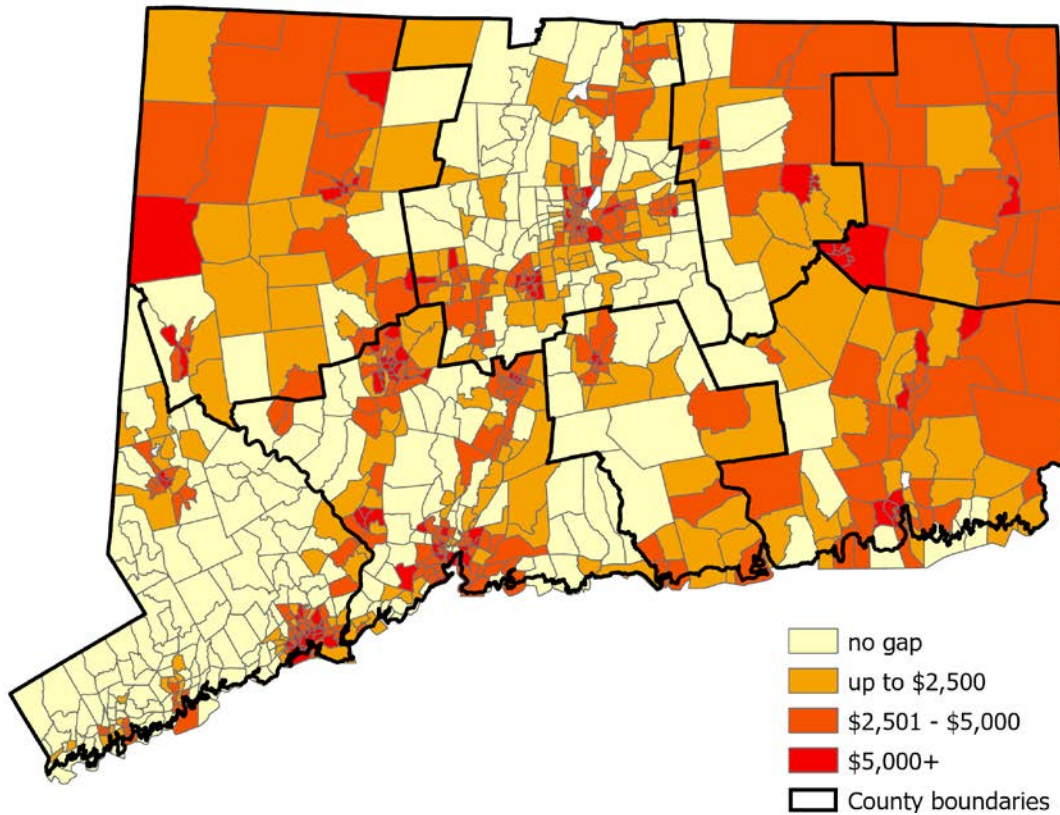
Sizable affordability gaps in transportation spending were present in nearly every AMI band, even those census tracts exceeding 100% AMI (Table 7). The gap was generally most acute (over \$5,000 annually) in urban areas characterized by low household income (e.g. Waterbury and Bridgeport; Figure 7). Again, even in these urban areas, modeling by the H&T Index indicated that households would need at least at least one vehicle to meet their mobility needs, driving up transportation costs. Transportation affordability gaps are pervasive in rural and suburban Connecticut, although smaller, less than \$5,000 in most cases.

Table 7. Transportation affordability gap by census tract AMI band³⁵

Census Tract AMI Band	Mean Household Transportation Affordability Gap
<60% AMI	\$5,097
60-80% AMI	\$3,464
80-100% AMI	\$2,050
100-120% AMI	\$1,067
>120% AMI	No gap

³⁵ Income bands are based on Census Metropolitan Statistical Area (MSA).

Figure 7. Transportation spending affordability gap by census tract.



Housing Affordability Gap

Median housing costs exceeded the 30% affordability threshold in 307 census tracts.³⁶ These tracts are scattered across the state, with concentrations in Hartford, New Haven, and Bridgeport (Figure 8). There were four census tracts with housing affordability gaps over \$10,000: two in Fairfield County and two in New Haven County.

As noted, estimates of housing costs came from the **H&T Index** and are full shelter costs, inclusive of building energy. Housing costs by county, exclusive of building energy are presented in Table 8. Spending on building energy comprised the smallest portion of total shelter costs in Fairfield County, where housing costs are by far the highest (over \$25,000 annually). On average, building energy comprised 14% of total shelter costs, statewide, below the widely used 20% threshold established by Fisher et al.³⁷ but a sizable portion nonetheless. **Further reducing building energy costs and thus total shelter costs, is one means of improving housing affordability.**

³⁶ The 30% affordability threshold includes all shelter cost: mortgage/rent, utility costs, building energy, insurance, condo association fees, and taxes.

³⁷ Fisher Sheehan & Colton. 2013. Home Energy Affordability Gap: www.homeenergyaffordabilitygap.com

Figure 8. Housing affordability gap by census tract.

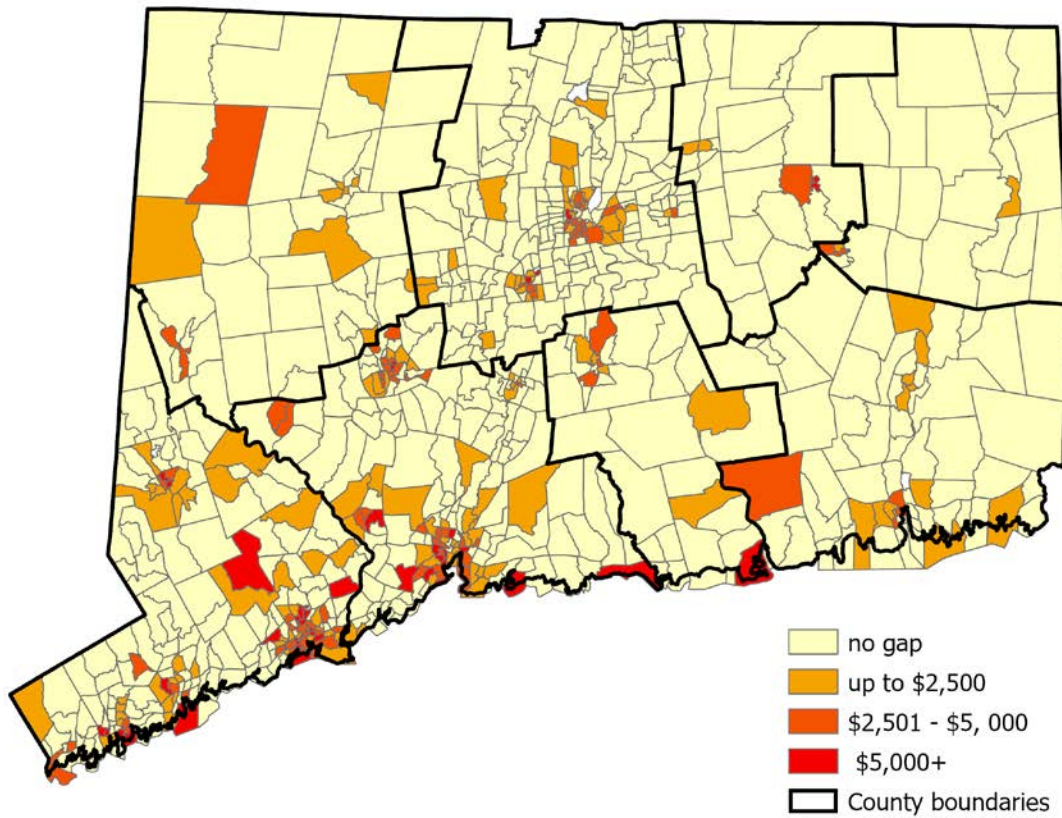


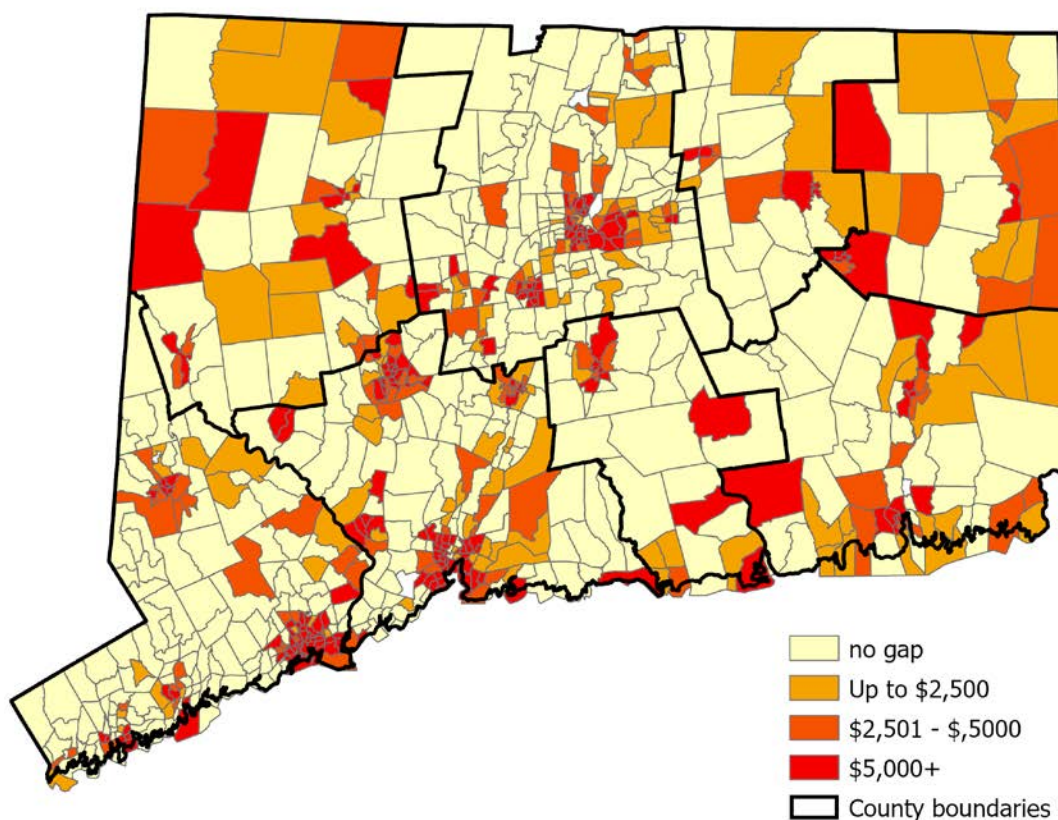
Table 8. Annual housing and building energy costs by county.

