

845 Brook Street, Rocky Hill, CT 06067
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ctgreenbank.com



October 5, 2017

Dear Audit, Compliance and Governance (ACG) Committee Members,

We look forward to our meeting on Wednesday, October 11th at the Connecticut Green Bank in Rocky Hill from 8:30 a.m. to 9:30 a.m. We will discuss the following agenda items:

1. Draft Comprehensive Annual Financial Report (CAFR);
2. Staff Project Authorization increase to \$500,000 and related update to the Green Bank Bylaws;
3. A presentation by CAFR Non-Financial Statistics Auditors;
4. Public Health Methodology; and
5. 2017 Legislative and Regulatory Update.

As always, please let me know if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Brian Farn". The signature is written in a cursive style and is followed by a long horizontal line.

Brian Farn
General Counsel & Chief Legal Officer



AGENDA

Audit, Compliance and Governance Committee of the
Connecticut Green Bank
845 Brook Street
Rocky Hill, CT 06067

Wednesday, October 11, 2017
8:30 – 9:30 a.m.

Staff Invited: George Bellas, Brian Farnen, Bryan Garcia, Bert Hunter, Matt Macunas and Eric Shrago

Others invites: SustainAbility, Inc.

1. Call to order
2. Public Comments – 5 minutes
3. Approve Meeting Minutes for July 10, 2017* – 5 minutes
4. Discuss proposed draft Comprehensive Annual Financial Report (CAFR)** – 30 minutes
5. Staff Project Authorization increase to \$500,000 and related Update to Bylaws** - 15 minutes
6. Presentation by SustainAbility (CAFR Non-Financial Statistics Auditors) – 20 minutes
7. Public Health Methodology – 10 minutes
8. 2017 Legislative and Regulatory Update – 5 minutes
9. Other Business – 15 minutes
10. Adjourn

*Denotes item requiring Committee action

** Denotes item requiring Committee action and recommendation to the Board for approval

Join the meeting online at <https://global.gotomeeting.com/join/243776109>

Or call in using your telephone:
Dial **+1 (224) 501-3312**
Access Code: 243-776-109

Next Regular Meeting: 2018 - TBD
Connecticut Green Bank, 845 Brook Street, Rocky Hill, CT



RESOLUTIONS

Audit, Compliance and Governance Committee of the
Connecticut Green Bank
845 Brook Street
Rocky Hill, CT 06067

Wednesday, October 11, 2017
8:30 – 9:30 a.m.

Staff Invited: George Bellas, Brian Farnen, Bryan Garcia, Bert Hunter, Matt Macunas and Eric Shrago

Others invites: SustainAbility, Inc.

1. Call to order
2. Public Comments – 5 minutes
3. Approve Meeting Minutes for July 10, 2017* – 5 minutes

Resolution #1

Motion to approve the minutes of the Audit, Compliance and Governance Committee meeting for July 10, 2017. Second. Discussion. Vote.

4. Discuss proposed draft Comprehensive Annual Financial Report (CAFR)** – 30 minutes

Resolution #2

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;

NOW, therefore be it:

RESOLVED, that the Committee hereby recommends to the Board of Directors for approval 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.

5. Staff Project Authorization increase to \$500,000 Staff Project Authorization increase to \$500,000 and related Update to Bylaws ** – 10 minutes

Resolution #3

WHEREAS, pursuant to Section 5.3.1 of the Connecticut Green Bank (Green Bank) Bylaws, the Audit, Compliance & Governance (ACG) Committee is charged with the review and approval of, and in its discretion recommendations to the Board regarding, all governance and administrative matters affecting the Green Bank, including but not limited to matters of corporate governance and corporate governance policies; WHEREAS, on January 18, 2013, the Board of Directors authorized 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 ("Staff Approval Policy for Projects Under \$300,000").

WHEREAS, On July 18, 2014, the Connecticut Green Bank ("Green Bank") Board of Directors approved of a recommendation brought forth by the Deployment Committee to approve the authorization of Green Bank staff to evaluate and approve program 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 \$1,000,000 from the date of the last Deployment Committee meeting

NOW, therefore be it:

RESOLVED, that the Green Bank Deployment Committee hereby recommends that the Board of Directors adopt a resolution amending the Staff Approval Policy to increase the program funding request for Projects Under \$300,000 to \$500,000 with an aggregate amount limit of \$1,000,000 from the date of the last Deployment Committee meeting.

Resolution #4

RESOLVED, that the Audit, Compliance and Governance Committee hereby recommends to the Board of Directors for approval the proposed draft revisions to the Green Bank Bylaws.

6. Presentation by CAFR Non-Financial Statistics Auditors –20 minutes –Eric Shrago, and SustainAbility, Inc.
7. Public Health Methodology – 10 minutes – Eric Shrago

Resolution #5

RESOLVED, that the Audit, Compliance and Governance Committee hereby recommends to the Board of Directors for approval on its consent agenda the proposed US Environmental Protection Agency CoBenefits Risk Assessment (CoBRA) Model for the Evaluation and Measurement of the public health impact of Green Bank supported projects.

8. 2017 Legislative and Regulatory Update – 5 minutes – Brian Farnen and Matt Macunas
9. Other Business – 15 minutes
10. Adjourn

*Denotes item requiring Committee action

** Denotes item requiring Committee action and recommendation to the Board for approval

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Next Regular Meeting: 2018 - TBD
Connecticut Green Bank, 845 Brook Street, Rocky Hill, CT



CONNECTICUT
GREEN BANK

Audit, Compliance and Governance Committee of the Connecticut Green Bank

Agenda Item #1
Call to Order

October 11, 2017
Regular Meeting





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Audit, Compliance and Governance Committee of the Connecticut Green Bank

Agenda Item #2
Public Comments

October 11, 2017
Regular Meeting





CONNECTICUT
GREEN BANK

Audit, Compliance and Governance Committee of the Connecticut Green Bank

Agenda Item #3

Approval of Meeting Minutes of July 10, 2017

October 11, 2017
Regular Meeting





CONNECTICUT
GREEN BANK

Audit, Compliance and Governance Committee of the Connecticut Green Bank

Agenda Item #4

Review of Draft Comprehensive Annual
Financial Report (CAFR)

October 11, 2017
Regular Meeting



CONNECTICUT GREEN BANK
Audit, Compliance and Governance
Committee Presentation
for the Audit of the fiscal year ended
June 30, 2017

BlumShapiro

Accounting | Tax | Business Consulting

The passion to unlock potential

CT Green Bank - Audit Results



Agenda:

Engagement Scope and Reporting

Financial Highlights

Required Auditors' Communications

Closing

Audit Team Contact Information

Engagement Scope and Reporting

The audit was performed under the following standards:

- Auditing Standards Generally Accepted in the United States of America (GAAS).
- The standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States (GAGAS).

CT Green Bank - Audit Results



Engagement Scope and Reporting (continued)

Reporting Results in the Financial Statements:

- Reporting under GAAS:
 - Unmodified audit opinion.
- Reporting under GAGAS:
 - Reporting on Internal Control and Compliance at the Financial Statement Level

Under Internal Control

- No Material Weakness or Significant Deficiencies were identified.

Under Compliance

- No instances of noncompliance were identified.

CT Green Bank - Audit Results



Financial Highlights – Statement of Net Assets (in thousands)

Net Position (in thousands)				
		<u>2017</u>	<u>2016</u>	Increase (Decrease)
Cash and cash equivalents-unrestricted	\$	37,911	\$ 48,072	\$ (10,161)
Cash and cash equivalents-restricted		21,301	9,750	11,551
Bonds receivable		3,329	3,492	(163)
Portfolio investments		-	1,000	(1,000)
Solar lease notes		8,113	9,008	(895)
Program loans		42,206	33,268	8,938
Capital assets, net		61,510	58,115	3,395
Other assets		<u>17,382</u>	<u>14,124</u>	<u>3,258</u>
Total Assets		<u>191,752</u>	<u>176,829</u>	<u>14,923</u>
Deferred Outflows of Resources				
Deferred amount for pensions		<u>9,978</u>	<u>2,575</u>	<u>7,403</u>
Total deferred outflows of resources		<u>9,978</u>	<u>2,575</u>	<u>7,403</u>

CT Green Bank - Audit Results



Financial Highlights – Statement of Net Assets (in thousands)

	<u>2017</u>	<u>2016</u>	Increase (Decrease)
Current liabilities	13,698	6,964	6,734
Unearned revenue	872	6,258	(5,386)
Pension liabilities	25,245	16,096	9,149
Other long term liabilities	3,020	2,528	492
Fair value of interest rate swap	541	1,628	(1,087)
Long term debt, less current maturities	<u>29,691</u>	<u>18,567</u>	<u>11,124</u>
Total liabilities	<u>73,067</u>	<u>52,042</u>	<u>21,025</u>
Net Position			
Invested in capital assets	61,510	58,115	3,395
Restricted Net Position:			
Non-expendable	1	1	-
Restricted - energy programs	21,301	9,750	11,551
Unrestricted	<u>45,851</u>	<u>59,496</u>	<u>(13,645)</u>
Total Net Position	\$ <u>128,663</u>	\$ <u>127,362</u>	\$ <u>1,301</u>

CT Green Bank - Audit Results



Financial Highlights

2017 Financial Analysis

Total assets of the Green Bank increased to \$191.7MM during 2017, an increase of \$14.9MM. This was principally due to an increase of \$8.9MM in program loans to support renewable energy installations and \$3.4MM in energy efficiency upgrades for residential and commercial property owners in CT.

Total liabilities increased \$21.0MM due to primarily to increases in long-term debt associated with bond issuances, advances under CGB's credit facility with Key Bank and increases CGB's allocation of the CT State Employee Retirement System net pension liability.

Total Net Position increased slightly however the components of net position changes most notably in CGB's restricted portion of net position which increased \$11.6MM to \$21.3MM at June 30, 2017.

CT Green Bank - Audit Results



Financial Highlights – Statement of Changes in Net Assets (in thousands)

	2017	2016	Increase (Decrease)
Revenues	<u>\$ 33,970</u>	<u>\$ 37,788</u>	<u>\$ (3,818)</u>
Operating Expenses			
Grants and programs	34,682	27,228	7,916
General and administrative expense	<u>4,928</u>	<u>4,706</u>	<u>222</u>
Total Operating Expenses	<u>39,610</u>	<u>31,472</u>	<u>8,138</u>
Operating Income	(5,640)	6,316	(15,116)
Non-Operating Revenues (Expenses)			
Interest earned	3,145	2,614	705
Interest expense	(1,222)	(731)	(612)
Investment loss realize and unrealized	(94)	(33)	1,177
Unrealized gain (loss) on interest rate swap	1,087	(968)	(308)
Provision for loan losses	(956)	(1,022)	(458)
Capital contribution	6,446	12,294	5,450
Distribution to member	(437)	(301)	(196)
Unrealized loss on investment	<u>(1,000)</u>	<u>--</u>	<u>(1,000)</u>
Net Change	<u>\$ 1,329</u>	<u>\$ 18,196</u>	<u>\$ 15,867</u>

CT Green Bank - Audit Results



Financial Highlights

2017 Operating Activity

The Green Bank had operating revenues of approximately \$34MM for the year ended June 30, 2017 which was a decrease from the prior year of approximately \$3.8MM. This was mainly due to a decrease in Regional Greenhouse Gas Initiative (RGGI) auction clearing price average and the diversion of \$800K of proceeds earmarked to go to the State of CT under P.A. 16-3.

Total operating expenses increased approximately \$8.1MM during 2017, due principally to increases in grant and program expense increases associated with financial incentives to residential and commercial property owners to install renewable energy or energy efficiency measures.

Net Non-Operating Revenues (Expenses) were approximately \$7.0MM. This was mostly attributable to capital contributions of \$6.4MM received from CT SL2, LLC's investor member.

Required Auditors' Communications

Required communications to those charged with governance (Audit Committee/Board of Directors):

Qualitative Aspects of Accounting Practices.

Management is responsible for the selection and use of appropriate accounting policies.

- We noted no transactions entered into by the governmental unit 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.

Required Auditors' Communications (continued)

Qualitative Aspects of Accounting Practices (continued)

Accounting Estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. The most sensitive estimates affecting the financial statements were as follows:

- **Loan Loss Reserves** – Managements estimate is based on certain historical data and currently known information related to amounts written off or deemed uncollectable.
- **SWAP Fair Value Calculation** – Managements estimate is based on a third party valuation performed by
- **Net Pension Liability** - Management's estimate of the net pension liability is based on an actuarial valuation utilizing various assumptions and estimates approved by management.
- **Asset Retirement Obligation**- Management's estimate of the asset retirement obligation is based upon amounts calculated by management.

Required Auditors' Communications (continued)

Qualitative Aspects of Accounting Practices (continued)

- We have evaluated the key factors and assumptions used to develop the above estimates in determining that they are reasonable in relation to the financial statements taken as a whole. The results of our procedures gave no indication of management bias in the development of the estimates in the financial statements.
- The financial statement disclosures are neutral, consistent and clear. There were no sensitive disclosures affecting the financial statements.

Required Auditors' Communications (continued)

Difficulties Encountered in Performing the Audit

Professional standards require us to communicate any significant difficulties encountered with management encountered during the performance of our audit.

- We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management.

- No uncorrected misstatements were identified in connection with our audit of the financial statements for the fiscal year ended June 30, 2017.

Required Auditors' Communications (continued)

Disagreements with Management

A disagreement with management is a financial accounting, reporting or auditing matter, whether or not resolved to our satisfaction that could be significant to the financial statements or the auditors' report.

- We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

- We will requested certain representations from management prior to the final issuance of our Auditors Report.

Required Auditors' Communications (continued)

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a “second opinion” on certain situations. If a consultation involves application of an accounting principle to the governmental unit’s financial statements or a determination of the type of auditor’s opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts.

- To our knowledge, there were no such consultations with other accountants.

Required Auditors' Communications (continued)

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the governmental unit's auditors.

- Any such discussion that occurred took place in the normal course of our professional relationship and our responses were not a condition to our retention.

Required Auditors' Communications (continued)

Other Matters

With respect to the supplementary information accompanying the financial statements, we made certain inquiries of management and evaluated the form, content and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements.

- We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

CT Green Bank - Audit Results



Required Auditors' Communications (continued)

This information is intended solely for the use of Audit, Compliance and Governance Committee and the Board of Directors and management of Connecticut Green Bank, and is not intended to be and should not be used by anyone other than these specified parties.

Closing

BlumShapiro would like to thank the professional staff of Connecticut Green Bank that participated with us in the performance of the audit. CGB's staff was very responsive and helpful to our inquiries and requests which allowed both BlumShapiro and management to meet the financial reporting deadlines that had been established.

CT Green Bank - Audit Results



Audit Team Contact Information

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CONNECTICUT
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Audit, Compliance and Governance Committee of the Connecticut Green Bank

Agenda Item #5

Staff Project Authorization Increase to \$500,000
and Related Update to Bylaws

October 11, 2017
Regular Meeting



Connecticut Green Bank



Staff Project Authorization Increase to \$500,000 and Related Update to Bylaws

Issue raised at Deployment Committee Meeting

Increase of staff authorization from \$300K to \$500K due to the increased funding request amounts per project, especially within the C-PACE and Solar Lease programs.

Green Bank has operationalized increased standardization with the relevant financing documents, underwriting and technical review for such programmatic projects.

CGB Bylaw Update for Consistency
(only revision to governance docs for 2017)



Connecticut Green Bank



Staff Project Authorization Increase to \$500,000 and Related Update to Bylaws (Continued)

WHEREAS, pursuant to Section 5.3.1 of the Connecticut Green Bank (Green Bank) Bylaws, the Audit, Compliance & Governance (ACG) Committee is charged with the review and approval of, and in its discretion recommendations to the Board regarding, all governance and administrative matters affecting the Green Bank, including but not limited to matters of corporate governance and corporate governance policies;

WHEREAS, on January 18, 2013, the Board of Directors authorized 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 ("Staff Approval Policy for Projects Under \$300,000").

WHEREAS, On July 18, 2014, the Connecticut Green Bank ("Green Bank") Board of Directors approved of a recommendation brought forth by the Deployment Committee to approve the authorization of Green Bank staff to evaluate and approve program 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 \$1,000,000 from the date of the last Deployment Committee meeting

NOW, therefore be it:

RESOLVED, that the Green Bank Deployment Committee hereby recommends that the Board of Directors adopt a resolution amending the Staff Approval Policy to increase the program funding request for Projects Under \$300,000 to \$500,000 with an aggregate amount limit of \$1,000,000 from the date of the last Deployment Committee meeting.





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Audit, Compliance and Governance Committee of the Connecticut Green Bank

Agenda Item #6

Presentation by CAFR Non-Financial Statistics
Auditors

October 11, 2017
Regular Meeting





Connecticut Green Bank
Annual Report Metrics and Reporting Review
*Final Findings Audit, Compliance & Governance
Committee Presentation*

October 11, 2017

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SustainAbility.com

Contents



Introduction

How the assessment is organized

Slide 4

Metrics Benchmark & Guidance

Review of metrics, methodologies and transparency for CGB and three benchmark companies

Slides 5-7

Reporting Benchmark & Guidance

Review of reporting and communications approach for CGB and four benchmark companies

Slides 8-10



Introduction



Introduction

SustainAbility is pleased to present our benchmark analysis and recommendations to Connecticut Green Bank (CGB) to support the organization in assessing the quality of its impact reporting related to clean energy programs.

We have organized our assessment into two main areas as follows:

- 1. Metrics Benchmark & Guidance:** Benchmark of three companies to compare what metrics (financial & investment and social & environmental) were being used along with analysis of the methodologies, transparency, verification and stakeholder engagement.
- 2. Reporting Benchmark & Guidance:** Benchmark of four companies/examples to evaluate the effectiveness of impact reporting communications with a specific focus on written reports and how metrics are portrayed.



Metrics Benchmark & Guidance



Metrics Benchmark Summary

CGB ranks highly compared to benchmark companies in terms of the overall quality of metrics & methodology. CGB leads on financial and investment metrics, falling only slightly behind Green Investment Bank on social and environmental metrics and ranks high on transparency, verification and stakeholder engagement.

Quality of Metrics & Methodology

Low

High



	NY Green Bank	Goldman Sachs	Connecticut Green Bank	Green Investment Bank
Financial & Investment Metrics	<ul style="list-style-type: none"> Basics Mobilization ratio 	<ul style="list-style-type: none"> Basics Specific project breakdowns Target to finance/invest 	<ul style="list-style-type: none"> Basics Mobilization ratio Plus several additional risk and evaluation metrics 	<ul style="list-style-type: none"> Basics Mobilization ratio Specific project breakdowns
Social & Environmental Metrics	<ul style="list-style-type: none"> Basics 	<ul style="list-style-type: none"> Basics People employed globally 	<ul style="list-style-type: none"> Basics Job Years, direct, indirect, induced 	<ul style="list-style-type: none"> Basics NOx, SOx and PM avoided Green Impact Forecast Accuracy Operational metrics (diversity, pay, corp. GHGs)
Transparency	Low	Medium	High	High, except certain methodologies
Verification	Financials audit	No mention	Financials audit + verification opinion	Financials audit + impact assurance by Deloitte
Stakeholder Engagement	Advisory Committee + industry engagement	Consulted with industry experts	Multiple experts (Opinion Dynamics, Dusky, Eversource, etc.)	UK's Department for Business, Energy and Industrial Strategy



Methodologies Review

Both Goldman Sachs and Connecticut Green Bank use EPA's Greenhouse Gas Equivalencies Calculator, but when calculating emissions saved, methodologies vary more widely across the companies benchmarked.

Metric					Analysis
Employment/ Jobs	Job Years (Direct & Indirect) Calculated based on per \$1 million invested using Navigant Consulting report in 2010 and 2016.	People employed globally Calculated based on the people employed by the companies they have invested in or helped finance	Does not report on employment/jobs.	Does not report on employment/jobs.	CGB is more specific about how job years are calculated based on a study interviewing over 100 companies and researching over 130 to develop the Navigant methodology.
Emissions Savings (CO₂, NO_x, SO_x, PM)	2017 report will be based on DOE's AVERT model to calculate emissions savings (tons CO ₂), NO _x , SO _x and PM.	GHGs avoided are calculated based on US EPA eGRID model. NO _x , SO _x and PM are not reported.	The Offshore Wind Fund example calculates the net Green Impact by comparing to baselines using GIB's proprietary reference sources or provided to GIB by relevant third parties or obtained from publicly available sources. Grid connected projects calculated using the methodology set out in the International Financial Institutions (IFI) approach	Both the Annual Review and Quarterly report mention emissions avoided, but do not provide clarity on where these numbers originate or the methodologies used. One Transaction Profile for retrofitting LTMI housing mentions using NYSERDA conversion factors which are not explained (see footnote 6).	NY Green Bank is the laggard, not reporting or referencing methodologies used for calculations. Both CGB and Goldman Sachs use US based models for calculations, relevant as projects are US based, whereas GIB uses UK based models. The three models used by CGB, GS, and GIB rely on calculating emissions savings based on the emissions from baseline energy sources, but datasets and methodologies vary. These are further discussed in the following slide.
GHG Equivalency	Calculated based on EPA's Greenhouse Gas Equivalencies Calculator . Note: Need to add footnote to CAFR referencing EPA.	Calculated based on EPA's Greenhouse Gas Equivalencies Calculator .	Does not report equivalencies.	Includes mention of one equivalency in letter from the president (annual report) but no footnote or reference to how this was calculated.	Both Goldman Sachs and CGB use EPA's calculator which relies on underlying eGRID data for calculations. These equivalencies seem sound, but keep beware of aging underlying datasets moving forward.

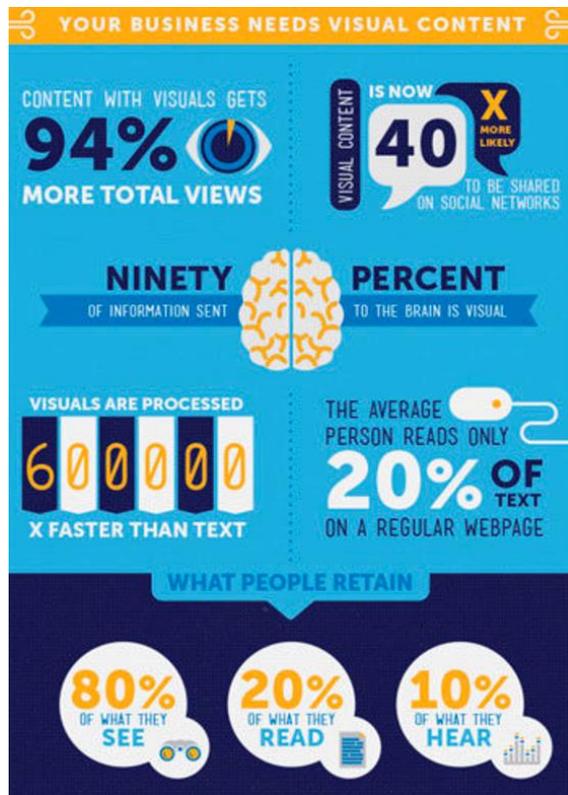


Reporting and Communications Benchmark & Guidance



Utilizing Visuals to Improve Engagement

As CGB looks to evolve its reporting, it will be important to consider the power of visuals and storytelling to improve the speed with which stakeholders process the information and, perhaps more importantly, how actively they engage with the information and remember it.



According to research by 3M, humans are able to process visuals 60,000 times faster than text. This is an important reality to consider as CGB seeks to share information with an increasingly busy audience with a limited attention span.

Using this page as an example, visuals are also more engaging and memorable. When you consider reading this text versus looking at the image to the left, which is more interesting? Which is your eye drawn to first?

With the average person reading only 20% of the text on a webpage and retaining 80% of what they see versus only 20% of what they read, visuals and graphics become a powerful tool for ensuring your audience absorbs and retains what you decide to communicate.

Source: <https://www.fastcompany.com/3035856/why-were-more-likely-to-remember-content-with-images-and-video-infogr>



Reporting Benchmark Summary

From the benchmarking exercise, we identified several techniques that the UK Green Investment Bank, Goldman Sachs and NY Green Bank employ which could be applied to CGB.



Visualize

- Visualize the data using charts, graphs, icons, infographics and logos
- Even simple doughnut charts or line graphs can help bring the data to life

Summarize & Contextualize

- Summarize highlights using an executive summary or summary infographics that contextualize the data with equivalents (cars off the road, trees planted, homes powered)

Other Considerations

- Include Accuracy Forecasts
- Link to the Sustainable Development Goals
- Consider including Long Term Targets



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Audit, Compliance and Governance Committee of the Connecticut Green Bank

Agenda Item #7

Public Health Methodology

October 11, 2017
Regular Meeting





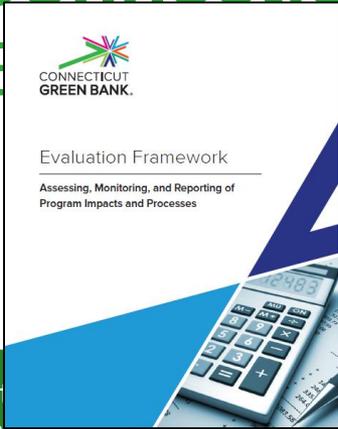
CONNECTICUT
GREEN BANK

Evaluation Framework: Public Health Methodology

Proposal for the Adoption of the Environmental Protection Agency's Co-Benefits Risk Assessment Model (CoBRA) for measuring impacts on Public Health

October 11, 2017
Regular Meeting

Connecticut Green Bank Evaluation Framework



Evaluation Framework

Customer Privacy Policy

Data Collection and Analysis Protocol

Societal Benefits

PosiGen

Energy

Environment (DEEP, DPH, EPA)

Economy (DECD)

C-PACE



CO2 Emissions (EPA AVERT)

Investment

Smart-E

Equivalencies (EPA AVERT)

Direct, Indirect, and Induced Jobs

Others (e.g., RTT, AFV and Infrastructure)

Public Health (EPA COBRA)

Others (e.g., GDP growth)

Economic Development Overview
One of the indicators that the Connecticut Green Bank will be tracking in its programs and asset distribution is the extent to which investments in clean energy create net new jobs. A detailed perspective on clean energy creation comes from a societal perspective and relates to the economic development of the state. For Green Bank programs this will be measured as the relationship between investment and associated direct and indirect jobs created. In 2010, we applied an EPA Regional Cost-benefit program (Connecticut Renewable Energy and Energy Efficiency Economic Benefits Study) which included a list of 40 investments in clean energy, including solar and wind power. These investments were used to estimate the availability of new clean energy technologies that have emerged (e.g., EPP, renewable PPA, electric charging stations, etc.) and a variety of related economic factors (e.g., costs of labor, cost of investment equipment, etc.) have changed. In consultation with the Connecticut Department of Economic and Community Development (DECD) and with assistance from Research & Analytics (R&A), the Connecticut Green Bank conducted a societal perspective analysis to estimate the net new jobs created by investments in clean energy development in Connecticut. This analysis is presented in this report.

Results of REUSE jobs-years created to investment analysis:
Below is a summary of the results of the analysis of direct, indirect, and induced jobs-years created by each individual investment in clean energy development in Connecticut.

-7 jobs-years for storage tech installers	-5 jobs-years for residential solar installers	-15 jobs-years for commercial EE installers
-7 jobs-years for EV charging installers	-10 jobs-years for fuel cell manufacturers	-15 jobs-years for EE installers
-7 jobs-years for commercial solar installers	-10 jobs-years for wind project installers	-15 jobs-years for residential EE installers

About the Connecticut Green Bank
The Connecticut Green Bank was established by the Connecticut General Assembly on July 1, 2010 as a part of Public Act 10-20. As the first public green bank in the United States, the bank is committed to financing public and private investments in renewable energy, energy efficiency, and energy infrastructure projects across Connecticut. The Green Bank's mission is to mobilize private investment to clean energy in being Connecticut creditable, increase economic prosperity, promote energy security, and address climate change. For more information about the Connecticut Green Bank, please visit www.ctgreenbank.org.

About the Department of Economic and Community Development
The Department of Economic and Community Development is the state's lead agency responsible for strengthening Connecticut's competitive standing in the rapidly changing global economy. The department administers the Manufacturing Innovation Fund that was created to support and strengthen Connecticut's manufacturing sector. For more information about the Department of Economic and Community Development, please visit www.decd.org.

What is COBRA and How Does It Work?

COBRA¹ is a screening model that converts emission reductions into changes in air quality and estimates the number of cases of illness and death avoided as well as the economic value of those benefits.



Inputs = Change in 2017 Emissions
- PM2.5, SO2, NOx, NH3, VOCs

COBRA:

Quantifies Changes in Air Quality
(Specifically, particulate matter)

Calculates Change in Health Outcomes
(Resulting from particulate matter changes)²

Calculates Monetary Value of Health Outcomes

Outputs = Tables and maps of illness cases and deaths avoided as well as the related economic value.

¹COBRA is a peer-reviewed screening model that based on rigorous methods used by EPA health benefits assessments as described in the User Manual.

² COBRA estimates only particulate matter-related benefits and may be conservative in that respect.

Economic Values of Effects: Unit Values

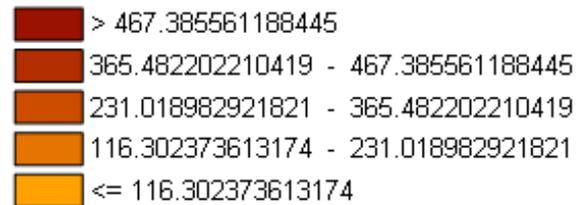
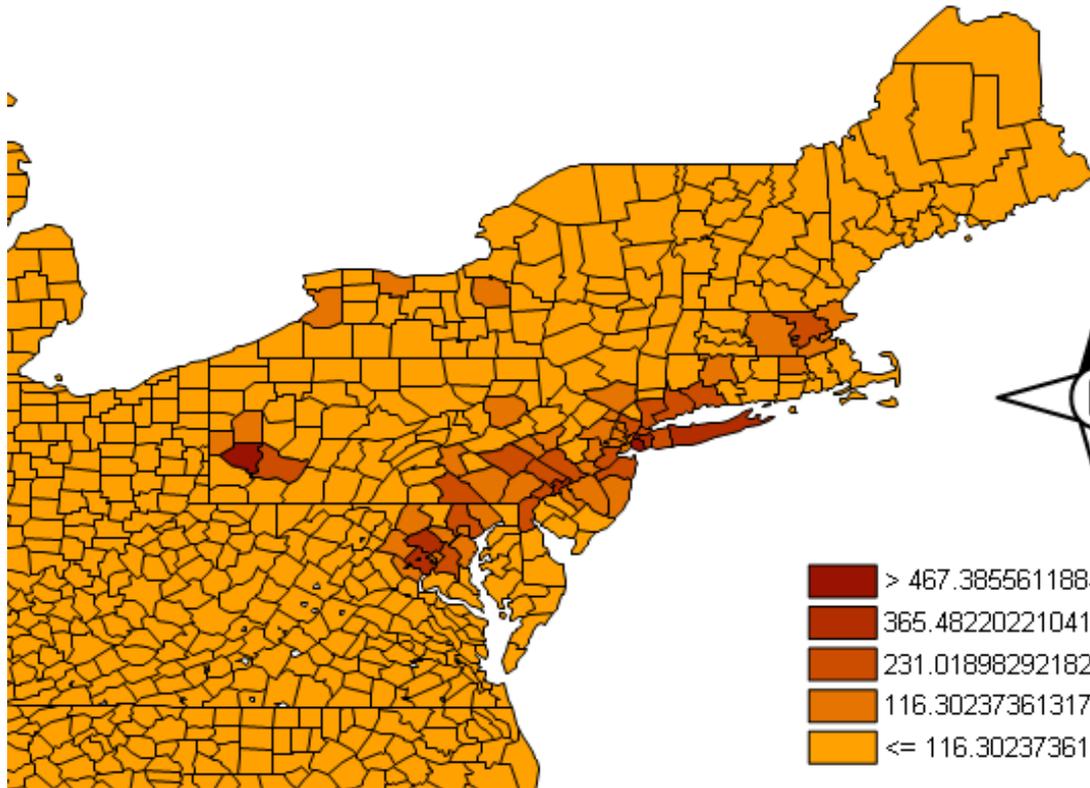


Health Incident Avoided	Economic Value (\$2010)	
	3% discount rate	7% discount rate
Adult Mortality	\$8,434,924	\$7,512,853
Infant Mortality	\$9,401,680	\$9,401,680
Non-Fatal Heart Attacks	\$33,259 - \$263,795	\$31,446 - \$253,247
Hospital Admissions	\$15,430 - \$41,002	\$15,430 - \$41,002
Asthma ER Visits	\$388 - \$464	\$388 - \$464
Acute Bronchitis	\$477	\$477
Respiratory Symptoms	\$21 - \$33	\$21 - \$33
Asthma Exacerbations	\$57	\$57
Minor Restricted Activity Days	\$68	\$68
Work Loss Days	\$160	\$160

Mapping Helps Visually Convey Results



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CONNECTICUT
GREEN BANK

Audit, Compliance and Governance Committee of the Connecticut Green Bank

Agenda Item #8

2017 Legislative and Regulatory Update

October 11, 2017
Regular Meeting



State Budget Update



Temporary State Budget

- Currently the state budget continues under Gov. Malloy's executive authority and [Resource Allocation Plan](#) as of July 1, 2017.
- No agreement on biennial state budget yet between legislative party caucuses. Gov. Malloy veto of the Republican-drafted budget has not been overridden as of early October. Not enough support exists for either party's budget to pass into law.

Most recent legislative revenue diversion proposals

Line Item	Democrat	Republican
Clean Energy Fund (CEF)	FY18 \$18.6 M FY19 \$13 M	FY18 \$13 M FY19 \$13 M
CEF +1 mil	FY18 (\$26 M) FY19 (\$26 M)	- -
CEF diversion net of + 1 mil	FY18 (\$7.4 M) FY19 (\$13 M)	- -
RGGI	- -	FY18 \$10 M FY19 \$10 M

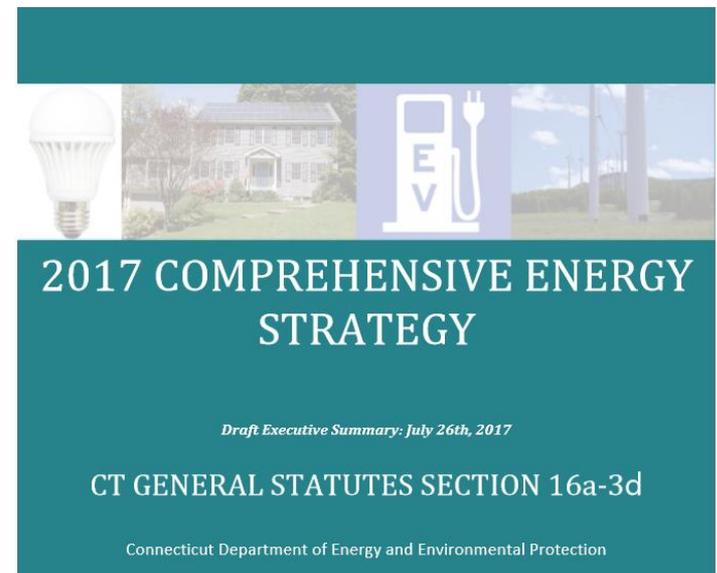
Comprehensive Energy Strategy



Framed to advance climate and energy goals in various target sectors:
Electricity Supply, Buildings, and Transportation

CES process

- Draft released July 26th
- [Public input](#) collected until late September
 - Green Bank comments available [here](#)
- DEEP anticipates releasing a final version by November/December, possibly to a 2nd public comment period
- 2018 Regular Legislative Session policy proposals would follow





CONNECTICUT
GREEN BANK

Audit, Compliance and Governance Committee of the Connecticut Green Bank

Agenda Item #9

Housekeeping – Annual Governance Review
and Board Appointments

October 11, 2017
Regular Meeting



Housekeeping – Annual Governance Review and Board Appointments



Annual Review of Bylaws, Operating Procedure and Employee Handbook

CEFIA BOARD OF DIRECTORS APPOINTMENTS								
Appointing Authority	Requirements	Appointee	Organization	Date Appointed/ Reappointed	Statutory Term	Specified Term Date	Expiration Date	Notes
Governor (Finance)	One person with experience in the finance of renewable energy	Kevin Walsh		9/2/14	2 years, then 4 years	9/2/14 appointment letter from Gov. Malloy. Term ends 6/30/18, or until a successor has qualified.	6/30/2018	Focus here in FY 2018
Minority Leader of House	One person with experience in investment fund management	Norma Glover	NJG-Associates	6/25/14	4 years	7/26/11 appointment letter from Rep Lawrence Cafero. Term ends 6/30/14.	6/30/2018	Resigned effective 6/23/17
Speaker of the House	One person representing a residential or low-income group	Elizabeth (Betsy) Crum	CT Housing Coalition	2/17/17	4 years	2/17/17 appointment letter from Speaker of the House Joe Aresimpwicz. Term ends 6/30/19, or until a successor has been appointed & qualified.	6/30/2019	
Governor (Finance)	One person with experience in the finance of renewable energy	Reed Hund	Coalition for Green Capital	1/10/14	2 years, then 4 years	9/22/11 appointment letter from Gov. Malloy. Term ends 6/30/13, or until successor is appointed and has qualified. Reappointed until 6/30/17 or until successor is appointed and has qualified.	6/30/2017	Focus here in FY 2018
Governor (R&D)	A representative who shall have experience in research & development or manufacturing of clean energy	Regina McCarthy	Former PA Administrator	4/17/17	4 years, then 4 years	4/17/17 appointment letter from Gov Malloy. Term ends 6/30/20, or until a successor has been appointed & qualified.	6/30/2020	
President Pro Tempore of Senate	One person representing an environmental organization	Matt Ranelli (Secretary)	Shipman & Goodwin	11/9/15	4 years	7/14/11 appointment letter from Senate President Pro Tempore, Donald Williams. Coterminous with the appointing authority.	6/30/2019	
Governor (Labor)	A representative of organized labor	John Harrity	CT State Council of Machinists	6/2/15	4 years, then 4 years	7/16/13 appointment letter from Gov Malloy. Term ends 9/12/15, or until a successor has been appointed & qualified.	6/30/2019	
Minority Leader of Senate	One person with experience in the finance or deployment of renewable energy	Tom Flynn	Town of Fairfield	7/21/15	4 years	7/21/15 appointment letter from Senate Minority Leader Len Fasano. Term ends 6/30/19	6/30/2019	
Statute (PA11-80)	Comissioner of DECD or designee	Catherine Smith (Chair)	DECD	9/13/2011	ex officio	ex officio	12/31/2099	
Statute (PA11-80)	Commissioner of DEEP or designee	Rob Klee (Vice Chair)	DEEP	not required	ex officio	ex officio	12/31/2099	
Statute (PA11-80)	Treasurer or designee	Denise Nappier	Office of the State Treasurer	8/3/2011	ex officio	ex officio	12/31/2099	
Non-voting members	The President of the Authority and a member of the Board of Connecticut Innovations, appointed by the Chairperson shall serve on the board in an ex-officio, nonvoting capacity,							
CEFIA President	The President of the Authority	Bryan T. Garcia	CEFIA		ex officio	ex officio	12/31/2099	
Member of CI Board	A member of the Board of Connecticut Innovations, appointed by the Chairperson of CI.	TBD			ex officio	ex officio	12/31/2099	Check with Catherine Smith here. Should we pursue or not?



CONNECTICUT
GREEN BANK

Audit, Compliance and Governance Committee of the Connecticut Green Bank

Agenda Item #10
Other Business

October 11, 2017
Regular Meeting





CONNECTICUT
GREEN BANK

Audit, Compliance and Governance Committee of the Connecticut Green Bank

Agenda Item #11

Adjourn

October 11, 2017
Regular Meeting



**AUDIT, COMPLIANCE AND GOVERNANCE COMMITTEE OF THE
CONNECTICUT GREEN BANK**

Draft Minutes – Regular Meeting

Monday, July 10, 2017

8:30 – 9:30 a.m.

A regular meeting of the Audit, Compliance, and Governance Committee (“Audit Committee”) of the Board of Directors of the Connecticut Green Bank (the “Green Bank”) was held on July 10, 2017 at the office of the Connecticut Green Bank, 845 Brook Street, Rocky Hill, CT in the Albert Pope Board Room.

1. **Call to order:** Mr. Ranelli, Chairperson of the Audit Committee, called the meeting to order at 8:34 a.m. Audit Committee members participating: Matthew Ranelli (by phone) and Tom Flynn (by phone).

Staff Attending: Brian Farnen, Bryan Garcia, Cheryl Samuels, and George Bellas,

Others Attending: Paul Horowitz, Consultant.

2. **Public Comments:**

There were no public comments.

3. **Approve Meeting Minutes for April 24, 2017 Special Meeting:**

**Upon a motion made by Tom Flynn, and seconded by, Matt Ranelli,
approval of the Minutes from April 24, 2017, was unanimous.**

Resolution #1

Motion to approve the minutes of the Audit, Compliance and Governance Committee meeting for April 24, 2017. Second. Discussion. Vote.

4. **Annual Review of Accounting Internal Control Policies:**

George Bellas provided an overview of the Green Bank’s Internal Control Policies (“Controls”). He stated that the Controls are reviewed by both the State Auditors of Public Accounts (“APA”) and by Blum Shapiro as part of their annual audit of the Green Bank’s financial statements.. He explained staff is proposing some minor adjustments to the procedures. He explained that both the APA and Blum Shapiro recommend that a review of these Controls is undertaken e by the ACG at least once a year. He explained that the last review by the ACG was done in 2016.

Mr. Bellas stated that this year staff is proposing three minor revisions to these Controls. The first revision is to the Credit Card Policy. This change would replace Bryan Garcia

with Eric Shrago as an approver of the monthly credit card invoice. He stated that the Green Bank has two Green Bank administered credit cards , one which the Operations department utilizes for office and IT expenditures, which was issued to Mackey Dykes, and one issued to Bryan Garcia. He stated that Mr. Garcia no longer utilizes his card and has returned it to him for cancellation.. He also stated that when the monthly credit card invoice is received it is required, per the Controls, to be approved by himself and Mr. Garcia. Tom Flynn asked whose name was on the credit card used for operations. George Bellas stated that right now it is in Mr. Dykes name, but that he is in the process of replacing Mr. Dykes with Mr. Shrago who has taken over the responsibility of overseeing the Green Bank's operations. Mr. Flynn questioned Mr. Shrago being an approver since the card will be in his name. Mr. Flynn stated that Mr. Shrago in this case, is more of a submitter, resulting in only one level of independent approval of credit card charges.. Mr. Flynn suggested that the second approver should be someone other than the person whose name appears on the credit card. After further discussion it was decided to replace Mr. Garcia with Mr..Farnen, the Chief Legal Officer, as the second independent approver. Mr. Bellas stated that staff would reflect this change in the Control documentation before presentation to the Board for final approval.

Matt Ranelli asked about controls over bank wire and ACH disbursements of Green Bank funds. Mr. Bellas explained that the Green Bank has implemented a dual control system over these disbursements. He stated that the banks require two Board authorized account signers to release either an ACH or wire transaction.. This provides a significant level of control over these types of disbursements since no one individual can release Green Bank funds using wires or ACH transactions..

Mr. Bellas then discussed the proposed revision to the Green Bank's mobile device reimbursement policy. Currently the Green Bank subsidizes a portion of the cost of a cell phone purchased by new employees who have been authorized to do so Since new employees own a cell phone prior to employment at the Green Bank staff is proposing eliminating this subsidy.. The Green Bank will continue to subsidize monthly access and service fees. The amount of subsidy will continue to be set by Mr. Garcia and Mr. Shrago.