County	Average Building Energy Spending	Average Spending on Housing, Exclusive of Building Energy
Fairfield	\$3,283	\$25,770
Hartford	\$2,671	\$16,619
Litchfield	\$2,993	\$18,047
Middlesex	\$2,847	\$18,666
New Haven	\$2,806	\$17,162
New London	\$2,694	\$16,713
Tolland	\$2,832	\$18,000
Windham	\$2,894	\$14,616

Energy, Transportation, and Housing Affordability Gap

On average, for households earning 100% of tract-level AMI, combined housing and transportation costs exceed affordable levels in Connecticut. Combined mean burden for spending on energy, transportation, and housing is 49% statewide, slightly above the 45% threshold for affordability. In more than half of census tracts, combined spending on building energy, transportation, and housing exceeded 45% of median household income. These census tracts are scattered throughout the state, in rural and urban areas. A primary driver of these results is transportation costs: housing costs were generally estimated to be at or below 30% of AMI in most of the state's census tracts while the mean transportation cost burden was 20%, above the threshold of affordability.

Figure 9. Combined energy, transportation, and housing affordability gap by census tract.

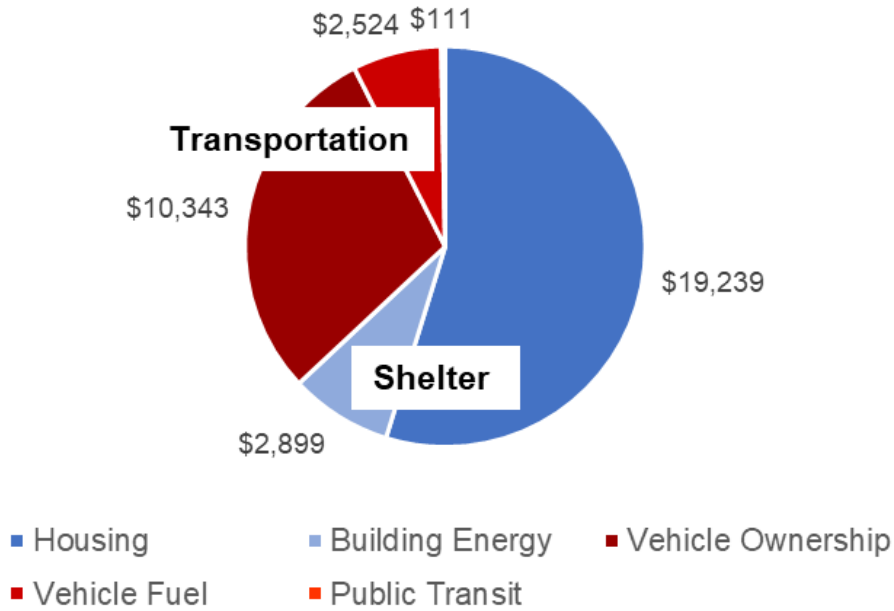


In nearly 200 tracts out of 823, the average building energy/transportation/housing affordability gap was greater than \$5,000. These tracts are most concentrated in the state's urban areas: Hartford, New Haven, Bridgeport, and Waterbury (Figure 9). Although these tracts skewed towards households with median incomes between 60-80% of the regional AMI,³⁸ they also included tracts in the 80-100% regional AMI income band in Hartford and New Haven, suggesting

³⁸ Census Metropolitan Statistical Area (MSA).

that **even households above traditional low-income thresholds struggle with the combined affordability of building energy, transportation, and housing.** As more than 700,000 residents filed for unemployment in 2020, we see this problem is dramatically worse in the wake of COVID.³⁹ We estimate that, on average, households earning 100% of tract-level AMI would need to spend about \$35,000 each year to secure housing, adequate space heating and cooling, and mobility (Figure 10).

Figure 10. Total household spending on shelter and transportation in Connecticut

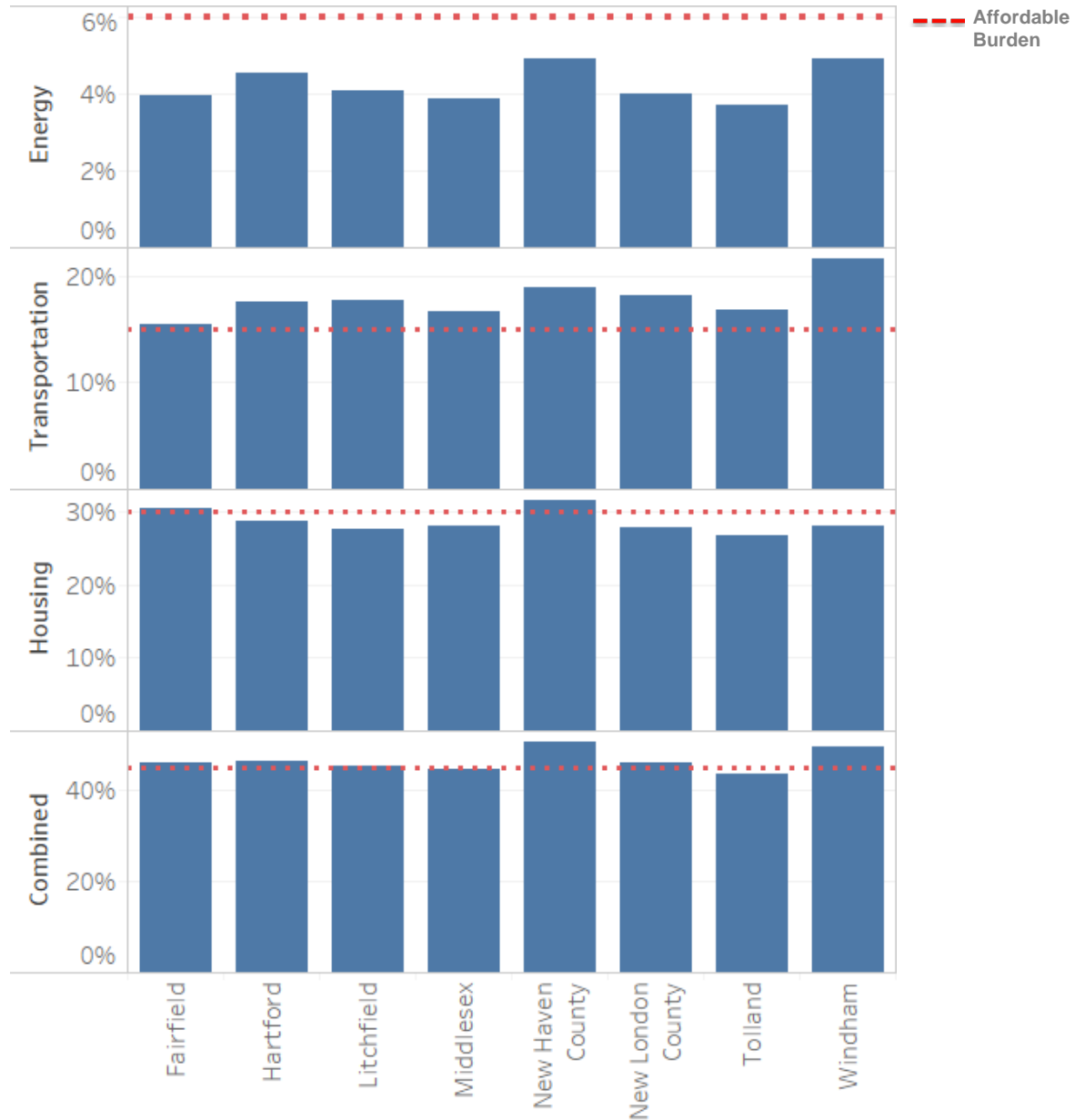


³⁹ <https://www.courant.com/business/hc-biz-unemployment-extension-20200804-drpbillkzyzfmxkt5zgt2om66pa-story.html>

County-level Affordability

To provide a picture of affordability and cost burden at a broader level we also looked at spending by county in Connecticut across all income levels. For building energy, no counties have a mean cost burden above the 6% threshold, but many are above the 15% affordable threshold for transportation, and most are right on the edge of housing affordability (Figure 11).

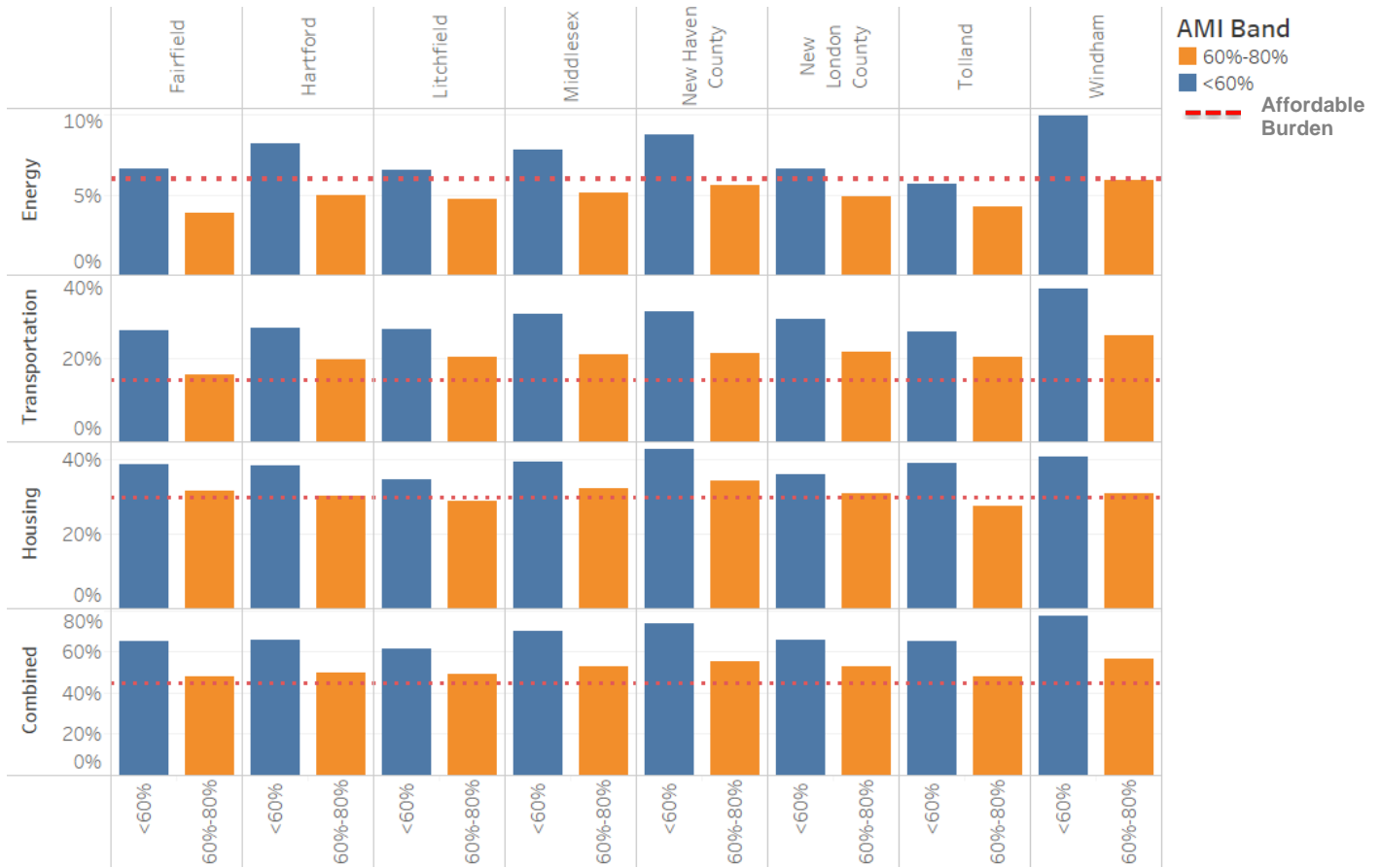
Figure 11. Mean spending burden by county: building energy, transportation, housing, and all spending categories combined.



Considering only low-income households (census tracts below 80% AMI), mean cost burden was well above affordable levels for transportation, housing and combined spending on energy,

transportation, and housing (Figure 12). Splitting the data out by Metropolitan Statistical Area (MSA) AMI bands sharpens the picture of cost burden by median income level: in all cases, cost burdens are reduced as median incomes rise.⁴⁰ **Building energy burdens are significantly higher for lower income populations, even though the highest income population is spending roughly one-third more for building energy and transportation and twice as much for housing than the lowest income population.**

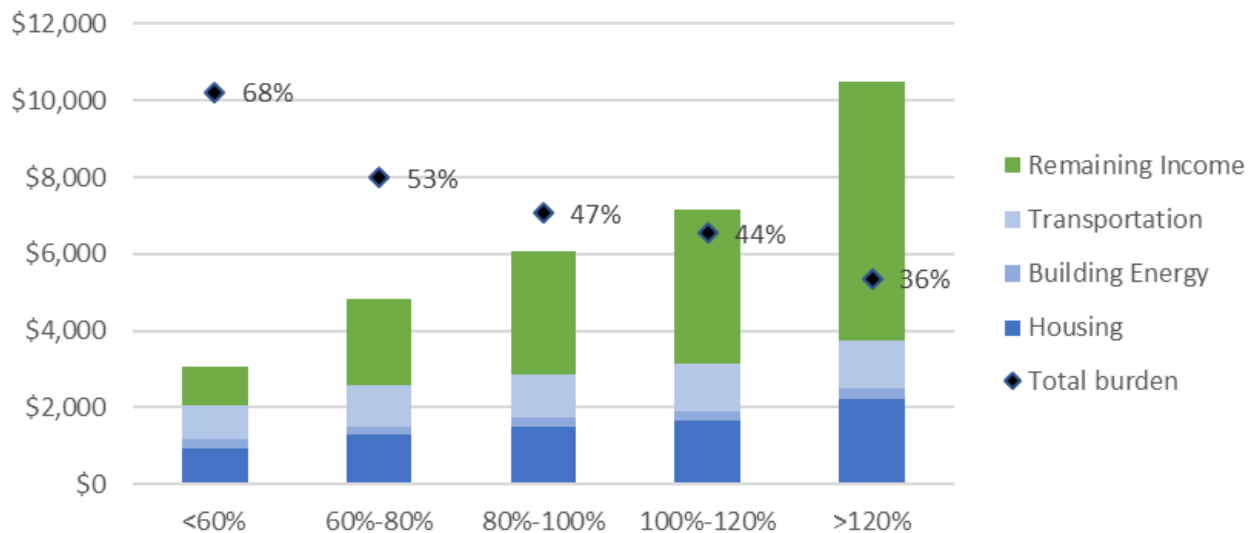
Figure 12. Average low-income building energy, transportation, and housing burden by county.



⁴⁰ Each census tract is assigned an income band based on the incomes in their local Metropolitan Statistical Area (MSA). MSA is a geographic designation of the U.S. Census.

Comparing estimated spending among the highest earning and lowest earning census tracts in the state reveals starkly different conditions. Figure 13 illustrates average monthly expenditures and remaining income for all households that fall below 60% AMI and above 120% AMI. For households below 60% AMI, housing, energy and transportation costs account for 68% of total monthly income compared to 36% of monthly income for those households earning more than 120% AMI.

Figure 13. Combined monthly spending on energy, transportation, and housing and remaining income for Connecticut census tracts by AMI band.



Discussion & Solutions

Combined spending on energy, transportation, and housing in Connecticut exceeded affordable levels in census tracts throughout the state. Urban areas were characterized by low household incomes, such as New Haven, Hartford, and Bridgeport, had clusters of highly burdened census tracts, as expected. Less expected, was the emergence of wealthier census tracts with unaffordable transportation burdens (e.g., in Litchfield and New London counties). Our results show that a range of policies and programs are needed to maintain affordability for Connecticut’s households across energy and transportation sectors. The combination of efficiency and solar can help close the building energy affordability gap for most households in the state that own their dwelling, dramatically reducing annual energy costs. Fewer options are available to renting households, although existing programs, like Energize CT’s Home Energy Solutions do substantially reduce building energy burden. Addressing Connecticut’s high transportation burden is absolutely critical to keeping the state affordable. Transportation costs were high throughout the state: in urban,

suburban, and rural areas, and across income levels. Programs to both reduce reliance on private vehicles and vehicle fuel costs are needed.

Building Energy Burden and Affordability Gap

While Connecticut has multiple programs available to low income customers to help them better afford their utility bills, individual programs are insufficient to support all customers on their own. The Connecticut Energy Assistance Program (“CEAP”) is primarily funded through the federal Low Income Home Energy Assistance Program (“LIHEAP”) and provides direct bill assistance to households earning <60% of state median income. **The CEAP program budget is approximately \$88 million, which is only sufficient to serve roughly 20% of the 430,825 eligible households in the state.^{41, 42} Both of the state’s investor-owned utilities also offer matching payment and arrearage forgiveness programs. In 2019 these programs served nearly 19,000 customers but only 58% successfully completed the program.** Further exacerbating the insufficiency of

The savings achieved through the combination of efficiency and solar is enough to close the building energy affordability gap entirely for many of the state’s low income households.

these resources is the fact that, while bill assistance programs are critical to supporting low income households and their ability to afford their energy costs, they do not offer a solution that permanently reduces a household’s energy burden.

The combination of energy efficiency and solar has the potential to close the building energy affordability gap. An analysis by the CT Green Bank in partnership with VEIC found an average combined savings from energy efficiency and solar PV of close to \$600 for participants of the Residential Solar Incentive Program (RSIP) and just over \$1,300 for participants in the Solar for All program. The building energy affordability gap for households earning less than 60% AMI is \$1,010. This is evidence that programs designed to provide both energy efficiency upgrades and solar energy are well poised to fill the building energy gap at all income levels and across all census tracts.⁴³ However, most of the state’s solar programs, including Solar For All, are only open

⁴¹ https://liheappm.acf.hhs.gov/sites/default/files/private/congress/profiles/2018/FY2018_CT_grantee_prof_final.pdf

⁴² Docket No. 17-12-03RE01 – PURA Investigation into System Planning of the Electric Distribution Companies – Energy Affordability, PRO Final Report June 3, 2020

⁴³ Connecticut Green Bank Low and Moderate Income Solar Program Savings Analysis. October, 2020, by VEIC with support from the Connecticut Green Bank and funding from Clean Energy States Alliance (CESA) under U.S. Department of Energy Solar Energy (DOE) Technologies Office Award Number DE-EE-0007667.

to owner-occupied homes, not rentals. Further efforts are needed to ensure these types of programs benefit both homeowners and renters.

Table 9 provides a high-level overview of currently available programs and the impact they can have on reducing energy burdens. Due to varying eligibility requirements, these programs do not demonstrate a cumulative approach to relieving building energy burden. The state residential solar incentive program, Residential Solar Investment Program (RSIP), is available to all owner-occupied single-family homes, pending their individual solar feasibility, and offers a higher incentive level for customers that are low-and-moderate income. The state’s energy assistance program (CEAP) also has an income threshold, serving customers below 60% state median income. Energy efficiency programs can serve both homeowners and renters who obtain landlord approval but can often be deferred if health and safety issues such as lead or asbestos exist. Despite inconsistent eligibility requirements, many programs exist to address various aspects of energy burdens.

Table 9. Programmatic solutions to high building energy burden.

	Program	Average Savings per Household	Total Eligible Customers/Customers Served
Direct Bill Assistance			
	Connecticut Energy Assistance Program (LIHEAP)	\$677 - \$1,180 (delivered fuel bill assistance) ⁴⁴	- 430,825 eligible - 80,467 served
Energy Efficiency			
	Weatherization (WAP)	\$3,435 lifetime savings ⁴⁵	- 430,825 eligible - 286 served in 2018
	Home Energy Solutions (HES)	\$200 - \$250 ⁴⁶	- 1,367,374 occupied housing units eligible ⁴⁷ - 164,378 served since 2007 ⁴⁸
Solar Programs⁴⁹			
	Residential Solar Investment Program (RSIP)	\$349	- 857,796 owner occupied 1-4 unit households eligible ⁵⁰ - 41,805 projects approved

⁴⁴ Docket No. 17-12-03RE01 – PURA Investigation into System Planning of the Electric Distribution Companies – Energy Affordability, PRO Final Report June 3, 2020.

⁴⁵ https://liheappm.acf.hhs.gov/sites/default/files/private/congress/profiles/2018/FY2018_CT_grantee_prof_final.pdf.

⁴⁶ See <https://www.energizect.com/your-home/solutions-list/home-energy-solutions-core-services>.

⁴⁷ 2018 ACS

⁴⁸ Data provided by Eversource.

⁴⁹ Solar program savings available in: Connecticut Green Bank Low and Moderate Income Solar Program Savings Analysis. October, 2020, by VEIC with support from the Connecticut Green Bank and funding from Clean Energy States Alliance (CESA) under U.S. Department of Energy Solar Energy (DOE) Technologies Office Award Number DE-EE-0007667.

⁵⁰ 2018 ACS

	Program	Average Savings per Household	Total Eligible Customers/Customers Served
Solar Programs⁵¹			
	RSIP Low-and-Moderate Income Incentive	\$679	- 295,750 owner occupied 1-4 unit households in <100% AMI band census tract eligible ⁵² - 1,669 projects approved
	Solar for All (solar PV and energy efficiency)	\$1,315	3,049 LMI and non-LMI customers served
	Shared Clean Energy Facilities	\$208 estimated annual bill credit ⁵³	

Transportation Costs

Transportation costs were consistently above affordable levels; most of these costs were associated with private vehicle ownership (vehicle purchase, maintenance, and fuel). These costs were modeled, rather than based on actual spending levels, and although rigorously reviewed, these were the least reliable estimates in our datasets. Transportation data is notoriously difficult

If rather than spending 15% of household income on vehicle ownership, households could spend 5% or even 10% on public transit, their household wealth would grow.

to collect, especially for low-and moderate-income households that are traditionally under-represented in survey data. However, these estimates do provide some insight into what expected spending levels are, given local land use patterns and a minimum level of mobility (access to reliable transportation to reach employment, medical appointments, goods and services).

In even the state’s most densely populated urban areas, the H&T Index deemed a car necessary to achieve this minimum level of mobility. Granted, actual rates of auto ownership may be considerably lower than those used in the model, meaning households are spending less; however, if they are depending solely on public transportation, biking and walking they presumably have reduced mobility and may be spending an excessive amount of time traveling to destinations.