Mr. Bellas also discussed the proposed revision to increase the threshold used to capitalize and depreciate capital assets from \$500 to \$1,000. After further discussion, the Committee was in agreement with this proposed change.

Upon a motion made by Tom Flynn, and seconded by Matt Ranelli, the Committee agreed to bring the recommendations to the Board.

Resolution #2

RESOLVED, that the Audit, Compliance and Governance Committee hereby recommends to the Board of Directors for approval the proposed revisions to the current internal accounting control policies as amended by the Committee.

Second. Discussion. Vote

5. Board Selection Update

Brian Farnen provided an update on Board Selection. He advised that Norma Glover has retired and that they are currently working to find a replacement. Tom Flynn questioned how many empty seats they currently have. Brian Farnen stated that there are currently two empty seats. Bryan Garcia stated that they may want to revisit with Catherine Smith regarding her position on both the Green Bank Board and the Board of CT Innovations (CI). Brian Farnen explained that the Green Bank was previously within CI for administrative purposes. He explained that they were taken out of CI about two years ago through a legislative revision that included our expanded bond authority. He explained that they did not open Board Governance through this legislative process. Matt Ranelli stated the Green Bank does not select or appoint, but that CI is the appointing authority and they can appoint at their discretion. Brian Farnen stated that they can provide recommendations but the ultimate decision to appoint is at the discretion of CI. He also noted that CI appointment would be as a non-voting member per the statute.

6. 2017 Legislative and Regulatory Update

Brian Farnen discussed the Legislative update. He stated that with the competing budget proposals, the Green Bank has been impacted in numerous ways. He stated that there have been cuts from RGGI. He stated that they are working hard to show results and our best to defense is our continued success in deploying clean energy and attracting private capital and jobs to the State. He stated that they don't feel that the Green Bank will get out completely unscathed, but we do not expect sweeps or reductions that will impact our ability to complete all the programmatic objectives, projects and products that they envision in the near term. He stated that they need to stay proactive and demonstrating the success of the green bank model.

Brian Farnen stated that to date they have not had any CPACE foreclosures but we needed to clarify the CPACE statute through a technical fix to clearly and unambiguously demonstrate how the foreclosure process would work with a CPACE financing. He stated that although it's not an issue now, at some point it will be. He stated that they want to make it clear how the Non-Acceleration and the Non-Extinguishment language works. Tom Flynn questioned if they currently have CPACE for new construction. Brian Farnen stated that they do not but the technical fix clarifies that new construction is possible under CT's CPACE law. Tom Flynn questioned the process was going to be for evaluating the ability to pay back. Brian Farnen stated that they will not do anything until they have clear underwriting criteria set forth, reviewed and approved by the Board. Matt Ranelli stated that it may worth talking to developers in different areas to get a handle on how they handle new construction. Matt Ranelli questioned if the Green Bank has any protection in a Bankruptcy scenario. Brian Farnen stated that the way that the language has been bolstered, they're making CPACE benefit assessments akin to a Sewer/Water Assessment.

Brian Farnen discussed the Productive Farmlands and Solar legislation passed this session. He stated that the Department of Agriculture is looking to protect prime farmland and forestry. He stated that they're trying to balance the incentives provided for solar and the public policy behind trying to protect farmland and forestry in the State. He stated that overall, the final compromise legislation adopted is not a problematic public act.

Brian Farnen discussed Public Act 144, citing that it extends the ZREC by one year and addresses a myriad of items important to the clean energy industry. He stated that DEEP is going to be involved in more clean energy procurements. He stated that the Office of Fiscal Analysis is now reviewing the ratepayer impact of legislation under Public Act 144. He stated that he is okay in theory with this legislation but is worried about how the analysis occurs in execution. Matt Ranelli stated that they need some way to educate OFA on how to account for the value of solar and other renewables. Brian Farnen stated that they will reach out and offer assistance on how that will be done.

Brian Farnen went on to provide an update on the items that did not survive the Legislative Session.

7. Other Business

Bryan Garcia discussed the Evaluation Framework and introduced Paul Horowitz. He explained that about this time last year, the Board approved the Evaluation Framework. He explained that since then several methodologies to value societal impacts of the CGB programs have been developed and approved: one for Economic Development program impacts, presenting associated jobs production, in conjunction with DECD and Navigant, and one for Environmental Performance program impacts, working with DEEP and EPA using a tool called AVERT. He stated that they are wrapping up the Public Health program impacts approach with the Connecticut Department of Public Health, DEEP, and EPA using a tool called COBRA.

Bryan Garcia stated that they are working on finalizing surveys for program participants in their existing programs, notably low to moderate income participants in the Posigen program, which is delivering both renewable energy production and energy efficiency savings. He stated that this is a biannual survey. He discussed the Comprehensive Plan process, stating that it starts with looking at the markets that they are focusing on. He explained that all the data collection gets built into the non-financial statistics of the CAFR. He explained that RSIP requires them to report to the Legislature, every other year, on how it is performing.

Paul Horowitz provided a high-level overview of what types of evaluations can be performed. Bryan Garcia noted that they have set aside \$100,000 to conduct independent evaluation(s) under guidance from the Board of Directors. Criteria to determine which programs to evaluate were presented and discussed. He stated that they are seeking the Committee's recommendation on which programs they should allocate resources to. He

explained that Paul Horowitz would serve in some capacity as the independent intermediary between the Board of Directors and staff.

Paul Horowitz discussed the value to the CGB of conducting independent third party evaluation of program performance to avoid, to the extent possible, appearances of or actual CGB influence on the study results. He noted that this is particularly important in the use of public monies, to provide confidence both in the claimed program results and in the appropriate spending of those public monies. Tom Flynn stated that given where they are in the State's financial health, he felt that one program area that they ought to be looking at for independent verification are those projects they think are doing well, and that any program that they are not confident in right now would be the next leg of the program evaluation that he would be interested in seeing. Paul Horowitz stated that an impact evaluation can take a few years from beginning to end. He stated that a process evaluation typically takes less time and that the process evaluation might be a good approach for programs that the Green Bank may not be quite as confident in. Tom Flynn stated that he agrees with the process side, for the ones that they have concerns about. Bryan Garcia stated that he will reconnect with Paul Horowitz and come back to the Committee to continue the discussion and help them make a final determination on the type of program evaluation(s) to be conducted and for which programs.

8. Adjourn

Upon a motion made by Tom Flynn, and seconded by, Matt Ranelli, the meeting was adjourned at 9:33 a.m.

Respectfully Submitted,

Matthew Ranelli, Chairperson of the Audit,
Compliance, and Governance Committee



Memo

To: Members of the Connecticut Green Bank (the “Green Bank”) Audit Committee
From: George Bellas
CC: Bryan Garcia, Brian Farnen, Bert Hunter, Eric Shrago
Date: October 4, 2017
Re: Results of annual financial audit of the Green Bank and the Green Bank 2017 draft CAFR

Dear Committee members:

Results of Annual Financial Audit:

Blum Shapiro and Company performed the annual financial audit of the Green Bank for the fiscal year ending June 30, 2017. They will be presenting the results of their audit to the Committee during the meeting. The audit itself went well with no material internal control weaknesses identified or material adjustments to the financial books and records recorded.

Green Bank 2017 draft CAFR:

I am enclosing the draft Green Bank 2017 CAFR for your review. The major sections of the CAFR are as follows:

1. Financial Audit Section
2. Statistical Section

Financial Section:

This section contains Management’s Discussion and Analysis of the results of operations for the current and prior fiscal years as well as the audited financial statements and related footnotes.

The financial statements themselves, comprised of the Statement of Net Position, the Statement of Revenues, Expenses and Changes in Net Position and the Statement of Cash Flows have been completed. The related footnotes have also been completed.

Staff has reviewed the draft and provided Blum Shapiro with a list of adjustments that need to be made before finalizing the draft. These edits include general clean-up for typos and grammar and minor reclassifications of amounts presented in the financial statements and footnotes. The finalized draft will be presented to the full Board based on your recommendation for approval. We do not anticipate any further adjustments to the financial statements themselves which would have a material impact on the financial position of the Green Bank.

Statistical Section

The statistical section is broken out into two subsections:

Financial Statistics:

Financial Statistics are organized in tables as follows:

- Net Position by Component
- Changes in Net Position
- Operating Revenue by Source
- Significant Sources of Operating Revenue
- Outstanding Debt by Type
- Demographic and Economic Information
- Principal Employers for the State of Connecticut
- FTE's by Function
- Operating Indicators by Function
- Capital Assets Statistics by Function

No additional changes to the data in these tables are anticipated.

Non-Financial Statistics:

The non-financial statistical section contains statistical data and narrative pertaining to the Green Bank's current programs. There is a table of contents in the front of this section for the reader's use. This year we included a report on the non-financial metrics from Sustainability, an independent external reviewer. This report strictly pertains to the non-financial metrics included in this section of the CAFR.

In conclusion I wish to thank the committee members for their effort in reviewing this document. Our goal is to provide readers with a comprehensive overview of the financial and programmatic activities of the Green Bank on an annual basis.

RESOLUTION:

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;

NOW, therefore be it:

RESOLVED, that the Committee hereby recommends to the Board of Directors for approval the proposed draft Comprehensive Annual Financial Report (CAFR) for 2017 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.

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

**COMPREHENSIVE ANNUAL
FINANCIAL REPORT**

FISCAL YEAR ENDED JUNE 30, 2017
(With Summarized Totals as of and for Fiscal Year Ended June 30, 2016)

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

**CONNECTICUT GREEN BANK
TABLE OF CONTENTS
JUNE 30, 2017**

Introductory Section	Page
Letter of Transmittal	i-v
Board of Directors	vi
Organizational Chart	vii
GFOA Certificate of Achievement in Financial Reporting	viii
Financial Section	
Independent Auditors' Report – Blum, Shapiro & Company, P.C.	1-3
Management's Discussion and Analysis	4-13
Basic Financial Statements	
Financial Statements:	
Statement of Net Position	14-15
Statement of Revenues, Expenses and Changes in Net Position	16
Statement of Cash Flows	17
Notes to the Financial Statements	18-57
Required Supplementary Information	
Schedule of the Proportionate Share of the Net Pension Liability	58
Schedule of the Proportionate Share of Contributions to the State Employees' Retirement System (SERS)	59
Statistical Section	
Financial Statistics	
Introduction	
Financial Trends:	
Net Position by Component	60
Changes in Net Position	61-63
Revenue Capacity:	
Operating Revenue by Source	64
Significant Sources of Operating Revenue	65
Debt Capacity:	
Outstanding Debt by Type	66
Demographic and Economic Information:	
Demographic and Economic Statistics	67
Principal Employers	68
Operating Information:	
FTE's by Function	69
Operating Indicators by Function	70
Capital Asset Statistics by Function	71

Non-Financial Statistics

Introduction	72-74
1. Statement of the Connecticut Green Bank	75
2. Statement of the Non-Financial Statistics Auditor	??
3. Organizational Background	
Governance	??
Ethics and Transparency	
Open Connecticut	80-86
Small and Minority Owned Business Procurement	87-88
Efficiency	89
4. Measures of Success	
Activity	90-93
Capital Deployed	XX-XX
Clean Energy Produced and Energy Saved	XX-XX
Clean Energy Technology Deployment	XX-XX
The Green Bank Model	88-89
Societal Benefits	XX-XX
Community Impacts	90-92
5. Programs	
Program Logic Model and the Financing Market Transformation Strategy	93-98
Case 1 – C-PACE	99-106
Case 2 – Solar Lease	107-111
Case 3 – Residential Solar Investment Program	112-117
Case 4 – Smart-E Loan	118-124
Case 5 – Low Income Solar Lease and Energy-Efficiency Energy Savings Agreement	125-127
Case 6 – Multifamily Programs	
Case 7 – CT Solar Loan (Graduated)	XX-XX
Anaerobic Digestion and Combined Heat and Power Pilot Programs	XX-XX
Strategic Investments	XX-XX
6. Appendix	
Community Activity Table	XX-XX
Contractor Activity Table	XX-XX
Trained Contractor Table	XX-XX
Calculations and Assumptions	XX-XX
Index of Figures and Tables	XX-XX

INTRODUCTORY SECTION

DRAFT
FOR DISCUSSION PURPOSES ONLY



October 31, 2017

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, 2017 accompanied by summarized totals as of and for the fiscal year ended June 30, 2016.

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 has issued an unmodified opinion on the Green Bank’s financial statements for the fiscal year ending June 30, 2017. 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. SustainAbility 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 relative to peer financial institutions benchmarked. 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, 2016, June 30, 2015 and June 30, 2014. 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.

The Green Bank was awarded the prestigious Harvard Kennedy School's Ash Center's "Innovations in American Government Awards" in 2017 for its "Sparking the Green Bank Movement" nomination. The Ash Center for Democratic Governance and Innovation advances excellence in governance and strengthens democratic institutions worldwide. Through its research, education, international programs, and government innovations awards, the Center fosters creative and effective government problem solving and serves as a catalyst for addressing many of the most pressing needs of the world's citizens. The Innovations in American Government Award is the nation's preeminent recognition for excellence and creativity in the public sector. The award program receives thousands of applications which are evaluated on criteria to assess their novelty, effectiveness, significance, and transferability. The Ford Foundation created the Innovations in American Government Awards in 1985 in response to widespread pessimism and distrust in government's effectiveness.

The Green Bank's vision is to lead the green bank movement by accelerating private investment in clean energy deployment for Connecticut to achieve economic prosperity, create jobs, promote energy security and address climate change. By accelerating the growth of green energy we contribute to a better quality of life, a better environment and a better future for Connecticut. The Green Bank's mission is to support the Governor's and Legislature's energy strategy to achieve cleaner, cheaper and more reliable sources of energy while creating jobs and supporting local economic development.

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

1. To attract and deploy private capital investment to finance the clean energy² policy goals for Connecticut.
2. To leverage limited public funds to attract multiples of private capital investment while returning and reinvesting public funds in clean energy deployment over time.
3. To develop and implement strategies that bring down the cost of clean energy in order to make it more accessible and affordable to consumers.
4. To support affordable and healthy buildings in low-to-moderate income and distressed communities by reducing the energy burden and addressing health and safety issues in their homes, businesses, and institutions.

These goals support the implementation of Connecticut's clean energy policies be they statutory (i.e., Public Act 11-80, Public Act 13-298, Public Act 15-194), planning (i.e., Comprehensive Energy Strategy, Integrated Resources Plan), or regulatory in nature. The powers of the Green Bank are vested in and

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 Public Act 11-80 defines "clean energy" broadly and includes familiar renewable energy sources such as solar photovoltaic, solar thermal, geothermal, wind and low-impact hydroelectric energy, but also includes fuel cells, energy derived from anaerobic digestion (AD), combined heat and power (CHP) systems, infrastructure for alternative fuels for transportation and financing energy efficiency projects.

exercised by a Board of Directors that is comprised of eleven voting and two 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.

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 five years, we are deploying more green energy in our state than ever before (see Table 1).³

Table 1. Project Investments between FY 2012 through FY 2017⁴

	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	Total
Total Investment (\$MM)	\$ 215.3	\$ 315.1	\$ 324.9	\$ 107.4	\$ 111.5	\$ 15.0	\$ 1,089.3
Green Bank Investment \$(MM)	\$ 24.5	\$ 37.0	\$ 57.0	\$ 32.6	\$ 18.7	\$ 4.8	\$ 174.6
Leverage Ratio	8.7	8.4	5.5	3.2	5.9	3.1	6.1
% of Funding as Grants	57%	54%	59%	65%	67%	100%	61%
Installed Capacity (MW)	53.2	68.7	62.7	23.4	23.5	2.9	234.4

By using \$174.6 million of ratepayer funds, we have attracted \$914.8 million of private investment in clean energy for a total investment of \$1.1 billion. This is supporting the deployment of 234.4 MW of renewable energy and producing and saving an annual estimated 2.3 million MMBtu of clean energy while creating over 13,000 job-years and reducing an estimated 3.7 million tons of CO2 emissions over the life of the projects.

We Grow Businesses and We Help People Thrive

As leaders in the green bank movement – through innovation, education, and activation – we accelerate the growth of green energy. By generating a robust, flourishing green energy marketplace, we grow businesses and help people thrive. Within this marketplace the Green Bank partners with contractors and capital providers to offer a diverse portfolio of programs that benefit homeowners, businesses, and institutions. The Green Bank is demonstrating how public resources can be better invested in ways that attract more private investment in our communities, lead to the deployment of more green energy by local contractors, and most importantly providing positive value to our consumers.

The Green Bank helps make homes more energy efficient and sustainable by promoting awareness and offering flexible financing solutions to homeowners and multifamily building owners who seek assistance to make green energy upgrades. We make green energy more attractive to everyone so that residents can integrate it into their lives. The benefits are many – from reducing the burden of energy costs, to improving comfort and health in the home, to a cleaner environment. More green homes mean greener, healthier communities.

³ Connecticut Green Bank – Investment and Public Benefit Performance from Clean Energy Projects from FY 2012 through FY 2015 – Board of Director Memo of October 16, 2015

⁴ Includes closed transactions approved by the Board of Directors consistent with its Comprehensive Plan and Budget.

The Green Bank makes green energy investments smarter and safer for businesses, including commercial and industrial customers, and institutions, including multifamily and not-for-profit organizations, with affordable, long-term financing for energy upgrades. We demonstrate how green energy improvements are smart investments that lower operating costs. We inspire them to embrace cleaner and more reliable sources of energy to power their buildings which stimulates a healthier local economy. Healthy buildings mean healthy businesses and institutions.

The Green Bank makes green energy more accessible and affordable to grow businesses and help people thrive.

We Believe in Inclusive Prosperity

The green economy is for everyone. Washington, DC Mayor Bowser says it best “As the nation’s capital, we need to lead the way when it comes to protecting and preserving the environment. By creating a Green Bank, we will create more jobs for DC residents, which will allow us to continue our push for inclusive prosperity.”

The Green Bank’s simple promise of increasing affordability and accessibility to green energy has evolved into a greater commitment to our stakeholders. We believe that everything we do, we do to help families thrive and businesses grow. We do it in the interest of achieving inclusive prosperity not only within Connecticut and across the country, but around the world.

Leading the Green Bank Movement

The Connecticut Green Bank is a leader in the green bank movement. The Connecticut Green Bank and its programs serve as models for other states across the country.

This year, we have seen several of our programs serving as replicable and scalable models, including:

- Commercial Property Assessed Clean Energy (C-PACE) for commercial, industrial, multifamily, and non-profit buildings with Hannon Armstrong
- Solar for All residential solar PV lease and energy efficiency energy savings agreement for low-to-moderate income households with PosiGen

The Connecticut Green Bank is leading a movement to use public funds more responsibly by attracting and deploying more private investment in green energy for the state’s economy and environment.

Responsible Public Investment in Green Energy

The Green Bank receives funding through a number of sources, including a Systems Benefit Charge, the Regional Greenhouse Gas Initiative (RGGI), renewable energy certificate (REC) sales 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.

Acknowledgements

First and foremost, we would like to thank the Staff of the Connecticut Green Bank. Through their hard work, commitment and innovation, we have eclipsed \$1 billion of investment into Connecticut’s economy and 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 SustainAbility, 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 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

George Bellas
Vice President - Finance and Administration

DRAFT
FOR DISCUSSION PURPOSES ONLY

Board of Directors

Connecticut Green Bank

Position	Status	Voting	Name	Organization
State Treasurer (or designee)	Ex Officio	Yes	Bettina Bronisz	Treasurer's Office
Commissioner of DEEP ⁵ (or designee)	Ex Officio	Yes	Robert Klee ⁶	DEEP
Commissioner of DECD ⁷ (or designee)	Ex Officio	Yes	Catherine Smith ⁸	DECD
Residential or Low Income Group	Resigned Appointed	Yes	Pat Wrice Betsy Crum	Operation Fuel Women's Institute for Housing and Economic Development
Investment Fund Management	Appointed	Yes	Norma Glover	NJG Associates
Environmental Organization	Appointed	Yes	Matthew Ranelli ⁹	Shipman & Goodwin
Finance or Deployment	Appointed	Yes	Thomas Flynn	Environmental Data Resources
Finance of Renewable Energy	Appointed	Yes	Reed Hundt ¹⁰	Coalition for Green Capital
Finance of Renewable Energy	Appointed	Yes	Kevin Walsh	GE Energy Financial Services
Labor Organization	Appointed	Yes	John Harrity	IAM Connecticut
R&D or Manufacturing	Resigned Appointed	Yes	Mun Choi Gina McCarthy	University of Connecticut Harvard T.H. Chan School of Public Health
President of the Green Bank	Ex Officio	No	Bryan Garcia	Connecticut Green Bank
Board of Connecticut Innovations ¹¹	Ex Officio	No	(unfilled)	(unfilled)

Discretely Presented Component Units

Position	Name
President	Bryan Garcia
Treasurer	George Bellas
Secretary	Brian Farnen
Chief Investment Officer	Roberto Hunter

⁵ Department of Energy and Environmental Protection

⁶ Vice Chairperson of the Board of Directors and Chairperson of the Budget and Operations Committee

⁷ Department of Economic and Community Development

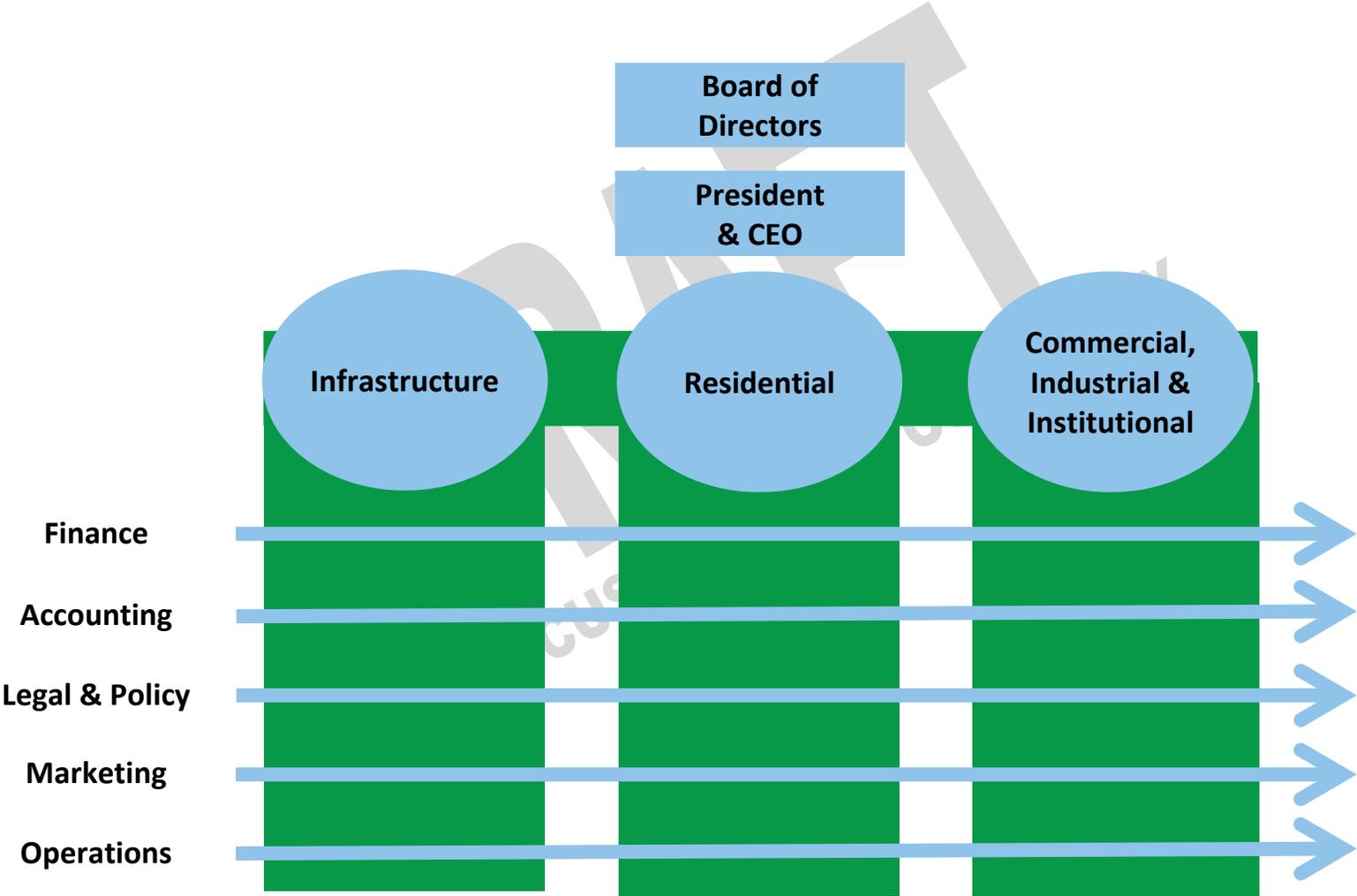
⁸ Chairperson of the Board of Directors

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

¹⁰ Chairperson of the Deployment Committee

¹¹ Catherine Smith also serves on the Board of Directors of Connecticut Innovations.

Organizational Chart





Government Finance Officers Association

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Connecticut Green Bank

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2016

Executive Director/CEO

FINANCIAL SECTION

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FOR DISCUSSION PURPOSES ONLY

Independent Auditors' Report

To the Board of Directors
Connecticut Green Bank

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities and discretely presented component units of the Connecticut Green Bank (CGB) (a component unit of the State of Connecticut) as of and for the fiscal year ended June 30, 2017, and the related notes to the financial statements, which collectively comprise CGB'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 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 financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these 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 financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the 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 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 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 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, 2017, 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 on pages 4 through 10 and schedule of Green Bank's proportionate share of the net pension liability and proportionate share of contributions to the state employees' retirement system (SERS) on pages 52 and 53 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 financial statements, and other knowledge we obtained during our audit of the 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 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 basic financial statement of the Connecticut Green Bank as of and for the year ended June 30, 2016 (not presented herein), and have issued our report thereon dated December 26, 2016, which contained unmodified opinions on the respective financial statements of the business-type activities and the discretely presented component units. The accompanying summarized comparative information as of June 30, 2016 is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and related directly to the underlying accounting and other records used to prepare the 2016 financial statements. The accompanying summarized comparative information has been subjected to the auditing procedures applied in the audit of the 2016 basic financial statements and certain additional procedures including comparing and reconciling such information directly to the underlying accounting and other records used to prepare those financial statements or to those 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 is fairly stated in all material respects in relation to the basic financial statements as a whole for the year ended June 30, 2016.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated Month XX, 2017 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 XX, 2017

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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 (CGB), 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, 2017. 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.

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

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.

CGB is a quasi-public agency of the State of Connecticut established on July 1, 2011 by Section 16-245n of the Connecticut General Statutes, created for the purposes of, but not limited to: (1) implementing the Comprehensive Plan developed by CGB pursuant to Section 16-245n(c) of the Connecticut General Statutes, 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 CGB 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. CGB 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 Connecticut General Statutes and therefore the net position of such fund was transferred to the newly created CGB 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 CGB'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 CGB. The Statement of Cash Flows reconciles the changes in cash and cash equivalents with the activities of CGB 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 2017

NET POSITION

The Connecticut Green Bank's overall net position increased slightly year over year. Net position as of June 30, 2017 and 2016 was \$128.7 million and \$127.4 million, respectively, an increase of \$1.3 million. The components of net position show that unrestricted net position decreased to \$45.9 million as of June 30, 2017 as compared to \$59.5 million as of June 30, 2016, a decrease of \$13.6 million. Contributing to this decrease in unrestricted net position was a shift in resources allocated to investments in capital assets and credit enhancements to support various programs. Investments in capital assets increased from \$58.1 million as of June 30, 2016 to \$61.5 million as of June 30, 2017, an increase of \$3.4 million. This increase was the result of the purchase and construction of commercial solar PV systems by CT Solar Lease 2 LLC. These systems will either be leased or the electricity generated by them sold, to third party commercial, not for profit and municipal customers. During fiscal 2017, CT Solar lease 2 completed its acquisition of both residential and commercial solar PV systems which comprise the balance in capital assets. During fiscal year 2017, the Green Bank established a new component unit, CT Solar Lease 3 LLC, whose purpose will be to continue the acquisition of commercial solar PV systems begun by CT Solar Lease 2 LLC and to sell the electricity generated by these facilities to non-residential customers. The remaining component of net position, net position restricted for energy programs, increased \$11.6 million from \$9.8 million as of June 30, 2016 to \$21.3 million as of June 30, 2017. This increase was the result of the contractual restriction of Green Bank cash balances to maintain loan loss reserves, to reserve funds to be used for consumer interest rate buydowns under the Smart E program and cash deposits with financial institutions to collateralize loan guarantees made by the Green Bank on behalf of the developer of a hydro-electric facility. Restricted net position also includes approximately \$2.9 in proceeds received upon the issuance of Clean Renewable Energy Bonds by the Green Bank in fiscal year 2017 which the Green Bank, through its component unit, CGB Meriden Hydro LLC, will use to purchase a hydro-electric facility in fiscal year 2018 from the facility's developer in a sale- lease back transaction.

Green Bank assets increased \$14.9 million in fiscal year 2017 to \$191.7 million as of June 30, 2017 from \$176.8 million as of June 30, 2016 primarily resulting from an increase of \$8.9 million in program loans to support renewable energy installations and energy efficiency upgrades for both residential and commercial property owners in Connecticut and an increase in capital assets, as discussed in the preceding paragraph of \$3.4 million.

Unrestricted cash and cash equivalents decreased \$10.2 million to \$37.9 million as of June 30, 2017 from \$48.1 million as of June 30, 2016 and restricted cash and cash equivalents increased \$11.6 million to \$21.3 million as of June 30, 2017 from \$9.8 million as of June 30, 2016 primarily for the reasons also discussed in the preceding paragraph. As of June 30, 2016, Green Bank assets included \$1.0 million representing an equity investment in a company that developed uninterruptable power supply products. During fiscal 2017 the Green Bank fully reserved this investment which it made when it was managed as the Connecticut Clean Energy Fund by Connecticut Innovations, Inc. Connecticut Innovations investment staff continue to monitor and manage this investment and recommended a full reserve as of June 30, 2017. Investment staff will continue to monitor this investment and recommend changes to the reserve if warranted.

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

Green Bank liabilities increased by \$21.0 million in fiscal year 2017 to \$73.1 million as of June 30, 2017 from \$52.0 million as of June 30, 2016. Current liabilities, comprised of current maturities of long term debt, accounts payable and accrued expenses increased \$6.7 million to \$13.7 million as of June 30, 2017 compared to \$ 7.0 million as of June 30, 2016. This increase was primarily the result of an increase in performance based incentives ("PBI") payable to third party owners of solar facilities as of June 30, 2017 when compared to June 30, 2016 of \$5.8 million. A portion of the \$5.8 million, \$1.7 million, represents the buyout of future PBI obligations to third party owners, which was approved by the Green Bank Board of Directors in fiscal year 2017. The significant increase in PBI liabilities resulted from the increase in residential solar PV systems coming on line and generating electricity in fiscal year 2017. Deferred revenues resulting from the development and acquisition of commercial solar PV systems by CEFIA Holdings LLC and CT Solar Lease 2 LLC and the leasing of residential solar PV systems by CT Solar Lease 2 LLC decreased \$5.4 million to \$872,000 as of June 30, 2017 from \$6.3 million as of June 30, 2016 as the remaining commercial solar PV systems were completed in fiscal year 2017.

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 \$9.1 million in fiscal year 2017 to \$25.2 million as of June 30, 2017 compared to \$16.1 million as of June 30, 2016. The related Deferred Outflows of Resources, which represents timing differences in plan earnings, assumptions and Green Bank pension contributions increased \$7.4 million to \$10.0 million as of June 30, 2017 compared to \$2.6 million as of June 30, 2016. Notes 15 and 16 provide further details regarding the pension plan.

Long term debt increased \$11.1 million in fiscal year 2017 to \$29.7 million as of June 30, 2017 when compared to \$18.6 million as of June 30, 2016. During fiscal year 2017, the Green Bank issued \$2.9 million of Clean Renewable Energy Bonds. The proceeds from these bonds will be used by CGB Meriden Hydro LLC to purchase a hydro-electric facility from the developer in fiscal year 2018 in a sale-leaseback transaction. During fiscal year 2017, CEFIA Solar Services, Inc. borrowed \$1.8 million from the Connecticut Housing Finance Authority which it lent to CT Solar Lease 2 LLC to finance the installation of renewable energy and energy efficiency projects in municipal housing developments throughout Connecticut. The remainder of the increase in long term debt represents advances of \$9.5 million made to CT Solar Lease 2 LLC under its credit facility with KeyBank for total of \$14.2 million in new borrowings during fiscal year 2017.

As of June 30, 2017, the Green Bank Board of Directors designated \$76.9 million in current and future unrestricted net position to fund contingent grant and loan commitments, the majority of which represent PBI payments to third party owners of solar facilities as described in Note 14. These grant and loan commitments are expected to be funded over the next one to six years.

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following table summarizes the net position of the reporting entity at June 30, 2017 and 2016:

Net Position
(in thousands)

	<u>2017</u>	<u>2016</u>	<u>Increase (Decrease)</u>
Cash and cash equivalents-unrestricted	\$ 37,911	\$ 48,072	\$ (10,161)
Cash and cash equivalents-restricted	21,301	9,750	11,551
Bonds receivable	3,329	3,492	(163)
Portfolio investments	-	1,000	(1,000)
Solar lease notes	8,113	9,008	(895)
Program loans	42,206	33,268	8,938
Capital assets, net	61,510	58,115	3,395
Other assets	17,382	14,124	3,258
Total Assets	<u>191,752</u>	<u>176,829</u>	<u>14,923</u>
Deferred Outflows of Resources			
Deferred amount for pensions	9,978	2,575	7,403
Total deferred outflows of resources	<u>9,978</u>	<u>2,575</u>	<u>7,403</u>
Current liabilities	13,698	6,964	6,734
Unearned revenue	872	6,258	(5,386)
Pension liabilities	25,245	16,096	9,149
Other long term liabilities	3,020	2,528	492
Fair value of interest rate swap	541	1,628	(1,087)
Long term debt, less current maturities	29,691	18,567	11,124
Total liabilities	<u>73,067</u>	<u>52,042</u>	<u>21,025</u>
Deferred Inflows of Resources			
Deferred amount for pensions	-	-	-
Total deferred inflows of resources	<u>-</u>	<u>-</u>	<u>-</u>
Invested in capital assets	61,510	58,115	3,395
Restricted Net Position:			
Non-expendable	1	1	-
Restricted - energy programs	21,301	9,750	11,551
Unrestricted	<u>45,851</u>	<u>59,496</u>	<u>(13,645)</u>
Total Net Position	<u>\$ 128,663</u>	<u>\$ 127,362</u>	<u>\$ 1,301</u>

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

CHANGES IN NET POSITION

Operating revenues decreased by \$3.8 million to \$34.0 million as of June 30, 2017 as compared to \$37.8 million as of June 30, 2016. Continuing a trend in recent years, remittances to the Green Bank 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 \$200,000 to \$26.4 million for the fiscal year ended June 30, 2017 as compared to \$26.6 million for the fiscal year ending June 30, 2016. Sales of Renewable Energy Credits ("RECs") remained level year over year at \$2.6 million for the fiscal year 2017 compared to \$2.7 million for the fiscal year 2016. Proceeds received by the Green Bank from quarterly Regional Greenhouse Gas Initiative ("RGGI") auctions declined \$4.1 million year over year with proceeds of \$2.4 million in fiscal year 2017 compared to proceeds of \$6.5 million in fiscal year 2016. The decrease in proceeds received by the Green Bank can primarily be attributed to a decrease in the auction clearing price for CO2 allowances. For the four auctions in fiscal year 2016, the clearing price average was \$6.18 per allowance while the clearing price average for the four auctions held in fiscal year 2017 was \$3.40 per allowance. Contributing to the decline in auction proceed revenue was the diversion of approximately \$800,000 in proceeds earmarked for the Green Bank to the State of Connecticut general fund under Public Act 16-3.

Total payments of grants and incentives to commercial, not for profit, municipal and residential owners to install either solar PV systems or energy efficiency measures increased \$7.7 million to \$18.1 million in fiscal year 2017 compared to \$10.4 million for the fiscal year 2016. PBI payments comprised the largest share of this increase as PV systems came on line in fiscal 2017 and began to generate electricity which provides the basis for the PBI payment.

As a result of continuing efforts by Green Bank management to control costs, program administration expenses increased \$215,000 to \$16.55 million in fiscal 2017 from \$ 16.34 million in fiscal 2016, a 1.4% increase. Included in program administration expenses is the non-cash depreciation expense for Solar PV capital assets acquired by CT Solar Lease 2 LLC of \$2.3 million in fiscal 2017 and \$1.5 million in fiscal 2016. General and administrative costs rose slightly by \$222,000 to \$ 4.93 million in fiscal year 2017 from \$4.71 million in fiscal year 2016, a 4.5% increase. Included in general and administrative costs is an increase of \$2.0 million year over year for the non-cash GASB 68 pension expense allocated to the Green Bank by the State of Connecticut which is not an expense that is controllable by Green Bank management.

Interest earned on program investments and bank deposits increased \$504,000 in fiscal 2017 to \$3.1 million compared to \$2.6 million. Interest as a revenue source is expected to continue to increase in future years as the Green Bank expands its investment portfolio. Interest expense increased \$491,000 to \$1.2 million from \$731,000 as borrowings have increased to finance its leasing programs. The unrealized loss on investment of \$1.0 million results from fully reserving the carrying cost of the Green Bank's previously discussed equity investment. Capital contributions to CT SL2 LLC by its investor member decreased \$5.9 million to \$6.4 million in fiscal 2017 from \$12.3 million in fiscal year. Capital contributions from the investor member are received as projects are completed. As of June 30, 2017, all capital contributions to CT SL2 LC due from the investor member have been received.

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following table summarizes the changes in net position between June 30, 2017 and 2016:

Changes in Net Position
(in thousands)

	<u>2017</u>	<u>2016</u>	<u>Increase (Decrease)</u>
Revenues	\$ 33,970	\$ 37,788	\$ (3,818)
Operating Expenses			
Grant and incentive payments	18,128	10,427	7,701
Program administration expenses	16,554	16,339	215
General and administrative expenses	4,928	4,706	222
Total operating expenses	<u>39,610</u>	<u>31,472</u>	<u>8,138</u>
Operating Income	(5,640)	6,316	(11,956)
Non-Operating Revenues (Expenses)			
Interest earned	3,145	2,641	504
Interest expense	(1,222)	(731)	(491)
Investment loss	(94)	(33)	(61)
Unrealized loss on investment	(1,000)	--	(1,000)
Unrealized gain(loss) on interest rate swap	1,087	(968)	2,055
Provision for loan losses	(956)	(1,022)	66
Capital contribution by member	6,446	12,294	(5,848)
Distribution to member	(437)	(301)	(136)
Net Change	1,329	18,196	(15,867)
Net Position Beginning of Year	<u>127,363</u>	<u>109,167</u>	<u>18,196</u>
Net Position at End of Year	<u>\$ 128,692</u>	<u>\$ 127,363</u>	<u>\$ 1,329</u>

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

FINANCIAL HIGHLIGHTS OF FISCAL 2016

NET POSITION

Total net position increased by \$18.2 million to \$127.4 million at June 30, 2016 compared to \$109.2 million as of June 30, 2015. This growth was primarily driven by the acquisition of residential and commercial solar PV capital assets by CT Solar Lease 2 LLC which increased \$31.1 million to \$58.1 million as of June 30, 2016 compared to \$27.0 million as of June 30, 2015. Offsetting this growth in capital assets was a decrease in unrestricted net position of \$13.9 million to \$59.5 million as of June 30, 2016 compared to \$73.4 million as of June 30, 2015. Significant factors affecting the decrease in unrestricted net position include an increase in long term debt to finance the acquisition of solar PV equipment, an increase in the GASB 68 pension liability and an increase in the asset retirement obligation which is directly correlated to the increase in solar PV equipment placed into service in fiscal 2016.

Unrestricted cash and cash equivalents increased \$8.1 million to \$48.1 million as of June 30, 2016 compared to \$39.9 million as of June 30, 2015 primarily due to the sale of a portion of the Green Bank's CPACE portfolio to an outside investor. Restricted cash over the same period increased \$1.0 million to \$9.75 million as a result in funds received which are to be used to administer a program of an agency of the State of Connecticut.

The acquisition of \$3.5 million in bonds was a part of the proceeds received by the Green Bank as a result of the sale of CPACE program loans during fiscal years 2014 through 2016. Note 5 provides further detail as to the future cash flows related to these bonds. The Green Bank's portfolio of solar lease note principal decreased \$811,000 due to scheduled principal repayments. Note 6 provides further detail as to future cash flows expected from this investment. The decrease in program loans in 2016 to \$33.3 million as compared to \$40.5 million in 2015 was primarily a result of sales of CPACE loans held in the Green Bank portfolio to an outside investor. Note 7 provides further detail regarding these sales. Capital assets increased to \$58.1 million in 2016 compared to \$27.0 million in 2015 as a result of the continued acquisition of solar equipment by CT Solar Lease 2 LLC. Note 1 discusses CT Solar Lease 2 LLC's operations.

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 2016 to \$16.1 million as of June 30, 2016 compared to \$14.9 million as of June 30, 2015. The related Deferred Outflows of Resources, which represents timing differences in plan assumptions and Green Bank pension contributions increased \$905,000 to \$2.6 million as of June 30, 2016 compared to \$1.7 million as of June 30, 2015. The related Deferred Inflows of Resources representing timing differences in plan earnings decreased \$532,000 from its balance of \$532,000 as of June 30, 2015. Notes 15 and 16 provide further details regarding the pension plan.

As of June 30, 2016, the Green Bank Board of Directors designated \$84.5 million in current and future unrestricted net position to fund contingent grant and loan commitments, the majority of which represent PBI payments to third party owners of solar facilities as described in Note 14. These grant and loan commitments are expected to be funded over the next one to six years.

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following table summarizes the net position of the reporting entity at June 30, 2016 and 2015:

Net Position
(in thousands)

	<u>2016</u>	<u>2015</u>	<u>Increase (Decrease)</u>
Cash and cash equivalents-unrestricted	\$ 48,072	\$ 39,894	\$ 8,178
Cash and cash equivalents-restricted	9,750	8,799	951
Bonds receivable	3,492	1,600	1,892
Portfolio investments	1,000	1,000	-
Solar lease notes	9,008	9,819	(811)
Program loans	33,268	40,518	(7,250)
Capital assets, net	58,115	26,971	31,144
Other assets	14,124	8,972	5,152
Total Assets	<u>176,829</u>	<u>137,573</u>	<u>39,256</u>
Deferred Outflows of Resources			
Deferred amount for pensions	2,575	1,670	905
Total deferred outflows of resources	<u>2,575</u>	<u>1,670</u>	<u>905</u>
Current liabilities	6,964	6,825	139
Unearned revenue	6,258	2,519	3,739
Pension liabilities	16,096	14,900	1,196
Other long term liabilities	2,528	1,094	1,434
Fair value of interest rate swap	1,628	660	968
Long term debt, less current maturities	18,567	3,546	15,021
Total liabilities	<u>52,041</u>	<u>29,544</u>	<u>22,497</u>
Deferred Inflows of Resources			
Deferred amount for pensions	-	532	(532)
Total deferred inflows of resources	<u>-</u>	<u>532</u>	<u>(532)</u>
Invested in capital assets	58,115	26,971	31,144
Restricted Net Position:			
Non-expendable	1	1	-
Restricted - energy programs	9,750	8,799	951
Unrestricted	<u>59,496</u>	<u>73,396</u>	<u>(13,900)</u>
Total Net Position	<u>\$ 127,362</u>	<u>\$ 109,167</u>	<u>\$ 18,195</u>

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

CHANGES IN NET POSITION

Operating revenues decreased by \$8.5 million in fiscal year 2016 primarily as a result of a decrease in RGGI auction proceeds of \$10.1 million. CGB received \$6.5 million from the State in RGGI auction proceeds during the year as compared to RGGI auction proceeds of \$16.6 million in 2015. Public Act 13-247, see Note 10, allowed the Commissioner of the Connecticut Department of Energy and Environmental Protection to transfer additional RGGI auction proceeds to CGB to be used to support energy efficiency financing opportunities. This increase in RGGI auction proceeds helped offset payments to the State by CGB required under Public Act 13-247 during fiscal year 2015. Helping to offset the decrease in RGGI auction proceeds was an increase in REC sales of \$1.2 million over the prior year to \$2.7 million for fiscal year 2016.

Total expenditures for grants and programs in 2016 were \$26.8 million, an increase of \$4.7 million when compared to the total expenditures of \$22.1 million in 2015. Included in these totals are payments representing financial incentives to residential and commercial property owners to install renewable energy or energy efficiency measures of \$12.8 million in 2016 and \$11.3 million in 2015. These financial incentives and the associated costs to administer these payments fluctuate from year to year as they are based on the achievement of contract milestones established by each CGB program.

General and administrative expenses increased by \$1.5 million in 2016 to \$4.7 million compared to \$3.1 million in 2015 primarily resulting from expenditures for new marketing and branding initiatives undertaken in 2016.

CONNECTICUT GREEN BANK

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following table summarizes the changes in net position between June 30, 2016 and 2015:

Changes in Net Position
(in thousands)

	<u>2016</u>	<u>2015</u>	<u>Increase (Decrease)</u>
Revenues	\$ 37,788	\$ 46,294	\$ (8,506)
Operating Expenses			
Grant and incentive payments	10,427	10,686	(259)
Program administration expenses	16,339	11,445	4,894
General and administrative expenses	4,706	3,117	1,589
Total operating expenses	<u>31,472</u>	<u>25,248</u>	<u>6,224</u>
Operating Income	6,316	21,046	(14,730)
Non-Operating Revenues (Expenses)			
Interest earned	2,641	2,312	329
Interest expense	(731)	(119)	(612)
Investment loss	(33)	(1,180)	1,147
Unrealized loss on investment	--	(660)	660
Unrealized loss on interest rate swap	(968)	(564)	(404)
Provision for loan losses	(1,022)	6,844	(7,866)
Capital contribution by member	12,294	(105)	12,399
Distribution to member	(301)	(19,200)	18,899
Net Change	18,196	8,374	9,162
Net Position Beginning of Year	<u>109,167</u>	<u>100,793</u>	<u>8,374</u>
Net Position at End of Year	<u>\$ 127,363</u>	<u>\$ 109,167</u>	<u>\$ 18,196</u>

REQUESTS FOR INFORMATION

This financial report is designed to provide a general overview of CGB's finances. Questions concerning any of the information provided in this report or request for additional financial information should be addressed to the Office of Finance and Administration, 845 Brook Street, Rocky Hill, Connecticut 06067.

CONNECTICUT GREEN BANK
CONSOLIDATING STATEMENT OF NET POSITION
JUNE 30, 2017

(with summarized totals for the year ended June 30, 2016)

	<u>Discretely Presented Component Units</u>					2017 Total Reporting Entity	2016 Total Reporting Entity
	<u>Total Primary Government</u>	<u>CT Solar Lease 2 LLC</u>	<u>CEFIA Solar Services Inc.</u>	<u>CT Solar Lease 3 LLC</u>	<u>Eliminating Entries</u>		
Assets							
Current Assets							
Cash and cash equivalents	\$ 30,467,479	\$ 5,466,605	\$ 1,975,578	\$ 1,000	\$	\$ 37,910,662	\$ 48,072,061
Accounts receivable	290,787	114,020				404,807	1,430,622
Utility remittance receivable	2,507,659					2,507,659	2,670,634
Other receivables	394,384	375,619				770,003	430,002
Due from component units	35,934,016	507,865	10,826,490		(46,770,070)	498,301	-
Prepaid expenses and other assets	9,023,655	976,635	11,735			10,012,025	4,245,806
Contractor loans	-					-	2,272,906
Current portion of solar lease notes	869,831					869,831	845,479
Current portion of program loans	1,910,048					1,910,048	1,378,242
Total current assets	81,397,859	7,440,744	12,813,803	1,000	(46,770,070)	54,883,336	61,345,752
Noncurrent Assets							
Portfolio investments	1					1	1,000,000
Bonds receivable	3,328,530					3,328,530	3,492,282
Solar lease notes, less current portion	7,242,822					7,242,822	8,162,635
Program loans, less current portion	40,296,113					40,296,113	31,889,275
Renewable Energy Credits	654,767					654,767	812,770
Investment in component units	100		22,682,460		(22,682,560)	-	-
Capital assets, net of depreciation and amortization	198,486	70,192,062			(8,880,341)	61,510,207	58,114,914
Asset retirement obligation, net		2,535,104				2,535,104	2,261,472
Restricted assets:							
Cash and cash equivalents	16,798,243	4,502,784				21,301,027	9,749,983
Total noncurrent assets	68,519,062	77,229,950	22,682,460	-	(31,562,901)	136,868,571	115,483,331
Total Assets	149,916,921	84,670,694	35,496,263	1,000	(78,332,971)	191,751,907	176,829,083
Deferred Outflows of Resources							
Deferred amount for pensions	9,978,107					9,978,107	2,575,368
Total Deferred Outflows of Resources	9,978,107	-	-	-	-	9,978,107	2,575,368

The accompanying notes are an integral part of the financial statements

CONNECTICUT GREEN BANK
CONSOLIDATING STATEMENT OF NET POSITION (CONTINUED)
JUNE 30, 2017
(with summarized totals for the year ended June 30, 2016)

	Discretely Presented Component Units					2017 Total Reporting Entity	2016 Total Reporting Entity
	Total Primary Government	CT Solar Lease 2 LLC	CEFIA Solar Services Inc.	CT Solar Lease 3 LLC	Eliminating Entries		
Liabilities, Deferred Inflows of Resources and Net Position							
Liabilities							
Current maturities of long-term debt	\$ 240,525	\$ 2,358,281	\$ 94,788	\$ -	\$ -	\$ 2,693,594	\$ 1,794,181
Accounts payable and accrued expenses	7,994,515	657,697	8,734	-	-	8,660,946	2,984,746
Due to component units	507,865	13,599,055	33,160,451	1,000	(46,770,070)	498,301	-
Due to outside agency	-	-	-	-	-	-	30,127
Custodial liability	1,844,791	-	-	-	-	1,844,791	2,155,128
Unearned revenue	-	871,714	-	-	-	871,714	6,258,204
Total current liabilities	10,587,696	17,486,747	33,263,973	1,000	(46,770,070)	14,569,346	13,222,386
Asset retirement obligation	-	3,020,405	-	-	-	3,020,405	2,528,335
Long-term debt, less current maturities	5,195,412	22,749,427	1,745,725	-	-	29,690,564	18,567,419
Fair value of interest rate swap	-	540,877	-	-	-	540,877	1,627,864
Pension liability	25,245,439	-	-	-	-	25,245,439	16,096,113
Total liabilities	41,028,547	43,797,456	35,009,698	1,000	(46,770,070)	73,066,631	52,042,117
Net Position							
Invested in capital assets	198,486	70,192,062	-	-	(8,880,341)	61,510,207	58,114,914
Restricted Net Position:							
Nonexpendable	1,000	22,682,460	100	-	(22,682,560)	1,000	1,000
Restricted for energy programs	16,798,243	4,502,784	-	-	-	21,301,027	9,749,983
Unrestricted (deficit)	101,868,752	(56,504,068)	486,465	-	-	45,851,149	59,496,437
Total Net Position	\$ 118,866,481	\$ 40,873,238	\$ 486,565	-	\$ (31,562,901)	\$ 128,663,383	\$ 127,362,334

The accompanying notes are an integral part of the financial statements

CONNECTICUT GREEN BANK
CONSOLIDATING STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN NET ASSETS
FOR THE YEAR ENDED JUNE 30, 2017
(with summarized totals for the year ended June 30, 2016)

	Discretely Presented Component Units					2017 Total Reporting Entity	2016 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	\$ 26,404,349					\$ 26,404,349	\$ 26,605,084
Grant revenue	98,486					98,486	589,917
RGGI auction proceeds	2,392,647					2,392,647	6,481,562
Energy system sales	12,689,540				(12,689,540)	-	-
REC sales	2,214,000	356,647				2,570,647	2,653,783
Other income	240,994	3,303,236	129,227		(1,169,348)	2,504,109	1,457,889
Total operating revenues	<u>44,040,016</u>	<u>3,659,883</u>	<u>129,227</u>		<u>(13,858,888)</u>	<u>33,970,238</u>	<u>37,788,235</u>
Operating Expenses							
Cost of goods sold - energy systems	11,333,034				(11,333,034)	-	-
Grants and incentive programs	18,128,022					18,128,022	-
Program administration expenses	14,026,577	3,884,129			(1,356,506)	16,554,200	26,843,084
General and administrative expenses	4,430,883	620,912	4,998		(129,227)	4,927,566	4,629,540
Total operating expenses	<u>47,918,516</u>	<u>4,505,041</u>	<u>4,998</u>		<u>(12,818,767)</u>	<u>39,609,788</u>	<u>31,472,624</u>
Operating Income (Loss)	<u>(3,878,500)</u>	<u>(845,158)</u>	<u>124,229</u>		<u>(1,040,121)</u>	<u>(5,639,550)</u>	<u>6,315,611</u>
Nonoperating Revenue (Expenses)							
Interest income - promissory notes	2,921,710					2,921,710	2,520,151
Interest income - short-term cash deposits	189,237	17,615	16,446			223,298	120,613
Interest expense long-term debt	(228,502)	(961,956)	(31,926)			(1,222,384)	(730,839)
Interest income - component units	61,455		31,437		(92,892)	-	-
Interest expense - component units		(92,892)			92,892	-	-
Distributions to member		(436,452)				(436,452)	(301,548)
Realized gain (loss) on investments	(93,974)					(93,974)	(33,723)
Unrealized gain (loss) on investments	(999,998)					(999,998)	-
Unrealized gain (loss) on interest rate swap		1,086,987				1,086,987	(967,791)
Provision for loan losses	(956,489)					(956,489)	(1,021,826)
Total nonoperating revenue (expenses)	<u>893,439</u>	<u>(386,698)</u>	<u>15,957</u>		<u>-</u>	<u>522,698</u>	<u>(414,963)</u>
Change in Net Position before Payments to State of Connecticut and Capital Contributions	<u>(2,985,061)</u>	<u>(1,231,856)</u>	<u>140,186</u>		<u>(1,040,121)</u>	<u>(5,116,852)</u>	<u>5,900,648</u>
Capital contributions		8,145,358			(1,699,568)	6,445,790	12,294,443
Change in Net Position	<u>(2,985,061)</u>	<u>6,913,502</u>	<u>140,186</u>		<u>(2,739,689)</u>	<u>1,328,938</u>	<u>18,195,091</u>
Net Position - Beginning of Year	<u>121,851,542</u>	<u>33,959,736</u>	<u>346,379</u>		<u>(28,795,323)</u>	<u>127,362,334</u>	<u>109,167,243</u>
Net Position - End of Year	<u>\$ 118,866,481</u>	<u>\$ 40,873,238</u>	<u>\$ 486,565</u>		<u>\$ (31,535,012)</u>	<u>\$ 128,691,272</u>	<u>\$ 127,362,334</u>

The accompanying notes are an integral part of the financial statements

CONNECTICUT GREEN BANK
CONSOLIDATING STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED JUNE 30, 2017
(with summarized totals for the year ended June 30, 2016)

	Discretely Presented Component Units					2017 Total Reporting Entity	2016 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	\$ 18,826,940	\$	\$	\$	\$ (18,304,578)	\$ 522,362	\$ -
Sales of Renewable Energy Credits	2,214,000	301,088				2,515,088	2,443,524
Utility company remittances	26,567,324					26,567,324	26,453,300
Grants	99,949					99,949	797,101
RGGI auction proceeds	3,560,543					3,560,543	5,313,666
Other income	251,047	1,778,549				2,029,596	1,240,305
Lease payments received		1,295,956				1,295,956	976,737
Program administrative expenses	(13,734,338)	(1,602,391)				(15,336,729)	(14,773,218)
Grants, incentives and credit enhancements	(10,842,910)					(10,842,910)	(11,170,406)
Purchases of energy equipment	(16,907,742)					(16,907,742)	(34,278,291)
General and administrative expenditures	(2,666,644)	(454,892)	(12,500)			(3,134,036)	(4,535,123)
Net cash provided by (used in) operating activities	<u>7,368,169</u>	<u>1,318,310</u>	<u>(12,500)</u>	<u>-</u>	<u>(18,304,578)</u>	<u>(9,630,599)</u>	<u>(27,532,405)</u>
Cash Flows from Non-capital Financing Activities							
Funds received (disbursed) from escrow & custodial accounts	(564,964)					(564,964)	1,035,343
Advances to CGB component units	(3,001,000)				3,001,000	-	-
Advances repaid (disbursed) to third party capital providers	90,908					90,908	-
Subordinated debt advance to component units			(414,990)		414,990	-	-
Advances from CGB and component units		5,875,000	3,000,000	1,000	(8,876,000)	-	-
Repayments of Advances (to) from component units			(5,875,000)		5,875,000	-	-
Net cash provided by (used in) non-capital financing activities	<u>(3,475,056)</u>	<u>5,875,000</u>	<u>(3,289,990)</u>	<u>1,000</u>	<u>414,990</u>	<u>(474,056)</u>	<u>1,035,343</u>
Cash Flows from Capital and Related Financing Activities							
Purchase of capital assets	(105,149)	(18,304,578)			18,304,578	(105,149)	(67,646)
Proceeds from long-term debt	2,957,971	9,500,633	1,895,807			14,354,411	17,510,837
Repayment of long-term debt	(715,950)	(1,560,600)	(55,294)			(2,331,844)	(1,002,770)
Interest expense	(172,379)	(906,238)	(31,926)			(1,110,543)	(637,267)
Proceeds from subordinated debt with component unit		414,990			(414,990)	-	-
Capital contributions from/(to) component entities		1,699,567	(1,699,567)			-	-
Capital contributions from Firststar Development, LLC		6,445,790				6,445,790	12,294,443
Return of capital to Firststar Development, LLC		(412,606)				(412,606)	(219,969)
Net cash provided by (used in) capital and related financing activities	<u>1,964,493</u>	<u>(3,123,042)</u>	<u>109,020</u>	<u>-</u>	<u>17,889,588</u>	<u>16,840,059</u>	<u>27,877,628</u>
Cash Flows from Investing Activities							
Loan losses	(20,277)						
Return of principal on WC & program loans	9,531,886					9,531,886	26,765,812
Interest on short-term investments, cash, solar lease notes and loans	2,679,839	17,615	47,883			2,745,337	1,850,035
CPACE program loan disbursements	(5,602,984)					(5,602,984)	(15,474,204)
Grid Tied program loan disbursements	(319,471)					(319,471)	(911,249)
AD/CHP program loan disbursements	(1,997,403)					(1,997,403)	-
Alpha/Operational Demo program loan disbursements	(15,000)					(15,000)	(350,000)
Energy Efficiency program loan disbursements	(130,000)					(130,000)	-
HOPBI program loan disbursements							(1,093,599)
Residential Solar Loan program disbursements	(9,537,847)					(9,537,847)	(3,037,972)
Net cash used in investing activities	<u>(5,411,257)</u>	<u>17,615</u>	<u>47,883</u>	<u>-</u>	<u>-</u>	<u>(5,325,482)</u>	<u>7,748,823</u>
Net Increase (Decrease) in Cash and Cash Equivalents	<u>446,349</u>	<u>4,087,883</u>	<u>(3,145,587)</u>	<u>1,000</u>	<u>-</u>	<u>1,389,645</u>	<u>9,129,389</u>
Cash and Cash Equivalents - Beginning of Year	<u>46,819,373</u>	<u>5,881,506</u>	<u>5,121,165</u>	<u>-</u>	<u>-</u>	<u>57,822,044</u>	<u>48,692,655</u>
Cash and Cash Equivalents - End of Year	<u>\$ 47,265,722</u>	<u>\$ 9,969,389</u>	<u>\$ 1,975,578</u>	<u>\$ 1,000</u>	<u>\$ -</u>	<u>\$ 59,211,689</u>	<u>\$ 57,822,044</u>
Changes in operating assets and liabilities:							
Provided by (Used in) Operating Activities:							
Operating income (loss)	\$ (3,878,500)	\$ (845,158)	\$ 124,229	\$	\$ (18,304,578)	\$ (22,904,007)	\$ 6,315,611
Adjustments to reconcile operating loss to net cash provided by (used in) operating activities:							
Depreciation	116,584	2,307,546				2,424,130	1,777,556
Accretion		(273,633)				(273,633)	105,843
Deferred lease revenue						-	(41,040)
Pension expense adjustment	1,746,587						
Other							92,396
Changes in operating assets and liabilities:							
(Increase) decrease in operating assets	8,821,259	(272,997)	(129,230)			8,419,032	(37,716,132)
(Decrease) increase in operating liabilities	562,239	402,552	(7,499)			957,292	1,933,361
Net Cash Provided by (Used in) Operating Activities	<u>\$ 7,368,169</u>	<u>\$ 1,318,310</u>	<u>\$ (12,500)</u>	<u>\$ -</u>	<u>\$ (18,304,578)</u>	<u>\$ (9,630,599)</u>	<u>\$ (27,532,405)</u>

The accompanying notes are an integral part of the financial statements

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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 were transferred to the newly created CGB as of July 1, 2011. Pursuant to Connecticut General Statute 4-38f, CGB is within CI for administrative purposes only.

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, 2016, 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 energy efficiency and 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 FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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, 2017 has established five legally separate for-profit entities whose collective purpose is to administer the Green Bank's solar 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), 99% owned by the Green Bank (1% owned by CI), 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, 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 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 FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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. CEFIA Solar Services, Inc. ("Solar Services") has a one percent ownership interest in CT Solar Lease 2 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. 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 FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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, will acquire 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. As of June 30, 2017, CT Solar Lease 3 LLC had a single member, CEFIA Solar Services Inc. ("Solar Services"). As of June 30, 2017, CT Solar Lease 3 LLC has not commenced operations. During fiscal year 2018, Solar Services plans to admit an investor member into CT Solar Lease 3 LLC. See Note XX, Subsequent Events, for developments regarding this component unit subsequent to June 30, 2017 but prior to the issuance of this report.

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.

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**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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

Condensed combining information for the primary government (CGB) and its two blended component units (CEFIA Holdings LLC and CT Solar Loan I LLC) is presented as follows:

Condensed, Combining Information - Statement of Net Position

	<u>CGB</u>	<u>CT Solar Loan I LLC</u>	<u>CEFIA Holdings LLC</u>	<u>Eliminating Entries</u>	<u>Total Primary Government</u>
Assets					
Current Assets					
Cash and cash equivalents	\$ 20,528,930	\$ 3,081,696	\$ 6,856,853	\$	\$ 30,467,479
Accounts receivable	243,186	1,080	46,521		290,787
Utility remittance receivable	2,507,659				2,507,659
Other receivables	394,384				394,384
Due from component units	45,078,634		5,294,126	(14,438,744)	35,934,016
Prepaid expenses and other assets	563,936	17,755	8,441,964		9,023,655
Contractor loans					-
Current portion of solar lease notes	869,831				869,831
Current portion of program loans	1,712,551	197,497			1,910,048
Total current assets	<u>71,899,111</u>	<u>3,298,028</u>	<u>20,639,464</u>	<u>(14,438,744)</u>	<u>81,397,859</u>
Noncurrent Assets					
Portfolio investments	1				1
Bonds receivable	3,328,530				3,328,530
Solar lease notes, less current portion	7,242,822				7,242,822
Program loans, less current portion	37,172,357	3,123,756			40,296,113
Renewable Energy Credits	654,767				654,767
Investment in component units	99,100		100	(99,100)	100
Capital assets, net of depreciation and amortization	198,486				198,486
Asset retirement obligation, net					
Restricted assets:					
Cash and cash equivalents	16,497,311	300,932			16,798,243
Total noncurrent assets	<u>65,193,374</u>	<u>3,424,688</u>	<u>100</u>	<u>(99,100)</u>	<u>68,519,062</u>
Total Assets	<u>137,092,485</u>	<u>6,722,716</u>	<u>20,639,564</u>	<u>(14,537,844)</u>	<u>149,916,921</u>
Deferred Outflows of Resources					
Deferred amount for pensions	9,978,107				9,978,107
Total Deferred Outflows of Resources	<u>9,978,107</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>9,978,107</u>

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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

Condensed, Combining Information - Statement of Net Position (Continued)

	CGB	CT Solar Loan I LLC	CEFIA Holdings LLC	Eliminating Entries	Total Primary Government
Liabilities, Deferred Inflows of Resources and Net Position					
Liabilities					
Current maturities of long-term debt	\$ 53,418	\$ 187,107	\$	\$	\$ 240,525
Accounts payable and accrued expenses	7,910,104	4,706	79,705	(14,438,744)	7,994,515
Due to component units	508,765	4,072,500	10,365,344	(14,438,744)	507,865
Due to outside agency					-
Custodial liability	762,379		1,082,412		1,844,791
Unearned revenue					-
Total current liabilities	9,234,666	4,264,313	11,527,461	(14,438,744)	10,587,696
Asset retirement obligation					
Long-term debt, less current maturities	2,904,553	2,290,859			5,195,412
Fair value of interest rate swap					
Pension liability	25,245,439				25,245,439
Total liabilities	37,384,658	6,555,172	11,527,461	(14,438,744)	41,028,547
Net Position					
Invested in capital assets	198,486				198,486
Restricted Net Position:					
Nonexpendable			100,000	(99,000)	1,000
Restricted for energy programs	16,497,311	300,932			16,798,243
Unrestricted (deficit)	92,990,137	(133,388)	9,012,103	(100)	101,868,752
Total Net Position	\$ 109,685,934	\$ 167,544	\$ 9,112,103	\$ (99,100)	\$ 118,866,481

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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

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

	<u>CGB</u>	<u>CT Solar Loan I LLC</u>	<u>CEFIA Holdings LLC</u>	<u>Eliminating Entries</u>	<u>Total Primary Government</u>
Operating Revenues					
Utility remittances	\$ 26,404,349	\$	\$	\$	\$ 26,404,349
Grant revenue	98,486				98,486
RGGI auction proceeds	2,392,647				2,392,647
Energy system sales			12,689,540		12,689,540
REC sales	2,214,000				2,214,000
Other income	240,371	623			240,994
Total operating revenues	<u>31,349,853</u>	<u>623</u>	<u>12,689,540</u>	<u>-</u>	<u>44,040,016</u>
Operating Expenses					
Cost of goods sold - energy systems			11,333,034		11,333,034
Grants and incentive programs	18,128,022				18,128,022
Program administration expenses	13,809,136	58,630	158,811		14,026,577
General and administrative expenses	4,412,693	7,021	11,169		4,430,883
Total operating expenses	<u>36,349,851</u>	<u>65,651</u>	<u>11,503,014</u>	<u>-</u>	<u>47,918,516</u>
Operating Income (Loss)	<u>(4,999,998)</u>	<u>(65,028)</u>	<u>1,186,526</u>	<u>-</u>	<u>(3,878,500)</u>
Nonoperating Revenue (Expenses)					
Interest income - promissory notes	2,680,027	241,683			2,921,710
Interest income - short-term cash deposits	181,430	88	7,719		189,237
Interest expense long-term debt	(56,123)	(172,379)			(228,502)
Interest income - component units	61,455				61,455
Interest expense - component units					
Distributions to member					
Realized gain (loss) on investments	(93,974)				(93,974)
Unrealized gain (loss) on investments	(999,998)				(999,998)
Unrealized gain (loss) on interest rate swap					
Provision for loan losses	(956,489)				(956,489)
Total nonoperating revenue (expenses)	<u>816,328</u>	<u>69,392</u>	<u>7,719</u>	<u>-</u>	<u>893,439</u>
Change in Net Position before Payments to State of Connecticut and Capital Contributions	<u>(4,183,670)</u>	<u>4,364</u>	<u>1,194,245</u>	<u>-</u>	<u>(2,985,061)</u>
Capital contributions	100			(100)	
Change in Net Position	<u>(4,183,570)</u>	<u>4,364</u>	<u>1,194,245</u>	<u>(100)</u>	<u>(2,985,061)</u>
Net Position - Beginning of Year	<u>113,869,504</u>	<u>163,180</u>	<u>7,917,858</u>	<u>(99,000)</u>	<u>121,851,542</u>
Net Position - End of Year	<u>\$ 109,685,934</u>	<u>\$ 167,544</u>	<u>\$ 9,112,103</u>	<u>\$ (99,100)</u>	<u>\$ 118,866,481</u>

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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

Condensed, Combining Information - Statement of Cash Flows

	CGB	CT Solar Loan I LLC	CEFIA Holdings LLC	Eliminating Entries	Total Primary Government
Cash Flows from Operating Activities					
Sales of energy systems	\$	\$	\$ 18,826,940	\$	\$ 18,826,940
Sales of Renewable Energy Credits	2,214,000				2,214,000
Utility company remittances	26,567,324				26,567,324
Grants	99,949				99,949
RGGI auction proceeds	3,560,543				3,560,543
Other income	250,424	623			251,047
Lease payments received					
Program administrative expenses	(13,576,520)	(32,397)	(125,421)		(13,734,338)
Grants, incentives and credit enhancements	(10,842,910)				(10,842,910)
Purchases of energy equipment			(16,907,742)		(16,907,742)
General and administrative expenditures	(2,653,092)	(5,356)	(8,196)		(2,666,644)
Net cash provided by (used in) operating activities	<u>5,619,718</u>	<u>(37,130)</u>	<u>1,785,581</u>	<u>-</u>	<u>7,368,169</u>
Cash Flows from Non-capital Financing Activities					
Funds received (disbursed) from escrow & custodial accounts	(564,964)				(564,964)
Advances to CGB component units	(4,051,000)			1,050,000	(3,001,000)
Advances repaid (disbursed) to third party capital providers	90,908				90,908
Subordinated debt advance to component units					
Advances from CGB and component units			1,050,000	(1,050,000)	
Repayments of Advances (to) from component units					
Net cash provided by (used in) non-capital financing activities	<u>(4,525,056)</u>	<u>-</u>	<u>1,050,000</u>	<u>-</u>	<u>(3,475,056)</u>
Cash Flows from Capital and Related Financing Activities					
Purchase of capital assets	(105,149)				(105,149)
Proceeds from long-term debt	2,957,971				2,957,971
Repayment of long-term debt			(715,950)		(715,950)
Interest expense			(172,379)		(172,379)
Proceeds from subordinated debt with component unit					
Capital contributions from/(to) component entities					
Capital contributions from Firststar Development, LLC					
Return of capital to Firststar Development, LLC					
Net cash provided by (used in) capital and related financing activities	<u>2,852,822</u>	<u>(888,329)</u>	<u>-</u>	<u>-</u>	<u>1,964,493</u>
Cash Flows from Investing Activities					
Loan losses	(20,277)				(20,277)
Return of principal on WC & program loans	8,812,656	719,230			9,531,886
Interest on short-term investments, cash, solar lease notes and loans	2,426,254	245,866	7,719		2,679,839
CPACE program loan disbursements	(5,602,984)				(5,602,984)
Grid Tied program loan disbursements	(319,471)				(319,471)
AD/CHP program loan disbursements	(1,997,403)				(1,997,403)
Alpha/Operational Demo program loan disbursements	(15,000)				(15,000)
Energy Efficiency program loan disbursements	(130,000)				(130,000)
HOPBI program loan disbursements					
Residential Solar Loan program disbursements	(9,537,847)				(9,537,847)
Net cash used in investing activities	<u>(6,384,072)</u>	<u>965,096</u>	<u>7,719</u>	<u>-</u>	<u>(5,411,257)</u>
Net Increase (Decrease) in Cash and Cash Equivalents	(2,436,588)	39,637	2,843,300	-	446,349
Cash and Cash Equivalents - Beginning of Year	39,462,829	3,342,991	4,013,553	-	46,819,373
Cash and Cash Equivalents - End of Year	\$ 37,026,241	\$ 3,382,628	\$ 6,856,853	\$ -	\$ 47,265,722
Changes in operating assets and liabilities:					
Provided by (Used in) Operating Activities:					
Operating income (loss)	\$ (4,999,998)	\$ (65,028)	\$ 1,186,526	\$	\$ (3,878,500)
Adjustments to reconcile operating loss to net cash provided by (used in) operating activities:					
Depreciation	116,584				116,584
Accretion					
Deferred lease revenue					
Pension expense adjustment	1,746,587				1,746,587
Other					
Changes in operating assets and liabilities:					
(Increase) decrease in operating assets	2,972,962	26,233	5,822,064		8,821,259
(Decrease) increase in operating liabilities	5,783,583	1,665	(5,223,009)		562,239
Net Cash Provided by (Used in) Operating Activities	\$ 5,619,718	\$ (37,130)	\$ 1,785,581	\$ -	\$ 7,368,169

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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.

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.

Upon commencement of operations in fiscal 2018, CT Solar Lease 3 LLC will derive revenue from the following sources: energy generation and the sale of Solar Renewable Energy Certificates ("SRECs") to third parties.

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 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. Non-operating revenue (expense) consists of investment earnings, and other items not considered operational by management.

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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

Use of Estimates

Management uses estimates and assumptions in preparing these financial statements in accordance with accounting principles generally accepted in the United States of America. Those estimates and assumptions affect certain reported amounts and disclosures in the financial statements. Actual results could vary from the estimates that were used.

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 \$500 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.

The estimated useful lives of capital assets are as follows:

<u>Asset</u>	<u>Years</u>
Solar lease 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.

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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

All solar facilities are owned by CT Solar Lease 2 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. Solar facilities in process represent facilities which are in various stages of construction or have not yet received the necessary utility company approvals.

Impairment of Long-Lived Assets

CT Solar Lease 2 LLC ("CT SL2") reviews its 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 during the fiscal year ending June 30, 2017. As of June 30, 2017, CT Solar Lease 3 LLC had not acquired any solar facilities.

Asset Retirement Obligations

CT SL2 is required to recognize its liability related to asset retirement obligations when it has 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 to remove the solar facilities at its 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. 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 considers 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 routinely reviews and reassesses its estimates to determine if an adjustment to the value of asset retirement obligations is required. As of June 30, 2017, CT Solar Lease 3 LLC had not acquired any solar facilities.

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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

The aggregate carrying amount of asset retirement obligations recognized by CT SL2 was \$3,020,405 and \$2,528,335 at June 30, 2017 and June 30, 2016 respectively. The following table shows changes in the aggregate carrying amount of CT SL2's asset retirement obligation for the year ended June 30, 2017:

Balance - June 30, 2016	\$	2,528,335
Additional accruals		429,559
Accretion expense		<u>62,511</u>
Balance - June 30, 2017	\$	<u>3,020,405</u>

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.

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.

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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

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 2016 summarized information have been reclassified to conform to the 2017 presentation.

Subsequent Events

CGB has performed a review of events subsequent to the statement of net position date through **October XX, 2017**, the date of the financial statements where available to be issued. Except as described below, no additional events requiring recording or disclosure in the financial statements were identified.

CT Solar Lease 3 LLC

On August 2, 2017, an operating agreement between CEFIA Solar Services Inc. ("Solar Services"), as the managing member, and Firststar Development LLC ("Firststar"), as the investor member, was executed for CT Solar Lease 3 LLC ("CT SL3"). Solar Services membership interest is 1% and Firststar's membership interest is 99%. Solar Services has committed to providing \$13,984,204 in capital contributions and Firststar has committed providing \$7,861,324 in capital contributions to CT SL3. On August 2, 2017 CT SL3 also executed a Development and Purchase Agreement (the "Agreement") with CEFIA Holdings LLC to purchase commercial solar projects. The Agreement commits CT SL3 to purchase \$21,457,062 of commercial solar projects from CEFIA Holdings LLC.

Purchase of Hydroelectric Facility

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 will remit 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 commences on the date commercial operations begin and terminates on the 30th anniversary of said date. Commercial operations began on xxxxx. In addition to revenues earned through its lease with Hanover Pond, CGB Meriden will also receive 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

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.

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.

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

2. FAIR VALUE MEASUREMENTS (CONTINUED)

The following table sets forth by level, within the fair value hierarchy, the Green Bank's fair value measurements at June 30, 2017:

	Investment Assets at Fair Value as of June 30, 2017			
	Level 1	Level 2	Level 3	Total
Portfolio investments	\$	\$	\$ 1	\$ 1

The following table sets forth by level, within the fair value hierarchy, CGB's fair value measurements at June 30, 2016:

	Investment Assets at Fair Value as of June 30, 2016			
	Level 1	Level 2	Level 3	Total
Portfolio investments	\$	\$	\$ 1,000,000	\$ 1,000,000

There were no transfers between levels during the years ended June 30, 2017 and 2016.

3. CASH AND CASH EQUIVALENTS

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

	2017	2016
Checking	\$ 8,382,573	\$ 4,499,265
Money Market	13,114,107	10,103,292
State Treasurer's Short-Term Investment Fund	16,413,982	33,469,504
Unrestricted cash and cash equivalents	37,910,662	48,072,061
Checking - restricted	1,132,633	1,109,782
Money Market - restricted	8,986,340	5,001,190
State Treasurer's Short-Term Investment Fund - restricted	11,182,054	3,639,011
Total cash and cash equivalents	\$ 59,211,689	\$ 57,822,044

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

3. CASH AND CASH EQUIVALENTS (CONTINUED)

	Cash and Cash Equivalents as of June 30, 2017				
	Primary Government	CT Solar Lease 2 LLC	CEFIA Solar Services, Inc.	CT Solar Lease 3 LLC	Total
Checking	\$ 7,722,434	\$ 523,672	\$ 135,967	\$ 500	\$ 8,382,573
Money Market	6,331,063	4,942,933	1,839,611	500	13,114,107
State Treasurer's Short-Term Investment Fund	16,413,982				16,413,982
Unrestricted Cash and Cash Equivalents	30,467,479	5,466,605	1,975,578	1,000	37,910,662
Restricted Cash					
Checking	132,633	1,000,000			1,132,633
Money market	5,483,556	3,502,784			8,986,340
State Treasurer's Short-Term Investment Fund	11,182,054				11,182,054
	<u>\$ 47,265,722</u>	<u>\$ 9,969,389</u>	<u>\$ 1,975,578</u>	<u>\$ 1,000</u>	<u>\$ 59,211,689</u>

	Cash and Cash Equivalents as of June 30, 2016				
	Primary Government	CT Solar Lease 2 LLC	CEFIA Solar Services, Inc.	CT Solar Lease 3 LLC	Total
Checking	\$ 4,179,676	\$ 244,856	\$ 74,733	\$ -	\$ 4,499,265
Money Market	3,920,210	1,136,650	5,046,432		10,103,292
State Treasurer's Short-Term Investment Fund	33,469,504				33,469,504
Unrestricted Cash and Cash Equivalents	41,569,390	1,381,506	5,121,165	-	48,072,061
Restricted Cash					
Checking	109,782	1,000,000			1,109,782
Money market	1,501,190	3,500,000			5,001,190
State Treasurer's Short-Term Investment Fund	3,639,011				3,639,011
	<u>\$ 46,819,373</u>	<u>\$ 5,881,506</u>	<u>\$ 5,121,165</u>	<u>\$ -</u>	<u>\$ 57,822,044</u>

State Treasurer's Short-Term Investment Fund

The State Treasurer's Short-Term Investment Fund is a Standard & Poors 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 FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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.

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, CGB's deposits may not be returned to it. CGB does not have a deposit policy for custodial credit risk. As of June 30, 2017 and 2016, \$29,254,187 and \$19,019,356, respectively, of CGB's bank balances were exposed to custodial credit risk. Primary government consisted of \$17,966,373 and \$8,727,950 as of June 30, 2017 and 2016, respectively. CT Solar Lease 2, LLC consisted of \$9,562,237 and \$5,420,241 as of June 30, 2017 and 2016, respectively. CEFIA Solar Services, Inc. consisted of \$ 1,725,577 and \$4,871,165 as of June 30, 2017 and 2016, respectively. Funds held by banks on behalf of CGB, CT Solar Lease 2 LLC and CEFIA Solar Services included contractual requirements to maintain \$10,132,312 in deposits with financial institutions participating in various lease and loan programs, representing loan loss and lease maintenance reserves and guaranty pledge accounts.

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. CGB does not have a policy relating to the credit risk of investments. As of June 30, 2017 and 2016, CGB had no reportable credit risk.

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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 \$8,858 for each bond as a result of a C-PACE loan payoff in 2016. At June 30, 2017, 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 a principal repayment of \$81,877 for each bond as a result of a C-PACE loan payoff in 2017. At June 30, 2017, 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.

Principal maturities of these bonds are as follows:

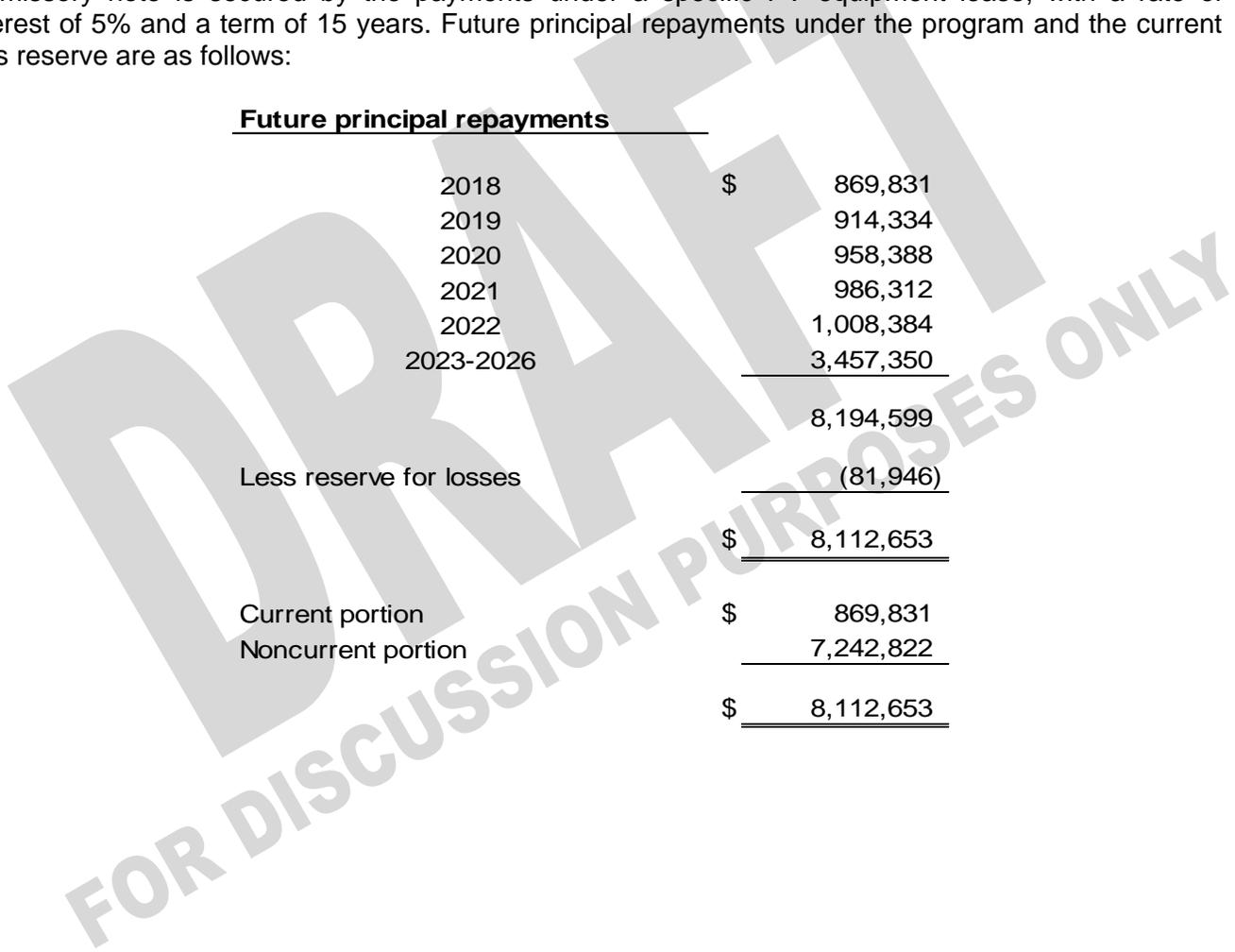
<u>Year ended June 30,</u>	<u>2014B-1</u>	<u>2014C-1</u>	<u>2015B-1</u>	<u>2015C-1</u>	<u>Total</u>
2018	\$	\$	\$	\$	\$
2019					
2020					
2021					
2022					
2023 - 2027					
2028 - 2032	457,500	457,500			915,000
2033 - 2037	<u>333,642</u>	<u>333,642</u>	<u>873,123</u>	<u>873,123</u>	<u>2,413,530</u>
	\$ <u>791,142</u>	\$ <u>791,142</u>	\$ <u>873,123</u>	\$ <u>873,123</u>	\$ <u>3,328,530</u>

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

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:

<u>Future principal repayments</u>	
2018	\$ 869,831
2019	914,334
2020	958,388
2021	986,312
2022	1,008,384
2023-2026	<u>3,457,350</u>
	8,194,599
Less reserve for losses	<u>(81,946)</u>
	<u>\$ 8,112,653</u>
Current portion	\$ 869,831
Noncurrent portion	<u>7,242,822</u>
	<u>\$ 8,112,653</u>



**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

7. PROGRAM LOANS RECEIVABLE

Outstanding principal balances by program for the years ending June 30, 2017 and 2016 are as follows:

	<u>2017</u>	<u>2016</u>
Loans in repayment for completed projects:		
Connecticut Green Bank		
CPACE Program benefit assessments- in repayment	\$ 12,157,762	\$ 11,221,563
CPACE Promissory notes	1,791,578	1,553,884
Grid-Tied Program term loans	10,568,847	8,701,188
Multifamily/Affordable housing program loans	10,967,995	2,467,231
Alpha/Operational Demonstration program loans	1,151,421	1,136,421
Other program loans	684,580	680,737
CT Solar Loan I LLC		
Residential Solar PV Program loans-in repayment	3,321,253	4,041,563
	40,643,436	29,802,587
Reserve for loan losses	(5,611,942)	(4,674,813)
Total loans in repayment for completed projects, net	<u>\$ 35,031,494</u>	<u>\$ 25,127,774</u>
Loan advances for projects under construction:		
Connecticut Green Bank		
CPACE Program benefit assessments- under construction	\$ 7,174,667	\$ 8,113,510
CT Solar Loan I LLC		
Residential Solar PV Program loans-under construction	_____	26,233
Total loans advances for projects under construction	<u>\$ 7,174,667</u>	<u>\$ 8,139,743</u>

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

7. PROGRAM LOANS RECEIVABLE (CONTINUED)

Scheduled repayments of principal under these loans in repayment as of June 30, 2017 is as follows:

	2018	2019	2020	2021	2022	Thereafter	Total
Connecticut Green Bank							
CPACE Program benefit assessments- in repayment	\$ 488,884	\$ 519,622	\$ 548,639	\$ 577,611	\$ 611,546	\$ 9,411,460	\$ 12,157,762
CPACE promissory notes	36,868	45,922	49,482	53,584	58,217	1,547,505	1,791,578
Grid-Tied Program term loans	303,360	310,752	318,374	327,904	1,216,697	8,091,760	10,568,847
Multifamily/Affordable housing term loans	791,352	767,720	810,092	857,148	1,400,785	6,340,898	10,967,995
Alpha/Operational Demonstration program loans	501,421					650,000	1,151,421
Other program loans	110,462	101,535	95,000	12,699	37,801	327,083	684,580
CT Solar Loan I LLC							
Residential Solar PV Program loans - in repayment	197,497	189,172	202,005	215,537	230,633	2,286,409	3,321,253
	2,429,844	1,934,723	2,023,592	2,044,483	3,555,679	28,655,115	40,643,436
Reserve for loan losses	(519,796)	(1,100)	(38,460)	(3,378)		(5,049,208)	(5,611,942)
	<u>\$ 1,910,048</u>	<u>\$ 1,933,623</u>	<u>\$ 1,985,132</u>	<u>\$ 2,041,105</u>	<u>\$ 3,555,679</u>	<u>\$ 23,605,907</u>	<u>\$ 35,031,494</u>

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. CPACE promissory notes represent a component of proceeds received from the sale of 37 benefit assessments from the Green Bank's portfolio to a third-party capital provider. These promissory notes 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.