⁵¹ Solar program savings available in: Connecticut Green Bank Low and Moderate Income Solar Program Savings Analysis. October, 2020, by VEIC with support from the Connecticut Green Bank and funding from Clean Energy States Alliance (CESA) under U.S. Department of Energy Solar Energy (DOE) Technologies Office Award Number DE-EE-0007667.

⁵² Ibid.

⁵³ \$0.025/kWh bill credit applied to an assumed 8,311kWh annual load, based on Eversource average residential customer load profile in 2017.

Previous research has shown that private vehicle ownership can be a key avenue out of poverty.^{54, 55, 56} Despite their crippling costs, for those who can afford to purchase and maintain them, cars provide reliable access to employment, a level of access that can only be rivaled in the most transit-dense areas of the U.S., like Manhattan.

Our analysis suggests that changing this narrative and making prosperity possible without a vehicle is perhaps the clearest way to improve the financial stability of low-and moderate-income households in Connecticut. Our dependence on private vehicles hits these households the hardest. If rather than spending 15% of household income on vehicle ownership (and another 4% on vehicle fuel), households could spend 5 or even 10% on public transit, their household wealth would grow, even more so among low- and moderate-income households which spend proportionately more on transportation. For households that cannot afford a vehicle, a high level of transit service (high frequency of service, night and weekend service, service to major employment centers) provides affordable mobility. For households that do own vehicle(s), often at unaffordable cost as this analysis showed, a high level of transit can allow them to reduce their reliance on vehicles by driving less and owning fewer cars.

We suggest two solutions to Connecticut's high household transportation burden: 1) minimize the need for private vehicles through increased access to other modes of travel, and 2) for households that do own vehicles, lower fuel costs through electric vehicle adoption.

1. Minimizing the need for and use of private vehicles:

- a. Increase access to, and use of, public transit: In Connecticut's densest urban areas facing the highest transportation burdens, a high level of transit service is the clearest way to provide mobility without taking on the cost burden of vehicle ownership. Users with highest need should be centered in public transit planning process, from vehicles, to prices, to routes, to frequency, and other service considerations. Further, people must be able to safely access public transit stops by foot or wheels; this will increase value, safety, and ridership.
- b. Electric bike adoption: E-bikes have enormous potential to provide much of the convenience of private vehicles at a fraction of the cost and environmental impact. In China, e-bike owners already outnumber car owners. For some, although not all households, e-bike adoption can dramatically improve mobility. For urban and suburban households, e-bikes can provide a first mile/last mile link to transit. A 2019 study of e-bike owners in Vermont reported an average of 1,400 miles ridden annually (important to

⁵⁴ The Urban Institute. 2014: <https://www.urban.org/sites/default/files/publication/22461/413078-Driving-to-Opportunity-Understanding-the-Links-among-Transportation-Access-Residential-Outcomes-and-Economic-Opportunity-for-Housing-Voucher-Recipients.PDF>

⁵⁵ Smart and Klein. 2018. Disentangling the role of cars and transit in employment and labor earnings.

⁵⁶ King et al. 2019. The Poverty of the Carless: Toward Universal Auto Access. Journal of Planning and Education.

note that winter mileage was very low). One of the most common uses of e-bikes among survey participants was commuting.⁵⁷ To reach low-and-moderate income households, a generous incentive program (inclusive of helmets, bike locks, and technical assistance) would be necessary. Secure bike storage facilities on job sites and other destinations is also important.

2. Electric vehicle adoption: In rural and suburban areas, dependence on private vehicles is often unavoidable. Electric vehicles offer clear fuel savings over gasoline-powered vehicles (often over 50% for fully electric vehicles). However, fuel savings are not always enough to overcome higher upfront costs, especially for low-and-moderate income households for whom upfront cost is a key barrier. Generous income-eligible EV incentives can help households overcome this barrier. Similarly, the MileageSmart Program, in Vermont, provides incentives to low income households for vehicles that achieve a minimum of 40 miles per gallon.⁵⁸ A 50% reduction in vehicle fuel spending would reduce transportation energy burden from 4% to 2%.

Although transportation burden in Connecticut is higher than the national average (20% vs. 13%), reliance on private vehicles is high throughout the U.S. Most transportation projects are designed with these vehicles in mind and most funding at state, federal, and local levels, goes towards accommodating these vehicles, rather than upgrades to local transit systems or bicycle and pedestrian networks.⁵⁹ In 2014, research by the Pew Charitable Trust confirmed that funding for highways far exceeds funding for public transit at all three levels of government.⁶⁰ Building a more equitable transportation system will require systemic solutions and new funding mechanisms. The suggestions above have the potential to provide meaningful reductions in transportation burden for many of Connecticut's most highly burdened households. Our hope is that these suggestions above can guide further study and implementation efforts.

⁵⁷ Electric Bikes: Survey and Efficiency Analysis: <https://www.encyvermont.com/Media/Default/docs/white-papers/efficiency-vermont-electric-bike-white-paper.pdf>

⁵⁸ <https://capstonevt.org/transportation/mileagesmart>

⁵⁹ Although it's challenging to get an accurate accounting, funding for public transit comprises about 20-25% of the federal highway budget. Bike and pedestrian infrastructure comprises less than 2%. See: Congressional Research Service: <https://fas.org/spp/crs/misc/R42706.pdf>; Congressional Budget Office, 2020: <https://www.cbo.gov/system/files/2020-01/56006-CBO-presentation.pdf>; U.S. DOT 2018 Transportation Statistics Annual Report: <https://www.bts.dot.gov/sites/bts.dot.gov/files/docs/browse-statistical-products-and-data/transportation-statistics-annual-reports/Preliminary-TSAR-Full-2018-a.pdf>; U.S. DOT 2015 Status of the Nation's Highways, Bridges, and Transit:

<https://www.fhwa.dot.gov/policy/2015cpr/chap11.cfm>;

⁶⁰ https://www.pewtrusts.org/-/media/assets/2014/09/ff-transportation-report-horizontal-graphics_v3_123114.pdf

Appendix

Spending Burden by County

Figure 1A. Mean burden by county and AMI band.

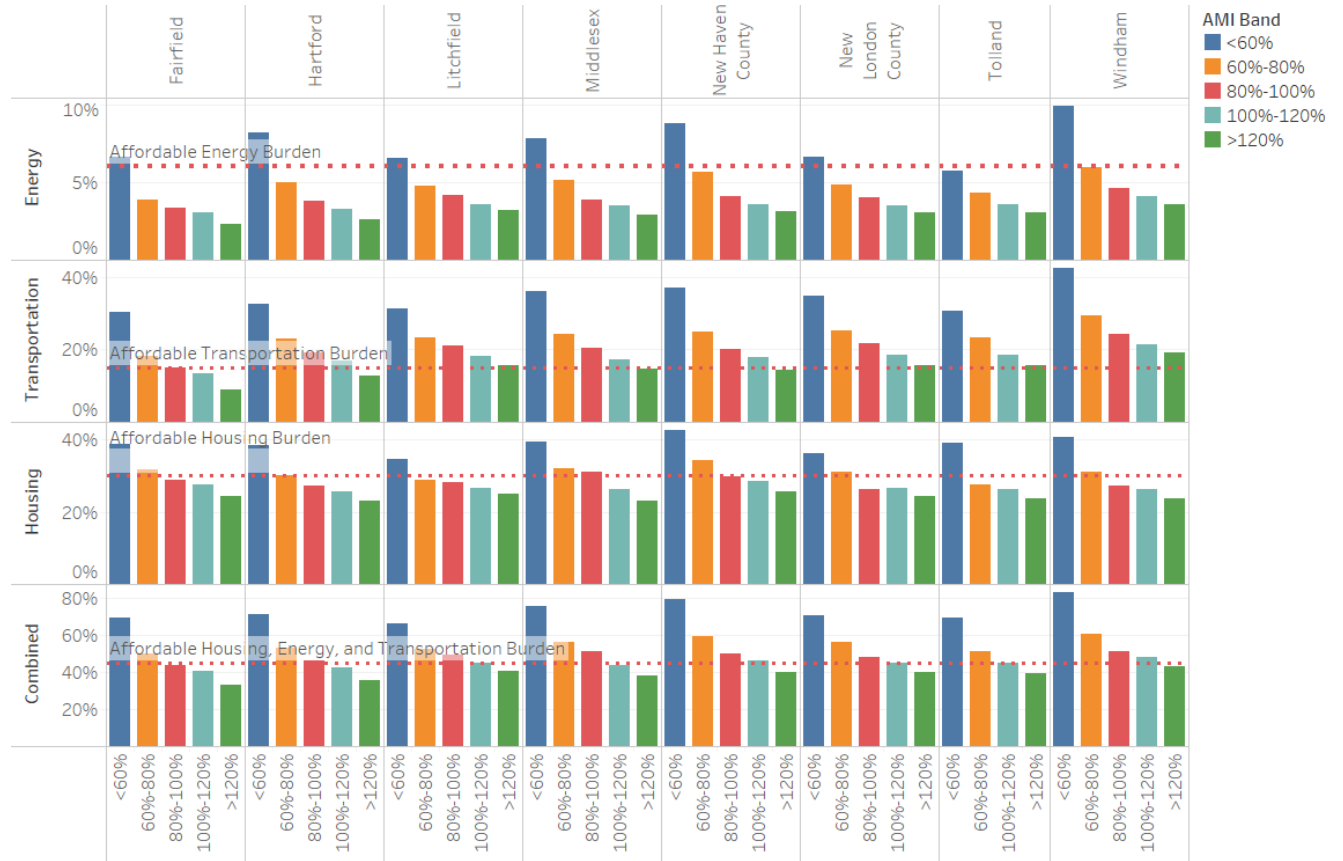


Figure 2A. Mean spending burden by municipality for Fairfield County: building energy, transportation, housing, and all spending categories combined.