Grid-tied terms loan represent the financing of three projects. The first project is the 15 -megawatt Bridgeport Fuel Cell Park from Project 150. Interest is paid monthly on the outstanding principal balance at a rate of 5.0% until 2022 when principal repayments commence over a 48-month period. 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 non-revolving term loan is paid quarterly based on the project's cash flows. The minimum rate of interest on the non-revolving term loan is 10%. Principal under both loans is repaid at maturity which is 15 years from the date the project was placed in service. The project was placed in service in November of 2015. 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.

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, 2017, the Green Bank has advanced \$7,691,173 of a \$10,000,000 term financing facility comprising two promissory notes with interest rates of 5% and 7.7% payable monthly. Each advance under the notes matures six years from the date of the advance. The final maturity date of all advances made under these notes as of June 30, 2017 is September 26, 2023. Under a second initiative as of June 30, 2017, the Green Bank has advanced \$3,500,000 of a \$3,500,000 term financing facility comprising 4 promissory notes. All notes carry an interest rate of 3% payable along with principal on a monthly basis. The notes have terms of 7 and 20 years with maturities ranging from December 1, 2025 to October 1, 2037.

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

7. PROGRAM LOANS RECEIVABLE (CONTINUED)

Multifamily pre-development loans are advances to developers and owners 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, 2017, \$91,875 had been advanced under this program.

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 represent the financing of feasibility studies for various renewable energy projects or energy efficiency upgrades.

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. FINANCING ACTIVITIES

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, 2017 and 2016 there was \$508,793 and \$691,707, respectively, outstanding. All borrowings will have matured by September 20, 2028.

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.

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

8. FINANCING ACTIVITIES (CONTINUED)

Future maturities on borrowings on the LOC are as follows:

<u>Years Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2018	\$ 47,385	\$ 29,237	\$ 76,622
2019	49,991	26,325	76,316
2020	52,848	23,248	76,096
2021	55,874	19,994	75,868
2022	59,080	16,555	75,635
2023 - 2027	231,771	32,834	264,605
Thereafter	11,844	294	12,138
	<u>\$ 508,793</u>	<u>\$ 148,487</u>	<u>\$ 657,280</u>

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.

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.

Future maturities on borrowings under the Reinvestment Fund LOC is as follows:

<u>Years Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2018	\$ 139,722	\$ 113,371	\$ 253,093
2019	96,608	107,496	204,104
2020	102,587	101,517	204,104
2021	108,936	95,168	204,104
2022	115,678	88,426	204,104
2023 - 2027	1,405,642	68,238	1,473,880
Thereafter			-
	<u>\$ 1,969,173</u>	<u>\$ 574,216</u>	<u>\$ 2,543,389</u>

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

8. 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 Hyro 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 15th. Proceeds from the sale of the CREB have been deposited with the bond trustee and will be disbursed upon acquisition of the hydroelectric facility from its developer which is expected to occur during the first quarter of fiscal year 2018. 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 US Treasury under Section 54xxx 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>Total</u>
2018	\$ 53,418	\$ 97,430	\$ 150,848
2019	106,223	121,701	227,924
2020	109,041	117,250	226,291
2021	123,718	112,681	236,399
2022	134,348	107,497	241,845
2023 - 2027	842,955	440,696	1,283,651
2028 - 2032	841,184	262,200	1,103,384
2033 - 2037	747,084	95,718	842,802
	<u>\$ 2,957,971</u>	<u>\$ 1,355,173</u>	<u>\$ 4,313,144</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, 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.

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

8. FINANCING ACTIVITIES (CONTINUED)

Future maturities on borrowings under CHFA is as follows:

<u>Years Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2018	\$ 94,788	\$ 44,927	\$ 139,715
2019	94,788	42,557	137,345
2020	94,788	40,187	134,975
2021	94,788	37,817	132,605
2022	94,788	35,448	130,236
2023 - 2027	473,953	141,692	615,645
2028 - 2032	473,953	82,448	556,401
2033 - 2037	418,667	23,949	442,616
	<u>\$ 1,840,513</u>	<u>\$ 449,025</u>	<u>\$ 2,289,538</u>

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

CT Solar Lease 2, LLC has a \$24,000,000 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:

KeyBank, N.A	\$ 17,250,000
Webster Bank, N.A.	<u>10,350,000</u>
	<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 and 2016, \$27,500,633 and \$18,000,000, respectively, had been advanced under the additional LOC. Principal repayments as of June 30, 2017 and 2016 were \$1,560,600 and \$832,325, 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 percent. 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.

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

8. FINANCING ACTIVITIES (CONTINUED)

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 9.

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.

9. 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 \$17,553,675 and \$19,374,375 as of June 30, 2017 and 2016, respectively. The KeyBank Agreement provides for CT Solar Lease 2 LLC to receive payments based on the 1 month USD-LIBOR-BBA (1.15889% and 0.44205% at June 15, 2017 and 2016, 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, 2017 and 2016 was reported as a liability of \$520,880 and \$1,627,864, respectively which is represented as the fair value of the interest rate swap on the accompanying 2017 and 2016 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 \$2,000,000 as of June 30, 2017. The Webster Agreement provides for CT Solar Lease 2 LLC to receive payments based on the 1 month USD-LIBOR-BBA (1.21556% at June 22, 2017, the date the Webster Agreement became effective. Subsequent reset dates will be adjusted to coincide with the KeyBank reset date of the 15th of each month) 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, 2017 was reported as a liability of \$19,997 which is a component of the fair value of interest rate swap on the accompanying 2017 and 2016 Statement of Net Position.

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

10. 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 \$77,807 and \$58,401 for the years ended June 30, 2017 and 2016, respectively. As June 30, 2017, no amount was due to CI. The amount due CI as of June 30, 2016 was \$30,127.

Unused Commitment Fee

The Investor Member of CT Solar Lease 2 LLC is entitled to an annual fee due within 30 days of the end of each calendar year, 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 percent 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 US Bank Prime Rate in effect on the due date plus 2 percent. The unused commitment fee totaled \$33,896 and \$99,486 for the years ended June 30, 2017 and 2016, respectively, and is included in accounts payable and accrued expenses on the accompanying statement of net position.

Priority Return

The Investor Member is the Tax-Equity Investor and is entitled to substantially all of the tax benefits of CT Solar Lease 2 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, 2021, the Flip Date.

The investor Member of CT Solar Lease 2 LLC shall be due a cumulative, quarterly distribution 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 a priority returns of \$436,452 and \$299,831 for the years ended June 30, 2017 and 2016, respectively.

Administrative Services Fee

The Managing Member of CT Solar Lease 2 LLC, CEFIA Solar Services, Inc. provides administrative and management services to the Company and earns a quarterly fee initially equal to \$30,000 per quarter beginning July 1, 2013. The amount of the fee increased 2.5 percent each July 1st beginning July 1, 2014. The administrative services fee totaled \$129,227 and \$130,075 for the years ended June 30, 2017 and 2016, respectively, and is included in accounts payable and accrued expenses on the accompanying statement of net position.

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

10. RELATED PARTY TRANSACTIONS AND OPERATING LEASES (CONTINUED)

Prepaid Priority Return

The investor member of CT Solar Lease 2 LLC will be paid a prepaid priority return with respect to each residential energy system project where the customer has made a prepayment to CT Solar Lease 2 LLC. The prepaid priority return is a one-time distribution to the investor member equal to 4.2055% of each prepaid project's purchase price. The prepaid priority return will be paid to the investor member on the date it makes its initial acquisition capital contribution with respect to the purchase of the prepaid project. During the years ended June 30, 2017, there was nothing paid to the investor member related to the prepaid priority return. During the year ended June 30, 2016, the investor member was paid \$1,717 related to the prepaid priority return.

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 2017 and 2016 was \$3,757,008 and \$3,691,048, respectively, comprising 74.33% and 74.30% respectively, of gross salaries.

Operating Leases

During 2014, the Green Bank entered into a non-cancellable 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, 2017 and 2016 was \$164,614 and \$159,498, respectively.

In addition, the Green Bank has a non-cancelable 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, 2017 and 2016 amounted to \$95,000 and \$105,422, respectively. The Green Bank also began sub leasing additional office space from CI in March of 2016. Initial monthly payments are \$5,665.50 with escalating payments through December 2020. Rent expense related to this sub lease were \$68,894 and \$22,662 for the years ended June 30, 2017 and 2016, respectively.

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, 2017 and 2016 was \$11,005 and \$13,465, respectively.

Future minimum lease payments for office rentals are as follows:

Years Ending June 30,

2018	\$	333,379
2019		341,440
2020		349,501
2021		<u>176,766</u>
	\$	<u><u>1,201,086</u></u>

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

11. CAPITAL ASSETS

Capital asset activity for reporting entity for the years ended June 30, 2017 and 2016 are as follows:

Primary Government:

<u>2017</u>	<u>Balance, July 1, 2016</u>	<u>Additions</u>	<u>Deletions</u>	<u>Adjustments</u>	<u>Balance, June 30, 2017</u>
Capital assets being depreciated:					
Furniture and equipment	\$ 169,423	\$ 532	\$	\$	\$ 169,955
Computer hardware and software	212,831	45,151	(23,845)		234,137
Leasehold improvements	225,844	25,137			250,981
Capital assets not being depreciated:					
Construction in progress	4,502	9,517	(14,019)		-
	<u>612,600</u>	<u>80,337</u>	<u>(37,864)</u>	<u>-</u>	<u>655,073</u>
Less accumulated depreciation and amortization:					
Furniture and equipment	103,079	33,300			136,379
Computer hardware and software	151,573	37,244	(23,845)		164,972
Leasehold improvements	109,196	46,040			155,236
	<u>363,848</u>	<u>116,584</u>	<u>(23,845)</u>	<u>-</u>	<u>456,587</u>
Capital assets, net	<u>\$ 248,752</u>	<u>\$ (36,247)</u>	<u>\$ (14,019)</u>	<u>\$ -</u>	<u>\$ 198,486</u>
<u>2016</u>	<u>Balance, July 1, 2015</u>	<u>Additions</u>	<u>Deletions</u>	<u>Adjustments</u>	<u>Balance, June 30, 2016</u>
Capital assets being depreciated:					
Furniture and equipment	\$ 222,701	\$ 11,417	\$ (7,054)	\$ (57,641)	\$ 169,423
Computer hardware and software	128,627	35,963	(9,400)	57,641	212,831
Leasehold improvements	153,657	72,187			225,844
Capital assets not being depreciated:					
Construction in progress	7,141	23,090	(25,729)		4,502
	<u>512,126</u>	<u>142,657</u>	<u>(42,183)</u>	<u>-</u>	<u>612,600</u>
Less accumulated depreciation and amortization:					
Furniture and equipment	122,149	60,653	(4,125)	(75,598)	103,079
Computer hardware and software	50,906	26,124	(1,055)	75,598	151,573
Leasehold improvements	75,232	33,964			109,196
	<u>248,287</u>	<u>120,741</u>	<u>(5,180)</u>	<u>-</u>	<u>363,848</u>
Capital assets, net	<u>\$ 263,839</u>	<u>\$ 21,916</u>	<u>\$ (37,003)</u>	<u>\$ -</u>	<u>\$ 248,752</u>

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

11. CAPITAL ASSETS (CONTINUED)

Discretely presented component units:

2017	Balance, July 1, 2016	Additions	Deletions	Adjustments	Balance, June 30, 2017
Capital assets being depreciated:					
Solar lease equipment	\$ 47,534,491	\$ 21,042,372	\$	\$ (3,646,021)	\$ 64,930,842
Capital assets not being depreciated:					
WIP solar lease equipment	11,931,741	6,685,666	(20,906,922)	2,289,515	-
	<u>59,466,232</u>	<u>27,728,038</u>	<u>(20,906,922)</u>	<u>(1,356,506)</u>	<u>64,930,842</u>
Less accumulated depreciation and amortization:					
Solar lease equipment	1,600,070	2,307,547		(288,496)	3,619,121
	<u>1,600,070</u>	<u>2,307,547</u>	<u>-</u>	<u>(288,496)</u>	<u>3,619,121</u>
Capital assets, net	<u>\$ 57,866,162</u>	<u>\$ 25,420,491</u>	<u>\$ (20,906,922)</u>	<u>\$ (1,068,010)</u>	<u>\$ 61,311,721</u>
2016	Balance, July 1, 2015	Additions	Deletions	Adjustments	Balance, June 30, 2016
Capital assets being depreciated:					
Solar lease equipment	\$ 21,011,832	\$ 29,240,167	\$	\$ (2,717,508)	\$ 47,534,491
Capital assets not being depreciated:					
WIP solar lease equipment	6,014,560	18,206,741	(11,067,035)	(1,222,525)	11,931,741
	<u>27,026,392</u>	<u>47,446,908</u>	<u>(11,067,035)</u>	<u>(3,940,033)</u>	<u>59,466,232</u>
Less accumulated depreciation and amortization:					
Solar lease equipment	319,144	1,532,051		(251,125)	1,600,070
	<u>319,144</u>	<u>1,532,051</u>	<u>-</u>	<u>(251,125)</u>	<u>1,600,070</u>
Capital assets, net	<u>\$ 26,707,248</u>	<u>\$ 45,914,857</u>	<u>\$ (11,067,035)</u>	<u>\$ (3,688,908)</u>	<u>\$ 57,866,162</u>

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

11. CAPITAL ASSETS (CONTINUED)

Total Reporting Entity:

2017	Balance, July 1, 2016	Additions	Deletions	Adjustments	Balance, June 30, 2017
Capital assets being depreciated:					
Solar lease equipment	\$ 47,534,491	\$ 21,042,372	\$	\$ (3,646,021)	\$ 64,930,842
Furniture and equipment	169,423	532			169,955
Computer hardware and software	212,831	45,151	(23,845)		234,137
Leasehold improvements	225,844	25,137			250,981
Capital assets not being depreciated:					
WIP solar lease equipment	11,931,741	6,685,666	(20,906,922)	2,289,515	-
Construction in progress	4,502	9,517	(14,019)		-
	<u>60,078,832</u>	<u>27,808,375</u>	<u>(20,944,786)</u>	<u>(1,356,506)</u>	<u>65,585,915</u>
Less accumulated depreciation and amortization:					
Solar lease equipment	1,600,070	2,307,547		(288,496)	3,619,121
Furniture and equipment	103,079	33,300			136,379
Computer hardware and software	151,573	37,244	(23,845)		164,972
Leasehold improvements	109,196	46,040			155,236
	<u>1,963,918</u>	<u>2,424,131</u>	<u>(23,845)</u>	<u>(288,496)</u>	<u>4,075,708</u>
Capital assets, net	<u>\$ 58,114,914</u>	<u>\$ 25,384,244</u>	<u>\$ (20,920,941)</u>	<u>\$ (1,068,010)</u>	<u>\$ 61,510,207</u>
2016	Balance, July 1, 2015	Additions	Deletions	Adjustments	Balance, June 30, 2016
Capital assets being depreciated:					
Solar lease equipment	\$ 21,011,832	\$ 29,240,167	\$	\$ (2,717,508)	\$ 47,534,491
Furniture and equipment	222,701	11,417	(7,054)	(57,641)	169,423
Computer hardware and software	128,627	35,963	(9,400)	57,641	212,831
Leasehold improvements	153,657	72,187			225,844
Capital assets not being depreciated:					
WIP solar lease equipment	6,014,560	18,206,741	(11,067,035)	(1,222,525)	11,931,741
Construction in progress	7,141	23,090	(25,729)		4,502
	<u>27,538,518</u>	<u>47,589,565</u>	<u>(11,109,218)</u>	<u>(3,940,033)</u>	<u>60,078,832</u>
Less accumulated depreciation and amortization:					
Solar lease equipment	319,144	1,532,051		(251,125)	1,600,070
Furniture and equipment	122,149	60,653	(4,125)	(75,598)	103,079
Computer hardware and software	50,906	26,124	(1,055)	75,598	151,573
Leasehold improvements	75,232	33,964			109,196
	<u>567,431</u>	<u>1,652,792</u>	<u>(5,180)</u>	<u>(251,125)</u>	<u>1,963,918</u>
Capital assets, net	<u>\$ 26,971,087</u>	<u>\$ 45,936,773</u>	<u>\$ (11,104,038)</u>	<u>\$ (3,688,908)</u>	<u>\$ 58,114,914</u>

12. GRANT PROGRAMS

The Green Bank, the primary government, recognizes grant revenue based on expenditures or fulfillment of program requirements. For the year ended June 30, 2017 and 2016, the Green Bank recognized related grant revenue of \$73,486 and \$589,917, respectively under Department of Energy programs.

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

13. COMMITMENTS AND LOAN GUARANTEES

Commitments

As of June 30, 2017 and 2016, 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, 2017</u>	<u>Type</u>	<u>June 30, 2016</u>
Primary Government				
Connecticut Green Bank				
Solar PV	Incentive	\$ 52,403,654	Incentive	\$ 56,457,195
AD/CHP Programs	Loan	18,464,844	Loan	15,462,247
Fuel Cells	Loan	5,000,000	Loan	-
CSPACE	Loan	2,089,057	Loan	7,022,004
Multifamily/LMI Solar PV & Energy Eff.	Loan	3,179,452	Grant/Loan	9,510,841
Energy Efficiency Programs	Grant/Loan	-	Grant	1,130,000
Education and Outreach	Grant	58,704	Loan	706,900
Other Technologies	Loan	271,795	Loan	271,795
Alpha and Operational Demonstration	Loan	-	Loan	165,000
		<u>81,467,506</u>		<u>90,725,982</u>
Solar PV commitments payable to CT Solar Lease 2 LLC:		<u>(4,593,338)</u>		<u>(6,223,664)</u>
Total Reporting Entity		<u>\$ 76,874,168</u>		<u>\$ 84,502,318</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 FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

13. COMMITMENTS AND LOAN GUARANTEES (CONTINUED)

Loan Guarantees

As of June 30, 2017 and 2016, the following financial guarantees, approved by the Board of Directors, were outstanding. As of June 30, 2017 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.

Guarantor	Issuer	Relationship of Guarantor to Issuer	Type of Obligation Guaranteed	Maximum Amount of Guaranty	Obligations Guaranteed as of 6/30/2017	Obligations Guaranteed as of 6/30/2016
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	\$ 1,323,325	\$ -
CGB	Developers of clean energy projects in Connecticut	Issuers participate in programs administered by CGB to install energy equipment at residential and commercial sites.	Commercial loans with various terms	5,000,000	-	-
CGB	CT Solar Loan I LLC	Blended unit of primary government	Non revolving term note	2,510,837	1,969,173	2,502,218
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	Guarantee limited to \$600,000 on revolving credit note of \$6,000,000	600,000	6,000,000	6,000,000
CGB	New England Hydropower Company	Issuer is the developer of hydropower project in Connecticut approved by the CGB Board of Directors.	Line of Credit	3,900,000	3,896,773	-
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	-
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 (QECCBs) for State Sponsored Housing Projects (SSHP)	1,895,807	1,840,513	-
				<u>\$ 19,206,644</u>	<u>\$ 15,329,784</u>	<u>\$ 8,502,218</u>

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

14. PENSION PLAN

All employees of the Green Bank participate in the State Employees' Retirement System (SERS), which is administered by the State Employees' Retirement Commission. The CGB has no liability for pension costs other than the annual contribution. The latest actuarial study was performed on the plan as a whole, as of June 30, 2012, and does not separate information for employees of the CGB. Therefore, certain pension disclosures pertinent to CGB otherwise required pursuant to accounting principles generally accepted in the United States of America are omitted. Based upon the 2012 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% (previously 8%); (2) price inflation of 2.5% (previously 2.75%) for cost of living adjustments; (3) projected salary increases of 3.5% to 19.5% (previously 4% to 20%), Social Security wage base increases of 3.50% per annum; (4) payroll growth of 3.5% (previously 3.75%) per annum; and (5) the RP-2014 White Collar Mortality Table (previously RP-2000 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, CT 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 three tiers. Tier I and Tier IIA are contributory plans, and Tier II is a noncontributory plan.

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. 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, will become members of Tier IIA. Tier IIA plan is essentially the existing Tier II plan with the exception that employee contributions of 2 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
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

14. PENSION PLAN (CONTINUED)

Employees hired on or after July 1, 2011 are covered under the Tier III plan. Tier III requires employee contributions of two percent of salary up to a \$250,000 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.

The total payroll for employees of the Green Bank covered by SERS for the years ended June 30, 2017 and 2016 was \$5,061,287 and \$4,695,647, 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>2017</u>	<u>2016</u>	<u>2015</u>
Contributions made:			
By employees	\$ 144,286	\$ 208,516	\$ 171,260
Percent of current year covered payroll	2.9%	4.4%	4.3%
Percent of required contributions	100.0%	100.0%	100.0%
By CGB	\$ 1,803,349	\$ 2,474,182	\$ 1,974,507
Percent of current year covered payroll	35.6%	52.7%	49.2%
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.

15. PENSION LIABILITIES, PENSION EXPENSE, DEFERRED OUTFLOWS OF RESOURCES, AND DEFERRED INFLOWS OF RESOURCES

The implementation of GASB 68 resulted in the Green Bank's reporting an initial net pension liability for fiscal year 2015. The Statement required the Green Bank to recognize 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 Pension (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.

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

15. PENSION LIABILITIES, PENSION EXPENSE, DEFERRED OUTFLOWS OF RESOURCES, AND DEFERRED INFLOWS OF RESOURCES (CONTINUED)

At June 30, 2017 and 2016, the Green Bank reported a liability of \$25,245,439 and \$16,096,113, respectively for its proportionate share of the net pension liability. The net pension liability as of June 30, 2017 was measured as of June 30, 2016, 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 2016 covered payroll multiplied by the SERS 2016 contribution rate of 40.36 percent. As of June 30, 2017 and 2016, the Green Bank's proportion was 0.10994 percent and 0.09741 percent respectively.

For the years ended June 30, 2017 and 2016, the Green Bank recognized pension expense of \$3,226,512 and \$1,399,477, respectively. Pension expense is reported in the Green Bank's financial statements as part of general and administration expense and grant and program expenditures. At June 30, 2017 and 2016, the Green Bank reported deferred outflows of resources and deferred inflows of resources related to pension from the following sources:

As of June 30, 2017:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Difference between expected and actual experience	\$ 701,307	\$
Net Difference between projected and actual earnings on pension plan investments	791,666	
Change of assumptions	4,501,094	
Change in proportion and differences between employer contributions and proportionate share of contributions	2,180,691	
CGB Contributions subsequent to the measurement date	<u>1,803,349</u>	
	<u>\$ 9,978,107</u>	<u>\$ -</u>

As of June 30, 2016:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Net Difference between projected and actual earnings on pension plan investments	\$ 2,535	\$
Change in proportion and differences between employer contributions and proportionate share of contributions	598,326	
CGB Contributions subsequent to the measurement date	<u>1,974,507</u>	
	<u>\$ 2,575,368</u>	<u>\$ -</u>

**CONNECTICUT GREEN BANK
 NOTES TO FINANCIAL STATEMENTS
 FOR THE YEAR ENDED JUNE 30, 2017**

15. PENSION LIABILITIES, PENSION EXPENSE, DEFERRED OUTFLOWS OF RESOURCES, AND DEFERRED INFLOWS OF RESOURCES (CONTINUED)

The amount recognized as deferred inflows of resources, representing the net difference between projected and actual earnings, 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 (2018)	\$	1,736,622
Year 2 (2019)		1,736,622
Year 3 (2020)		1,893,818
Year 4 (2021)		1,741,051
Year 5 (2022)		<u>1,066,648</u>
	\$	<u>8,174,761</u>

Actuarial Methods and Assumption

The total pension liability in the June 30, 2016 actuarial valuation was determined based on the results of an actuarial experience study for the period July 1, 2011 through June 30, 2015. 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	2.25%-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, 2016 was the long term expected rate of return, 6.90 percent. 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 2016.

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 FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

15. PENSION LIABILITIES, PENSION EXPENSE, DEFERRED OUTFLOWS OF RESOURCES, AND DEFERRED INFLOWS OF RESOURCES (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>
Large Cap U.S. Equities	21.0%	5.8%
Developed Non-U.S. Equities	18.0%	6.6%
Emerging Market (non-U.S.)	9.0%	8.3%
Real Estate	7.0%	5.1%
Private Equity	11.0%	7.6%
Alternative Investments	8.0%	4.1%
Fixed Income (Core)	8.0%	1.3%
High Yield Bonds	5.0%	3.9%
Emerging Market Bond	4.0%	3.7%
TIPS	5.0%	1.0%
Cash	4.0%	0.4%

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 percent, as well as the proportionate share of the net pension liability using a 1.00 percent increase or decrease from the current discount rate.

	<u>1% Decrease</u>	<u>Discount Rate</u>	<u>1% Increase</u>
	5.9%	6.9%	7.9%
CGB's proportionate share of the net pension liability	\$ 29,958,758	\$ 25,245,439	\$ 21,322,878

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

16. RESTRICTED NET POSITION

Restricted net position at June 30, 2017 and 2016 consisted of the following:

	<u>2017</u>	<u>2016</u>
Primary Government		
Nonexpendable		
Connecticut Innovations, Inc. equity interest	\$ <u>1,000</u>	\$ <u>1,000</u>
Energy Programs		
CGB		
Assets restricted for maintaining loan loss and interest rate buydown reserves	\$ 8,121,816	\$ 3,748,793
Assets restricted by contractual obligations under Clean Renewable Energy Bond	3,275,978	
Assets restricted by contractual obligations for maintaining pledge accounts for loan guarantees	5,099,517	1,200,346
CT Solar Loan I LLC		
Assets restricted by contractual obligations for maintaining loan loss reserve	<u>300,932</u>	<u>300,844</u>
	<u>16,798,243</u>	<u>5,249,983</u>
Discretely Presented Component Units		
CT Solar Lease 2 LLC		
Assets restricted for maintaining loan loss reserve	3,502,784	3,500,000
Assets restricted for operating and maintenance reserve	<u>1,000,000</u>	<u>1,000,000</u>
	<u>4,502,784</u>	<u>4,500,000</u>
	\$ <u>21,302,027</u>	\$ <u>9,750,983</u>

17. 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.

**CONNECTICUT GREEN BANK
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

18. 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. On March 23, 2015 the Green Bank entered into a contract to sell a total of 98,553 RECs generated during the calendar years of 2014 to 2016. For the years ended June 30, 2017 and 2016 the Green Bank generated and sold its contractual obligations of 45,000 and 30,000 RECs, respectively. As of June 30, 2017, the Green Bank has met its contractual obligations under this contract.

RECs trade on the New England Power Pool (NEPOOL) market. The market price of Connecticut Class 1 RECs as of June 30, 2017 ranged from \$17.00 to \$19.00. The Green Bank's inventory of RECs generated by commercial facilities as of June 30, 2017 and 2016 was \$44,682 and \$58,436, respectively. The Green Bank recorded its inventory as of June 30, 2017 at cost which is below market price.

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 15 year master purchase agreements ("MPA") for each vintage year that these systems are placed into service beginning with the vintage year commencing January 1, 2015 and terminating the earlier of the vintage year ending December 31, 2022 or the deployment of solar PV systems that in the aggregate can generate 300 megawatts of electricity. The Act requires all MPAs to be approved by the State's Public Utility Regulatory Authority ("PURA") prior to execution and sets the initial price for the purchase of a SHREC at \$50. Thereafter pricing will be determined by the Green Bank and incorporated into PURA approved MPAs for subsequent vintage years. The initial MPA for vintage years 2015, 2016 and 2017 was approved by PURA and executed on February 7, 2017. SHRECs created and certificated in the New England Power Pool Generation System ("NEPOOL GIS") from electricity generated for the period January 1, 2017 through December 31, 2017 for vintage 2015-2017 PV systems will be sold to the two utilities at the initial price of \$50 per SHREC on a quarterly basis. SHRECs are certificated by NEPOOL during the fifth month subsequent to the end of the quarter in which the electricity was generated. Once certificated ownership of the SHRECs are transferred to each public utility and payment is received by the Green Bank 30 days later. For electricity generated for the quarter ending March 31, 2017, SHREC certificates were created and transferred to the two utilities in July of 2017 at an aggregate sale price of \$400,700.

REQUIRED SUPPLEMENTARY INFORMATION

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FOR DISCUSSION PURPOSES ONLY

**CONNECTICUT GREEN BANK
SCHEDULE OF GREEN BANK'S PROPORTIONATE SHARE OF THE NET PENSION LIABILITY
LAST THREE FISCAL YEARS***

As of June 30,

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Green Bank's portion of the net pension liability	0.10994%	0.97410%	0.09304%
Green Bank's proportionate share of the net pension liability	\$ 25,245,439	\$ 16,096,113	\$ 14,899,766
Green Bank's covered employee payroll	\$ 5,061,287	\$ 4,695,647	\$ 4,013,411
Green Bank's proportionate share of the net pension liability as a percentage of its covered-employee payroll	498.79%	342.79%	371.25%
Plan fiduciary net position as a percentage of the total pension liability	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.

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**CONNECTICUT GREEN BANK
SCHEDULE OF GREEN BANK'S PROPORTIONATE CONTRIBUTIONS TO THE STATE EMPLOYEES' RETIREMENT SYSTEM (SERS)
LAST SIX FISCAL YEARS***

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012*</u>
Contractually required contribution	\$ 1,803,349	\$ 2,474,182	\$ 1,974,507	\$ 1,669,961	\$ 1,125,649	\$ 601,014
Contributions in relation to the contractually required contribution	<u>1,803,349</u>	<u>2,474,182</u>	<u>1,974,507</u>	<u>1,669,961</u>	<u>1,125,649</u>	<u>601,014</u>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Green Bank's covered employee payroll	\$ 5,061,287	\$ 4,695,647	\$ 4,013,411	\$ 3,121,583	\$ 2,517,190	\$ 1,541,308
Contributions as a percentage of covered-employee payroll	35.63%	52.69%	49.20%	53.50%	44.72%	38.99%

* The Green Bank had no employees prior to 2012 and accordingly there is no activity for 2011 and 2010.

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) 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 60-63

These schedules contain trend information to help the reader understand how CGB’s financial performance and well-being have changed over time.

Revenue Capacity 64-65

These schedules contain information to help the reader assess CGB’s most significant local revenue sources.

Debt Capacity 66

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 67-68

These schedules offer demographic and economic indicators to help the reader understand the environment within which CGB’s financial activities take place.

Operating Information 69-71

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 Six Fiscal Years**

	Year Ended June 30,					
	2017	2016	2015	2014	2013	2012
Primary Government						
Invested in capital assets, net of related debt	\$ 198,486	\$ 248,752	\$ 263,839	\$ 289,932	\$ 362,505	\$ 91,329
Restricted Net Position						
Non-expendable	1,000	1,000	1,000	1,000	1,000	
Restricted - energy programs	16,798,243	5,249,983	4,299,005	4,595,715	5,036,656	176,974
Unrestricted	<u>101,868,752</u>	<u>116,351,807</u>	<u>104,881,783</u>	<u>97,754,765</u>	<u>93,717,230</u>	<u>80,920,002</u>
	<u>118,866,481</u>	<u>121,851,542</u>	<u>109,445,627</u>	<u>102,641,412</u>	<u>99,117,391</u>	<u>81,188,305</u>
CT Solar Lease 2 LLC						
Invested in capital assets, net of related debt	70,192,062	65,678,493	30,830,671	3,538,975		
Restricted Net Position						
Non-expendable	22,682,460	17,482,892	8,007,153	1,294,801	100	
Restricted - energy programs	4,502,784	4,500,000	4,500,000	4,500,000	4,500,000	
Unrestricted (deficit)	<u>(56,504,068)</u>	<u>(53,701,649)</u>	<u>(28,210,286)</u>	<u>(5,741,703)</u>	<u>(1,616,886)</u>	
	<u>40,873,238</u>	<u>33,959,736</u>	<u>15,127,538</u>	<u>3,592,073</u>	<u>2,883,214</u>	<u>-</u>
CEFIA Solar Services, Inc.						
Restricted Net Position						
Non-expendable	100	100	100	100	100	
Restricted - energy programs						
Unrestricted (deficit)	<u>486,465</u>	<u>346,279</u>	<u>224,654</u>	<u>109,123</u>		
	<u>486,565</u>	<u>346,379</u>	<u>224,754</u>	<u>109,223</u>	<u>100</u>	<u>-</u>
CT Solar Lease 3 LLC						
Restricted Net Position						
Non-expendable						
Restricted - energy programs						
Unrestricted (deficit)	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Eliminations	<u>(31,562,901)</u>	<u>(28,795,323)</u>	<u>(15,630,676)</u>	<u>(5,549,471)</u>	<u>(3,500,100)</u>	
Total Net Position	<u>\$ 128,663,383</u>	<u>\$ 127,362,334</u>	<u>\$ 109,167,243</u>	<u>\$ 100,793,237</u>	<u>\$ 98,500,605</u>	<u>\$ 81,188,305</u>

**CONNECTICUT GREEN BANK
CHANGES IN NET POSITION
Last Six Fiscal Years**

	Year Ended June 30,					
	2017	2016	2015	2014	2013	2012
Primary Government						
Operating Revenues	\$ 44,040,016	\$ 69,250,883	\$ 72,038,472	\$ 52,301,283	\$ 43,343,093	\$ 39,753,684
Operating Expenses						
Cost of good sold - energy systems	11,333,034	28,826,974	22,526,874	2,794,270		
Grants and program expenditures	18,128,022	25,127,814	21,111,751	22,948,676	23,634,465	31,122,355
Program administration expenditures	14,026,577					
General and administrative expenses	4,430,883	4,445,648	2,984,178	2,408,715	1,811,227	1,387,854
Total Operating Expenses	<u>47,918,516</u>	<u>58,400,436</u>	<u>46,622,803</u>	<u>28,151,661</u>	<u>25,445,692</u>	<u>32,510,209</u>
Operating Income (Loss)	<u>(3,878,500)</u>	<u>10,850,447</u>	<u>25,415,669</u>	<u>24,149,622</u>	<u>17,897,401</u>	<u>7,243,475</u>
Non-Operating Revenue and (Expenses)						
Interest income - promissory notes	2,921,710	2,520,151	2,217,368	1,034,953	583,575	589,007
Interest income - short-term investments	189,237	92,536	83,761	98,383	103,928	140,786
Interest income	61,455	60,127	58,511	57,407		
Interest expense - long-term debt	(228,502)	(61,796)	(26,985)			
Realized gain (loss) on investments	(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
Provision for loan losses	(956,489)	(1,021,826)	(563,825)	(1,310,933)		
Net Non-Operating Revenues (Expenses)	<u>893,439</u>	<u>1,555,469</u>	<u>588,545</u>	<u>(120,191)</u>	<u>30,957</u>	<u>1,164,495</u>
Income (Loss) Before Transfers, Capital Contributions and Member (Distributions)	<u>(2,985,061)</u>	<u>12,405,916</u>	<u>26,004,214</u>	<u>24,029,431</u>	<u>17,928,358</u>	<u>8,407,970</u>
Capital Contributions					1,000	
Transfers to State of Connecticut			<u>(19,200,000)</u>	<u>(6,200,000)</u>		
Change in Net Position	<u>\$ (2,985,061)</u>	<u>\$ 12,405,916</u>	<u>\$ 6,804,214</u>	<u>\$ 17,829,431</u>	<u>\$ 17,929,358</u>	<u>\$ 8,407,970</u>

CONNECTICUT GREEN BANK
CHANGES IN NET POSITION (CONTINUED)
Last Five Fiscal Years

	Year Ended June 30,					
	2017	2016	2015	2014	2013	2012
CT Solar Lease 2 LLC						
Operating Revenues	\$ 3,659,883	\$ 2,416,597	\$ 210,869	\$ 1,770	\$	\$
Operating Expenses						
Program administration expenditures	3,884,129	3,078,633	1,201,123	600,186		
General and administrative expenses	620,912	305,217	124,748	127,511	853,480	
Total Operating Expenses	4,505,041	3,383,850	1,325,871	727,697	853,480	
Operating Income (Loss)	(845,158)	(967,253)	(1,115,002)	(725,927)	(853,480)	-
Non-Operating Revenue and (Expenses)						
Interest on short-term investments	17,615	27,777	9,207	8,642		
Interest expense	(1,054,848)	(729,170)	(150,871)	(57,407)		
Unrealized gain (loss) on investments	1,086,987	(967,791)	(660,073)			
Net Non-Operating Revenues (Expenses)	49,754	(1,669,184)	(801,737)	(48,765)	-	-
Income (Loss) Before Transfers, Capital Contributions and Member (Distributions)	(795,404)	(2,636,437)	(1,916,739)	(774,692)	(853,480)	
Capital Contributions	8,145,358	21,770,182	13,556,783	1,496,135	3,736,694	
Distributions to Members	(436,452)	(301,548)	(104,579)	(12,584)		
Change in Net Position	\$ 6,913,502	\$ 18,832,197	\$ 11,535,465	\$ 708,859	\$ 2,883,214	\$ -

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FOR DISCUSSION PURPOSES ONLY

CONNECTICUT GREEN BANK
CHANGES IN NET POSITION (CONTINUED)
Last Five Fiscal Years

	Year Ended June 30,					
	2017	2016	2015	2014	2013	2012
CEFIA Solar Services, Inc.						
Operating Revenues	\$ 129,227	\$ 126,075	\$ 123,000	\$ 120,000	\$ -	\$ -
Operating Expenses						
Grants and program expenditures						
General and administrative expenses	4,998	4,750	8,450	10,877	-	-
Total Operating Expenses	4,998	4,750	8,450	10,877	-	-
Operating Income (Loss)	124,229	121,325	114,550	109,123	-	-
Non-Operating Revenue and (Expenses)						
Interest on short-term investments	16,446	300	981	-	-	-
Interest income	(31,926)	-	-	-	-	-
Interest expense long-term debt	31,437	-	-	-	-	-
Net Non-Operating Revenues (Expenses)	15,957	300	981	-	-	-
Income (Loss) Before Transfers, Capital Contributions and Member (Distributions)	140,186	121,625	115,531	109,123	-	-
Capital Contributions	-	-	-	-	100	-
Change in Net Position	\$ 140,186	\$ 121,625	\$ 115,531	\$ 109,123	\$ 100	\$ -
CT Solar Lease 3 LLC						
Operating Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Expenses						
General and administrative expenses	-	-	-	-	-	-
Total Operating Expenses	-	-	-	-	-	-
Operating Income (Loss)	-	-	-	-	-	-
Non-Operating Revenue and (Expenses)						
Interest on short-term investments	-	-	-	-	-	-
Net Non-Operating Revenues	-	-	-	-	-	-
Income (Loss) Before Transfers, Capital Contributions and Member (Distributions)	-	-	-	-	-	-
Capital Contributions	-	-	-	-	-	-
Change in Net Position	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

**CONNECTICUT GREEN BANK
OPERATING REVENUE BY SOURCE
Last Six Fiscal Years Ending June 30,**

	Total Operating Revenues	Utility Remittances		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
Primary Government													
2017	\$ 44,040,016	\$ 26,404,349	60.0 %	\$ 2,392,647	5.4 %	\$ 98,486	0.2 %	\$ 12,689,540	28.8 %	\$ 2,214,000	5.0 %	\$ 240,994	0.5 %
2016	69,250,883	26,605,084	38.4 %	6,481,562	9.4 %	589,917	0.9 %	32,767,009	47.3 %	2,419,990	3.5 %	387,321	0.6 %
2015	72,038,471	27,233,987	37.8 %	16,583,545	23.0 %	192,274	0.3 %	25,912,414	36.0 %	1,474,488	2.0 %	641,763	0.9 %
2014	52,301,283	27,779,345	53.1 %	20,074,668	38.4 %	321,642	0.6 %	3,548,840	6.8 %	376,559	0.7 %	200,229	0.4 %
2013	43,343,093	27,621,409	63.7 %	4,744,657	10.9 %	10,035,250	23.2 %	-	-	147,000	0.3 %	794,777	1.8 %
2012	39,753,684	27,025,088	68.0 %	2,052,748	5.2 %	10,435,251	26.2 %	-	-	142,738	0.4 %	97,860	0.2 %
CT Solar Lease 2 LLC													
2017	\$ 3,659,883	\$ -	- %	\$ -	- %	\$ -	- %	\$ -	- %	\$ 356,647	9.7 %	\$ 3,303,236	90.3 %
2016	2,416,597	-	- %	-	- %	-	- %	-	- %	233,793	9.7 %	2,182,804	90.3 %
2015	210,869	-	- %	-	- %	-	- %	-	- %	-	- %	210,869	100.0 %
2014	1,770	-	- %	-	- %	-	- %	-	- %	-	- %	1,770	100.0 %
2013	-	-	- %	-	- %	-	- %	-	- %	-	- %	-	- %
2012	-	-	- %	-	- %	-	- %	-	- %	-	- %	-	- %
CEFIA Solar Services Inc.													
2017	\$ 129,227	\$ -	- %	\$ -	- %	\$ -	- %	\$ -	- %	\$ -	- %	\$ 129,227	100.0 %
2016	126,075	-	- %	-	- %	-	- %	-	- %	-	- %	126,075	100.0 %
2015	123,000	-	- %	-	- %	-	- %	-	- %	-	- %	123,000	100.0 %
2014	120,000	-	- %	-	- %	-	- %	-	- %	-	- %	120,000	100.0 %
2013	-	-	- %	-	- %	-	- %	-	- %	-	- %	-	- %
2012	-	-	- %	-	- %	-	- %	-	- %	-	- %	-	- %
CT Solar Lease 3 LLC													
2017	\$ -	\$ -	- %	\$ -	- %	\$ -	- %	\$ -	- %	\$ -	-- %	\$ -	-- %
2016	-	-	- %	-	- %	-	- %	-	- %	-	-- %	-	-- %
2015	-	-	- %	-	- %	-	- %	-	- %	-	-- %	-	-- %
2014	-	-	- %	-	- %	-	- %	-	- %	-	-- %	-	-- %
2013	-	-	- %	-	- %	-	- %	-	- %	-	-- %	-	-- %
2012	-	-	- %	-	- %	-	- %	-	- %	-	-- %	-	-- %
Eliminations													
2017	\$ (13,862,578)	\$ -	- %	\$ -	- %	\$ -	-- %	\$ (12,689,540)	91.5 %	\$ -	- %	\$ (1,173,038)	8.5 %
2016	(34,005,320)	\$ -	- %	-	- %	-	-- %	(32,767,009)	96.4 %	\$ -	- %	(1,238,311)	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													
2017	\$ 33,966,548	\$ 26,404,349	77.7 %	\$ 2,392,647	7.0 %	\$ 98,486	0.3 %	\$ -	- %	\$ 2,570,647	7.6 %	\$ 2,500,419	7.4 %
2016	37,788,235	26,605,084	70.4 %	6,481,562	17.2 %	589,917	1.6 %	-	- %	2,653,783	7.0 %	1,457,889	3.9 %
2015	46,294,417	27,233,987	58.8 %	16,583,545	35.8 %	192,274	0.4 %	16,687	0.0 %	1,474,488	3.2 %	793,436	1.7 %
2014	48,754,213	27,779,345	57.0 %	20,074,668	41.2 %	321,642	0.7 %	-	- %	376,559	0.8 %	201,999	0.4 %
2013	43,343,093	27,621,409	63.7 %	4,744,657	10.9 %	10,035,250	23.2 %	-	- %	147,000	0.3 %	794,777	1.8 %
2012	39,753,684	27,025,088	68.0 %	2,052,748	5.2 %	10,435,251	26.2 %	-	- %	142,738	0.4 %	97,860	0.2 %

CONNECTICUT GREEN BANK
SIGNIFICANT SOURCES OF OPERATING REVENUE
Last Six Fiscal Years

	Year Ended June 30,											
	2017		2016		2015		2014		2013		2012	
	Revenue	% of Total	Revenue	% of Total	Revenue	% of Total	Revenue	% of Total	Revenue	% of Total	Revenue	% of Total
Utility Remittances ⁽¹⁾												
Eversource	\$ 21,135,147	80.0 %	\$ 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	5,269,202	20.0 %	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	<u>\$ 26,404,349</u>	<u>100.0 %</u>	<u>\$ 26,605,084</u>	<u>100.0 %</u>	<u>\$ 27,233,987</u>	<u>100.0 %</u>	<u>\$ 27,779,345</u>	<u>100.0 %</u>	<u>\$ 27,621,409</u>	<u>100.0 %</u>	<u>\$ 27,025,088</u>	<u>100.0 %</u>
RGGI Auction Proceeds ⁽²⁾												
Renewables	\$ 2,392,647	100.0 %	\$ 6,481,562	100.0 %	\$ 5,631,156	34.0 %	\$ 7,476,158	37.2 %	\$ 4,744,657	100.0 %	\$ 2,052,748	100.0 %
Energy Efficiency		-- %		-- %	10,952,389	66.0 %	12,598,510	62.8 %		-- %		-- %
Total	<u>\$ 2,392,647</u>	<u>100.0 %</u>	<u>\$ 6,481,562</u>	<u>100.0 %</u>	<u>\$ 16,583,545</u>	<u>100.0 %</u>	<u>\$ 20,074,668</u>	<u>100.0 %</u>	<u>\$ 4,744,657</u>	<u>100.0 %</u>	<u>\$ 2,052,748</u>	<u>100.0 %</u>
Grant Revenue												
Federal ARRA Grants	\$	-- %	\$	-- %	\$	-- %	\$	-- %	\$ 8,376,681	83.5 %	\$ 8,738,726	83.8 %
DOE Grants	73,486	74.6 %	589,917	100.0 %	143,614	74.7 %	321,642	100.0 %	1,622,569	16.2 %	1,645,525	15.8 %
Private Foundation	25,000	25.4 %		-- %	48,660	25.3 %		-- %	36,000	0.4 %	50,000	0.5 %
Total	<u>\$ 98,486</u>	<u>100.0 %</u>	<u>\$ 589,917</u>	<u>100.0 %</u>	<u>\$ 192,274</u>	<u>100.0 %</u>	<u>\$ 321,642</u>	<u>100.0 %</u>	<u>\$ 10,035,250</u>	<u>100.0 %</u>	<u>\$ 10,434,251</u>	<u>100.0 %</u>
Sales of Renewable Energy Certificates ⁽³⁾												
Gross Proceeds	\$ 2,584,147	100.5 %	\$ 2,677,317	100.9 %	\$ 1,474,488	100.0 %	\$ 381,444	101.3 %	\$ 150,000	102.0 %	\$ 146,038	102.3 %
Commissions	(13,500)	(0.5 %)	(23,534)	(0.9 %)		-- %	(4,885)	(1.3 %)	(3,000)	(2.0 %)	(3,300)	(2.3 %)
Total	<u>\$ 2,570,647</u>	<u>100.0 %</u>	<u>\$ 2,653,783</u>	<u>100.0 %</u>	<u>\$ 1,474,488</u>	<u>100.0 %</u>	<u>\$ 376,559</u>	<u>100.0 %</u>	<u>\$ 147,000</u>	<u>100.0 %</u>	<u>\$ 142,738</u>	<u>100.0 %</u>

⁽¹⁾ Revenue based on Statutory rate of 1 mil per kWh generated by the utility.

⁽²⁾ 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 clean energy programs.

⁽³⁾ CGB owns Class 1 Renewable Energy Credits (RECs) generated by certain commercial renewable energy facilities for which CGB provided the initial funding. Through its RSIP 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
OUTSTANDING DEBT BY TYPE
Last Six Fiscal Years**

	Year Ended June 30,					
	2017	2016	2015	2014	2013	2012
Primary Government						
Line of Credit (including adjustments)	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 4,000,000	\$ -	\$ -
Cumulative Advances	1,085,956	1,085,956	1,085,956	126,088	-	-
Cumulative Repayments	(577,162)	(394,249)	(232,431)	-	-	-
Cumulative Outstanding Debt	508,794	691,707	853,525	126,088	-	-
Available LOC	-	-	-	3,873,912	-	-
Primary Government						
Original Term Note	2,510,837	2,510,837	-	-	-	-
Repayments	(541,664)	(8,619)	-	-	-	-
Cumulative Outstanding Debt	1,969,173	2,502,218	-	-	-	-
Primary Government						
Clean Renewable Energy Bond	2,957,971	-	-	-	-	-
Repayments	-	-	-	-	-	-
Cumulative Outstanding Debt	2,957,971	-	-	-	-	-
CT Solar Lease 2 LLC						
Line of Credit (including adjustments)	27,600,000	24,000,000	26,700,000	26,700,000	26,700,000	-
Cumulative Advances	27,500,633	18,000,000	3,000,000	-	-	-
Cumulative Repayments	(2,392,925)	(832,325)	-	-	-	-
Cumulative Outstanding Debt	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.						
Original Term Note	1,895,807	-	-	-	-	-
Repayments	(55,295)	-	-	-	-	-
Cumulative Outstanding Debt	1,840,512	-	-	-	-	-
Total Reporting Entity						
Cumulative Outstanding Debt	\$ 32,384,158	\$ 20,361,600	\$ 3,853,525	\$ 126,088	\$ -	\$ -

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**CONNECTICUT GREEN BANK
 DEMOGRAPHIC AND ECONOMIC STATISTICS - FOR THE STATE OF CONNECTICUT
 Last Six 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⁾
2017	n/a	n/a	n/a	n/a	n/a	5.0%
2016	3,576,452	40.7	n/a	n/a	n/a	5.2%
2015	3,590,886	40.6	\$ 38,803	\$ 70,331	747,709	5.5%
2014	3,592,053	40.3	\$ 38,480	\$ 69,899	752,070	6.5%
2013	3,583,561	40.2	\$ 37,892	\$ 69,461	754,442	7.8%
2012	3,572,213	40.0	\$ 37,807	\$ 69,519	751,096	8.5%

- Sources: (1) US Census Bureau - Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2016
 (2) US Census Bureau - Annual Population Estimates for Selected Age Groups by Sex
 (3) US Census Bureau - SELECTED ECONOMIC CHARACTERISTICS
 2011-2015 American Community Survey 5-Year Estimates
 (4) US Census Bureau - SCHOOL ENROLLMENT
 2011-2015 American Community Survey 5-Year Estimates
 (5) US Department of Labor - Databases, Tables & Calculators by Subject
 Local Area Unemployment Statistics

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**CONNECTICUT GREEN BANK
PRINCIPAL EMPLOYERS - FOR THE STATE OF CONNECTICUT
Last Four Calendar Years**

Employer	2016			2015			2014			2013		
	Employees ⁽¹⁾	Rank	Percentage of Total State Employment ⁽²⁾	Employees ⁽¹⁾	Rank	Percentage of Total State Employment ⁽²⁾	Employees ⁽¹⁾	Rank	Percentage of Total State Employment ⁽²⁾	Employees ⁽¹⁾	Rank	Percentage of Total State Employment ⁽²⁾
State of Connecticut	48,912	1	2.71%	51,646	1	2.89%	54,230	1	3.05%	53,951	1	3.10%
Yale New Haven Health System	19,920	2	1.10	20,071	3	1.12	18,869	3	1.06	18,639	3	1.07
Hartford Healthcare	18,135	3	1.01	18,107	4	1.01	18,597	4	1.05	16,951	4	0.98
Yale University	15,018	4	0.83	14,787	5	0.83	14,787	5	0.83	14,750	5	0.85
United Technologies	15,000	5	0.83	24,000	2	1.34	25,000	2	1.40	27,000	2	1.55
General Dynamics Electric Boat	10,230	6	0.57	9,583	6	0.54	8,896	7	0.50	8,817	6	0.51
Wal-Mart Stores Inc.	8,800	7	0.49	8,800	7	0.49	9,289	6	0.52	8,761	7	0.50
Sikorsky, A Lockheed Martin Company	8,000	8	0.44	N/A	---	--	N/A	---	--	N/A	---	--
The Travelers Cos. Inc.	7,400	9	0.41	7,300	8	0.41	7,400	9	0.42	7,400	9	0.43
The Hartford Financial Services Group	7,000	10	0.39	7,000	9	0.39	7,000	11	0.39	7,700	11	0.44
Mohegan Sun	6,735	11	0.37	6,900	10	0.39	7,300	10	0.41	7,300	10	0.42
Foxwoods Resort Casino	6,500	12	0.36	5,301	14	0.30	7,600	8	0.43	7,667	8	0.44

Sources: (1) Hartford Business Journal, Book of Lists: Connecticut's largest employers

(For 2016, removed #7 University of Connecticut per HBJ footnote (2) employee count is already included in State of Connecticut employee count.)

(2) Total State Employment from US Department of Labor - Databases, Tables & Calculators by Subject - Local Area Unemployment Statistics

CONNECTICUT GREEN BANK
FTEs BY FUNCTION
Last Six Fiscal Years

	Year Ended June 30,					
	2017	2016	2015	2014	2013	2012
Program Services						
Statutory & Infrastructure	9.00	9.00	8.00	7.00	7.00	9.00
Residential	6.00	6.00	6.00	5.00	3.00	1.00
Commercial & Industrial	4.00	4.00	2.00	4.00	2.00	
Institutional			1.00	1.00	1.00	1.00
Subtotal Program Services	<u>19.00</u>	<u>19.00</u>	<u>17.00</u>	<u>17.00</u>	<u>13.00</u>	<u>11.00</u>
Administrative & Support						
Executive	4.00	4.00	4.00	4.00	4.00	4.00
Finance	5.00	6.00	5.00	4.00	3.00	1.00
Accounting	5.75	5.75	5.30	3.50	2.75	2.20
Legal & Policy	3.00	3.00	3.00	2.00	2.00	2.00
Marketing	6.00	6.00	6.00	5.00	5.00	5.00
Operations	3.50	3.90	3.50	3.80	4.00	3.85
Subtotal Administrative & Support	<u>27.25</u>	<u>28.65</u>	<u>26.80</u>	<u>22.30</u>	<u>20.75</u>	<u>18.05</u>
Total FTEs by Function	<u><u>46.25</u></u>	<u><u>47.65</u></u>	<u><u>43.80</u></u>	<u><u>39.30</u></u>	<u><u>33.75</u></u>	<u><u>29.05</u></u>

Source: Connecticut Green Bank internal payroll records

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**CONNECTICUT GREEN BANK
OPERATING INDICATORS BY FUNCTION
Last Six Fiscal Years**

	Year Ended June 30,					
	2017	2016	2015	2014	2013	2012
Clean Energy Investment (\$s in Millions)						
CGB Dollars Invested	\$ 24.5	\$ 37.0	\$ 57.0	\$ 32.6	\$ 18.7	\$ 4.8
Private Dollars Invested	190.8	278.1	267.9	74.9	92.8	10.2
Total Project Investment	215.3	315.1	324.9	107.5	111.5	15.0
Number of Clean Energy Projects	5,459	7,606	6,527	2,456	1,119	417
Annual Energy Savings of Clean Energy (MMBtu)	532,685	346,135	709,965	246,195	463,328	11,183
Installed Capacity of Clean Energy (MW)						
Anaerobic Digesters		1.0				
Biomass			0.6			
CHP			0.3	3.0	0.7	
CHP/Microgrid	0.8					
Fuel Cell					14.8	
Energy Efficiency						
Geothermal						
Hydro	0.2		0.9			
Solar PV	52.2	67.7	55.9	20.4	8.0	2.9
Wind			5.0			
Total	53.2	68.7	62.7	23.4	23.5	2.9
Lifetime Production of Clean Energy (MWh)						
Anaerobic Digesters		106,171				
Biomass			17,082			
CHP			31,930	354,780	81,008	
CHP/Microgrid	94,017					
Energy Efficiency	69,315	103,710	43,128	56,929	4,846	
Fuel Cell					1,166,832	
Geothermal	329	295	38	84		
Hydro	20,626		96,185			
Solar PV	1,485,568	1,927,692	1,592,258	581,702	227,323	81,939
Wind			118,260			
Total	1,669,855	2,137,868	1,898,881	993,495	1,480,009	81,939
Jobs Created by Year						
Direct Jobs (# of Jobs)	722	1,654	1,465	594	580	88
Indirect and Induced Jobs (# of Jobs)	957	2,660	2,357	954	1,165	142
Lifetime CO2 Emission Reductions (Tons)						
Avoided Emissions	883,582	1,145,841	1,055,021	357,139	210,616	45,820
Homes' Energy Use for One Year	84,644	109,767	101,067	34,213	20,176	4,389
Passenger Vehicles Driven for One Year	169,319	219,575	202,172	68,438	40,360	8,780
Acres of U.S. Forests in One Year	758,771	983,985	905,994	306,692	180,865	39,347

Source: Internal Connecticut Green Bank Reporting: Key Performance Indicators Data File

CONNECTICUT GREEN BANK
CAPITAL ASSETS STATISTICS BY FUNCTION
Last Six Fiscal Years

	Year Ended June 30,					
	2017	2016	2015	2014	2013	2012
Capital assets being depreciated:						
Solar lease equipment	\$ 64,930,842	\$ 47,534,491	\$ 21,011,832	\$ 1,035,159	\$	\$
Furniture and equipment	169,955	169,423	222,701	338,938	335,744	13,049
Computer hardware and software	234,137	212,832	128,628	88,337	136,659	28,460
Leasehold improvements	250,981	225,844	153,657	139,682	71,470	56,224
Capital assets not being depreciated:						
WIP solar lease equipment		11,931,740	6,014,560	1,759,111		
Construction in progress		4,502	7,141	7,141		
	<u>65,585,915</u>	<u>60,078,832</u>	<u>27,538,519</u>	<u>3,368,368</u>	<u>543,873</u>	<u>97,733</u>
Less accumulated depreciation and amortization:						
Solar lease equipment	3,619,121	1,600,070	319,144	9,865		
Furniture and equipment	136,379	103,079	122,149	205,820	146,560	626
Computer hardware and software	164,972	151,573	50,906	33,845	18,093	3,807
Leasehold improvements	155,236	109,196	75,232	44,501	16,715	1,971
	<u>4,075,708</u>	<u>1,963,918</u>	<u>567,431</u>	<u>294,031</u>	<u>181,368</u>	<u>6,404</u>
Capital assets, net	<u>\$ 61,510,207</u>	<u>\$ 58,114,914</u>	<u>\$ 26,971,088</u>	<u>\$ 3,074,337</u>	<u>\$ 362,505</u>	<u>\$ 91,329</u>

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NON-FINANCIAL STATISTICS

Contents

This part of the Connecticut Green Bank’s comprehensive annual financial report presents detailed non-financial information as a context for understanding the methods management uses to measure the Connecticut Green Bank’s success and efforts to transform the clean energy market in using its financial resources.

1. STATEMENT OF THE CONNECTICUT GREEN BANK 72

2. STATEMENT OF NON-FINANCIAL STATISTICS AUDITOR..... 75

3. ORGANIZATIONAL BACKGROUND..... 76

Governance 76

Ethics and Transparency 79

Open Connecticut..... 80

Small and Minority Business Procurement 80

Efficiency 81

4. MEASURES OF SUCCESS 83

Activity 83

Capital Deployed 84

Clean Energy Produced and Energy Saved..... 85

Clean Energy Technology Deployment..... 86

The Green Bank Model 88

Societal Benefits..... 90

Community Impacts 93

**CONNECTICUT GREEN BANK
NON-FINANCIAL STATISTICS INTRODUCTION**

5. PROGRAMS.....106

Program Logic Model and the Financing Market Transformation Strategy106

Case 1 – C-PACE112

Case 2 – Solar Lease.....124

Case 3 – Residential Solar Investment Program.....136

Case 4 – Smart-E Loan147

Case 5 – Low Income Solar Lease and Energy-Efficiency Energy Savings Agreement (ESA)156

Case 6 – Multifamily Programs164

Case 7 – CT Solar Loan (Graduated)175

Anaerobic Digestion and Combined Heat and Power Pilot Programs.....184

Strategic Investments186

6. APPENDIX.....188

Community Activity Table188

Contractor Activity Table188

Trained Contractor Table188

Calculations and Assumptions188

Index of Figures and Tables.....191

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1. Statement of the Connecticut Green Bank

August 25, 2017

Re: Statement of the Connecticut Green Bank on the Non-Financial Statistics Contents of the Comprehensive Annual Financial Report for FY 2017 - 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 2017.

In FY 2017, our sixth 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. It was a year filled with milestones for our organization:

- Our first “green bond” - Clean Renewable Energy Bonds - was issued to finance a first-in-the-nation deployment of an Archimedes Screw Generator hydroelectric technology for a run-of-river project on the Hanover Pond in Meriden, CT.
- We received our first Program Related Investment (PRI) from the Kresge Foundation to develop community based energy storage projects that provide resiliency.
- As an organization, we passed the mark of \$1 billion in cumulative capital deployed to clean energy projects.
- Commercial Property Assessed Clean Energy passed \$100 million in capital deployed in its lifetime.
- Residential programs passed \$100 million in capital deployed since we started addressing the sector.

In recognition not just of these milestone but for our innovative approach to “Sparking the Green Bank Movement” and building inclusive prosperity through the green economy, the Ash Center for Democratic Governance and Innovation at Harvard University’s Kennedy School of Government awarded the Green Bank the winner of the 2017 [Innovations in American Government Award](http://www.ash.harvard.edu/innovations-american-government-awards)¹. 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. During the course of FY2017, we made great strides in terms of our Evaluation, Measurement, and Verification agenda as well. Our board of directors approved the Evaluation Framework as a structure by which we will measure our programs and their impact. We started focusing on specific methodologies and processes within the framework by which we gauge different societal benefits supported by our investments. We, in conjunction with Navigant Consulting and the Department of Economic and Community Development, updated our Jobs study and formalized calculations for

¹ Innovations in American Government Award: <http://www.ash.harvard.edu/innovations-american-government-awards>

CONNECTICUT GREEN BANK

1. STATEMENT OF THE CONNECTICUT GREEN BANK

determining the job years stimulated by clean energy in Connecticut. Working with the Connecticut Department of Energy and Environment Protection and the U.S. Environmental Protection Agency, we adopted a new model for assessing the environmental benefits created by the support of our projects. We intend to build on this progress in FY2018 focusing on Public Health and energy measurement with a focus on renewable energy.

To bolster our work on methodology and transparency, we engaged SustainAbility to assess the organization's methods for representing impact using our indicators. The team from SustainAbility had no findings and has endorsed the Green Bank's methodologies. Further, SustainAbility benchmarked the Green Bank's reporting against other green banks, utilities, and financial institutions. They found the Connecticut Green Bank's reporting to provide a high degree of transparency both in terms of activity and in terms of the underlying methods used to calculate this activity. SustainAbility also reviewed the organization's manners of presentation and the Connecticut Green Bank will be using SustainAbility's report as a guide to improve its impact reporting across the board.

The result is a more transparent Non-Financial Statistics section. In this document, you will find:

Organizational Background – an overview of the organization's governance, including engagement of its members at the board and committee levels, along with ethics compliance and financial interest disclosure requirements as well as the organization's dedication to transparency. You will see how the organization has made steady progress in terms of voluntarily ensuring that Connecticut's small businesses and minority-owned enterprises have opportunities to bid on a portion of the purchases of goods and services that the organization procures. You will also find measures of our efficiency, showing that as we have grown we have remained nimble as an organization.

- **Measures of Success** – as outlined in the organization's [Comprehensive Plan](#)², we are reporting on the following measures of success:
 - **Attract & Deploy Capital** – how we are sourcing projects (as illustrated by projects in statuses from approved to completed), level of investment by both the Connecticut Green Bank and the end-use consumer or private investor, and the private to public leverage ratio being achieved by sector.
 - **Energy Saved and Generated** – how we are quantifying the energy generated and/or saved by each project. - This includes the amount of clean energy deployed (i.e., kW), estimate of clean energy produced over the life of the projects (i.e., MWh), estimate of the annual amount of energy savings (i.e., MMBtu), and the variety of clean energy technologies we have invested in by sector.
 - **Green Bank** – how we are building a balance sheet because of our financing focus in terms of asset management (i.e., current vs. non-current assets), ratio of public funds invested in grants and subsidies versus credit enhancements, loans, and leases, and the general credit quality of residential borrowers in our financing programs.
 - **Societal Benefits** – how our investment activities are supporting economic development (i.e., jobs) and environmental protection (i.e., GHG emission reductions and equivalencies) benefits.
 - **Community Impacts** – how we are attracting investment to and deploying clean energy in our local communities, including distressed communities and low income census tracts.

² Comprehensive Plan: <http://www.ctgreenbank.com/wp-content/uploads/2016/11/CTGreenBank-Comprehensive-Plan-Fiscal-Years-2017-2018-11232016.pdf>

CONNECTICUT GREEN BANK

1. STATEMENT OF THE CONNECTICUT GREEN BANK

- **Programs** – an overview of the programs of the Green Bank and of the program logic model for the organization in terms of its goals:
 - **Attract and Deploy** – to attract and deploy private capital to finance the clean energy policy goals for Connecticut;
 - **Leverage and Reinvestment** – to leverage limited public funds to attract multiples of private capital investment while returning and reinvesting public funds in clean energy deployment over time;
 - **Affordable and Accessible** – to develop and implement strategies that bring down the cost of clean energy to make it more accessible and affordable to customers; and
 - **Underserved Markets** – to support affordable and healthy buildings in low-to-moderate income and distressed communities by reducing the energy burden and addressing health and safety issues in their homes, businesses, and institutions.
- **Appendix** – the appendix contains tables showing data contained in the bodies of prior years' Non-Financial Statistics showing Green Bank activity by Community and by Contractor and includes factors used in our calculations.

As always, we continue to strive to provide a transparent view of our organization and our programs with the hope that where we find both success and challenges, others will be able to learn from our example.

Regards,

Bryan Garcia
President and CEO

Eric Shrago
Director of Operations

2. Statement of Non-Financial Statistics Auditor



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Connecticut Green Bank
845 Brook Street
Rocky Hill, CT 06067

31st August 2017

To the Board of Directors
Connecticut Green Bank

Report on Non-Financial Metrics

In July 2017, the Connecticut Green Bank (the company) asked SustainAbility, Inc., to conduct an independent, external review of the metrics, and underlying data collection and calculation methods, outlined in the non-financial statistics section of the company's Comprehensive Annual Financial Report.

SustainAbility evaluated the company's data collection methods and performance calculation methodologies as well as the degree of transparency exhibited by the company in reporting on the following metrics: Capital Deployed, Projects Completed, Clean Energy Generated, Job Years, CO₂ savings, NO_x, SO_x and Particulate Matter avoided. SustainAbility also benchmarked Connecticut Green Bank's procedures against those of three other banks to identify possible gaps in metrics coverage and/or performance that the company's future reporting might consider encompassing.

Based on the information provided to SustainAbility by the company and our understanding of best practice in goal setting, measurement and disclosure, it is our opinion that the company'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, demonstrates a high level of transparency as relative to the peer financial institutions benchmarked.

Yours,

Christina Wong
Senior Manager
SustainAbility

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 by eleven voting and one non-voting member 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 2017

Position	Name	Status	Voting
Commissioner of DECD (or designee)	Catherine Smith	Ex Officio	Yes
Commissioner of DEEP (or designee)	Rob Klee	Ex Officio	Yes
State Treasurer (or designee)	Bettina Bronisz	Ex Officio	Yes
Finance of Renewable Energy	Reed Hundt	Appointed	Yes
Finance of Renewable Energy	Kevin Walsh	Appointed	Yes
Labor Organization	John Harrity	Appointed	Yes
R&D or Manufacturing	Mun Choi ³	Resigned	
	Gina McCarthy ⁴	Appointed	Yes
Investment Fund Management	Norma Glover ⁵	Appointed	Yes
Environmental Organization	Matthew Ranelli	Appointed	Yes
Finance or Deployment	Tom Flynn	Appointed	Yes
Residential or Low Income	Pat Wrice ⁶	Resigned	
	Betsy Crum ⁷	Appointed	Yes
President of the Green Bank	Bryan Garcia	Ex Officio	No
Board of Connecticut Innovations ⁸	Unfilled	Ex Officio	No

³ The last official board meeting of Mun Choi was January 20, 2017.

⁴ The first official board meeting of Gina McCarthy was April 28, 2017.

⁵ The last official board meeting of Norma Glover was June 23, 2017.

⁶ The last official board meeting of Pat Wrice was January 20, 2017.

⁷ The first official board meeting of Betsy Crum was April 28, 2017.

⁸ Catherine Smith is also on the board of Connecticut Innovations.

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](#)⁹ and [Ethical Conduct Policy](#)¹⁰, [Resolutions of Purposes](#)¹¹, [Bylaws](#)¹², [Joint Committee Bylaws](#)¹³, and [Comprehensive Plan](#)¹⁴. The Comprehensive Plan for the Connecticut Green Bank provides a multiyear 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](#)¹⁵ 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 Board of Directors of the Connecticut Green Bank is comprised of eleven (11) ex officio and appointed voting members, and two (2) ex officio non-voting members. The leadership of the Board of Directors, includes:

- **Chair** - Catherine Smith, Commissioner of DECD (designated as the Chair of the Connecticut Green Bank by Governor Malloy)
- **Vice Chair** - Rob Klee, Commissioner of DEEP (voted in by 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 2017, the Board of Directors of the Connecticut Green Bank met ten (10) times, including six (6) regularly scheduled meetings and four (4) special meetings. There was an attendance rate of 70% by the Board of Directors and 49 approved resolutions. For a link to the materials from the Board of Directors meetings that are publicly accessible – click [here](#)¹⁶.

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 and Operations
- Deployment
- Joint Committee of the Energy Efficiency Board and the Connecticut Green Bank

⁹Ethics Statement: http://www.ctgreenbank.com/wp-content/uploads/2017/02/Green-Bank_Ethics-Statement-CLEAN-REVISED-102214.pdf

¹⁰ Ethical Conduct Policy: http://www.ctgreenbank.com/wp-content/uploads/2017/08/Green-Bank_Ethical-Conduct-Policy_BOD_CLEAN_REVISED-101714.pdf

¹¹ Resolutions of Purposes: http://www.ctgreenbank.com/wp-content/uploads/2016/01/Financial-and-Gov._-CT-Green-Bank-Resolution-of-Purpose.pdf

¹² Bylaws: <http://www.ctgreenbank.com/wp-content/uploads/2017/02/CTGreenBank-Bylaws-sec16-245n-CTGS-r12162016.pdf>

¹³ Joint Committee Bylaws: http://www.ctgreenbank.com/wp-content/uploads/2015/12/ECMB_CGB_Joint_Committee_Bylaws_October_2014FINAL.pdf

¹⁴ Comprehensive Plan: <http://www.ctgreenbank.com/wp-content/uploads/2016/11/CTGreenBank-Comprehensive-Plan-Fiscal-Years-2017-2018-11232016.pdf>

¹⁵ Operating Procedures: <http://www.ctgreenbank.com/wp-content/uploads/2017/02/CTGreenBank-Operating-Procedures-sec16-245n-CTGS-r12162016.pdf>

¹⁶ 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 Audit, Compliance and Governance Committee (ACG Committee) of the Connecticut Green Bank 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 Catherine Smith)
- **Members**¹⁷ – John Harrity and Pat Wrice/Tom Flynn¹⁸ (designated as a member of the Committee by Catherine Smith)

During FY 2017, the ACG Committee of the Connecticut Green Bank met two (2) times, including two (2) special meetings and no regular meetings. There was an attendance rate of 83% by the Committee members and 6 approved resolutions. For a link to the materials from the ACG Committee meetings that are publicly accessible – click [here](#)¹⁹.

Budget and Operations Committee

The Budget & Operations Committee (B&O Committee) of the Connecticut Green Bank is comprised of three (3) ex officio and appointed voting members. The leadership of the B&O Committee, includes:

- **Chair** - Rob Klee, Commissioner of DEEP (designated as the Chair by Catherine Smith)
- **Members**²⁰ - Mun Choi²¹ and Norma Glover (designated as a member of the Committee by Catherine Smith)

During FY 2017, the B&O Committee of the Connecticut Green Bank met three (3) times, including two (2) regularly scheduled meetings and one (1) special meeting. There was an attendance rate of 100% by the Committee members and 1 approved resolution. For a link to the materials from the B&O Committee meetings that are publicly accessible – click [here](#)²².

Deployment Committee

The Deployment Committee of the Connecticut Green Bank is comprised of four (4) ex officio and appointed voting members. The leadership of the Deployment Committee, includes:

- **Chair** - Reed Hundt, CEO of the Coalition for Green Capital (designated as the Chair by Catherine Smith)
- **Members** - Bettina Bronisz (ex officio per bylaws), Matthew Ranelli, and Pat Wrice / Betsy Crum²³ (designated as a member of the Committee by Catherine Smith)

During FY 2017, the Deployment Committee of the Connecticut Green Bank met four (4) times, including four (4) regularly scheduled meetings and no special meetings. There was an attendance

¹⁷ 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.

¹⁸ Note - as a result of the resignation of Pat Wrice and given his professional experiences, Tom Flynn was appointed to the ACG Committee.

¹⁹ ACG, B&O, Deployment Committee meetings: <http://www.ctgreenbank.com/about-us/governance/connecticut-grittee-meetings/>

²⁰ 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.

²¹ The last official B&O committee meeting of Mun Choi was January 11, 2017.

²² ACG, B&O, Deployment Committee meetings: <http://www.ctgreenbank.com/about-us/governance/connecticut-grittee-meetings/>

²³ Betsy Crum was appointed by Catherine Smith to serve on the Deployment Committee to fill the position vacated by Pat Wrice.

CONNECTICUT GREEN BANK

3. ORGANIZATIONAL BACKGROUND

rate of 75% by Committee members and 7 approved resolutions. For a link to the materials from the Deployment Committee meetings that are publicly accessible – click [here](#)²⁴.

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 bylaws established and approved by the EEB and the 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** - Diane Duva, DEEP (voted in by her peers of the EEB and the Connecticut Green Bank)
- **Secretary** - Bryan Garcia, 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 - Bryan Garcia (non-voting), Norma Glover, Bert Hunter (non-voting), and John Harrity (designated as members of the Committee by Catherine Smith)

During FY 2017, the Joint Committee of the EEB and the Connecticut Green Bank met four (4) times, including four (4) regularly scheduled meetings and no special meetings. There was an attendance rate of 78% 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.

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.

²⁴ ACG, B&O, Deployment Committee meetings: <http://www.ctgreenbank.com/about-us/governance/connecticut-grittee-meetings/>

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
3. ORGANIZATIONAL BACKGROUND

With respect to the 2017 SFI filing – required by May 1, 2017 – 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 2017

	Number of SFIs Submitted	% Submitted on Time
Senior Staff	9	100%
Board of Directors	9	100%

The Connecticut Green Bank received a Certificate of Excellence Ethics Compliance from the Connecticut Office of State Ethics. The organization has received this designation in each of its first six years of operation.

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, the comptroller’s office requested that quasi-public agencies voluntarily provide checkbook-level vendor payment data for display on Open Connecticut. The Connecticut Green Bank has voluntarily submitted this information since the inception of Open Connecticut. To access this information, click [here](#)²⁷.

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 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 the analysis to ensure we are still committed to voluntarily meeting our set aside goals.

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%

²⁷ Open Connecticut: <http://www.osc.ct.gov/openCT/quasi.html>

CONNECTICUT GREEN BANK
3. ORGANIZATIONAL BACKGROUND

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%

Efficiency

Since its inception in July of 2011 (FY 2012), the Green Bank has grown in financial resources, real estate, and in human capital. As demonstrated in the following table, while staff has grown by 1.6 and office space has increased by 4 times, the organization’s overall expenses have remained flat. Revenues have remained flat.

Table 5. Human and Financial Resources of the Green Bank FY 2012 vs FY 2017

Fiscal Year	Human Resources		Financial Resources				
	FTE	Office Space (ft2)	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
2017	46.25	16,122	\$39,625,205	\$21,497,183	\$5,716,875	\$26,404,349	\$2,392,647

Despite a sixty percent increase in FTEs and comparable expenses between these two fiscal years, the impact of the organization has grown significantly. Private Investment and clean energy deployment have increased over 19-fold as demonstrated in Table 6.

Table 6. Green Bank Impact FY 2012 vs FY 2017

Fiscal Year	Impact					
	Private Investment	Clean Energy Deployment (MW)	Expected Annual Generation (MWh)	Annual Saved / Produced (MMBtu)	Job Years Supported	Annual CO2 Savings (tons)
2012	\$10,184,827	2.9	3,278	11,183	231	1,833
2017	\$197,369,415	55.0	72,305	532,685	1,680	36,975
Multiple	19.4x	19.0x	22.1x	47.6x	7.3x	20.2x

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 5 years of existence.

CONNECTICUT GREEN BANK
3. ORGANIZATIONAL BACKGROUND

Table 7. Green Bank Deployment Efficiency FY 2012 vs FY 2017

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)			(\$/ft2)	(kW/ft2)
2012	\$350,596	100	0.31	7.34	\$2,809	0.8
2017	\$4,267,446	1,189	4.98	34.52	\$12,242	3.41
Multiple	12.2x	11.9x	15.9x	4.7x	4.4x	4.3x

DRAFT
 FOR DISCUSSION PURPOSES ONLY

4. Measures of Success

The Green Bank develops a comprehensive plan every two years, establishing targets around its Key Performance Indicators: Capital Deployed, Projects Completed, and Clean Energy Generated. In addition to these KPIs, the Green Bank reports its several program-associated societal benefits including jobs created, and environmental impacts, among others.

Table 8. Green Bank Actuals vs Targets by FY Closed²⁸

FY Closed	2012	2013	2014	2015	2016	2017²⁹	Total
# Closed Projects							
Target	-	-	4,396	4,485	14,252	6,856	29,989
Actual	417	1,119	2,456	6,527	7,606	5,459	23,584
% of Target			56%	146%	53%	80%	79%
Capital Deployed							
Target			\$56,439,000	\$291,602,500	\$591,131,745	\$272,358,518	\$1,211,531,763
Actual	\$14,989,569	\$111,175,698	\$101,929,030	\$312,957,453	\$310,569,962	\$212,749,474	\$1,064,371,186
% of Target			181%	107%	53%	78%	88%
Capacity Installed (MW)							
Target	-	-	31.6	55.5	119.5	68.7	275.3
Actual	2.9	23.5	23.4	62.7	68.7	53.2	234.4
% of Target			74%	113%	58%	77%	85%

As the above metrics show, the Green Bank continues to deploy capital to new projects that lead to increased deployment of clean energy. The Green Bank continues to set ambitious targets each year after consulting its biannual Comprehensive Plan, which analyzes markets and directs the programs of the organization.

In addition to these Key Performance Indicators, the Connecticut Green Bank passed some significant milestones in FY 2017. Shortly after the organization’s fifth anniversary, the Green Bank passed its billionth dollar deployed. Both C-PACE and the Residential programs passed milestones marked by \$100 million in capital deployed.

Activity

The Connecticut Green Bank tracks projects through three phases as they move through the pipeline from application until the implementation is complete – 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 Connecticut Green Bank’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 is complete, and the project is operational. The full energy, economic, and environmental benefits from these projects begin to be fully accounted for and reported after they are closed. Table 9 below presents annual project activity by these three phases.

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. These projects have been removed from the total to avoid double counting.

²⁹ Targets for FY 2017 are the adjusted targets approved by the Board in January of 2017.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Table 9. Green Bank Project Activity by FY Closed³⁰

	2012	2013	2014	2015	2016	2017	Total
Approved	417	1,133	2,476	6,486	7,750	5,672	23,934
Closed	417	1,119	2,456	6,527	7,606	5,459	23,584
Completed	152	916	1,282	3,611	7,543	6,251	19,755

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.

Table 10. Green Bank Number of Multifamily Housing Units Impacted by FY Closed

	Affordable	Market Rate	Total
2014	120		120
2015	285	82	367
2016	1,578	191	1,769
2017	1,244	100	1,344
Total	3,227	373	3,600

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, both to decrease the reliance on public funds over time, as well as expand the scale of clean energy investments in the state. Several of the tables below, including Tables 11-13 show activity to date on this subject.

Table 11. Green Bank Clean Energy Investment by Source - Public and Private by FY Closed³¹

	2012	2013	2014	2015	2016	2017	Total
Green Bank	\$4,804,743	\$18,705,488	\$32,559,362	\$57,048,511	\$36,954,135	\$24,496,404	\$174,568,643
Private	\$10,184,827	\$92,783,682	\$74,921,011	\$267,898,099	\$278,148,207	\$190,843,805	\$914,779,630
Total	\$14,989,569	\$111,489,169	\$107,480,373	\$324,946,609	\$315,102,342	\$215,340,209	\$1,089,348,272

The table below 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 from year to year across the program portfolio offered by the Green Bank.

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 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.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Table 12. Green Bank Clean Energy Projects - Average Public and Private Investments by FY Closed³²

2012	2013	2014	2015	2016	2017	Total
\$35,946.21	\$99,632.86	\$43,762.37	\$49,784.99	\$41,428.13	\$39,446.82	\$46,190.14

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. This leverage ratio, as it is commonly referred to, is calculated by dividing the total monies available in each period – here the Green Bank’s fiscal year periods – by the amount of private investment. The table presents these ratios by fiscal year and by the Green Bank’s program categories. The leverage ratios for the Connecticut Green Bank are increasing over time. In addition, as shown in Table 18, a greater percentage of the public funds being used are in the form of loans and leases rather than subsidies and grants, which results in repayments of the funds over time.

Table 13. Green Bank Sector Leverage Ratios by FY Closed

Sector	2012	2013	2014	2015	2016	2017	Total
Commercial	0.0	3.8	2.2	2.8	4.7	7.2	3.8
Infrastructure	3.1	3.2	3.9	6.5	11.1	10.6	6.9
Residential	0.0	0.8	8.3	4.3	5.3	6.8	5.4
Strategic	0.0	12.2	0.0	17.5	0.0	1.2	10.2
Total	3.1	5.9	3.2	5.5	8.4	8.7	6.1

Clean Energy Produced and Energy Saved

The data below present the output of the projects supported by the Green Bank: electric capacity (megawatts [MW]), electricity production (megawatt hours [MWh]), and Energy Saved or Produced (MMBtu) – see Table 14.

³² 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.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Table 14. Green Bank Installed Capacity, Estimated Generation and Energy Saved and/or Produced by FY Closed³³

FY Closed	2012	2013	2014	2015	2016	2017	Total
Installed Capacity (MW)							
MW	2.9	23.5	23.4	62.7	68.7	53.2	234.4
Estimated Generation (MWh)							
Annual	3,278	131,581	51,668	210,440	92,840	72,305	562,111
Lifetime	81,939	1,480,009	993,496	1,898,881	2,137,867	1,669,855	8,262,048
Lifetime Clean Energy Produced (kWh) / Investment at Risk (\$)	17.1	79.1	30.5	33.3	57.9	68.2	47.3
Energy Saved or Produced (MMBtu)							
Annual	11,183	463,328	246,195	709,965	346,135	532,685	2,309,491
Lifetime	279,577	5,268,112	4,519,573	6,303,485	7,817,648	10,016,405	34,204,801
Investment at Risk (\$) / Lifetime Combined Energy Generated & Saved (MMBtu)	17.2	3.6	7.2	9.1	4.7	2.4	5.1

Clean Energy Technology Deployment

The Connecticut Green Bank takes a technology-agnostic approach to its financing products, with any commercially available technology that meets eligibility guidelines. The tables below present the number of projects by technology and 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 16-1.³⁴

³³ 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.

³⁴ Connecticut Public Act 11-80

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Table 15. Green Bank Projects by Technology³⁵ by FY Closed^{36 37}

	2012	2013	2014	2015	2016	2017	Total
# of Projects							
AD	0	0	0	0	1	0	1
CHP	0	2	1	4	0	0	7
CHP/Microgrid	0	0	0	0	0	1	1
EE	0	4	99	132	114	346	695
Fuel Cell	0	1	0	0	0	0	1
Geothermal	0	0	2	1	8	6	17
Hydro	0	0	0	1	0	1	2
PV	417	1,111	2,347	6,372	7,466	5,057	22,770
PV/Biomass	0	0	0	1	0	0	1
Waste Heat Recovery	0	0	0	1	0	0	1
Wind	0	0	0	1	0	0	1
Unknown	0	1	7	14	17	48	87
Total	417	1,119	2,456	6,527	7,606	5,459	23,584
MW							
AD	0.0	0.0	0.0	0.0	1.0	0.0	1.0
CHP	0.0	0.7	3.0	0.3	0.0	0.0	4.0
CHP/Microgrid	0.0	0.0	0.0	0.0	0.0	0.8	0.8
EE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell	0.0	14.8	0.0	0.0	0.0	0.0	14.8
Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydro	0.0	0.0	0.0	0.9	0.0	0.2	1.1
PV	2.9	8.0	20.4	55.9	67.7	52.2	207.1
PV/Biomass	0.0	0.0	0.0	0.6	0.0	0.0	0.6
Waste Heat Recovery	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wind	0.0	0.0	0.0	5.0	0.0	0.0	5.0
Unknown	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.9	23.5	23.4	62.7	68.7	53.2	234.4
Expected Lifetime Savings or Generation (MWh)							
AD	0	0	0	0	106,171	0	106,171
CHP	0	81,008	354,780	31,930	0	0	467,718
CHP/Microgrid	0	0	0	0	0	94,017	94,017
EE	0	4,846	56,929	43,128	103,710	69,315	277,928
Fuel Cell	0	1,166,832	0	0	0	0	1,166,832
Geothermal	0	0	84	38	295	329	746
Hydro	0	0	0	96,185	0	20,626	116,811
PV	81,939	227,323	581,702	1,592,258	1,927,692	1,485,568	5,896,482
PV/Biomass	0	0	0	17,082	0	0	17,082
Waste Heat Recovery ³⁸	0	0	0	0	0	0	0
Wind	0	0	0	118,260	0	0	118,260
Unknown	0	0	0	0	0	0	0
Total	81,939	1,480,009	993,496	1,898,881	2,137,867	1,669,855	8,262,048

³⁵ Commercial and Residential projects can be a combination of RE and EE measures and the data presented includes the EE generation for those projects but it is assigned to the applicable RE technology.