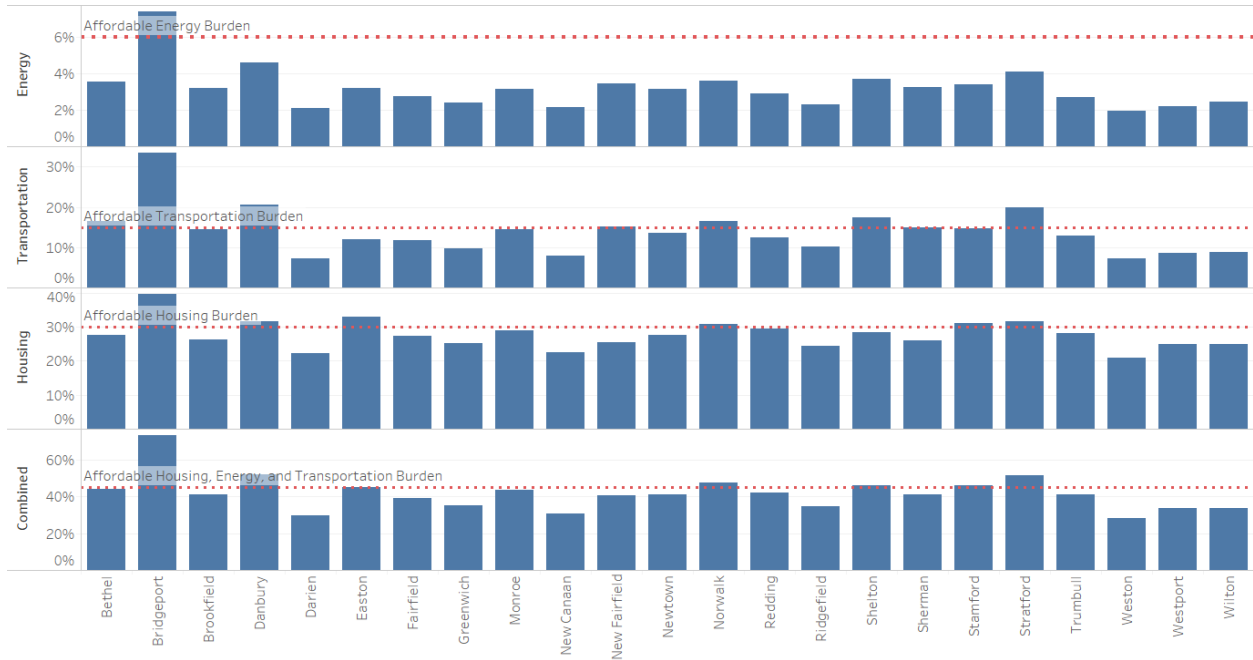


Figure 3A. Mean spending burden by municipality for Hartford County: building energy, transportation, housing, and all spending categories combined.

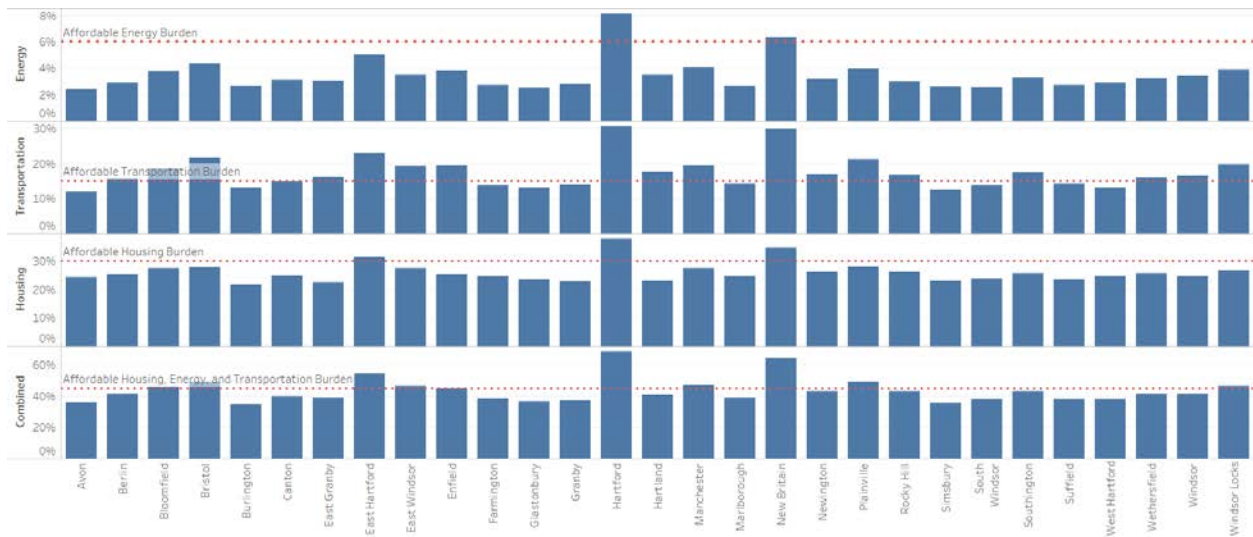


Figure 4A. Mean spending burden by municipality for Litchfield County: building energy, transportation, housing, and all spending categories combined.

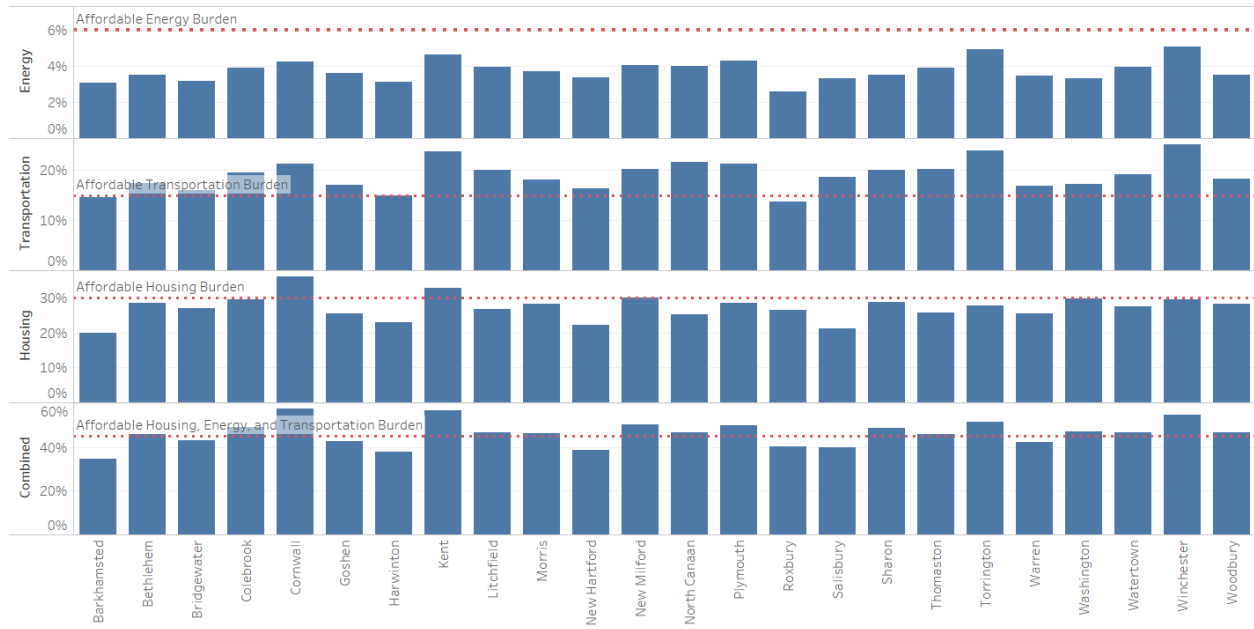


Figure 5A. Mean spending burden by municipality for Middlesex County: building energy, transportation, housing, and all spending categories combined.

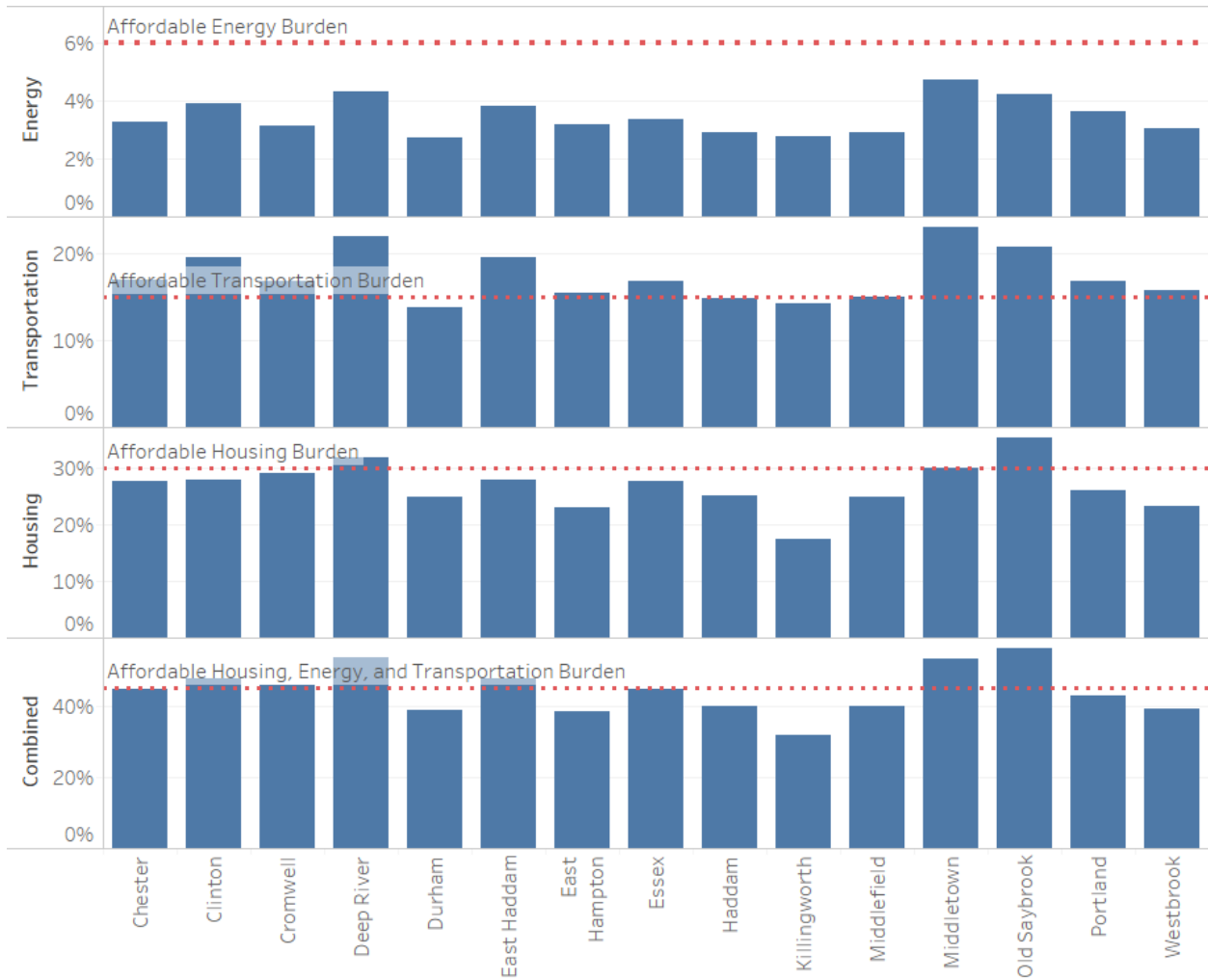


Figure 6 A. Mean spending burden by municipality for New Haven County: building energy, transportation, housing, and all spending categories combined.