³⁶ 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.

³⁷ 1,202 of the clean energy projects in this table were accompanied with energy efficiency measures.

³⁸ The expected annual generation for the Bridgeport Heating Loop project is 12,611 MWh. Lifetime generation is not available.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Table 16. Green Bank Project Types by FY Closed³⁹

	2012	2013	2014	2015	2016	2017	Total
# of Projects							
EE	0	4	99	132	114	346	695
RE	417	1,113	2,341	6,299	7,075	4,358	21,603
RE/EE	0	1	9	81	403	708	1,202
Other	0	0	0	1	0	0	1
Unknown	0	1	7	14	14	47	83
Total	417	1,119	2,456	6,527	7,606	5,459	23,584
MW							
EE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RE	2.9	23.4	22.8	60.9	65.5	48.4	223.7
RE/EE	0.0	0.1	0.6	1.8	3.3	4.8	10.6
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.9	23.5	23.4	62.7	68.7	53.2	234.4
Expected Lifetime Savings or Generation (MWh)							
EE	0	4,846	56,929	43,128	103,710	69,315	277,928
RE	81,939	1,472,287	918,792	1,791,297	1,941,338	1,463,309	7,668,962
RE/EE	0	2,875	17,774	64,456	92,820	137,231	315,158
Other	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0
Total	81,939	1,480,009	993,496	1,898,881	2,137,867	1,669,855	8,262,048

The Connecticut Green Bank’s efforts have led to a proportionately large amount of solar PV deployment in the state; about 97% of all clean energy projects deployed are from solar PV. When comparing deployment to clean energy production, solar PV produces the most energy (71% of all clean energy production), fuel cells also contribute a large proportion given the efficiency of the technology (14% of all clean energy production), both providing highly reliable baseload power.

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.

³⁹ 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.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

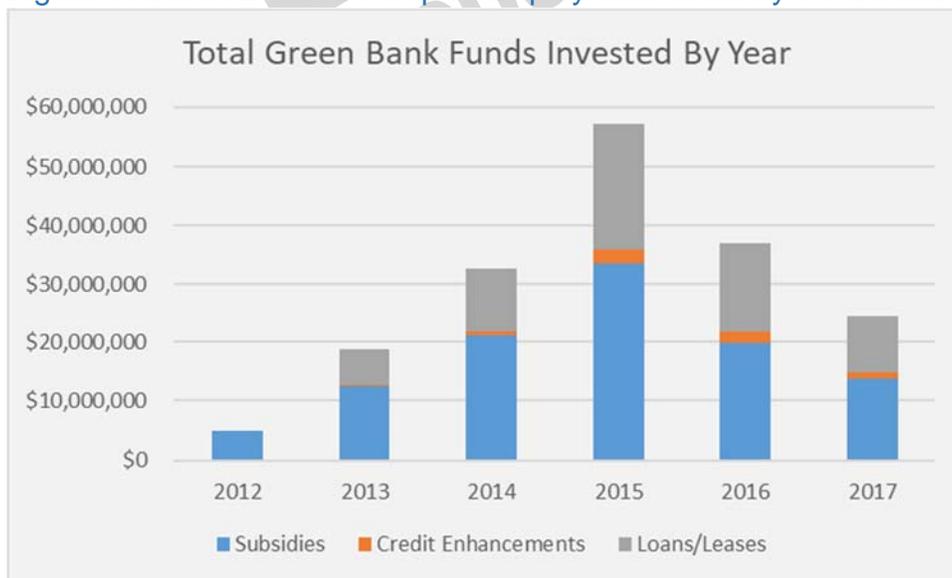
Table 17. Current and Non-Current Assets

	Year Ended June 30,					
	2017	2016	2015	2014	2013	2012
Current Assets						
Cash and cash equivalents	\$ 37,151,067	\$ 48,072,061	\$ 39,893,649	\$ 71,411,034	\$ 68,105,014	\$ 64,672,910
Receivables	3,682,469	4,531,258	2,867,233	8,253,318	4,545,661	3,305,301
Prepaid expenses and other assets	10,012,024	4,245,806	1,030,251	619,639	520,814	350,302
Contractor loans	--	2,272,906	3,112,663	--	--	--
Current portion of solar lease notes	869,831	845,479	803,573	766,086	704,032	670,645
Current portion of program loans	1,910,048	1,378,242	10,264,825	652,447	--	--
Total Current Assets	53,625,439	61,345,752	57,972,194	81,702,524	73,875,521	68,999,158
Noncurrent Assets						
Portfolio investments	1	1,000,000	1,000,000	1,000,000	1,000,000	2,155,525
Bonds receivable	3,328,530	3,492,282	1,600,000	1,600,000	--	--
Solar lease notes - less current portion	7,242,822	8,162,635	9,015,437	9,778,315	10,536,136	11,064,879
Program loans - less current portion	40,296,113	31,889,275	30,253,119	12,750,457	3,788,094	--
Renewable energy certificates	654,767	812,770	933,054	1,069,390	1,217,491	1,324,614
Capital assets, net of depreciation and amortization	62,578,217	58,114,914	26,971,087	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	22,060,622	9,749,983	8,799,005	9,513,715	9,536,656	8,540,684
Total noncurrent assets	138,696,176	115,483,331	79,600,898	38,786,214	26,440,882	23,177,031
Total Assets	\$192,321,615	\$176,829,083	\$137,573,092	\$120,488,738	\$100,316,403	\$ 92,176,189

Ratio of Public Funds Invested

As the first Green Bank in the country, the Connecticut Green Bank seeks to use limited public resources to attract private capital investment in clean energy. The Connecticut Green Bank does this by moving away from the subsidy-based model of supporting clean energy and towards a financing model. As highlighted below – see Figures 1 and 2, the Connecticut Green Bank has quickly moved towards this model, with fewer and fewer funds devoted to subsidies. This trend has developed even as total investment in clean energy has increased to over \$1 billion in total from 2012 through 2017, enabling the Connecticut Green Bank to do more at a faster pace while managing ratepayer resources more efficiently.

Figure 1. Green Bank KPI Capital Deployment Chart by FY Closed



CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Figure 2. Green Bank Cumulative Green Bank Funds Invested by Type by FY Closed

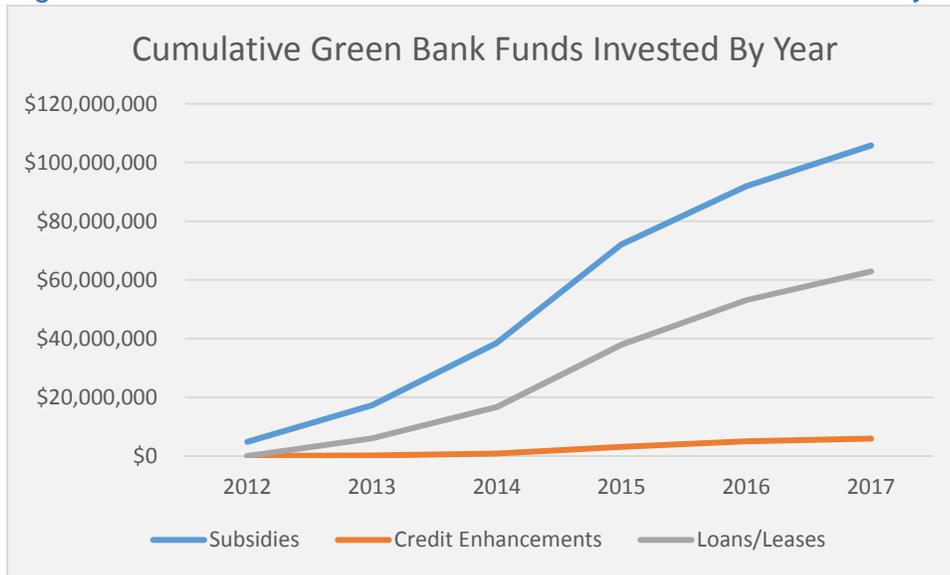


Table 18. Green Bank Ratio of Capital Invested as Subsidies, Credit Enhancements, and Loans and Leases by FY Closed⁴⁰

CGB Funds Invested	2012	2013	2014	2015 ⁴¹	2016	2017	Total
Subsidies (Grants & Incentives)	\$4,804,743	\$12,508,064	\$21,236,693	\$33,525,414	\$19,856,255	\$13,867,584	\$105,798,753
% Subsidies	100%	67%	65%	59%	54%	57%	61%
Credit Enhancements (LLR & IRB)	\$0	\$187,122	\$630,610	\$2,275,871	\$1,911,448	\$894,296	\$5,899,346
% Credit Enhancements	0%	1%	2%	4%	5%	4%	3%
Loans and Leases (includes sell downs)	\$0	\$6,010,302	\$10,692,059	\$21,247,225	\$15,186,433	\$9,734,524	\$62,870,543
% Loans and Leases	0%	32%	33%	37%	41%	40%	36%
Total	\$4,804,743	\$18,705,488	\$32,559,362	\$57,048,511	\$36,954,135	\$24,496,404	\$174,568,643

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

⁴⁰ 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.

⁴¹ As of January 1, 2015, all RSIP subsidies are redeployed over time through the SHREC cost recovery.

CONNECTICUT GREEN BANK

4. MEASURES OF SUCCESS

the resulting societal impacts or benefits arising from clean energy investment. The evaluation framework can be found [here](#)⁴².

Societal Benefits: Jobs

The Connecticut Green Bank stimulates economic activity in the state through the lending and investing conducted by its programs. 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 on 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. For more information on this study and the methodology, click [here](#)⁴³. An overview of our Jobs methodology can be found [here](#)⁴⁴.

Table 19. Green Bank Job Years Supported by FY Closed⁴⁵

	2012	2013	2014	2015	2016	2017	Total
Direct	88	580	594	1,465	1,654	722	5,104
Indirect and Induced	142	1,165	954	2,357	2,660	957	8,236
Total	231	1,745	1,548	3,822	4,314	1,680	13,340

Green Bank Societal Benefits: Environmental Impacts and Equivalencies

The Green Bank assesses the impact of its projects in terms of the local environmental benefits these projects produce. 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 methodology for these measurements in conjunction with outside experts at the Connecticut Department of Energy and Environmental Protection and at the United States Environmental Protection Agency. For more information on this methodology, click [here](#)⁴⁶. For more information on the EPA's AvERT, click [here](#)⁴⁷.

⁴² CGB Evaluation Framework: <http://ctgreenbank.com/wp-content/uploads/2017/02/CTGreenBank-Evaluation-Framework-July-2016.pdf>

⁴³ Clean Energy Jobs in Connecticut: <http://ctgreenbank.com/wp-content/uploads/2017/02/CTGreenBank-Clean-Energy-Jobs-CT-August102016.pdf>

⁴⁴ CGB Economic Development Factsheet: http://www.ctgreenbank.com/wp-content/uploads/2017/08/CGB_DECD_Jobs-Study_Fact-Sheet.pdf

⁴⁵ See Appendix for Job Year Factors.

⁴⁶ CGB Environmental Impact Factsheet: <http://www.ctgreenbank.com/wp-content/uploads/2017/05/CGB-Environmental-Impact-051617.pdf>

⁴⁷ Environmental Protection Agency AvERT User Manual: http://www.ctgreenbank.com/wp-content/uploads/2017/05/AVERT_fact_sheet_user_manual_03-01-17.pdf

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Table 20. Green Bank Avoided Emissions by FY Closed⁴⁸

	2012	2013	2014	2015	2016	2017	Total
CO2 Savings (tons)							
Annual	1,833	13,266	15,662	44,952	48,376	36,975	161,064
Lifetime	45,820	210,616	357,139	1,055,021	1,145,841	883,582	3,698,018
Investment at Risk (\$) / Lifetime Tons of CO2 Emissions (TCO2)	\$104.86	\$88.81	\$91.17	\$54.07	\$32.25	\$27.72	\$47.21
NOx Savings (pounds)							
Annual	2,307	70,810	20,876	50,524	51,079	37,325	232,921
Lifetime	57,671	821,238	479,656	1,199,483	1,207,003	897,064	4,662,115
Investment at Risk (\$) / Lifetime Pounds of NOx Emissions	\$83.31	\$22.78	\$67.88	\$47.56	\$30.62	\$27.31	\$37.44
SOx Savings (pounds)							
Annual	3,016	55,584	23,792	47,634	40,133	26,695	196,854
Lifetime	75,409	700,425	547,634	1,134,204	934,111	641,857	4,033,641
Investment at Risk (\$) / Lifetime Pounds of SOx Emissions	\$63.72	\$26.71	\$59.45	\$50.30	\$39.56	\$38.16	\$43.28
PM 2.5 (pounds)							
Annual	164	475	1,380	3,688	4,203	3,182	13,092
Lifetime	4,112	11,627	31,731	87,015	100,056	76,326	310,867
Investment at Risk (\$) / Lifetime Pounds of PM 2.5 Emissions	\$1,168.47	\$1,608.81	\$1,026.11	\$655.62	\$369.33	\$320.94	\$561.55

Using the organization’s methodology for environmental impact, the Green Bank calculates environmental equivalencies using factors from the EPA’s environmental equivalency calculator. 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. For more information on this methodology, click [here](#)⁴⁹. The EPA environmental equivalency calculator can be found [here](#)⁵⁰.

⁴⁸ See Appendix for Average Emission Rates.

⁴⁹ <http://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references>

⁵⁰ EPA Greenhouse Gas Equivalencies Calculator: <http://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Table 21. Green Bank Greenhouse Gas Equivalencies (based on reductions of CO₂ tons) by FY Closed

		2012	2013	2014	2015	2016	2017	Total
Greenhouse gas emissions from:								
Passenger vehicles driven for one year	Annual	351	2,542	3,001	8,614	9,270	7,085	30,864
	Lifetime	8,780	40,360	68,438	202,172	219,575	169,319	708,644
Miles driven by an average passenger vehicle	Annual	3,984,866	28,843,642	34,052,135	97,736,084	105,178,625	80,390,801	350,186,153
	Lifetime	99,621,647	457,923,254	776,495,651	2,293,835,856	2,491,297,120	1,921,091,832	8,040,265,359
CO₂ emissions from:								
Gallons of gasoline consumed	Annual	187,091	1,354,220	1,598,761	4,588,747	4,938,177	3,774,379	16,441,376
	Lifetime	4,677,275	21,499,675	36,456,772	107,696,484	116,967,367	90,196,008	377,493,581
Homes' energy use for one year	Annual	176	1,271	1,500	4,306	4,634	3,542	15,429
	Lifetime	4,389	20,176	34,213	101,067	109,767	84,644	354,255
Carbon sequestered by:								
Tree seedlings grown for 10 years	Annual	43,090	311,900	368,221	1,056,865	1,137,345	869,303	3,786,725
	Lifetime	1,077,255	4,951,736	8,396,606	24,804,306	26,939,546	20,773,653	86,943,101
Acres of U.S. forests in one year	Annual	1,574	11,392	13,450	38,603	41,542	31,752	138,313
	Lifetime	39,347	180,865	306,692	905,994	983,985	758,771	3,175,655

Other Societal Benefits

The Green Bank is presently working on methodologies to further measure additional societal impacts of its programs. During Fiscal Year 2018, the organization will finalize methodologies for measuring and quantifying public health benefits associated with improved air quality and on the refined measurement of energy generated by the organization’s projects. The Green Bank is reviewing the economic relief from the energy burden felt by participating property owners and tenants.

Community Impacts

Community and Market Descriptions

Communities across Connecticut are demonstrating leadership in their support of clean energy. The Connecticut Green Bank distributes reports to communities on an annual basis to provide them with a breakdown of their performance. There are many leaders of clean energy deployment across the state, and we have assembled the “Top 5” in energy, environment, and economy for both FY 2017 as well as FY 2012 through FY 2017.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Table 22. The “Top 5” Energy, Environment, and Economy Metrics based on FY 2017 Closed Activity

Municipality	Watts / Capita	Municipality	Investment / Capita	Municipality	Total Lifetime CO2 Emissions (Tons)
Thompson	263.4	Thompson	\$855.98	Manchester	50,182
Canaan	168.7	Canaan	\$683.46	Thompson	39,874
Lebanon	68.3	Manchester	\$230.22	Stratford	32,703
Chester	64.1	Chester	\$225.53	New Britain	32,302
Bloomfield	59.6	Lebanon	\$219.71	Bridgeport	30,430

Table 23. The “Top 5” Energy, Environment, and Economy Metrics based on FY 2012 – 2017 Closed Activity

Municipality	Watts / Capita	Municipality	Investment / Capita	Municipality	Total Lifetime CO2 Emissions (Tons)
Colebrook	3,426.9	Colebrook	\$15,426.21	Bridgeport	184,215
Canaan	348.5	Deep River	\$1,556.41	Manchester	93,039
Thompson	347.0	Canaan	\$1,536.75	Hartford	84,295
Woodbridge	221.2	Thompson	\$1,179.52	Waterbury	73,246
Durham	220.3	Bridgeport	\$1,014.02	New Britain	70,181

Projects by Income Bands

In addition to looking at 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 are benefiting 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 26 groups the Green Bank’s residential projects based upon the average area median income (AMI) of their census tract from the American Community Survey (ACS) 5 Year Estimate data. Table 27 groups the Green Bank’s residential projects based upon the average state median income (SMI) of their census tract from the American Community Survey (ACS) 5 Year Estimate data.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Table 24. Overview of Population and Households in 2015 American Community Survey (ACS) Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands⁵¹

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/Rental Occupied 5+ Unit Households	% Owner/Rental Occupied 5+ Unit Household Distribution	Total Rental Occupied 1 - 4 Housing Units	% Rental Occupied 1 - 4 Housing Unit Distribution
<60%	662,619	18%	240,062	18%	64,361	7%	84,158	37%	91,543	35%
60%-80%	489,826	14%	193,188	14%	96,305	11%	44,668	19%	52,215	20%
80%-100%	650,163	18%	264,609	20%	164,873	19%	53,494	23%	46,242	18%
100%-120%	631,741	18%	240,485	18%	184,613	21%	24,388	11%	31,484	12%
>120%	1,150,974	32%	414,212	31%	352,621	41%	23,491	10%	38,100	15%
Total	3,585,323	100%	1,352,556	100%	862,773	100%	230,199	100%	259,584	100%

Table 25. Overview of Population and Households in 2015 American Community Survey (ACS) Metropolitan Statistical Area (MSA) State Median Income (SMI) Bands⁵²

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	Total Rental Occupied 1 - 4 Housing Units	% Rental Occupied 1 - 4 Housing Unit Distribution
<60%	643,447	18%	236,756	18%	65,471	8%	81,295	35%	89,990	35%
60%-80%	601,556	17%	235,289	17%	119,341	14%	53,768	23%	62,180	24%
80%-100%	648,379	18%	262,503	19%	169,692	20%	49,076	21%	43,735	17%
100%-120%	636,897	18%	247,545	18%	189,955	22%	25,811	11%	31,779	12%
>120%	1,055,044	29%	370,463	27%	318,314	37%	20,249	9%	31,900	12%
Total	3,585,323	100%	1,352,556	100%	862,773	100%	230,199	100%	259,584	100%

⁵¹ The suite of products offered by the Connecticut Green Bank do not currently address rental properties of 1-4 units.

⁵² The suite of products offered by the Connecticut Green Bank do not currently address rental properties of 1-4 units.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Table 26. Green Bank Residential⁵³ Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed^{54 55}

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total Household
2012	<60%	10	2%	279,743	2%	0.1	2%	228,062	17%	0.0	\$1.23	0.2
2012	60%-80%	10	2%	242,605	2%	0.1	2%	207,439	15%	0.0	\$1.17	0.3
2012	80%-100%	48	12%	1,644,387	11%	0.3	12%	239,356	18%	0.2	\$6.87	1.4
2012	100%-120%	118	28%	4,193,070	28%	0.8	28%	280,563	21%	0.4	\$14.95	2.9
2012	>120%	231	55%	8,629,764	58%	1.6	57%	404,748	30%	0.6	\$21.32	4.0
2012	Total	417	100%	14,989,569	100%	2.9	100%	1,360,168	100%	0.3	\$11.02	2.1
2013	<60%	20	2%	415,069	1%	0.1	1%	224,259	17%	0.1	\$1.85	0.4
2013	60%-80%	56	5%	1,683,198	5%	0.4	5%	222,791	16%	0.3	\$7.56	1.7
2013	80%-100%	128	12%	3,896,496	11%	0.8	10%	236,905	17%	0.5	\$16.45	3.5
2013	100%-120%	221	20%	6,752,086	19%	1.5	19%	264,685	20%	0.8	\$25.51	5.5
2013	>120%	687	62%	22,717,370	64%	5.1	65%	407,204	30%	1.7	\$55.79	12.6
2013	Total	1,112	100%	35,464,219	100%	7.9	100%	1,355,844	100%	0.8	\$26.16	5.8
2014	<60%	85	3%	1,951,582	3%	0.4	3%	224,369	17%	0.4	\$8.70	1.9
2014	60%-80%	162	6%	4,231,799	6%	0.9	5%	216,437	16%	0.7	\$19.55	4.2
2014	80%-100%	522	20%	11,892,770	16%	2.5	15%	231,014	17%	2.3	\$51.48	11.0
2014	100%-120%	613	24%	19,319,129	26%	4.3	26%	278,174	21%	2.2	\$69.45	15.6
2014	>120%	1,166	46%	36,828,938	50%	8.5	51%	406,185	30%	2.9	\$90.67	21.0
2014	Total	2,548	100%	74,224,218	100%	16.7	100%	1,356,179	100%	1.9	\$54.73	12.3
2015	<60%	275	4%	6,896,152	3%	1.5	3%	240,062	18%	1.1	\$28.73	6.4
2015	60%-80%	617	9%	17,854,340	8%	4.0	8%	193,188	14%	3.2	\$92.42	20.5
2015	80%-100%	1,243	19%	38,391,291	18%	7.9	17%	264,609	20%	4.7	\$145.09	29.9
2015	100%-120%	1,644	24%	56,688,974	26%	12.3	26%	240,485	18%	6.8	\$235.73	51.2
2015	>120%	2,937	44%	98,586,296	45%	22.3	46%	414,212	31%	7.1	\$238.01	53.8
2015	Total	6,716	100%	218,417,053	100%	48.0	100%	1,352,556	100%	5.0	\$161.48	35.5
2016	<60%	919	11%	19,052,183	7%	4.2	7%	240,062	18%	3.8	\$79.36	17.4
2016	60%-80%	1,066	13%	26,554,108	10%	6.4	11%	193,188	14%	5.5	\$137.45	33.0
2016	80%-100%	1,739	21%	52,380,872	21%	11.3	19%	264,609	20%	6.6	\$197.96	42.6

⁵³ Residential Owner occupied properties of 1-4 units and multifamily housing greater than 4 units.

⁵⁴ 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.

⁵⁵ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total Household
2016	100%-120%	2,007	24%	62,089,139	24%	14.0	24%	240,485	18%	8.3	\$258.18	58.1
2016	>120%	2,672	32%	94,495,537	37%	22.5	39%	414,212	31%	6.5	\$228.13	54.2
2016	Total	8,403	100%	254,571,838	100%	58.2	100%	1,352,556	100%	6.2	\$188.22	43.1
2017	<60%	1,268	19%	29,930,106	19%	4.8	12%	240,062	18%	5.3	\$124.68	20.1
2017	60%-80%	1,132	17%	23,069,670	14%	5.6	14%	193,188	14%	5.9	\$119.42	29.0
2017	80%-100%	1,154	18%	27,521,142	17%	7.5	19%	264,609	20%	4.4	\$104.01	28.4
2017	100%-120%	1,258	19%	29,568,212	19%	8.0	20%	240,485	18%	5.2	\$122.95	33.2
2017	>120%	1,743	27%	49,516,185	31%	13.5	34%	414,212	31%	4.2	\$119.54	32.6
2017	Total	6,555	100%	159,605,315	100%	39.5	100%	1,352,556	100%	4.8	\$118.00	29.2
Total	<60%	2,577	10%	58,524,835	8%	11.1	6%	240,062	18%	10.7	\$243.79	46.3
Total	60%-80%	3,043	12%	73,635,719	10%	17.2	10%	193,188	14%	15.8	\$381.16	89.3
Total	80%-100%	4,834	19%	135,726,958	18%	30.4	18%	264,609	20%	18.3	\$512.93	115.0
Total	100%-120%	5,861	23%	178,610,610	24%	40.9	24%	240,485	18%	24.4	\$742.71	169.9
Total	>120%	9,436	37%	310,774,090	41%	73.6	42%	414,212	31%	22.8	\$750.28	177.6
Total	Total	25,751	100%	757,272,212	100%	173.2	100%	1,352,556	100%	19.0	\$559.88	128.1

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Table 27. Green Bank Residential⁵⁶ Activity in Metropolitan Statistical Area (MSA) State Median Income (SMI) Bands by FY Closed^{57 58}

Fiscal Year Closed	MSA SMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total Household
2012	<60%	12	3%	247,910	2%	0.1	2%	249,608	18%	0.0	\$0.99	0.2
2012	60%-80%	8	2%	212,810	1%	0.1	2%	204,836	15%	0.0	\$1.04	0.3
2012	80%-100%	93	22%	3,213,897	21%	0.6	21%	293,878	22%	0.3	\$10.94	2.1
2012	100%-120%	122	29%	4,373,772	29%	0.8	29%	260,689	19%	0.5	\$16.78	3.2
2012	>120%	182	44%	6,941,180	46%	1.3	46%	351,157	26%	0.5	\$19.77	3.8
2012	Total	417	100%	14,989,569	100%	2.9	100%	1,360,168	100%	0.3	\$11.02	2.1
2013	<60%	30	3%	777,069	2%	0.2	2%	251,171	19%	0.1	\$3.09	0.7
2013	60%-80%	51	5%	1,459,921	4%	0.3	4%	211,049	16%	0.2	\$6.92	1.5
2013	80%-100%	194	17%	5,936,366	17%	1.3	16%	295,748	22%	0.7	\$20.07	4.3
2013	100%-120%	227	20%	7,354,103	21%	1.5	19%	247,329	18%	0.9	\$29.73	6.1
2013	>120%	610	55%	19,936,760	56%	4.6	59%	350,547	26%	1.7	\$56.87	13.2
2013	Total	1,112	100%	35,464,219	100%	7.9	100%	1,355,844	100%	0.8	\$26.16	5.8
2014	<60%	119	5%	2,800,024	4%	0.6	4%	264,100	19%	0.5	\$10.60	2.2
2014	60%-80%	164	6%	4,459,868	6%	1.0	6%	189,153	14%	0.9	\$23.58	5.0
2014	80%-100%	708	28%	18,092,192	24%	3.9	24%	288,116	21%	2.5	\$62.79	13.7
2014	100%-120%	601	24%	18,665,331	25%	4.2	25%	242,617	18%	2.5	\$76.93	17.4
2014	>120%	956	38%	30,206,804	41%	7.0	42%	372,193	27%	2.6	\$81.16	18.9
2014	Total	2,548	100%	74,224,218	100%	16.7	100%	1,356,179	100%	1.9	\$54.73	12.3
2015	<60%	394	6%	10,112,962	5%	2.2	5%	236,756	18%	1.7	\$42.71	9.5
2015	60%-80%	858	13%	23,503,029	11%	5.1	11%	235,289	17%	3.6	\$99.89	21.7
2015	80%-100%	1,468	22%	48,401,136	22%	10.4	22%	262,503	19%	5.6	\$184.38	39.6
2015	100%-120%	1,774	26%	56,222,016	26%	12.2	26%	247,545	18%	7.2	\$227.12	49.5
2015	>120%	2,222	33%	80,177,909	37%	18.0	38%	370,463	27%	6.0	\$216.43	48.6
2015	Total	6,716	100%	218,417,053	100%	48.0	100%	1,352,556	100%	5.0	\$161.48	35.5
2016	<60%	942	11%	18,608,131	7%	4.5	8%	236,756	18%	4.0	\$78.60	18.9
2016	60%-80%	1,418	17%	38,455,293	15%	8.9	15%	235,289	17%	6.0	\$163.44	37.8
2016	80%-100%	1,778	21%	58,707,520	23%	12.8	22%	262,503	19%	6.8	\$223.65	48.8
2016	100%-120%	1,974	23%	62,577,938	25%	13.9	24%	247,545	18%	8.0	\$252.79	56.0
2016	>120%	2,291	27%	76,222,957	30%	18.2	31%	370,463	27%	6.2	\$205.75	49.1
2016	Total	8,403	100%	254,571,838	100%	58.2	100%	1,352,556	100%	6.2	\$188.22	43.1
2017	<60%	1,180	18%	28,344,873	18%	4.6	12%	236,756	18%	5.0	\$119.72	19.4
2017	60%-80%	1,443	22%	29,556,143	19%	7.4	19%	235,289	17%	6.1	\$125.62	31.4

⁵⁶ Residential Owner occupied properties of 1-4 units and multifamily housing greater than 4 units.

⁵⁷ 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.

⁵⁸ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Fiscal Year Closed	MSA SMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total Household
2017	80%-100%	1,373	21%	29,407,299	18%	7.9	20%	262,503	19%	5.2	\$112.03	30.3
2017	100%-120%	1,208	18%	32,054,269	20%	8.8	22%	247,545	18%	4.9	\$129.49	35.7
2017	>120%	1,351	21%	40,242,731	25%	10.7	27%	370,463	27%	3.6	\$108.63	28.9
2017	Total	6,555	100%	159,605,315	100%	39.5	100%	1,352,556	100%	4.8	\$118.00	29.2
Total	<60%	2,677	10%	60,890,968	8%	12.1	7%	236,756	18%	11.3	\$257.19	51.3
Total	60%-80%	3,942	15%	97,647,064	13%	22.7	13%	235,289	17%	16.8	\$415.01	96.4
Total	80%-100%	5,614	22%	163,758,411	22%	37.0	21%	262,503	19%	21.4	\$623.83	140.9
Total	100%-120%	5,906	23%	181,247,429	24%	41.5	24%	247,545	18%	23.9	\$732.18	167.7
Total	>120%	7,612	30%	253,728,340	34%	59.9	35%	370,463	27%	20.5	\$684.90	161.7
Total	Total	25,751	100%	757,272,212	100%	173.2	100%	1,352,556	100%	19.0	\$559.88	128.1

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CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Through such products and initiatives as the LMI solar incentive, its partnership with PosiGen, ongoing education to the market about the good credit quality of low and moderate income homeowners and market research made available to industry participants for targeting (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 Tables 28 and 29 to deliver inclusive prosperity through the green economy.

Table 28. Green Bank Residential⁵⁹ Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed^{60 61}

Fiscal Year Closed	# Project Units				MW				Investment (Gross Cost)			
	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	417	349	68	16%	2.9	2.4	0.4	15%	\$14,989,569	\$12,822,834	\$2,166,735	14%
2013	1,112	908	204	18%	7.9	6.6	1.3	16%	\$35,464,219	\$29,469,456	\$5,994,762	17%
2014	2,548	1,779	769	30%	16.7	12.9	3.9	23%	\$74,224,218	\$56,148,067	\$18,076,152	24%
2015	6,716	4,581	2,135	32%	48.0	34.6	13.4	28%	\$218,417,053	\$155,275,270	\$63,141,783	29%
2016	8,403	4,679	3,724	44%	58.2	36.4	21.8	37%	\$254,571,838	\$156,584,676	\$97,987,162	38%
2017	6,555	3,001	3,554	54%	39.5	21.5	17.9	45%	\$159,605,315	\$79,084,397	\$80,520,918	50%
Total	25,751	15,297	10,454	41%	173.2	114.4	58.8	34%	\$757,272,212	\$489,384,700	\$267,887,512	35%

⁵⁹ Residential Owner occupied properties of 1-4 units and multifamily housing greater than 4 units

⁶⁰ 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.

⁶¹ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Table 29. Green Bank Residential⁶² Activity in Metropolitan Statistical Area (MSA) State Median Income (SMI) Bands Above or Below 100% by FY Closed^{63 64}

Fiscal Year Closed	# Project Units				MW				Investment (Gross Cost)			
	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	417	304	113	27%	2.9	2.2	0.7	25%	\$14,989,569	\$11,314,952	\$3,674,617	25%
2013	1,112	837	275	25%	7.9	6.1	1.7	22%	\$35,464,219	\$27,290,863	\$8,173,356	23%
2014	2,548	1,557	991	39%	16.7	11.3	5.5	33%	\$74,224,218	\$48,872,135	\$25,352,084	34%
2015	6,716	3,996	2,720	41%	48.0	30.3	17.7	37%	\$218,417,053	\$136,399,926	\$82,017,127	38%
2016	8,403	4,265	4,138	49%	58.2	32.1	26.2	45%	\$254,571,838	\$138,800,895	\$115,770,943	45%
2017	6,555	2,559	3,996	61%	39.5	19.5	19.9	51%	\$159,605,315	\$72,296,999	\$87,308,315	55%
Total	25,751	13,518	12,233	48%	173.2	101.4	71.8	41%	\$757,272,212	\$434,975,769	\$322,296,443	43%

Distressed Communities

Connecticut’s “distressed communities” are particularly affected by the state’s high energy prices. On average, Connecticut’s neediest households owe \$2,560 more in annual energy bills than they can afford⁶⁵. 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 30. Distressed and Not Distressed Municipalities, Population, and Households in Connecticut⁶⁶

For more information on DECD Distressed Municipality criterions, click [here](#)⁶⁷

2016 ⁶⁸ DECD Distressed Designation				
	Distressed	Not Distressed	Total	% Distressed
# Towns	25	144	169	15%
Population (2010 Census)	1,167,312	2,406,785	3,574,097	33%
Households (2010 Census)	445,638	925,449	1,371,087	33%

⁶² Residential Owner occupied properties of 1-4 units and multifamily housing greater than 4 units.

⁶³ 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.

⁶⁴ Excludes projects in unknown bands.

⁶⁵ Home Energy Affordability in Connecticut: <http://www.operationfuel.org/wp-content/uploads/Connecticut-2014-HEAG-Final.pdf>

⁶⁶ As designated by DECD in 2016.

⁶⁷ Department of Economic and Community Development: <http://www.ct.gov/ecd/cwp/view.asp?a=1105&q=251248>

⁶⁸ 2017 DECD Distressed Designations have not been made public at the time that this was published. The Green Bank will update its internal calculations with the 2017 designations once available.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

The Green Bank has steadily increased its percentage of projects deployed each year in distressed municipalities. This has led to nearly \$350 million in clean energy projects in these communities, creating 4,000 jobs.

Table 31. Green Bank Commercial and Residential Activity in Distressed Communities by FY Closed⁶⁹

Fiscal Year Closed	Distressed	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	2010 Census Population	% Population Distribution	Investment / Capita	Watts / Capita	2010 Census Households	% Household Distribution	Investment / Household	Watts / Household
2012	Yes	46	11%	\$1,283,753	9%	0.3	9%	1,172,186	33%	\$1.10	0.2	449,097	33%	\$2.86	\$0.59
2012	No	371	89%	\$13,705,816	91%	2.6	91%	2,401,911	67%	\$5.71	1.1	921,990	67%	\$14.87	\$2.83
2012	Total	417	100%	\$14,989,569	100%	2.9	100%	3,574,097	100%	\$4.19	0.8	1,371,087	100%	\$10.93	\$2.10
2013	Yes	121	11%	\$75,175,239	68%	15.5	66%	1,124,337	31%	\$66.86	13.8	428,395	31%	\$175.48	\$36.23
2013	No	998	89%	\$36,040,124	32%	7.9	34%	2,449,760	69%	\$14.71	3.2	942,692	69%	\$38.23	\$8.43
2013	Total	1,119	100%	\$111,215,363	100%	23.5	100%	3,574,097	100%	\$31.12	6.6	1,371,087	100%	\$81.11	\$17.12
2014	Yes	388	15%	\$20,924,533	20%	3.9	17%	1,104,894	31%	\$18.94	3.6	420,721	31%	\$49.73	\$9.37
2014	No	2,187	85%	\$82,671,271	80%	19.5	83%	2,469,203	69%	\$33.48	7.9	950,366	69%	\$86.99	\$20.51
2014	Total	2,575	100%	\$103,595,804	100%	23.4	100%	3,574,097	100%	\$28.99	6.6	1,371,087	100%	\$75.56	\$17.09
2015	Yes	1,514	22%	\$93,699,121	30%	13.2	21%	1,123,207	31%	\$83.42	11.7	429,250	31%	\$218.29	\$30.69
2015	No	5,264	78%	\$222,834,399	70%	49.5	79%	2,450,890	69%	\$90.92	20.2	941,837	69%	\$236.60	\$52.58
2015	Total	6,778	100%	\$316,533,520	100%	62.7	100%	3,574,097	100%	\$88.56	17.5	1,371,087	100%	\$230.86	\$45.73
2016	Yes	2,495	29%	\$82,415,451	26%	17.5	25%	1,167,312	33%	\$70.60	15.0	445,638	33%	\$184.94	\$39.27
2016	No	6,191	71%	\$229,372,784	74%	51.2	75%	2,406,785	67%	\$95.30	21.3	925,449	67%	\$247.85	\$55.35
2016	Total	8,686	100%	\$311,788,235	100%	68.7	100%	3,574,097	100%	\$87.24	19.2	1,371,087	100%	\$227.40	\$50.12
2017	Yes	2,455	36%	\$73,495,156	34%	16.3	31%	1,167,312	33%	\$62.96	14.0	445,638	33%	\$164.92	\$36.61
2017	No	4,277	64%	\$140,309,017	66%	36.9	69%	2,406,785	67%	\$58.30	15.3	925,449	67%	\$151.61	\$39.82
2017	Total	6,732	100%	\$213,804,172	100%	53.2	100%	3,574,097	100%	\$59.82	14.9	1,371,087	100%	\$155.94	\$38.78
Total	Yes	7,019	27%	\$346,993,253	32%	66.7	28%	1,167,312	33%	\$297.26	57.2	445,638	33%	\$778.64	\$149.71
Total	No	19,288	73%	\$724,933,411	68%	167.6	72%	2,406,785	67%	\$301.20	69.7	925,449	67%	\$783.33	\$181.16
Total	Total	26,307	100%	\$1,071,926,663	100%	234.4	100%	3,574,097	100%	\$299.92	65.6	1,371,087	100%	\$781.81	\$170.93

⁶⁹ 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.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

Credit Quality of Homeowners

The credit quality of Green Bank’s borrowers in Green Bank residential 1-4 programs that do FICO-based underwriting reflects the relatively high FICO scores in the state; 94% 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 have access to energy financing products through such initiatives as its partnership with PosiGen (which uses an alternative underwriting approach) and launching a credit-challenged version of the Smart-E program that broadens the credit eligibility and now has six lenders including Capital 4 Change (a CDFI) and all the credit unions participating (all institution with experience serving this market).

Table 32. Credit Score Ranges of Household Borrowers Using Residential Financing Programs

Program Name	Unknown	>639	640-679	680-699	700-719	720+	Total
Smart-E	3	18	91	94	106	853	1,165
Solar Lease	-	1	45	39	78	1,026	1,189
Solar Loan	-	-	-	11	15	253	279
Total	3	19	136	144	199	2,132	2,633
	0%	1%	5%	5%	8%	81%	

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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 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. For FY 2017, Between 35% and 50% of projects maybe CRA compliant.

Table 33. Green Bank Commercial and Residential Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 80% by FY Closed^{70 71}

Fiscal Year Closed	# Projects				Investment (Gross Cost)				Amount Financed			
	Total	Over 80% AMI	80% or Below AMI	80% or Below AMI	Total	Over 80% AMI	80% or Below AMI	80% or Below AMI	Total	Over 80% AMI	80% or Below AMI	80% or Below AMI
2012	417	397	20	5%	\$14,989,569	\$14,467,221	\$522,348	3%	\$0	\$0	\$0	0%
2013	1,119	1,040	79	7%	\$111,215,363	\$35,056,219	\$76,159,144	68%	\$6,962,882	\$1,034,730	\$5,928,152	85%
2014	2,456	2,198	258	11%	\$103,595,804	\$87,223,562	\$16,372,242	16%	\$29,697,964	\$19,573,243	\$10,124,721	34%
2015	6,527	5,606	921	14%	\$316,533,520	\$245,636,987	\$70,896,533	22%	\$73,310,347	\$60,038,631	\$13,271,716	18%
2016	7,600	5,841	1,759	23%	\$309,706,751	\$242,071,201	\$67,635,550	22%	\$77,047,006	\$51,561,454	\$25,485,552	33%
2017	5,448	3,610	1,838	34%	\$212,298,380	\$133,830,283	\$78,468,098	37%	\$71,895,375	\$35,707,006	\$36,188,369	50%
Total	23,567	18,692	4,875	21%	\$1,068,339,387	\$758,285,473	\$310,053,915	29%	\$258,913,573	\$167,915,064	\$90,998,510	35%

⁷⁰ Excludes projects in unknown bands.

⁷¹ 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.

CONNECTICUT GREEN BANK
4. MEASURES OF SUCCESS

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 by customer type is seen in Table 34.

Table 34. Green Bank Activity in Residential and Commercial Markets by FY Closed⁷²

Fiscal Year Closed	Market	# of Projects	# of Project Units	Investment (Gross System Cost)	Installed Capacity (MW)	Expected Annual Generation (MWh)	Annual Saved / Produced (MMBtu)
2012	Residential	417	417	\$14,989,569	2.9	3,278	11,183
	Total	417	417	\$14,989,569	2.9	3,278	11,183
2013	Commercial	7	7	\$75,751,144	15.6	122,597	432,678
	Residential	1,112	1,112	\$35,464,219	7.9	8,983	30,651
	Total	1,119	1,119	\$111,215,363	23.5	131,581	463,328
2014	Commercial	27	27	\$29,371,586	6.7	32,134	179,454
	Residential	2,429	2,548	\$74,224,218	16.7	19,534	66,714
	Total	2,456	2,575	\$103,595,804	23.4	51,668	246,168
2015	Commercial	62	62	\$98,116,467	14.7	155,132	520,179
	Residential	6,465	6,716	\$218,417,053	48.0	55,308	189,758
	Total	6,527	6,778	\$316,533,520	62.7	210,440	709,938
2016	Commercial	71	71	\$56,347,967	10.2	25,613	115,584
	Residential	7,535	8,615	\$255,440,268	58.5	67,227	227,828
	Total	7,606	8,686	\$311,788,235	68.7	92,840	343,412
2017	Commercial	62	62	\$52,693,065	13.6	25,267	370,947
	Residential	5,397	6,670	\$161,111,107	39.5	47,038	158,418
	Total	5,459	6,732	\$213,804,172	53.2	72,305	529,365
Total	Commercial	229	229	\$312,280,229	60.8	360,742	1,618,842
	Residential	23,355	26,078	\$759,646,434	173.5	201,369	690,649
Total		23,584	26,307	\$1,071,926,663	234.4	562,111	2,309,491

⁷² 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.

5. Programs

Program Logic Model and the Financing Market Transformation Strategy

The Connecticut Green Bank has published an Evaluation Framework⁷³ and developed a Program Logic Model (PLM) that presents the green bank model of attracting and deploying private capital through financing – see Figure 3. 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 3. Connecticut Green Bank Program Logic Model – Including Subsidies and Financing



The above figure is a generalized market transformation and impact logic model. Revealed later in this section will be how it has been adapted to develop several evaluation frameworks for specific programs of the Green Bank. Additionally, with the continued maturation of the organization's programs, more data is becoming available to quantify and present the societal impacts associated with those programs.

While the Green Bank's capital availability expands to further support clean energy deployment, even greater coordination between the Green Bank's programs and those administered by the utilities is anticipated. 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 funding demands of clean energy projects over the short, medium, and long term. In addition, the model facilitates the

⁷³ Evaluation Framework – Assessing, Monitoring, and Reporting of Program Impacts and Processes by Opinion Dynamics and Dunsky Energy Consulting for the Connecticut Green Bank (July 2016)

CONNECTICUT GREEN BANK

5. PROGRAMS – PROGRAM LOGIC MODEL

identification and capture of known interventions in the clean energy environment that 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 easy 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 300MW by 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.⁷⁴

Within the Green Bank's current programs, only participants in the Residential Solar Investment Program (RSIP) are required to receive a home energy assessment (supported by the utility efficiency programs), a BPI audit, or equivalent. 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).

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.⁷⁵ It is important to note that a number of other ongoing market

⁷⁴ 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.

⁷⁵ 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

CONNECTICUT GREEN BANK

5. PROGRAMS – PROGRAM LOGIC MODEL

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 towards 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 market place. 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
- 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

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.

CONNECTICUT GREEN BANK

5. PROGRAMS – PROGRAM LOGIC MODEL

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 market place. 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.

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.⁷⁶

⁷⁶ 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)

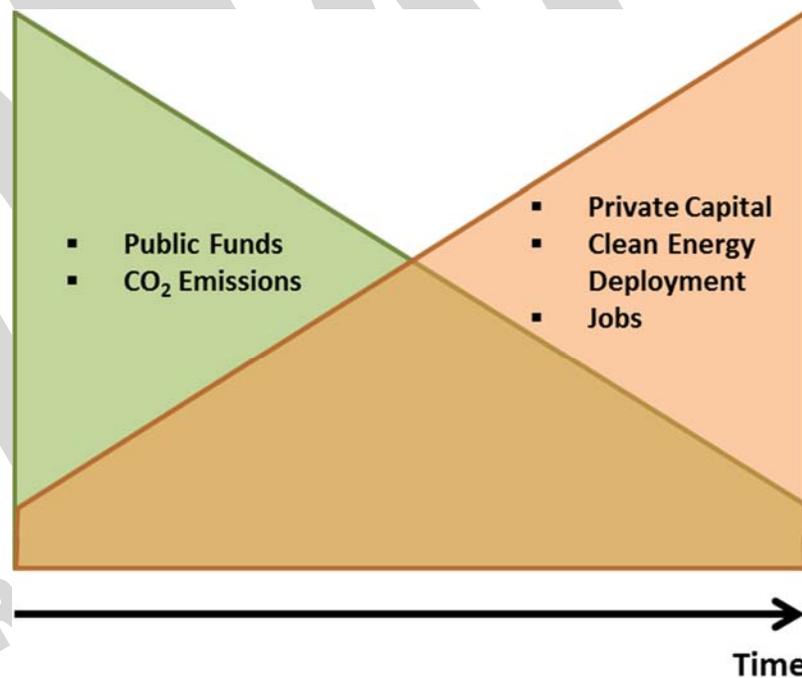
CONNECTICUT GREEN BANK 5. PROGRAMS – PROGRAM LOGIC MODEL

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,⁷⁷ increase in the creation of local in-state jobs,⁷⁸ and the reduction of greenhouse gas emissions⁷⁹ 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. Figure 4 below represents the transition over time of the Green Bank’s clean energy impacts and associated creation of societal benefits.

Figure 4. Societal Benefits – Environmental Protection and Economic Development – from Greater Private Capital Investment



⁷⁷ Green Bank will be working with the Connecticut Department of Energy and Environmental Protection and the U.S. Environmental Protection Agency to develop and approve a methodology for estimating public health benefits from the reduction of criteria pollutants as a result of the production of clean energy and reduction of energy consumption through the use of the Co-Benefits Risk Assessment (COBRA) model – <http://www.epa.gov/statelocalclimate/co-benefits-risk-assessment-cobra-screening-model>

⁷⁸ Green Bank is working with the Connecticut Department of Economic and Community Development and Navigant Consulting to update and approve a methodology for estimating economic development benefits from the investment in clean energy projects.

⁷⁹ Green Bank is working with the Connecticut Department of Energy and Environmental Protection to develop and approve a methodology for estimating greenhouse gas emission reduction benefits from the production of clean energy and reduction of energy consumption through the use of the Avoided Emissions and generation Tool (AVERT) - <http://www.epa.gov/statelocalclimate/avoided-emissions-and-generation-tool-avert>

CONNECTICUT GREEN BANK
5. PROGRAMS – PROGRAM LOGIC MODEL

As the Green Bank continues to attract more private investment in Connecticut’s clean energy economy through the issuance of green bonds, the deployment of clean energy will be accelerated. The more clean energy that is being deployed, the greater the societal benefits.

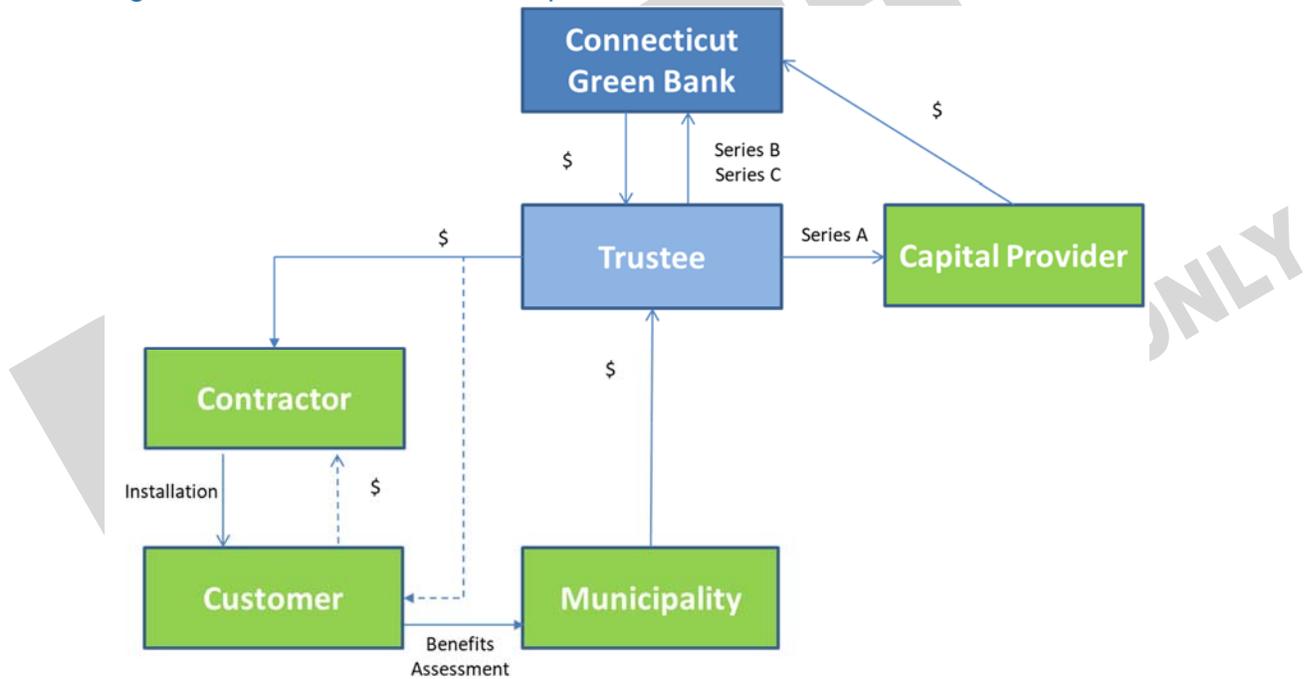
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Case 1 – C-PACE

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 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, 2017, there are 128 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, 2017, over \$100 million in C-PACE benefit assessment advances have been closed.

A portfolio of \$17.5 million in benefit assessment liens comprised of 30 energy efficiency and clean energy projects across 22 municipalities was sold in two tranches to the Public Finance Authority (PFA) under a bond conduit structure financed by Clean Fund. Using an auction process, bids for the portfolio were competitively solicited across the Connecticut Green Bank's capital providers. Bidders were encouraged to offer various structures and pricing, with or without credit enhancement, and to bid for one or more projects. The selected structure (See Figure 5) has the PFA use proceeds from Clean Fund (in return for a single class of Senior "A" bonds) to fund 80 percent of the portfolio purchase price. To credit enhance the transaction, the Connecticut Green Bank has taken back, in equal measure, Subordinated "B" and "C" bonds. The structure is, in effect, a "private securitization" of the underlying portfolio.

CONNECTICUT GREEN BANK
5. PROGRAMS – C-PACE

Building on this experience and the growth of the Connecticut C-PACE market, the Green Bank again solicited proposals from several financial institutions in 2015. As a result of the competitive solicitation, the Green Bank established a strategic financing partnership with Hannon Armstrong Sustainable Infrastructure (Hannon Armstrong), publicly listed on the NYSE. The Green Bank and Hannon Armstrong structure uses a special purpose entity (SPE) established by Hannon Armstrong specifically for the Green Bank C-PACE portfolio. The SPE purchases the benefit assessment liens in tranches that are financed from between 80% and 90% by Hannon Armstrong up to a maximum of \$100 million with the residual capital provided by the Green Bank.

Key Performance Indicators

The Key Performance Indicators for C-PACE closed activity are reflected in Tables 35 through 38. 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 35. C-PACE Project Types and Investment by FY Closed

Fiscal Year Closed	EE	RE	RE/EE	# Projects	# Project Units	Investment (Gross Cost) ⁸⁰	Green Bank Investment ⁸¹	Private Investment	Leverage Ratio
2012	-	-	-	-	-	-	-	-	-
2013	2		1	3	3	\$1,512,144	\$210,302	\$1,301,842	7.2
2014	6	14	3	23	23	\$21,785,167	\$9,550,120	\$12,235,046	2.3
2015	10	30	9	49	49	\$33,694,139	\$12,635,906	\$21,058,234	2.7
2016	10	34	8	52	52	\$36,248,743	\$7,407,738	\$28,841,004	4.9
2017	5	28	5	38	38	\$15,278,194	\$3,140,789	\$12,137,406	4.9
Total	33	106	26	165	165	\$108,518,387	\$32,944,855	\$75,573,532	3.3

Table 36. C-PACE Project Capacity, Generation and Savings by FY Closed

Fiscal Year Closed	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	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	7,280.0	14,973,965	325,349	41,464	902,240	\$2,792,189	\$58,534,753
2016	6,265.3	15,198,989	275,141	59,253	1,123,536	\$3,833,096	\$82,410,363
2017	3,918.9	6,283,132	133,414	23,113	497,061	\$560,640	\$14,072,754
Total	21,196.1	45,379,395	896,234	162,115	3,272,612	\$9,223,881	\$198,191,964

⁸⁰ Includes closing costs and capitalized interest for C-PACE and the Fair Market Value for Commercial/Residential Leases.

⁸¹ Includes incentives, interest rate buydowns and loan loss reserves.

CONNECTICUT GREEN BANK
5. PROGRAMS – C-PACE

Table 37. C-PACE Project Averages by FY Closed

Fiscal Year Closed	Average Gross System Cost	Average Amount Financed	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)	Average Finance Term (months)	Average Finance Rate
2012	-	-	-	-	-	-
2013	\$504,048	\$350,503	33.7	674	17	5.00
2014	\$947,181	\$883,582	157.9	1,577	18	5.57
2015	\$687,635	\$646,762	148.6	846	18	4.82
2016	\$697,091	\$644,825	120.5	1,139	18	4.75
2017	\$402,058	\$386,620	103.1	608	17	4.29
Total	\$657,687	\$613,865	128.5	983	18	4.78

Table 38. C-PACE Project Application Yield⁸² by FY Received⁸³

Fiscal Year Received	Applications Received	Projects in Review/On Hold	Projects Approved	Projects Withdrawn	Applications Denied	Approved Rate	Denied Rate
2012	-	-	-	-	-	-	-
2013	59	2	20	33	4	35%	7%
2014	149	22	39	85	3	31%	2%
2015	147	36	46	62	3	41%	3%
2016	111	43	41	24	3	60%	4%
2017	95	40	28	26	1	51%	2%
Total	561	143	174	230	14	42%	3%

⁸² 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.

⁸³ This table represents projects whose initial applications have been approved and are proceeding through the C-PACE financing pipeline prior to loan closure. Of initial applications received, about 98% enter the pipeline.

CONNECTICUT GREEN BANK
5. PROGRAMS – C-PACE

C-PACE has been used as a financing tool across a wide variety of end-use customers in Connecticut in its 5 years of existence as illustrated by Table 39.

Table 39. Types of End-Use Customers Participating in C-PACE

Property Type	# of Properties	Square Footage
Agricultural	2	10,904
Education	2	99,531
House of Worship	6	20,000
Industrial	42	1,862,979
Multi-family/apartment (> 5 units)	5	177,889
Non-profit	20	410,719
Nursing Home/Rehab Facility	1	-
Office	39	3,332,839
Public assembly	4	139,000
Retail	34	800,543
Special Purpose	1	10,000
Warehouse & storage	9	179,650
Total	165	7,044,054

To date, 128 municipalities have opted into the C-PACE program resulting in 165 closed projects – see Table 40.

Table 40. Municipalities Participating in C-PACE

Municipality	Opt in Date	# Closed Projects
Ansonia	9/27/2013	1
Avon	4/9/2013	2
Barkhamsted	7/21/2014	
Beacon Falls	4/11/2013	
Berlin	10/30/2013	
Bethany	9/2/2015	
Bethel	1/24/2014	
Bloomfield	6/21/2013	1
Branford	9/9/2013	1
Bridgeport	12/7/2012	13
Bristol	11/19/2014	5
Brookfield	8/5/2013	3
Burlington	1/12/2016	
Canaan	8/8/2013	1
Canterbury	11/5/2014	
Canton	7/9/2013	1
Cheshire	10/27/2014	1
Chester	7/25/2013	
Clinton	5/29/2013	1
Columbia	10/21/2014	
Coventry	6/24/2013	
Cromwell	4/9/2014	1
Danbury	10/8/2013	2
Darien	2/28/2014	

CONNECTICUT GREEN BANK
5. PROGRAMS – C-PACE

Municipality	Opt in Date	# Closed Projects
Deep River	7/22/2014	1
Durham	4/2/2013	1
East Granby	6/27/2013	
East Haddam	8/1/2013	2
East Hampton	7/10/2013	
East Hartford	4/11/2013	1
East Haven	2/28/2017	
East Lyme	9/11/2014	2
East Windsor	11/27/2013	5
Eastford	11/10/2014	
Easton	5/14/2015	
Ellington	8/27/2014	1
Enfield	1/3/2014	1
Essex	7/17/2014	
Fairfield	4/30/2014	3
Farmington	12/17/2013	2
Franklin	10/6/2015	
Glastonbury	6/14/2013	3
Granby	11/28/2013	
Greenwich	9/23/2013	1
Griswold	3/15/2016	
Groton	10/21/2013	2
Guilford	3/29/2016	
Haddam	9/18/2015	
Hamden	3/3/2014	
Hartford	10/26/2012	13
Hebron	12/20/2016	
Kent	9/17/2014	
Killingly	12/9/2014	
Killingworth	5/31/2013	1
Lebanon	5/13/2015	
Ledyard	1/14/2016	1
Madison	9/5/2014	
Manchester	8/1/2013	5
Mansfield	8/27/2013	
Meriden	5/24/2013	2
Middlefield	7/21/2015	
Middletown	3/25/2013	6
Milford	8/2/2013	
Monroe	3/8/2017	
Montville	12/4/2013	1
Naugatuck	6/30/2014	1
New Britain	7/17/2013	2
New Canaan	10/24/2014	
New Haven	12/6/2013	
New London	6/18/2013	8
New Milford	6/10/2013	

CONNECTICUT GREEN BANK
5. PROGRAMS – C-PACE

Municipality	Opt in Date	# Closed Projects
Newington	10/29/2014	1
Newtown	8/8/2013	3
Norfolk	5/13/2014	
North Branford	5/24/2013	
North Canaan	12/19/2013	1
North Haven	7/24/2014	
North Stonington	2/23/2015	1
Norwalk	12/3/2012	1
Norwich	10/7/2013	1
Old Lyme	1/25/2016	
Old Saybrook	2/20/2013	
Orange	5/17/2016	
Oxford	3/29/2016	1
Plainfield	6/14/2016	1
Plainville	6/28/2013	3
Portland	6/9/2016	1
Preston	1/8/2015	
Putnam	3/5/2013	2
Redding	10/20/2015	
Rocky Hill	10/8/2013	3
Salisbury	8/31/2016	
Seymour	1/27/2014	
Sharon	2/21/2014	
Shelton	9/30/2014	1
Simsbury	12/11/2014	1
Somers	5/23/2014	1
South Windsor	8/29/2014	2
Southbury	4/11/2012	
Southington	5/15/2013	2
Sprague	12/30/2013	
Stafford	9/26/2013	
Stamford	1/7/2013	8
Stonington	1/27/2014	1
Stratford	2/26/2013	3
Suffield	5/24/2013	
Thomaston	2/23/2016	
Tolland	4/11/2013	
Torrington	5/8/2013	1
Trumbull	7/31/2013	2
Vernon	7/22/2013	4
Waterbury	5/10/2013	5
Waterford	8/23/2013	
Watertown	4/11/2014	3
West Hartford	1/3/2013	
West Haven	5/6/2014	1
Westbrook	5/21/2013	
Weston	9/8/2014	

CONNECTICUT GREEN BANK
5. PROGRAMS – C-PACE

Municipality	Opt in Date	# Closed Projects
Westport	2/7/2013	4
Wethersfield	5/28/2013	
Willington	7/2/2014	1
Wilton	2/27/2012	2
Windham	5/1/2013	1
Windsor	5/16/2013	2
Windsor Locks	7/30/2015	1
Woodbridge	5/30/2014	2
Woodbury	3/18/2015	
Woodstock	4/15/2016	
Total	128	165

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CONNECTICUT GREEN BANK
5. 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 41 for Metropolitan Statistical Area (MSA) Area Median Income (AMI). It should be noted that C-PACE is not an income targeted program.

Table 41. C-PACE Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed⁸⁴

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Population	% Total Population Distribution	Project Units / 1,000 People	Investment / Total Population	Watts / Total 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%	3,565,079	100%	0.0	\$0.00	0.0
2013	<60%	1	33%	150,877	10%	0.0	0%	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%	711,251	47%	0.1	100%	588,813	16%	0.0	\$1.21	0.2
2013	100%-120%	1	33%	650,016	43%	0.0	0%	690,591	19%	0.0	\$0.94	0.0
2013	>120%	0	0%	0	0%	0.0	0%	1,131,305	32%	0.0	\$0.00	0.0
2013	Total	3	100%	1,512,144	100%	0.1	100%	3,584,094	100%	0.0	\$0.42	0.0
2014	<60%	7	30%	8,907,842	41%	1.3	37%	614,135	17%	0.0	\$14.50	2.2
2014	60%-80%	2	9%	609,883	3%	0.2	6%	546,132	15%	0.0	\$1.12	0.4
2014	80%-100%	5	22%	3,593,730	16%	1.1	32%	577,061	16%	0.0	\$6.23	2.0
2014	100%-120%	3	13%	800,605	4%	0.3	7%	720,856	20%	0.0	\$1.11	0.4
2014	>120%	6	26%	7,873,108	36%	0.7	18%	1,125,910	31%	0.0	\$6.99	0.6
2014	Total	23	100%	21,785,167	100%	3.6	100%	3,584,094	100%	0.0	\$6.08	1.0
2015	<60%	18	37%	7,737,619	23%	1.8	25%	662,619	18%	0.0	\$11.68	2.7
2015	60%-80%	5	10%	3,408,609	10%	0.8	10%	489,826	14%	0.0	\$6.96	1.6
2015	80%-100%	4	8%	3,427,052	10%	0.4	6%	650,163	18%	0.0	\$5.27	0.7
2015	100%-120%	9	18%	4,486,437	13%	1.2	16%	631,741	18%	0.0	\$7.10	1.9
2015	>120%	13	27%	14,634,422	43%	3.1	43%	1,150,974	32%	0.0	\$12.71	2.7
2015	Total	49	100%	33,694,139	100%	7.3	100%	3,585,323	100%	0.0	\$9.40	2.0
2016	<60%	8	16%	3,197,820	9%	0.6	10%	662,619	18%	0.0	\$4.83	0.9
2016	60%-80%	7	14%	3,255,764	9%	0.9	15%	489,826	14%	0.0	\$6.65	1.8
2016	80%-100%	9	18%	15,082,702	43%	0.8	14%	650,163	18%	0.0	\$23.20	1.3
2016	100%-120%	10	20%	5,901,863	17%	1.8	31%	631,741	18%	0.0	\$9.34	2.9
2016	>120%	15	31%	7,597,539	22%	1.8	30%	1,150,974	32%	0.0	\$6.60	1.6

⁸⁴ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. PROGRAMS – C-PACE

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Population	% Total Population Distribution	Project Units / 1,000 People	Investment / Total Population	Watts / Total Population
2016	Total	49	100%	35,035,689	100%	6.0	100%	3,585,323	100%	0.0	\$9.77	1.7
2017	<60%	7	18%	4,529,669	30%	1.7	43%	662,619	18%	0.0	\$6.84	2.6
2017	60%-80%	4	11%	1,312,429	9%	0.4	11%	489,826	14%	0.0	\$2.68	0.8
2017	80%-100%	7	18%	2,092,122	14%	0.4	9%	650,163	18%	0.0	\$3.22	0.5
2017	100%-120%	8	21%	2,305,092	15%	0.6	16%	631,741	18%	0.0	\$3.65	1.0
2017	>120%	12	32%	5,038,882	33%	0.8	21%	1,150,974	32%	0.0	\$4.38	0.7
2017	Total	38	100%	15,278,194	100%	3.9	100%	3,585,323	100%	0.0	\$4.26	1.1
Total	<60%	41	25%	24,523,827	23%	5.5	26%	662,619	18%	0.1	\$37.01	8.2
Total	60%-80%	18	11%	8,586,685	8%	2.3	11%	489,826	14%	0.0	\$17.53	4.7
Total	80%-100%	26	16%	24,906,858	23%	2.9	14%	650,163	18%	0.0	\$38.31	4.4
Total	100%-120%	31	19%	14,144,013	13%	3.9	19%	631,741	18%	0.0	\$22.39	6.2
Total	>120%	46	28%	35,143,951	33%	6.4	31%	1,150,974	32%	0.0	\$30.53	5.5
Total	Total	162	100%	107,305,333	100%	20.9	100%	3,585,323	100%	0.0	\$29.93	5.8

Table 42. C-PACE Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed⁸⁵

Fiscal Year Closed	# Project Units				MW				Investment (Gross Cost)			
	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	3	67%	0.1	0.0	0.1	100%	\$1,512,144	\$650,016	\$862,128	57%	3	67%
2014	23	61%	3.6	0.9	2.7	75%	\$21,785,167	\$8,673,712	\$13,111,454	60%	23	61%
2015	49	55%	7.3	4.3	3.0	41%	\$33,694,139	\$19,120,859	\$14,573,280	43%	49	55%
2016	49	49%	6.0	3.6	2.3	39%	\$35,035,689	\$13,499,402	\$21,536,287	61%	49	49%
2017	38	47%	3.9	1.4	2.5	63%	\$15,278,194	\$7,343,974	\$7,934,220	52%	38	47%
Total	162	52%	20.9	10.3	10.6	51%	\$107,305,333	\$49,287,964	\$58,017,370	54%	162	52%

⁸⁵ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. 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 43. It should be noted that C-PACE is not an income targeted program.

Table 43. C-PACE Activity in Distressed Communities by FY Closed

Fiscal Year Closed	Distressed	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	2010 Census Population	% Population Distribution	Investment / Capita	Watts / Capita	2010 Census Households	% Household Distribution	Investment / Household	Watts / Household
2012	Yes	0	0%	\$0	0%	0.0	0%	1,172,186	33%	\$0.00	0.0	449,097	33%	\$0.00	\$0.00
2012	No	0	0%	\$0	0%	0.0	0%	2,401,911	67%	\$0.00	0.0	921,990	67%	\$0.00	\$0.00
2012	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
2013	Yes	2	67%	\$800,893	53%	0.0	0%	1,124,337	31%	\$0.71	0.0	428,395	31%	\$1.87	\$0.00
2013	No	1	33%	\$711,251	47%	0.1	100%	2,449,760	69%	\$0.29	0.0	942,692	69%	\$0.75	\$0.11
2013	Total	3	100%	\$1,512,144	100%	0.1	100%	3,574,097	100%	\$0.42	0.0	1,371,087	100%	\$1.10	\$0.07
2014	Yes	7	30%	\$9,047,808	42%	1.4	40%	1,104,894	31%	\$8.19	1.3	420,721	31%	\$21.51	\$3.43
2014	No	16	70%	\$12,737,358	58%	2.2	60%	2,469,203	69%	\$5.16	0.9	950,366	69%	\$13.40	\$2.30
2014	Total	23	100%	\$21,785,167	100%	3.6	100%	3,574,097	100%	\$6.10	1.0	1,371,087	100%	\$15.89	\$2.65
2015	Yes	24	49%	\$17,102,026	51%	4.0	55%	1,123,207	31%	\$15.23	3.5	429,250	31%	\$39.84	\$9.24
2015	No	25	51%	\$16,592,113	49%	3.3	45%	2,450,890	69%	\$6.77	1.4	941,837	69%	\$17.62	\$3.52
2015	Total	49	100%	\$33,694,139	100%	7.3	100%	3,574,097	100%	\$9.43	2.0	1,371,087	100%	\$24.57	\$5.31
2016	Yes	15	29%	\$15,127,000	42%	1.5	24%	1,167,312	33%	\$12.96	1.3	445,638	33%	\$33.94	\$3.34
2016	No	37	71%	\$21,121,743	58%	4.8	76%	2,406,785	67%	\$8.78	2.0	925,449	67%	\$22.82	\$5.16
2016	Total	52	100%	\$36,248,743	100%	6.3	100%	3,574,097	100%	\$10.14	1.8	1,371,087	100%	\$26.44	\$4.57
2017	Yes	10	26%	\$6,422,413	42%	2.0	52%	1,167,312	33%	\$5.50	1.7	445,638	33%	\$14.41	\$4.57
2017	No	28	74%	\$8,855,781	58%	1.9	48%	2,406,785	67%	\$3.68	0.8	925,449	67%	\$9.57	\$2.03
2017	Total	38	100%	\$15,278,194	100%	3.9	100%	3,574,097	100%	\$4.27	1.1	1,371,087	100%	\$11.14	\$2.86
Total	Yes	58	35%	\$48,500,141	45%	8.9	42%	1,167,312	33%	\$41.55	7.7	445,638	33%	\$108.83	\$20.06
Total	No	107	65%	\$60,018,246	55%	12.3	58%	2,406,785	67%	\$24.94	5.1	925,449	67%	\$64.85	\$13.24
Total	Total	165	100%	\$108,518,387	100%	21.2	100%	3,574,097	100%	\$30.36	5.9	1,371,087	100%	\$79.15	\$15.46

CONNECTICUT GREEN BANK
5. PROGRAMS – C-PACE

Societal Impacts

Ratepayers in Connecticut continue to enjoy the societal benefits of C-PACE. In its 5 years of existence, the program has supported the creation of 1,272 job years, avoided the lifetime emission of 491,782 tons of carbon dioxide, 539,713 pounds of nitrous oxide, 494,403 pounds of sulfur oxide, and 37,927 pounds of particulate matter as illustrated by Tables 44 and 45.

Table 44. C-PACE Job Years Supported by FY Closed

	2012	2013	2014	2015	2016	2017	Total
Direct	0	9	109	142	179	56	495
Indirect and Induced	0	15	174	227	285	76	777
Total	0	24	282	369	464	132	1,272

Table 45. C-PACE Avoided Emissions by FY Closed

	2012	2013	2014	2015	2016	2017	Total
CO2 Savings (tons)							
Annual	-	283	4,700	7,725	8,587	3,497	24,792
Lifetime	-	4,224	86,427	171,292	155,257	74,582	491,782
NOx Savings (pounds)							
Annual	-	386	6,077	8,237	9,240	3,442	27,382
Lifetime	-	5,811	113,223	180,977	165,015	74,688	539,713
SOx Savings (pounds)							
Annual	-	477	6,872	7,764	8,141	2,451	25,706
Lifetime	-	7,148	128,033	168,384	137,591	53,246	494,403
PM 2.5 (pounds)							
Annual	-	24	400	488	714	298	1,924
Lifetime	-	360	7,497	10,467	13,158	6,444	37,927

Financing Program

Commercial Property Assessed Clean Energy (C-PACE) is a structure through which commercial property owners can finance energy efficiency and 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. It should be noted that, to date, 32 unique banks and 5 specialized lending institutions have provided lender consent for over 70 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.

The Connecticut Green Bank maintains a warehouse of capital from which it finances C-PACE transactions and sells to capital markets upon completion. 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

CONNECTICUT GREEN BANK

5. PROGRAMS – C-PACE

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 6/30/2017, there are no 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, as well as the Project Accelerator Service (PAS). PAS assists contractors in navigating the C-PACE process and developing projects, serving as both a means of originating projects for the Green Bank and a way of creating more skilled and active C-PACE contractors.

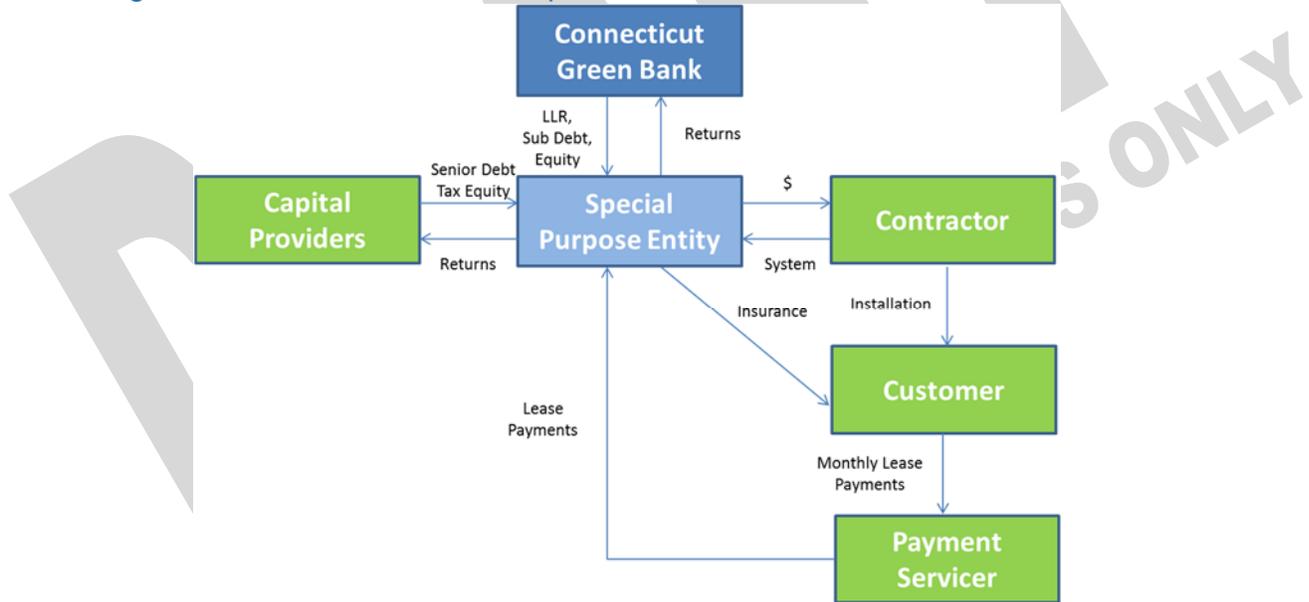
Case 2 – Solar Lease

Description

The Green Bank has used third-party ownership structures to deploy distributed solar generation in Connecticut both in the Residential and in the 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 Solar Lease⁸⁶



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 broaden 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 “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 could obtain the support of the tax equity

⁸⁶ It should be noted that the Special Purpose Entity structure includes several entities – CT Solar Lease II, LLC and CEFIA Holdings, LLC that provide different functions.

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LEASE

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.

Key Performance Indicators

The Key Performance Indicators for Solar Lease closed activity are reflected in Tables 46 through 52 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 46. Commercial Solar Lease Project Types and Investment by FY Closed

Fiscal Year Closed	EE	RE	RE/EE	# Projects	# Project Units	Investment (Gross Cost)⁸⁷	Green Bank Investment⁸⁸	Private Investment	Leverage Ratio
2012	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-
2015	-	16	-	16	16	\$11,547,562	\$2,886,891	\$8,660,672	4.0
2016	-	27	-	27	27	\$16,711,392	\$4,177,848	\$12,533,544	4.0
2017	-	30	-	30	30	\$32,491,862	\$2,931,619	\$29,560,243	11.1
Total	-	73	-	73	73	\$60,750,816	\$9,996,357	\$50,754,459	6.1

Table 47. Residential Solar Lease Project Investment by FY Closed

Fiscal Year Closed	EE⁸⁹	RE	RE/EE	# Projects	# Project Units	Investment (Gross Cost)⁹⁰	Green Bank Investment⁹¹	Private Investment	Leverage Ratio
2012	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-
2014	-	107	-	107	107	\$3,625,695	\$888,178	\$2,976,516	4.1
2015	-	610	-	610	610	\$22,206,010	\$4,861,995	\$18,652,325	4.6
2016	-	472	-	472	472	\$17,364,682	\$3,763,770	\$14,613,701	4.6
2017	-	-	-	-	-	-	-	-	-
Total	-	1,189	-	1,189	1,189	\$43,196,386	\$9,513,943	\$36,242,543	4.5

⁸⁷ Includes closing costs and capitalized interest for C-PACE and the Fair Market Value for Commercial/Residential Leases.

⁸⁸ Includes incentives, interest rate buydowns and loan loss reserves.

⁸⁹ All projects that receive an RSIP incentive are required to do an energy audit/assessment.

⁹⁰ Includes closing costs and capitalized interest for C-PACE and the Fair Market Value for Commercial/Residential Leases.

⁹¹ Includes incentives, interest rate buydowns and loan loss reserves.

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LEASE

Table 48. Commercial Solar Lease Project Capacity, Generation and Savings⁹² by FY Closed

Fiscal Year Closed	Installed Capacity (kW)	Expected Annual Generation (kWh)	Expected Lifetime Savings or Generation (MWh)	Annual Saved / Produced (MMBtu)	Lifetime Saved / Produced (MMBtu)
2012	-	-	-	-	-
2013	-	-	-	-	-
2014	-	-	-	-	-
2015	3,533.7	4,024,143	100,604	12,975	324,370
2016	5,470.1	6,229,384	155,735	21,282	532,057
2017	10,573.0	12,040,487	301,012	41,082	1,027,054
Total	19,576.8	22,294,014	557,350	75,339	1,883,481

Table 49. Residential Solar Lease Project Capacity, Generation and Savings⁹³ by FY Closed

Fiscal Year Closed	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	4,892.6	5,571,667	139,292	19,011	475,263
2016	3,840.6	4,373,704	109,343	14,923	373,077
2017	-	-	-	-	-
Total	9,550.3	10,875,874	271,897	37,108	927,712

Table 50. Commercial Solar Lease Project Averages by FY Closed

Fiscal Year Closed	Average Gross System Cost	Average Amount Financed	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)	Average Finance Term (months)	Average PPA Lease Price
2012	-	-	-	-	-	-
2013	-	-	-	-	-	-
2014	-	-	-	-	-	-
2015	\$721,723	\$721,723	220.9	811	20	\$0.10
2016	\$618,940	\$618,940	202.6	788	20	\$0.10
2017	\$1,083,062	\$1,083,062	352.4	1,369	20	\$0.08
Total	\$832,203	\$832,203	268.2	1,032	20	\$0.09

⁹² The Green Bank currently estimates annual savings and is in the process or reviewing and updating this methodology to include actual savings where possible.

⁹³ The Green Bank currently estimates annual savings and is in the process or reviewing and updating this methodology to include actual savings where possible.

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LEASE

Table 51. Residential Solar Lease Project Averages by FY Closed

Fiscal Year Closed	Average Gross System Cost	Average Amount Financed	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)	Average Finance Term (months)	Average DTI	Average FICO Score
2012	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-
2014	\$33,885	\$38,182	7.6	30	240	30	785
2015	\$36,403	\$36,663	8.0	31	240	31	777
2016	\$36,790	\$36,679	8.1	32	240	35	776
2017	-	-	-	-	-	-	-
Total	\$36,330	\$36,806	8.0	31	240	33	777

Table 52. Residential Solar Lease Project Application Yield⁹⁴ by FY Received

Fiscal Year Received	Applications Received	Applications Approved	Applications Withdrawn	Applications Denied	Approved Rate	Denied Rate
2012	-	-	-	-	-	-
2013	-	-	-	-	-	-
2014	669	452	256	217	68%	32%
2015	1,813	1,466	619	347	81%	19%
2016	351	300	154	51	85%	15%
2017	-	-	-	-	-	-
Total	2,833	2,218	1,029	615	78%	22%

The types of Commercial end-use customers participating in the Solar Lease program are shown in Table 53 along with the square footage impacted where available.

Table 53. Types of End-Use Customers Participating in Commercial Solar Lease

Property Type	# of Properties	Square Footage
Agricultural	1	-
Education	4	99,531
House of Worship	6	20,000
Industrial	2	-
Municipal building	30	-
Non-profit	15	-
Nursing Home/Rehab Facility	1	-
Office	10	24,100
Public assembly	2	11,000
Retail	1	-
Warehouse & storage	1	-
Total	73	154,631

⁹⁴ 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.

CONNECTICUT GREEN BANK
5. PROGRAMS – 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 54 and 55 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 54. Commercial Solar Lease Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed⁹⁵

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Population	% Total Population Distribution	Project Units / 1,000 People	Investment / Total Population	Watts / Total 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%	3,565,079	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	32%	0.0	\$0.00	0.0
2013	Total	0	0%	0	0%	0.0	0%	3,584,094	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%	3,584,094	100%	0.0	\$0.00	0.0
2015	<60%	2	13%	416,000	4%	0.1	4%	662,619	18%	0.0	\$0.63	0.2
2015	60%-80%	1	6%	300,000	3%	0.1	2%	489,826	14%	0.0	\$0.61	0.2
2015	80%-100%	2	13%	1,904,000	16%	0.6	18%	650,163	18%	0.0	\$2.93	1.0
2015	100%-120%	3	19%	1,238,000	11%	0.4	10%	631,741	18%	0.0	\$1.96	0.6
2015	>120%	8	50%	7,689,562	67%	2.3	65%	1,150,974	32%	0.0	\$6.68	2.0
2015	Total	16	100%	11,547,562	100%	3.5	100%	3,585,323	100%	0.0	\$3.22	1.0
2016	<60%	0	0%	0	0%	0.0	0%	662,619	18%	0.0	\$0.00	0.0
2016	60%-80%	1	4%	486,864	3%	0.1	2%	489,826	14%	0.0	\$0.99	0.3
2016	80%-100%	5	19%	2,251,498	13%	0.7	13%	650,163	18%	0.0	\$3.46	1.1
2016	100%-120%	7	26%	4,825,648	29%	1.6	29%	631,741	18%	0.0	\$7.64	2.5

⁹⁵ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LEASE

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Population	% Total Population Distribution	Project Units / 1,000 People	Investment / Total Population	Watts / Total Population
2016	>120%	14	52%	9,147,382	55%	3.0	56%	1,150,974	32%	0.0	\$7.95	2.6
2016	Total	27	100%	16,711,392	100%	5.5	100%	3,585,323	100%	0.0	\$4.66	1.5
2017	<60%	4	13%	3,456,922	11%	1.5	14%	662,619	18%	0.0	\$5.22	2.2
2017	60%-80%	3	10%	426,802	1%	0.1	1%	489,826	14%	0.0	\$0.87	0.3
2017	80%-100%	5	17%	8,452,522	26%	2.8	26%	650,163	18%	0.0	\$13.00	4.3
2017	100%-120%	8	27%	8,663,950	27%	2.7	25%	631,741	18%	0.0	\$13.71	4.2
2017	>120%	10	33%	11,491,666	35%	3.5	33%	1,150,974	32%	0.0	\$9.98	3.1
2017	Total	30	100%	32,491,862	100%	10.6	100%	3,585,323	100%	0.0	\$9.06	2.9
Total	<60%	6	8%	3,872,922	6%	1.6	8%	662,619	18%	0.0	\$5.84	2.4
Total	60%-80%	5	7%	1,213,666	2%	0.3	2%	489,826	14%	0.0	\$2.48	0.7
Total	80%-100%	12	16%	12,608,020	21%	4.1	21%	650,163	18%	0.0	\$19.39	6.4
Total	100%-120%	18	25%	14,727,598	24%	4.6	24%	631,741	18%	0.0	\$23.31	7.3
Total	>120%	32	44%	28,328,610	47%	8.9	45%	1,150,974	32%	0.0	\$24.61	7.7
Total	Total	73	100%	60,750,816	100%	19.6	100%	3,585,323	100%	0.0	\$16.94	5.5

Table 55. Residential Solar Lease Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed⁹⁶

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Owner Occupied 1-4 Unit Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total 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
2014	<60%	0	0%	0	0%	0.0	0%	57,673	7%	0.0	\$0.00	0.0
2014	60%-80%	6	6%	203,310	6%	0.0	5%	103,934	12%	0.1	\$1.96	0.4
2014	80%-100%	13	12%	440,505	12%	0.1	11%	149,038	17%	0.1	\$2.96	0.6

⁹⁶ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LEASE

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Owner Occupied 1-4 Unit Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total Household
2014	100%-120%	43	40%	1,457,055	40%	0.3	42%	209,561	24%	0.2	\$6.95	1.6
2014	>120%	45	42%	1,524,825	42%	0.3	42%	348,270	40%	0.1	\$4.38	1.0
2014	Total	107	100%	3,625,695	100%	0.8	100%	868,476	100%	0.1	\$4.17	0.9
2015	<60%	5	1%	203,010	1%	0.0	1%	64,361	7%	0.1	\$3.15	0.5
2015	60%-80%	43	7%	1,436,608	6%	0.3	6%	96,305	11%	0.4	\$14.92	3.0
2015	80%-100%	120	20%	4,362,945	20%	0.9	19%	164,873	19%	0.7	\$26.46	5.5
2015	100%-120%	165	27%	5,979,247	27%	1.3	27%	184,613	21%	0.9	\$32.39	7.1
2015	>120%	277	45%	10,224,200	46%	2.4	48%	352,621	41%	0.8	\$28.99	6.7
2015	Total	610	100%	22,206,010	100%	4.9	100%	862,773	100%	0.7	\$25.74	5.7
2016	<60%	20	4%	767,723	4%	0.1	4%	64,361	7%	0.3	\$11.93	2.1
2016	60%-80%	35	7%	1,325,870	8%	0.2	6%	96,305	11%	0.4	\$13.77	2.6
2016	80%-100%	83	18%	2,986,742	17%	0.6	17%	164,873	19%	0.5	\$18.12	3.9
2016	100%-120%	130	28%	4,799,392	28%	1.1	28%	184,613	21%	0.7	\$26.00	5.7
2016	>120%	204	43%	7,484,956	43%	1.8	46%	352,621	41%	0.6	\$21.23	5.0
2016	Total	472	100%	17,364,682	100%	3.8	100%	862,773	100%	0.5	\$20.13	4.5
2017	<60%	0	0%	0	0%	0.0	0%	64,361	7%	0.0	\$0.00	0.0
2017	60%-80%	0	0%	0	0%	0.0	0%	96,305	11%	0.0	\$0.00	0.0
2017	80%-100%	0	0%	0	0%	0.0	0%	164,873	19%	0.0	\$0.00	0.0
2017	100%-120%	0	0%	0	0%	0.0	0%	184,613	21%	0.0	\$0.00	0.0
2017	>120%	0	0%	0	0%	0.0	0%	352,621	41%	0.0	\$0.00	0.0
2017	Total	0	0%	0	0%	0.0	0%	862,773	100%	0.0	\$0.00	0.0
Total	<60%	25	2%	970,733	2%	0.2	2%	64,361	7%	0.4	\$15.08	2.7
Total	60%-80%	84	7%	2,965,788	7%	0.6	6%	96,305	11%	0.9	\$30.80	6.0
Total	80%-100%	216	18%	7,790,192	18%	1.6	17%	164,873	19%	1.3	\$47.25	9.9
Total	100%-120%	338	28%	12,235,694	28%	2.7	28%	184,613	21%	1.8	\$66.28	14.6
Total	>120%	526	44%	19,233,981	45%	4.5	47%	352,621	41%	1.5	\$54.55	12.7
Total	Total	1,189	100%	43,196,386	100%	9.6	100%	862,773	100%	1.4	\$50.07	11.1

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LEASE

Table 56. Commercial Solar Lease Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed⁹⁷

Fiscal Year Closed	# Project Units				MW				Investment (Gross Cost)			
	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	0	0%	0.0	0.0	0.0	0%	\$0	\$0	\$0	0%	0	0%
2015	16	31%	3.5	2.7	0.9	24%	\$11,547,562	\$8,927,562	\$2,620,000	23%	16	31%
2016	27	22%	5.5	4.6	0.8	16%	\$16,711,392	\$13,973,030	\$2,738,362	16%	27	22%
2017	30	40%	10.6	6.2	4.4	41%	\$32,491,862	\$20,155,616	\$12,336,246	38%	30	40%
Total	73	32%	19.6	13.5	6.1	31%	\$60,750,816	\$43,056,208	\$17,694,608	29%	73	32%

Table 57. Residential Solar Lease Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed⁹⁸

Fiscal Year Closed	# Project Units				MW				Investment (Gross Cost)			
	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	107	18%	0.8	0.7	0.1	16%	\$3,625,695	\$2,981,880	\$643,815	18%	107	18%
2015	610	28%	4.9	3.7	1.2	25%	\$22,206,010	\$16,203,447	\$6,002,563	27%	610	28%
2016	472	29%	3.8	2.8	1.0	27%	\$17,364,682	\$12,284,348	\$5,080,334	29%	472	29%
2017	0	0%	0.0	0.0	0.0	0%	\$0	\$0	\$0	0%	0	0%
Total	1,189	27%	9.6	7.2	2.4	25%	\$43,196,386	\$31,469,675	\$11,726,712	27%	1,189	27%

⁹⁷ Excludes projects in unknown bands.