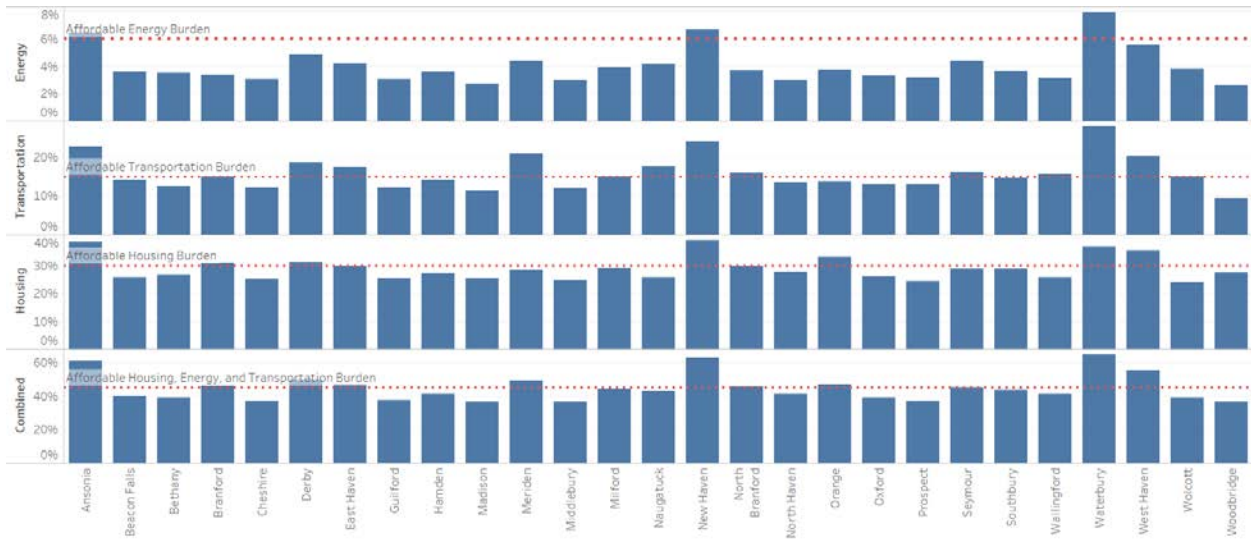


Figure 7A. Mean spending burden by municipality for New London County: building energy, transportation, housing, and all spending categories combined.

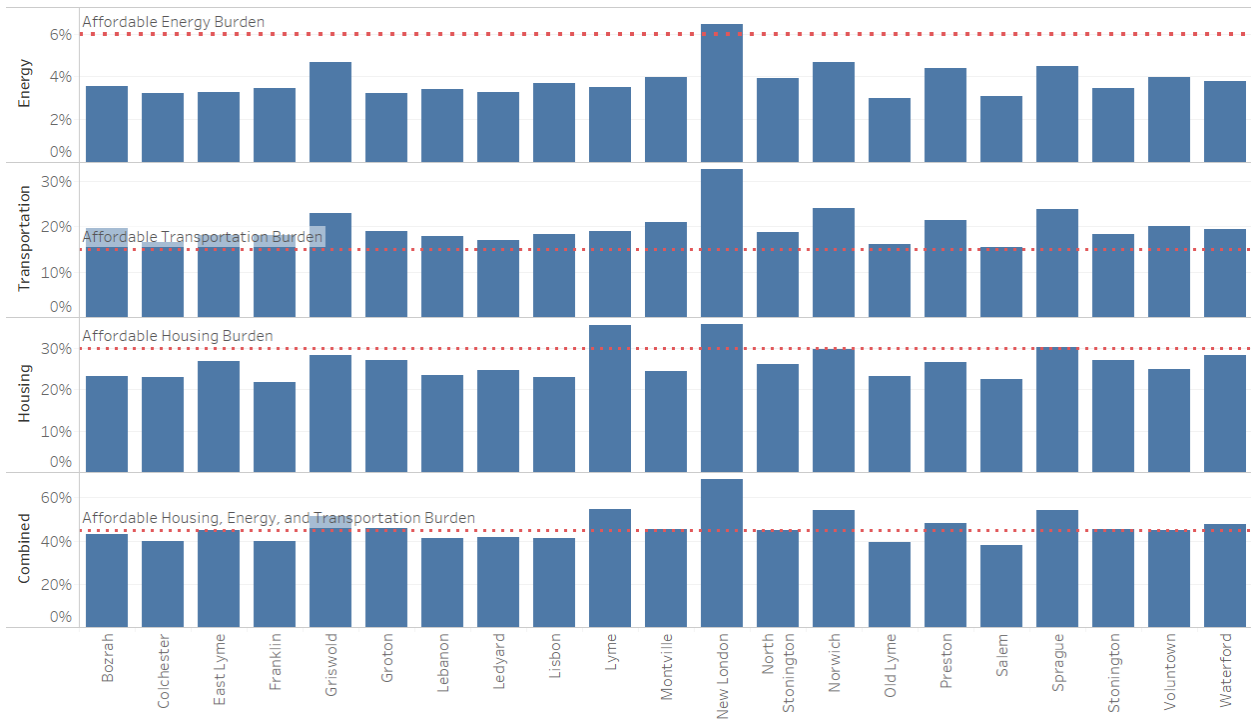
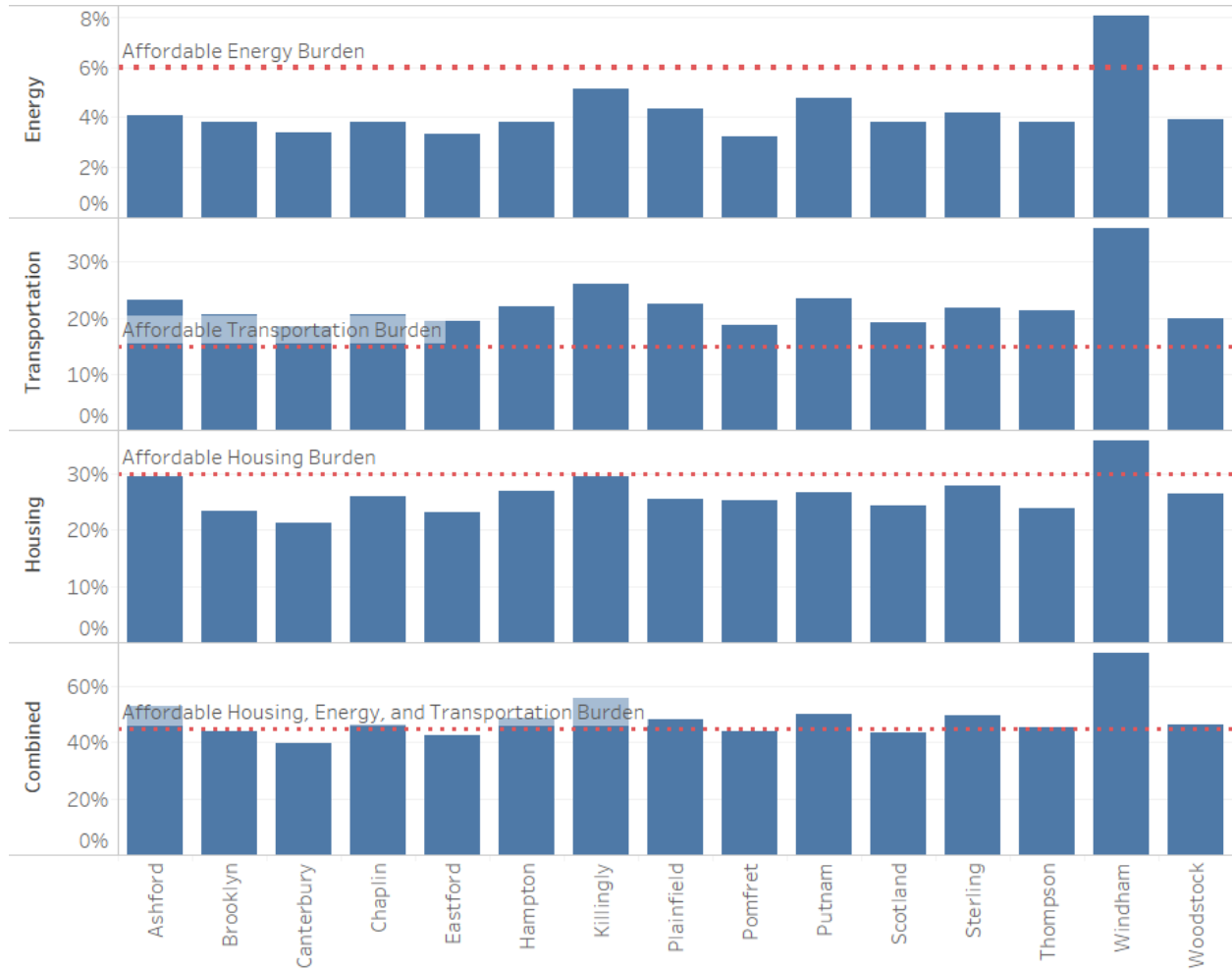


Figure 8A. Mean spending burden by municipality for Tolland County: building energy, transportation, housing, and all spending categories combined.



Figure 9A. Mean spending burden by municipality for Windham County: building energy, transportation, housing, and all spending categories combined.





Connecticut Green Bank Low and Moderate Income Solar Program Savings Analysis

Research for and support from:



October 2020



Executive Summary

This report quantifies realized and estimated solar and energy efficiency savings in 2019 for 252 customers that participated in the Connecticut Green Bank's low and moderate income (LMI) solar programs. These programs include an incentive available to solar projects installed for low- or moderate-income households, as well as a public-private partnership that supports a solar lease paired with energy efficiency services targeted at low and moderate income households (the Solar for All program). While all customers that participate in these programs receive basic weatherization and efficiency improvements through the utility-run Home Energy Solutions ("HES")¹ program, customers that participate in the Solar of All program also receive deeper energy efficiency services. Based on this analysis, customers that participated in the Green Bank's LMI incentive program but not the Solar for All program achieved average measured savings of \$349 in 2019 from their solar PV installation. These customers are also estimated to have saved an additional \$200-\$250 from their participation in the HES program, bringing their total estimated 2019 savings to \$549-\$599. Customers that participated in the Solar for All program achieved average measured savings of \$687 from solar in 2019, and an estimated average savings of \$403 from deeper energy efficiency improvements recommended through the HES program. The combined solar lease, HES program measures and recommended energy efficiency improvement offered in the Solar for All program are estimated to have delivered average annual savings of \$1290-\$1340 per customer in 2019.

Introduction

In 2015 the Connecticut Green Bank (CGB) developed a new initiative focused on delivering behind the meter solar savings for low- and moderate-income households in Connecticut. The program, which provides an elevated incentive to income-qualifying households through the Green Bank's Residential Solar Investment Program, and features a public private partnership that created a solar and energy efficiency lease targeted at LMI households, has increased annual solar deployment in LMI communities from 44% to 54% since 2015.

The first component in the Green Bank's LMI solar program is an elevated incentive offered through the organization's long-running Residential Solar Investment Program (RSIP). The RSIP was established in 2012, but the Green Bank's LMI incentive did not launch until August 2015. The incentive was created to correct market inequities in the distribution of behind the meter solar projects in the RSIP. The LMI incentive is a performance-based incentive ("LMI PBI") that is approximately three times higher than the non-LMI incentive. The incentive is only available to

¹ <https://www.energizect.com/your-home/solutions-list/home-energy-solutions-core-services>

qualifying third-party owned solar providers that have responded to an open RFP and had their product approved by the Green Bank, to ensure the value of the elevated incentive is passed through to customers. To receive the LMI incentive for a given project the solar provider must confirm the household meets the program's income requirements.² As of July 1, 2020, two (2) third-party owned solar providers and their solar products have been approved to access the LMI incentive.³

Recognizing the unique challenges of serving the LMI market, and that a concerted effort and specialized product would be needed to properly serve this market, Green Bank opened a Request for Proposals from financing providers to establish a public-private partnership to better serve the LMI market segment. PosiGen Solar Solutions, a Louisiana based solar provider, was selected under the open RFP and together with the Green Bank established Connecticut's "Solar for All" program. PosiGen offers a solar lease paired with energy efficiency improvements that leverage and build on efficiency services provided by through the state's Home Energy Solutions program.⁴ Any homeowner can qualify for PosiGen's product, but the company specifically targets LMI households and simplifies the approval process by using an alternative underwriting process rather a traditional credit check. Green Bank supported PosiGen's foray into the Connecticut market by investing an initial \$5 million in PosiGen's Connecticut solar lease fund and has since provided additional subordinated investments to enable the company to continue to offer an affordable LMI solar product in the Connecticut market. Since the program launched, nearly 3,300 households have participated and almost 22MW of solar has been installed as of August 2020. For more information on Connecticut's Solar for All program visit: <https://www.cesa.org/resource-library/resource/building-a-state-solar-program-for-low-and-moderate-income-homeowners-replicating-connecticuts-success/>

In July 2020, five years since the LMI program launched, the Green Bank and the Vermont Energy Investment Corporation (VEIC) conducted an analysis of realized solar savings for customers who participated in the Solar for All program, or whose project received the LMI PBI. The analysis considers both measured solar savings as well as estimated energy efficiency savings for participants.

² To receive the LMI incentive the solar provider must confirm that the household earns below 100% of Area Median Income (AMI), based on the applicable Metropolitan Statistical Area

³ In order to access the LMI incentive the solar provider's product pricing must be approved by Green Bank. Green Bank does not allow escalators to be applied to LMI products.

⁴ <https://www.energizect.com/your-home/solutions-list/home-energy-solutions-core-services>

Methodology

Solar Savings

To measure customer solar savings, a sample set of 252 residential solar projects was established. The dataset included 242 randomly selected PosiGen customers whose solar PV systems were energized prior to December 31, 2018, and for whom a full year’s worth of production data was available for 2019. This sample size represents approximately 15% of PosiGen’s installed portfolio as of 12/31/2018.⁵ 61% of these projects were verified as income-eligible households and received the LMI PBI, which is representative of PosiGen’s larger portfolio ratio of LMI PBI to PBI projects.⁶ The analysis also included 10 out of 15 customers whose solar PV project qualified for the LMI PBI, but whose systems were not installed by PosiGen. Only 10 out of these 15 total projects were included because a full year’s worth of data for 2019 was not available for the remaining 5 projects.

Table 1. Solar Savings Analysis Data set

Program	Number of Projects	Capacity (kW)	Average System Size (kW)	Average Lease or PPA Price
Solar for All				
<i>LMI PBI</i>	148	917	6.2	\$78/month
<i>PBI</i>	94	629	6.7	\$84/month
<i>LMI PBI Only</i>	10	68	7.6	\$0.17/kWh

For LMI PBI- Only projects, system sizes ranged from 3.3kW to 12.87kW and customer power purchase agreement (PPA) pricing ranged from \$0.163/kWh in Eversource territory to \$0.192/kWh in United Illuminating territory. Customers that participated in the Solar for All program installed systems ranging from 4.5kW to 8.7kW and their lease prices ranged from \$54.99 to \$119.99 based on the solar PV system size.

The Green Bank monitors system production for each solar installation that receives an incentive through the RSIP (regardless of whether the project receives an LMI or non-LMI incentive). The Green Bank also collects information on each customer’s annual electric load through the incentive application process. To calculate customer savings, each customer’s pre-solar annual electric load was compared to their system’s solar production from January 1, 2019 – December

⁵ As of 12/31/2018 PosiGen had 1,513 customers whose systems were installed and energized. As of April 30, 2020, PosiGen had 2,513 customers whose systems are installed and energized.

⁶ While only approximately 60% of PosiGen’s projects are verified as income-eligible (earning <100% AMI), 73% of projects are in census tracts with a median income <100% of AMI. This is due, in part, to the fact that not all customers are able to provide the information required to verify their income.

31, 2019 to determine how much of their electric load was offset by their solar production, and the total value of net metering credits the customer received in 2019.⁷ The cost of the customer’s solar PPA or lease was then subtracted from these savings to determine each customer’s net savings for the year.

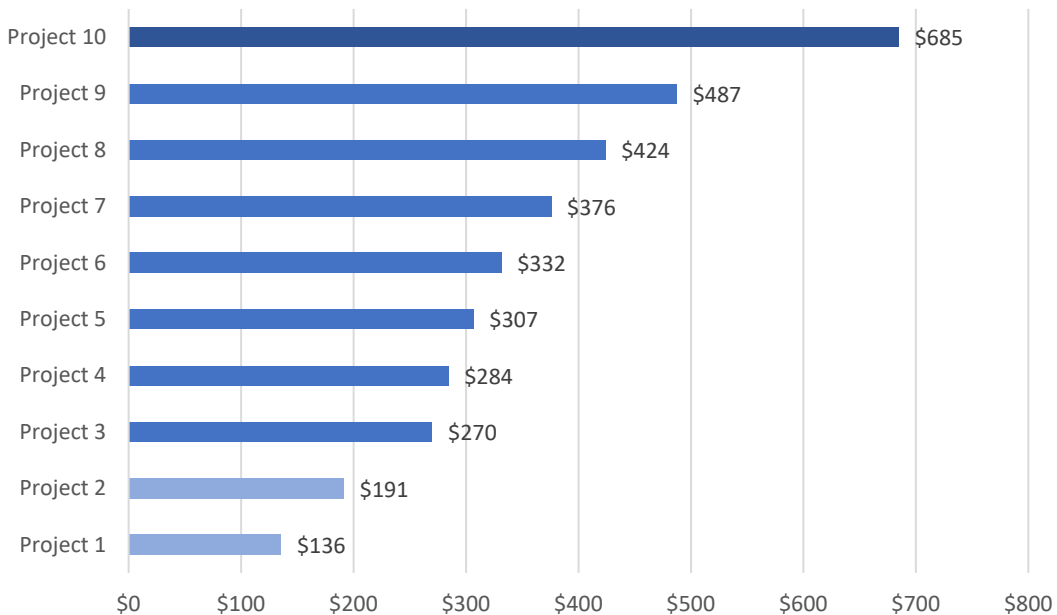
Solar Savings Calculations

Net Solar PPA Savings = (Pre-Solar annual electric load * applicable utility rate) – (((Pre-Solar annual electric load – measured solar PV production) * applicable utility rate) + (Measured solar PV production * PPA rate))

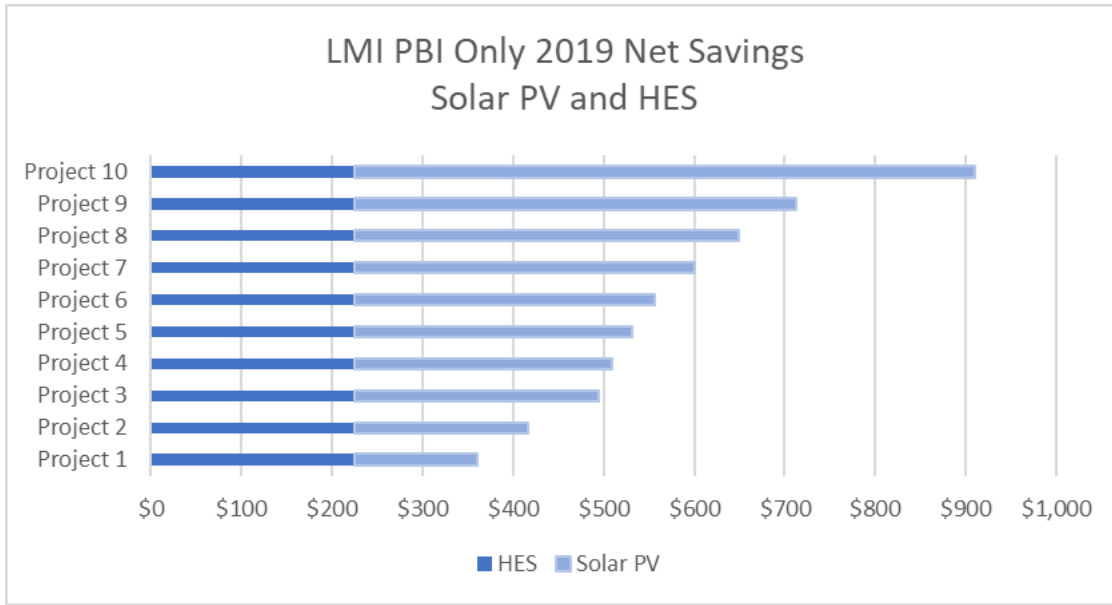
Net Solar Lease Savings = (Pre-Solar annual electric load * applicable utility rate) – (((Pre-Solar annual electric load - measured solar PV production) * applicable utility rate) + (Monthly Lease Price * 12))

LMI-PBI only customers saw average savings of \$349, which equates to an average of 18% of their annual utility bill. 2019 annual customer savings ranged from \$136 to \$685, with larger savings realized by customers who had a larger percent of electric load offset by solar PV, and customers with larger loads and related offset seeing greater savings. LMI-PBI customers were able to offset their electric load with solar by 79% on average.

Figure 1: 2019 LMI-PBI Only Net Customer Savings



⁷ **Net metering** is a billing mechanism that credits solar energy system owners for the electricity they export to the grid at the retail purchase rate.



Customers that participated in the Solar for All program saw average savings of \$687, which equates to an average of 34% of their pre-solar utility bill by offsetting their electric load with solar by 83% on average. 2019 annual customer savings ranged from \$46 to \$1,585, with customers who had a larger percent of electric load offset by solar PV seeing greater savings. 98% of customers saw annual solar savings greater than \$100, with the highest percentage of customers (27%) realizing savings of \$500-\$750 annually.

Figure 2. 2019 Solar for All Customer Net Savings by Dollar Amount (\$)

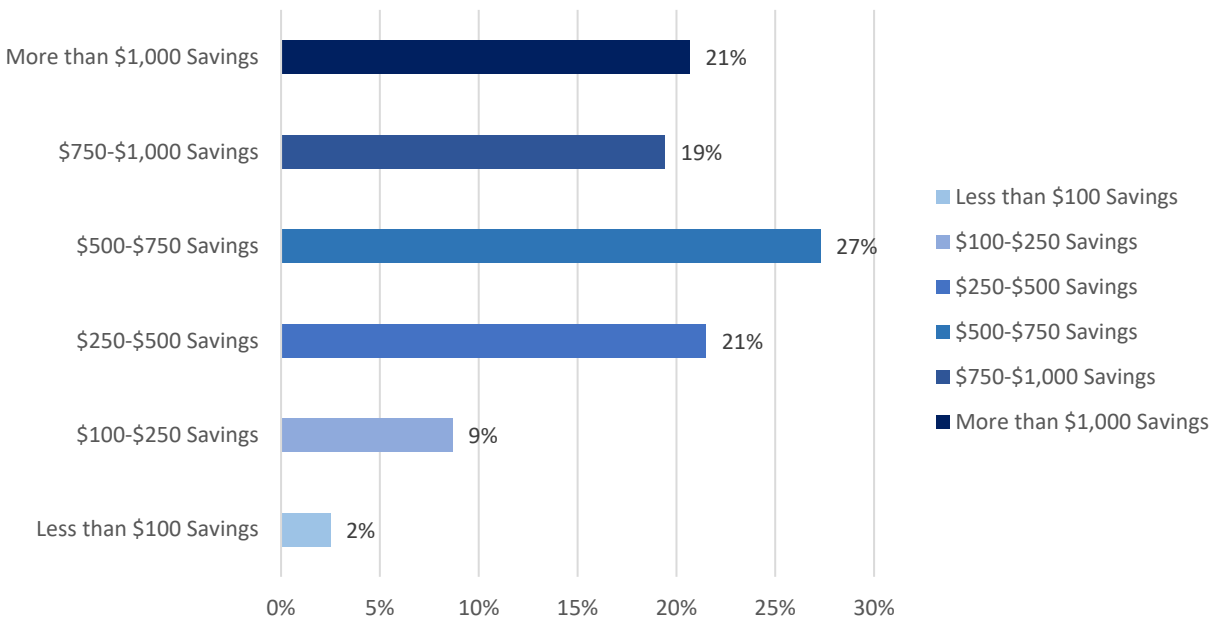
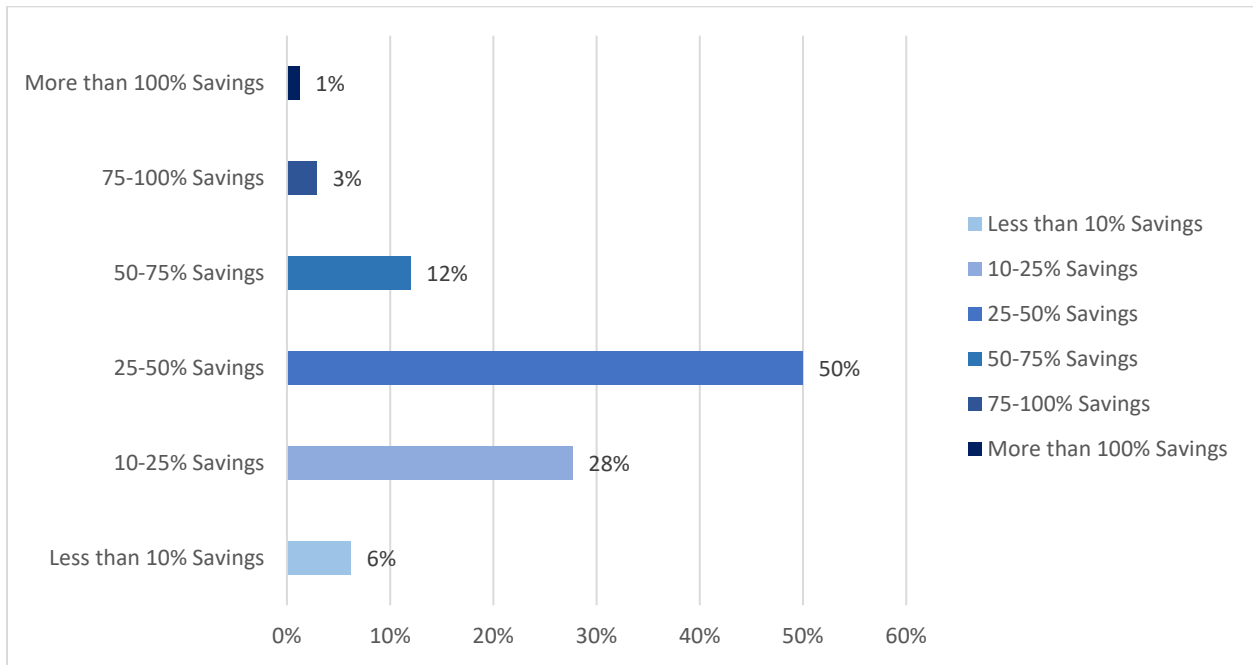


Figure 3. 2019 Solar for All Customer Net Savings by Percent (%) of Pre-Solar Electric Bill



Within the Solar for All sample, 61% of customers income-qualified for the LMI PBI, which is consistent with the broader portfolio’s ratio of LMI-PBI to PBI customers. When comparing LMI PBI to PBI customers, the sample revealed that the distribution of savings was roughly the same between the two groups, with most customers saving between \$500 and \$750 (27% and 28% respectively).

Table 2. 2019 Solar for All Customer Net Savings by Incentive Type

Net Savings	LMI PBI Customers	PBI Customers	Grand Total
Less than \$100 Savings	3%	2%	2%
\$100-\$250 Savings	9%	7%	9%
\$250-\$500 Savings	22%	21%	21%
\$500-\$750 Savings	27%	28%	27%
\$750-\$1,000 Savings	20%	19%	19%
More than \$1,000 Savings	20%	22%	21%
Grand Total	100%	100%	100%

On average LMI PBI customers saved \$679 through their solar lease and PBI customers saved an average of \$699, with both groups saving nearly 34% of their pre-solar electric bill, on average.

Table 3. 2019 Solar for All Average Customer Savings by Incentive Type

Incentive Type	Average Net Dollar (\$) Savings	Average Net Savings Percent (%)
LMI PBI	\$679	34%
PBI	\$699	33%
Grand Total	\$687	34%

Table 4: 2019 Net Savings for LMI PBI Only and Solar for All Customers

Program	Average Net Dollar (\$) Savings	Average Net Savings Percent (%)
LMI PBI Only	\$349	18%
Solar for All	\$687	34%

When comparing solar savings attained by the LMI BPI program and the Solar for All program, it is important to note that the LMI BPI dataset is very small, including only 10 projects, and the majority (90%) of those were completed in Eversource service territory which has a lower \$/kWh electric rate. By contrast, the majority (67%) of Solar for All projects were completed in UI service territory which has a higher \$/kWh electric rate. Additionally, the annualized average lease rate through the Solar for All program is approximately \$260 less than the annualized average PPA rate for the LMI PBI program.

Energy Efficiency Savings

All customers that participate in the RSIP are required to complete a home energy audit through the utility-run Home Energy Solutions (“HES”) program. A HES visit consists of an assessment of the home’s energy performance as well as the installation of basic weatherization and energy saving measures. It is estimated that a HES audit saves customers \$200-\$250 annually.⁸ Customers that went solar through the RSIP and were eligible for the LMI PBI all completed a HES audit and are estimated to be saving an additional \$200-\$250 per year in addition to their solar savings. As a result, customers whose project received the LMI PBI but did not install solar with PosiGen are estimated to have saved an average of \$549-\$599 in 2019 as a result of their participation in the RSIP and HES programs.

Customers that participate in the Solar for All program, receive a package of “deeper” energy efficiency measures on top of their HES services. The services each customer receives are in addition to the services they receive as part of the HES program and provide increased energy savings. The deeper measures include recommended measures resulting from the HES program. Through this portion of Solar for All product, each customer receives \$2,400 worth of efficiency measures and the cost of the service is rolled into their monthly price for the 20-year term of the

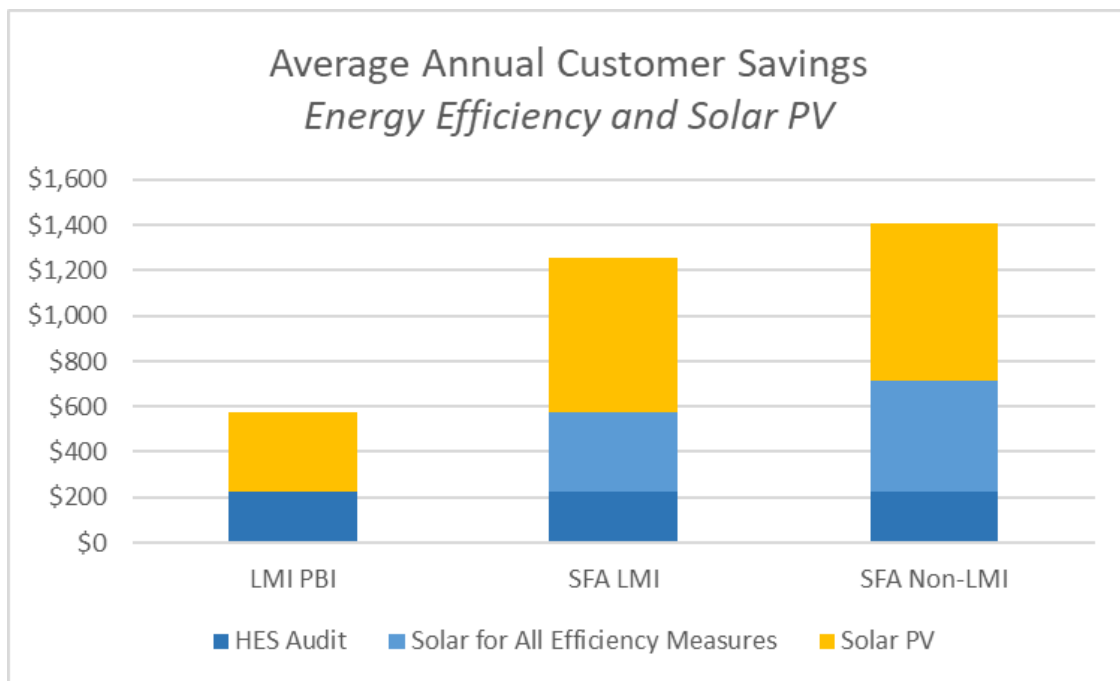
⁸ <https://www.energizect.com/your-home/solutions-list/home-energy-solutions-core-services>

lease. Estimates of savings achieved through these efficiency measures are calculated based on the deemed savings for each individual measure, as stated in the Connecticut Program Savings Document⁹.

Estimated savings from the additional energy efficiency improvements made in the home are calculated for each customer. Based on these calculations, PosiGen customers in the sample saved an average of \$403 from energy efficiency in addition to their solar savings and savings from the HES program. The range of savings from additional recommended EE measures estimated for customers in the dataset was \$19 -\$1343. Based on these estimates of energy efficiency savings, customers that participated in the Solar of All program are estimated to have saved an average of \$1,315 in 2019.

Table 5. 2019 Estimated Average Total Customer Savings

Program	Average Net Solar Savings	Average Estimated Energy Efficiency Savings	Average Estimated Total Customer Savings
LMI PBI Only	\$349	\$200-\$250	\$549-\$599
Solar for All	\$687	\$603-\$653	\$1290-\$1340



⁹ https://www.puc.nh.gov/EESE%20Board/EERS_WG/ct_trm.pdf



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