⁹⁸ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LEASE

Distressed Community Penetration

For a breakdown of Solar Lease project volume and investment by census tracts categorized by Distressed Communities – see Tables 58 and 59. It should be noted that Solar Lease is not an income targeted program.

Table 58. Commercial Solar Lease Activity in Distressed Communities by FY Closed

Fiscal Year Closed	Distressed	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	2010 Census Population	% Population Distribution	Investment / Capita	Watts / Capita	2010 Census Households	% Household Distribution	Investment / Household	Watts / Household
2012	Yes	0	0%	\$0	0%	0.0	0%	1,172,186	33%	\$0.00	0.0	449,097	33%	\$0.00	\$0.00
2012	No	0	0%	\$0	0%	0.0	0%	2,401,911	67%	\$0.00	0.0	921,990	67%	\$0.00	\$0.00
2012	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
2013	Yes	0	0%	\$0	0%	0.0	0%	1,124,337	31%	\$0.00	0.0	428,395	31%	\$0.00	\$0.00
2013	No	0	0%	\$0	0%	0.0	0%	2,449,760	69%	\$0.00	0.0	942,692	69%	\$0.00	\$0.00
2013	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
2014	Yes	0	0%	\$0	0%	0.0	0%	1,104,894	31%	\$0.00	0.0	420,721	31%	\$0.00	\$0.00
2014	No	0	0%	\$0	0%	0.0	0%	2,469,203	69%	\$0.00	0.0	950,366	69%	\$0.00	\$0.00
2014	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
2015	Yes	2	13%	\$416,000	4%	0.1	4%	1,123,207	31%	\$0.37	0.1	429,250	31%	\$0.97	\$0.33
2015	No	14	88%	\$11,131,562	96%	3.4	96%	2,450,890	69%	\$4.54	1.4	941,837	69%	\$11.82	\$3.60
2015	Total	16	100%	\$11,547,562	100%	3.5	100%	3,574,097	100%	\$3.23	1.0	1,371,087	100%	\$8.42	\$2.58
2016	Yes	1	4%	\$486,864	3%	0.1	2%	1,167,312	33%	\$0.42	0.1	445,638	33%	\$1.09	\$0.30
2016	No	26	96%	\$16,224,528	97%	5.3	98%	2,406,785	67%	\$6.74	2.2	925,449	67%	\$17.53	\$5.76
2016	Total	27	100%	\$16,711,392	100%	5.5	100%	3,574,097	100%	\$4.68	1.5	1,371,087	100%	\$12.19	\$3.99
2017	Yes	2	7%	\$2,889,250	9%	1.3	12%	1,167,312	33%	\$2.48	1.1	445,638	33%	\$6.48	\$2.89
2017	No	28	93%	\$29,602,612	91%	9.3	88%	2,406,785	67%	\$12.30	3.9	925,449	67%	\$31.99	\$10.03
2017	Total	30	100%	\$32,491,862	100%	10.6	100%	3,574,097	100%	\$9.09	3.0	1,371,087	100%	\$23.70	\$7.71
Total	Yes	5	7%	\$3,792,114	6%	1.6	8%	1,167,312	33%	\$3.25	1.3	445,638	33%	\$8.51	\$3.51
Total	No	68	93%	\$56,958,702	94%	18.0	92%	2,406,785	67%	\$23.67	7.5	925,449	67%	\$61.55	\$19.46
Total	Total	73	100%	\$60,750,816	100%	19.6	100%	3,574,097	100%	\$17.00	5.5	1,371,087	100%	\$44.31	\$14.28

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LEASE

Table 59. Residential Solar Lease Activity in Distressed Communities by FY Closed

Fiscal Year Closed	Distressed	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	2010 Census Population	% Population Distribution	Investment / Capita	Watts / Capita	2010 Census Households	% Household Distribution	Investment / Household	Watts / Household
2012	Yes	0	0%	\$0	0%	0.0	0%	1,172,186	33%	\$0.00	0.0	449,097	33%	\$0.00	\$0.00
2012	No	0	0%	\$0	0%	0.0	0%	2,401,911	67%	\$0.00	0.0	921,990	67%	\$0.00	\$0.00
2012	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
2013	Yes	0	0%	\$0	0%	0.0	0%	1,124,337	31%	\$0.00	0.0	428,395	31%	\$0.00	\$0.00
2013	No	0	0%	\$0	0%	0.0	0%	2,449,760	69%	\$0.00	0.0	942,692	69%	\$0.00	\$0.00
2013	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
2014	Yes	15	14%	\$508,275	14%	0.1	12%	1,104,894	31%	\$0.46	0.1	420,721	31%	\$1.21	\$0.24
2014	No	92	86%	\$3,117,420	86%	0.7	88%	2,469,203	69%	\$1.26	0.3	950,366	69%	\$3.28	\$0.75
2014	Total	107	100%	\$3,625,695	100%	0.8	100%	3,574,097	100%	\$1.01	0.2	1,371,087	100%	\$2.64	\$0.60
2015	Yes	95	16%	\$3,474,590	16%	0.7	15%	1,123,207	31%	\$3.09	0.6	429,250	31%	\$8.09	\$1.67
2015	No	515	84%	\$18,731,420	84%	4.2	85%	2,450,890	69%	\$7.64	1.7	941,837	69%	\$19.89	\$4.43
2015	Total	610	100%	\$22,206,010	100%	4.9	100%	3,574,097	100%	\$6.21	1.4	1,371,087	100%	\$16.20	\$3.57
2016	Yes	97	21%	\$3,462,405	20%	0.8	20%	1,167,312	33%	\$2.97	0.6	445,638	33%	\$7.77	\$1.69
2016	No	375	79%	\$13,902,277	80%	3.1	80%	2,406,785	67%	\$5.78	1.3	925,449	67%	\$15.02	\$3.34
2016	Total	472	100%	\$17,364,682	100%	3.8	100%	3,574,097	100%	\$4.86	1.1	1,371,087	100%	\$12.66	\$2.80
2017	Yes	0	0%	\$0	0%	0.0	0%	1,167,312	33%	\$0.00	0.0	445,638	33%	\$0.00	\$0.00
2017	No	0	0%	\$0	0%	0.0	0%	2,406,785	67%	\$0.00	0.0	925,449	67%	\$0.00	\$0.00
2017	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
Total	Yes	207	17%	\$7,445,270	17%	1.6	16%	1,167,312	33%	\$6.38	1.3	445,638	33%	\$16.71	\$3.52
Total	No	982	83%	\$35,751,116	83%	8.0	84%	2,406,785	67%	\$14.85	3.3	925,449	67%	\$38.63	\$8.63
Total	Total	1,189	100%	\$43,196,386	100%	9.6	100%	3,574,097	100%	\$12.09	2.7	1,371,087	100%	\$31.51	\$6.97

FOR DISCUSSION

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LEASE

Societal Impacts

Ratepayers in Connecticut reap the societal benefits of the CT Solar Lease. Over the course of its existence, the program has supported the creation of 437 job years and avoided the lifetime emission of 468,918 tons of carbon dioxide, 518,374 pounds of nitrous oxide, 439,874 pounds of sulfur oxide, and 41,197 pounds of particulate matter as illustrated by Tables 60 and 61.

Table 60. Commercial and Residential Solar Lease Job Years Supported by FY Closed

	2012	2013	2014	2015	2016	2017	Total
Direct	-	-	21	166	157	88	433
Indirect and Induced	-	-	34	266	252	116	669
Total	-	-	56	432	409	204	1,102

Table 61. Commercial and Residential Solar Lease Avoided Emissions by FY Closed

	2012	2013	2014	2015	2016	2017	Total
CO2 Savings (tons)							
Annual	-	-	514	5,483	5,991	6,768	18,757
Lifetime	-	-	12,859	137,063	149,787	169,209	468,918
NOx Savings (pounds)							
Annual	-	-	728	6,678	6,400	6,928	20,735
Lifetime	-	-	18,207	166,954	160,011	173,202	518,374
SOx Savings (pounds)							
Annual	-	-	871	6,715	5,064	4,945	17,595
Lifetime	-	-	21,778	167,871	126,590	123,634	439,874
PM 2.5 (pounds)							
Annual	-	-	47	481	526	595	1,648
Lifetime	-	-	1,168	12,025	13,140	14,865	41,197

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. First Niagara Bank and Webster Bank) that uses a credit enhancement (i.e., \$3,500,000 loan loss reserve),⁹⁹ 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 up to \$75 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 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,¹⁰⁰ insurance and “one call” system

⁹⁹ From repurposed American Recovery and Reinvestment Act funds

¹⁰⁰ AFC First Financial

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LEASE

performance and insurance resolution,¹⁰¹ and financing features in combination with the support of the Connecticut Green Bank.

Financial Performance

To date there are no defaults and as of 6/30/2017 there are 15 delinquencies totaling \$54,970 or 0.1% of the Commercial Solar Lease portfolio. To date there is 1 default with an original principal balance of \$34,940 or 0.1% of the Residential Solar Lease portfolio and as of 6/30/2017 there are no delinquencies.

The household customers that accessed the CT Solar Lease since its launch in 2014 had varying credit scores – see Table 62.

Table 62. Credit Score Ranges of Household Customers Using the CT Solar Lease by FY Closed

Fiscal Year Closed	-639		640-679		680-699		700-719		720+		Total # Projects
	# Projects	% of Total	# Projects	% of Total	# Projects	% of Total	# Projects	% of Total	# Projects	% of Total	
2014	-	0.0%	4	3.7%	-	0.0%	5	4.7%	98	91.6%	107
2015	-	0.0%	26	4.3%	23	3.8%	39	6.4%	522	85.6%	610
2016	1	0.2%	15	3.2%	16	3.4%	34	7.2%	406	86.0%	472
Total	1	0.1%	45	3.8%	39	3.3%	78	6.6%	1,026	86.3%	1,189

Marketing

To accelerate the deployment of residential solar PV through the RSIP and the uptake of the CT Solar Lease financing product, the Connecticut Green Bank implemented Solarize Connecticut. The Green Bank sponsored 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 63. The Green Bank also implemented channel marketing through the solar installer channel to support residential and commercial installers and their ability to grow their businesses by providing the CT Solar Lease product to their customers.

Table 63. Number of Projects, Investment, and Installed Capacity through Green Bank Solarize Connecticut for the CT Solar Lease Financing Product

Solarize	# of Projects	Investment (Gross Cost)	Installed Capacity (MW)
Solarize	325	\$11,878,017	2.5
Not Solarize	864	\$31,318,369	7.0
Total	1,189	\$43,196,386	9.6
% Solarize	27%	27%	27%

The Green Bank Solarize Connecticut program provided a marketing channel and origination catalyst for the CT Solar Lease comprising 27 percent of the total projects, investment, and installed capacity.

¹⁰¹ Assurant

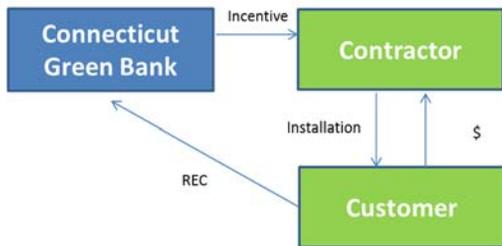
CONNECTICUT GREEN BANK
5. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM

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 time¹⁰² based on system production (i.e., through a performance based incentive or PBI) for third-party owned projects. With either incentive type, the Renewable Energy Credits (RECs) are owned by the Connecticut Green Bank.

Figure 7. RSIP Legal Structure and Flows of Capital¹⁰³



The subsidy under the RSIP has decreased over time – see Table 64, supporting the goal of reducing market reliance on rebates and incentives while moving it towards innovative low-cost financing and sustainable orderly development.

Table 64. 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
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	\$0.054	\$0.110	\$0.055
Step 9	2/1/2016	\$0.513		\$0.400	\$0.046	\$0.046	\$0.110	\$0.055
Step 10	9/1/2016	\$0.487		\$0.400	\$0.039	\$0.039	\$0.110	\$0.055
Step 11	8/1/2017	\$0.487		\$0.400	\$0.039	\$0.039	\$0.110	\$0.055

¹⁰² The PBI is currently paid out quarterly over a period of six years.

¹⁰³ 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.

CONNECTICUT GREEN BANK
5. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM

Key Performance Indicators

The Key Performance Indicators for RSIP closed activity are reflected in Tables 65 through 70. 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 65. RSIP Project Types and Investment by FY Closed

Fiscal Year Closed	EE ¹⁰⁴	RE	RE/EE	# Projects	# Project Units	Investment (Gross Cost) ¹⁰⁵	Green Bank Investment ¹⁰⁶	Private Investment	Leverage Ratio
2012	-	417	-	417	417	\$14,989,569	\$4,804,743	\$10,184,827	3.1
2013	-	1,115	-	1,115	1,115	\$35,584,155	\$11,953,564	\$23,630,591	3.0
2014	-	2,388	-	2,388	2,388	\$74,052,944	\$20,106,693	\$53,946,251	3.7
2015	-	6,445	-	6,445	6,445	\$216,516,944	\$33,464,664	\$183,052,280	6.5
2016	-	7,237	-	7,237	7,237	\$232,901,017	\$19,856,255	\$213,044,762	11.7
2017	-	5,024	-	5,024	5,024	\$138,068,370	\$12,867,584	\$125,200,786	10.7
Total	-	22,626	-	22,626	22,626	\$712,113,000	\$103,053,503	\$609,059,497	6.9

Table 66. RSIP Project Capacity, Generation and Savings by FY Closed

Fiscal Year Closed	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	2,878.1	3,277,578	81,939	11,183	279,577	\$499,900	\$12,497,490
2013	7,924.2	9,024,056	225,601	30,790	769,752	\$1,336,662	\$33,416,550
2014	17,170.3	19,553,593	488,840	66,717	1,667,922	\$2,862,734	\$71,568,360
2015	49,120.3	55,938,159	1,398,454	190,861	4,771,525	\$7,726,266	\$193,156,650
2016	56,449.2	64,284,374	1,607,109	219,338	5,483,457	\$8,675,716	\$216,892,890
2017	38,929.3	44,332,743	1,108,319	151,263	3,781,583	\$6,022,771	\$150,569,280
Total	172,471.5	196,410,503	4,910,263	670,153	16,753,816	\$27,124,049	\$678,101,220

¹⁰⁴ All projects that receive an RSIP incentive are required to do an energy audit/assessment. A significant percentage of these are completed through the utility administered Home Energy Solutions Program, which provides an evaluation of a home’s energy performance, implementation of energy savings measures such as air sealing, duct sealing, installation of energy-efficient lighting, and water saving measures, as well as recommendations for deeper energy saving measures.

¹⁰⁵ Includes closing costs and capitalized interest for C-PACE and the Fair Market Value for Commercial/Residential Leases.

¹⁰⁶ Includes incentives, interest rate buydowns and loan loss reserves.

CONNECTICUT GREEN BANK
5. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM

Table 67. RSIP Project Averages by FY Closed

Fiscal Year Closed	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)	Average Incentive Amount	Average Gross Installed Cost	Incentive (\$/W)	Installed Cost (\$/W)	Incentive % of Gross Cost	Net Cost to Customer
2012	6.9	27	\$11,522	\$35,946	\$1.67	\$5.21	32%	\$24,424.04
2013	7.1	28	\$10,721	\$31,914	\$1.51	\$4.49	34%	\$21,193.36
2014	7.2	28	\$8,420	\$31,010	\$1.17	\$4.31	27%	\$22,590.56
2015	7.6	30	\$5,192	\$33,595	\$0.68	\$4.41	15%	\$28,402.22
2016	7.8	30	\$2,744	\$32,182	\$0.35	\$4.13	9%	\$29,438.27
2017	7.7	30	\$2,561	\$27,482	\$0.33	\$3.55	9%	\$24,920.54
Total	7.6	30	\$4,555	\$31,473	\$0.60	\$4.13	14%	\$26,918.57

Table 68. RSIP Project Application Yield¹⁰⁷ by FY Received

Fiscal Year Received	Applications Received	Applications in Review	Applications Approved	Applications Withdrawn	Applications Denied	Approved Rate	Denied Rate
2012	382	-	343	52	39	90%	10%
2013	1,279	-	1,262	125	17	99%	1%
2014	2,797	-	2,782	251	15	99%	1%
2015	7,872	-	7,852	1,385	20	100%	0%
2016	8,711	-	8,681	1,494	30	100%	0%
2017	5,308	93	5,181	265	34	99%	1%
Total	26,349	93	26,101	3,572	155	99%	1%

Table 69. RSIP Systems Closed through the Subsidy by Step

RSIP Subsidy by Step	Installed Capacity (kW)	Incentive Amount	Gross Installed Cost	Incentive (\$/W)	Installed Cost (\$/W)	Incentive % of Gross Cost	Net Cost to Customer
None	921.7	\$1,379,986	\$5,026,558	\$1.50	\$5.45	27%	\$3,646,572
Step 1	1,380.7	\$2,470,307	\$7,222,670	\$1.79	\$5.23	34%	\$4,752,363
Step 2	5,991.8	\$9,762,264	\$26,992,954	\$1.63	\$4.50	36%	\$17,230,690
Step 3	13,164.1	\$16,177,276	\$56,168,196	\$1.23	\$4.27	29%	\$39,990,920
Step 4	19,415.0	\$20,055,054	\$85,478,583	\$1.03	\$4.40	23%	\$65,423,529
Step 5	13,513.1	\$10,073,966	\$60,318,503	\$0.75	\$4.46	17%	\$50,244,537
Step 6	12,306.8	\$6,308,807	\$54,482,961	\$0.51	\$4.43	12%	\$48,174,153
Step 7	19,252.2	\$7,695,213	\$83,959,008	\$0.40	\$4.36	9%	\$76,263,795
Step 8	28,578.8	\$10,169,200	\$119,155,860	\$0.36	\$4.17	9%	\$108,986,660
Step 9	28,797.5	\$9,502,809	\$111,704,105	\$0.33	\$3.88	9%	\$102,201,296
Step 10	29,149.8	\$9,458,622	\$101,603,604	\$0.32	\$3.49	9%	\$92,144,982
Total	172,471.5	\$103,053,503	\$712,113,000	\$0.60	\$4.13	14%	\$609,059,497

¹⁰⁷ 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 cancelled by the submitter due to the project not moving forward (e.g., customer cancellation) or due to the incentive expiring before the project is installed (incentives are reserved for 270 days). Applications Denied are those that are not approved for an incentive because the project does not meet RSIP requirements. The Approved Rate reflects the number of Applications Approved relative to the number of Applications Received.

CONNECTICUT GREEN BANK
5. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM

Table 70. RSIP Third Party Owned vs Homeowner-owned Systems

There are 16,070 PBI systems that are owned by a third party representing 71% of the RSIP.

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 71. It should be noted that RSIP is not an income targeted program. However, following the [UCONN study](#)¹⁰⁸ 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 71. RSIP Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed¹⁰⁹

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Owner Occupied 1-4 Unit Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total Household
2012	<60%	10	2%	279,743	2%	0.1	2%	61,168	7%	0.2	\$4.57	0.9
2012	60%-80%	10	2%	242,605	2%	0.1	2%	101,640	12%	0.1	\$2.39	0.5
2012	80%-100%	48	12%	1,644,387	11%	0.3	12%	151,346	17%	0.3	\$10.87	2.2
2012	100%-120%	118	28%	4,193,070	28%	0.8	28%	216,988	25%	0.5	\$19.32	3.7
2012	>120%	231	55%	8,629,764	58%	1.6	57%	350,196	40%	0.7	\$24.64	4.7
2012	Total	417	100%	14,989,569	100%	2.9	100%	881,338	100%	0.5	\$17.01	3.3
2013	<60%	20	2%	415,069	1%	0.1	1%	59,494	7%	0.3	\$6.98	1.5
2013	60%-80%	56	5%	1,683,198	5%	0.4	5%	109,189	12%	0.5	\$15.42	3.4
2013	80%-100%	128	11%	3,911,597	11%	0.8	11%	150,603	17%	0.8	\$25.97	5.5
2013	100%-120%	221	20%	6,753,881	19%	1.5	19%	203,157	23%	1.1	\$33.24	7.2
2013	>120%	690	62%	22,820,410	64%	5.2	65%	351,633	40%	2.0	\$64.90	14.7
2013	Total	1,115	100%	35,584,155	100%	7.9	100%	874,076	100%	1.3	\$40.71	9.1
2014	<60%	74	3%	1,839,839	2%	0.4	2%	57,673	7%	1.3	\$31.90	7.2
2014	60%-80%	159	7%	4,362,397	6%	1.0	6%	103,934	12%	1.5	\$41.97	9.5
2014	80%-100%	388	16%	11,333,704	15%	2.6	15%	149,038	17%	2.6	\$76.05	17.3
2014	100%-120%	610	26%	19,476,939	26%	4.5	26%	209,561	24%	2.9	\$92.94	21.3
2014	>120%	1,157	48%	37,040,065	50%	8.7	51%	348,270	40%	3.3	\$106.35	25.1
2014	Total	2,388	100%	74,052,944	100%	17.2	100%	868,476	100%	2.7	\$85.27	19.8
2015	<60%	265	4%	6,762,903	3%	1.5	3%	64,361	7%	4.1	\$105.08	24.0
2015	60%-80%	597	9%	17,468,491	8%	4.0	8%	96,305	11%	6.2	\$181.39	41.3
2015	80%-100%	1,113	17%	36,624,003	17%	8.1	17%	164,873	19%	6.8	\$222.13	49.2

¹⁰⁸ \\CTGBDC.ctgb.local\Public\CleanEnergy\CGB Board\Board Materials\2014\12.19.14 BOD Regular Meeting\PDF\7cii_Role of a Green Bank_Market Analysis_Low Income Solar and Housing_Memo_121214.pdf

¹⁰⁹ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Owner Occupied 1-4 Unit Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total Household
2015	100%-120%	1,680	26%	57,417,389	27%	12.8	26%	184,613	21%	9.1	\$311.01	69.3
2015	>120%	2,790	43%	98,244,158	45%	22.7	46%	352,621	41%	7.9	\$278.61	64.4
2015	Total	6,445	100%	216,516,944	100%	49.1	100%	862,773	100%	7.5	\$250.95	56.9
2016	<60%	652	9%	16,993,034	7%	4.1	7%	64,361	7%	10.1	\$264.03	63.5
2016	60%-80%	890	12%	25,048,687	11%	6.3	11%	96,305	11%	9.2	\$260.10	65.4
2016	80%-100%	1,421	20%	44,726,687	19%	10.7	19%	164,873	19%	8.6	\$271.28	65.0
2016	100%-120%	1,734	24%	55,661,524	24%	13.5	24%	184,613	21%	9.4	\$301.50	73.1
2016	>120%	2,540	35%	90,471,085	39%	21.9	39%	352,621	41%	7.2	\$256.57	62.0
2016	Total	7,237	100%	232,901,017	100%	56.4	100%	862,773	100%	8.4	\$269.94	65.4
2017	<60%	707	14%	17,609,501	13%	4.5	12%	64,361	7%	11.0	\$273.61	70.4
2017	60%-80%	779	16%	19,090,287	14%	5.4	14%	96,305	11%	8.1	\$198.23	56.1
2017	80%-100%	992	20%	26,882,997	20%	7.5	19%	164,873	19%	6.0	\$163.05	45.8
2017	100%-120%	965	19%	26,998,694	20%	7.8	20%	184,613	21%	5.2	\$146.24	42.1
2017	>120%	1,569	31%	47,142,883	34%	13.6	35%	352,621	41%	4.4	\$133.69	38.5
2017	Total	5,012	100%	137,724,361	100%	38.8	100%	862,773	100%	5.8	\$159.63	45.0
Total	<60%	1,728	8%	43,900,089	6%	10.7	6%	64,361	7%	26.8	\$682.09	166.6
Total	60%-80%	2,491	11%	67,895,665	10%	17.1	10%	96,305	11%	25.9	\$705.01	177.4
Total	80%-100%	4,090	18%	125,123,375	18%	30.1	17%	164,873	19%	24.8	\$758.91	182.7
Total	100%-120%	5,328	24%	170,501,497	24%	40.8	24%	184,613	21%	28.9	\$923.56	221.0
Total	>120%	8,977	40%	304,348,365	43%	73.6	43%	352,621	41%	25.5	\$863.10	208.9
Total	Total	22,614	100%	711,768,991	100%	172.4	100%	862,773	100%	26.2	\$824.98	199.8

CONNECTICUT GREEN BANK
5. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM

Table 72. RSIP Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed¹¹⁰

Fiscal Year Closed	# Project Units				MW				Investment (Gross Cost)			
	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	417	349	68	16%	2.9	2.4	0.4	15%	\$14,989,569	\$12,822,834	\$2,166,735	14%
2013	1,115	911	204	18%	7.9	6.6	1.3	16%	\$35,584,155	\$29,574,291	\$6,009,864	17%
2014	2,388	1,767	621	26%	17.2	13.2	4.0	23%	\$74,052,944	\$56,517,004	\$17,535,940	24%
2015	6,445	4,470	1,975	31%	49.1	35.5	13.6	28%	\$216,516,944	\$155,661,547	\$60,855,397	28%
2016	7,237	4,274	2,963	41%	56.4	35.3	21.1	37%	\$232,901,017	\$146,132,608	\$86,768,409	37%
2017	5,012	2,534	2,478	49%	38.8	21.4	17.5	45%	\$137,724,361	\$74,141,577	\$63,582,785	46%
Total	22,614	14,305	8,309	37%	172.4	114.4	57.9	34%	\$711,768,991	\$474,849,863	\$236,919,129	33%

Distressed Community Penetration

For a breakdown of RSIP project volume and investment by census tracts categorized by Distressed Communities – see Table 73. It should be noted that RSIP is not an income targeted program.

¹¹⁰ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM

Table 73. RSIP Activity in Distressed Communities by FY Closed

Fiscal Year Closed	Distressed	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	2010 Census Population	% Population Distribution	Investment / Capita	Watts / Capita	2010 Census Households	% Household Distribution	Investment / Household	Watts / Household
2012	Yes	46	11%	\$1,283,753	9%	0.3	9%	1,172,186	33%	\$1.10	0.2	449,097	33%	\$2.86	\$0.59
2012	No	371	89%	\$13,705,816	91%	2.6	91%	2,401,911	67%	\$5.71	1.1	921,990	67%	\$14.87	\$2.83
2012	Total	417	100%	\$14,989,569	100%	2.9	100%	3,574,097	100%	\$4.19	0.8	1,371,087	100%	\$10.93	\$2.10
2013	Yes	115	10%	\$3,270,246	9%	0.7	9%	1,124,337	31%	\$2.91	0.6	428,395	31%	\$7.63	\$1.67
2013	No	1,000	90%	\$32,313,909	91%	7.2	91%	2,449,760	69%	\$13.19	2.9	942,692	69%	\$34.28	\$7.65
2013	Total	1,115	100%	\$35,584,155	100%	7.9	100%	3,574,097	100%	\$9.96	2.2	1,371,087	100%	\$25.95	\$5.78
2014	Yes	381	16%	\$11,175,252	15%	2.5	15%	1,104,894	31%	\$10.11	2.3	420,721	31%	\$26.56	\$5.98
2014	No	2,007	84%	\$62,877,692	85%	14.7	85%	2,469,203	69%	\$25.46	5.9	950,366	69%	\$66.16	\$15.42
2014	Total	2,388	100%	\$74,052,944	100%	17.2	100%	3,574,097	100%	\$20.72	4.8	1,371,087	100%	\$54.01	\$12.52
2015	Yes	1,381	21%	\$41,836,952	19%	9.4	19%	1,123,207	31%	\$37.25	8.4	429,250	31%	\$97.47	\$21.97
2015	No	5,064	79%	\$174,679,992	81%	39.7	81%	2,450,890	69%	\$71.27	16.2	941,837	69%	\$185.47	\$42.14
2015	Total	6,445	100%	\$216,516,944	100%	49.1	100%	3,574,097	100%	\$60.58	13.7	1,371,087	100%	\$157.92	\$35.83
2016	Yes	2,150	30%	\$62,927,515	27%	15.3	27%	1,167,312	33%	\$53.91	13.1	445,638	33%	\$141.21	\$34.27
2016	No	5,087	70%	\$169,973,502	73%	41.2	73%	2,406,785	67%	\$70.62	17.1	925,449	67%	\$183.67	\$44.49
2016	Total	7,237	100%	\$232,901,017	100%	56.4	100%	3,574,097	100%	\$65.16	15.8	1,371,087	100%	\$169.87	\$41.17
2017	Yes	1,857	37%	\$46,025,148	33%	13.0	33%	1,167,312	33%	\$39.43	11.1	445,638	33%	\$103.28	\$29.13
2017	No	3,167	63%	\$92,043,222	67%	26.0	67%	2,406,785	67%	\$38.24	10.8	925,449	67%	\$99.46	\$28.04
2017	Total	5,024	100%	\$138,068,370	100%	38.9	100%	3,574,097	100%	\$38.63	10.9	1,371,087	100%	\$100.70	\$28.39
Total	Yes	5,930	26%	\$166,518,868	23%	41.2	24%	1,167,312	33%	\$142.65	35.3	445,638	33%	\$373.66	\$92.41
Total	No	16,696	74%	\$545,594,133	77%	131.3	76%	2,406,785	67%	\$226.69	54.5	925,449	67%	\$589.55	\$141.86
Total	Total	22,626	100%	\$712,113,000	100%	172.5	100%	3,574,097	100%	\$199.24	48.3	1,371,087	100%	\$519.38	\$125.79

CONNECTICUT GREEN BANK

5. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM

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 10,083 job years and avoided the lifetime emission of 2,774,223 tons of carbon dioxide, 3,145,906 pounds of nitrous oxide, 2,819,655 pounds of sulfur oxide, and 244,140 pounds of particulate matter as illustrated by Tables 74 and 75.

Table 74. RSIP Job Years Supported by FY Closed

	2012	2013	2014	2015	2016	2017	Total
Direct	88	210	437	1,277	1,374	538	3,925
Indirect and Induced	142	338	704	2,057	2,213	704	6,158
Total	231	548	1,140	3,334	3,587	1,243	10,083

Table 75. RSIP Avoided Emissions by FY Closed

	2012	2013	2014	2015	2016	2017	Total
CO2 Savings (tons)							
Annual	1,833	5,130	10,937	31,895	36,252	24,921	110,969
Lifetime	45,820	128,257	273,427	797,386	906,312	623,022	2,774,223
NOx Savings (pounds)							
Annual	2,307	7,453	14,920	37,541	38,106	25,509	125,836
Lifetime	57,671	186,329	373,003	938,524	952,652	637,726	3,145,906
SOx Savings (pounds)							
Annual	3,016	9,535	17,213	35,766	29,047	18,209	112,786
Lifetime	75,409	238,381	430,319	894,162	726,166	455,219	2,819,655
PM 2.5 (pounds)							
Annual	164	453	981	2,796	3,182	2,189	9,766
Lifetime	4,112	11,322	24,523	69,903	79,549	54,731	244,140

Marketing

To provide perspective on program growth, cost and incentive trends, Table 76 illustrates the increase in RSIP project volume while installed costs and incentives have decreased from fiscal years 2012 through 2017, grouped by Green Bank non-Solarize projects, Green Bank Solarize¹¹¹ projects and RSIP in total. RSIP volume in fiscal year 2017 decreased compared to the prior fiscal year for the first time since inception of the program due to: (1) Changes in the TPO landscape, with major companies struggling with profitability and customer acquisition costs, resulting in business model changes, market exits, and bankruptcies. In CT, the biggest impact was from the program’s largest TPO participant withdrawing from RSIP – they accounted for almost 40% market share in prior fiscal years. (2) Nationwide flattening/slowdown in the residential solar PV market. (3) A decrease in electricity rates from July through December 2016. (4) The Green Bank Solarize program transition to the private sector, with local installers participating based on a “pay for performance” model. (5) Installers noting that “low hanging fruit” customers have been taken.

¹¹¹ Solarize is a community-based marketing program (visit www.solarizect.com for more information).

CONNECTICUT GREEN BANK

5. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM

The Green Bank anticipates RSIP continuing a path of relatively flat growth, as is expected in the national residential market. In the context of broader market trends and the state of Connecticut’s fiscal status and climate change mitigation efforts, the strategy for supporting RSIP going forward will focus on:

- Sustained orderly development of a stable, resilient, residential solar PV market not dependent on incentives – including value of solar and net metering in time
- Maintaining a stable installer base including strong local company presence
- Continuing to support access to affordable financing through loans and third party providers
- Continuing to increase adoption of solar among LMI households through a tiered incentive and additional research and analysis to understand underserved market segment opportunities in the Connecticut solar market
- Training the market for the long term by supporting consumer education and protection, as well as installation technology diversity (e.g., energy efficiency)
- Continuing to reduce barriers to PV adoption

Supporting a “Solar Plus” model of adoption of solar PV in combination with complementary technologies such as energy storage, electric vehicles, renewable thermal technologies, energy efficiency, demand response, and home energy management systems to increase the value of solar to the grid and to customers

Table 76. RSIP Green Bank Solarize Volume, Capacity and Cost Data by FY Closed¹¹²

Fiscal Year Closed	CGB Solarize Type	# Projects	Installed Capacity (kW)	Incentive Amount	Gross Installed Cost	Incentive (\$/W)	Installed Cost (\$/W)	Incentive % of Gross Cost	Net Cost to Customer
2012	Not Solarize	417	2,878.1	\$4,804,743	\$14,989,569	\$1.67	\$5.21	32%	\$10,184,827
	Total	417	2,878.1	\$4,804,743	\$14,989,569	\$1.67	\$5.21	32%	\$10,184,827
2013	Not Solarize	788	5,480.5	\$8,413,662	\$26,210,609	\$1.54	\$4.78	32%	\$17,796,947
	Solarize	327	2,443.7	\$3,539,903	\$9,373,547	\$1.45	\$3.84	38%	\$5,833,644
	Total	1,115	7,924.2	\$11,953,564	\$35,584,155	\$1.51	\$4.49	34%	\$23,630,591
2014	Not Solarize	1,675	12,110.3	\$14,268,372	\$54,814,261	\$1.18	\$4.53	26%	\$40,545,889
	Solarize	713	5,060.1	\$5,838,321	\$19,238,683	\$1.15	\$3.80	30%	\$13,400,362
	Total	2,388	17,170.3	\$20,106,693	\$74,052,944	\$1.17	\$4.31	27%	\$53,946,251
2015	Not Solarize	5,541	41,574.7	\$27,849,468	\$187,173,003	\$0.67	\$4.50	15%	\$159,323,535
	Solarize	904	7,545.5	\$5,615,196	\$29,343,942	\$0.74	\$3.89	19%	\$23,728,745
	Total	6,445	49,120.3	\$33,464,664	\$216,516,944	\$0.68	\$4.41	15%	\$183,052,280
2016	Not Solarize	7,141	55,601.2	\$19,496,121	\$229,634,377	\$0.35	\$4.13	8%	\$210,138,256
	Solarize	96	848.1	\$360,133	\$3,266,640	\$0.42	\$3.85	11%	\$2,906,507
	Total	7,237	56,449.2	\$19,856,255	\$232,901,017	\$0.35	\$4.13	9%	\$213,044,762
2017	Not Solarize	4,980	38,551.8	\$12,713,815	\$136,743,027	\$0.33	\$3.55	9%	\$124,029,212
	Solarize	44	377.6	\$153,769	\$1,325,343	\$0.41	\$3.51	12%	\$1,171,574
	Total	5,024	38,929.3	\$12,867,584	\$138,068,370	\$0.33	\$3.55	9%	\$125,200,786
Total	Not Solarize	20,542	156,195.5	\$87,546,181	\$649,564,846	\$0.56	\$4.16	13%	\$562,018,665
	Solarize	2,084	16,274.9	\$15,507,322	\$62,548,155	\$0.95	\$3.84	25%	\$47,040,832
	Total	22,626	172,471.5	\$103,053,503	\$712,113,000	\$0.60	\$4.13	14%	\$609,059,497

¹¹² 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. We will have private supported Solarize in FY 2018 CAFR looking back at 2016-2018.

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. The SHRECs are sold through long-term contracts to the state's two investor-owned utilities, as mandated by the law. In FY17, significant progress was made to implement SHREC policy: (1) the SHREC Master Purchase Agreement was approved by PURA and executed with the utilities, (2) the SHREC aggregation process was approved by PURA and a Transaction Confirmation Agreement was executed with the utilities for the 2017 Tranche, including 2015 and 2016 Vintage SHRECs.

Market Transformation

The Connecticut Green Bank contracted with Cadmus Group, Inc., to conduct a cost-effectiveness analysis of its Residential Solar Investment Program (RSIP), completed in March 2016. The findings of the study were: (1) RSIP is cost-effective from the perspective of program participants, the Connecticut Green Bank, 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 from steps 7-10 and beyond. As the Connecticut Green Bank's only subsidy program, we are applying the Program Logic Model that focuses on rebates and incentives as the financial driver for customer action rather than financing.

CONNECTICUT GREEN BANK
5. PROGRAMS – RESIDENTIAL SOLAR INVESTMENT PROGRAM

Figure 8. Program Logic Model for the Residential Solar Investment Program (RSIP)



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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., \$1,800,000 loan loss reserve)¹¹³ and interest rate buy-downs (\$6,000,000 directly to programs)¹¹⁴ to stimulate the market for residential energy efficiency and solar 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 \$1.8 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. The interest rate buy-downs further encourage additional energy savings as they are reserved primarily for customers coupling multiple retrofits (e.g. solar and efficiency) or installing high priority policy measures (heat pump technologies, natural gas conversions).

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 hundreds 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,¹¹⁵ servicing,¹¹⁶ and financing features in combination with the support of the Connecticut Green Bank.

¹¹³ During FY2017, the Green Bank, in an effort to optimize its resources, now holds the Loan Loss Reserve on its balance sheet.

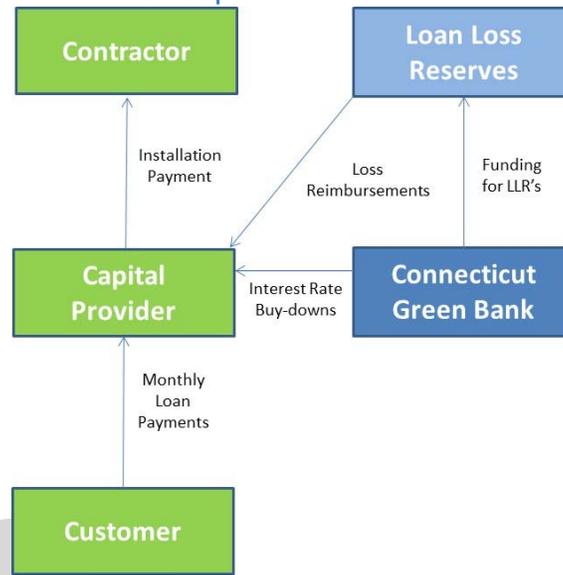
¹¹⁴ From repurposed American Recovery and Reinvestment Act funds.

¹¹⁵ Network of participating community banks and credit unions with local contractors.

¹¹⁶ Network of participating community banks and credit unions.

CONNECTICUT GREEN BANK
5. PROGRAMS – SMART-E LOAN

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 Tables 77 through 80. 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 77. Smart-E Loan Project Types and Investment by FY Closed

Fiscal Year Closed	EE	RE	RE/EE	Unknown	# Projects	# Project Units	Amount Financed	Investment (Gross Cost) ¹¹⁷	Green Bank Investment ¹¹⁸	Private Investment	Leverage Ratio
2012	-	-	-	-	-	-		-	-	-	-
2013	1	1		1	3	3	\$52,400	\$64,140	\$182,097	\$64,140	0.4
2014	90	40	6	6	142	142	\$1,772,707	\$2,444,163	\$150,144	\$2,444,163	16.3
2015	121	82	68	11	282	282	\$5,380,532	\$7,955,503	\$734,433	\$7,955,503	10.8
2016	104	49	66	2	221	221	\$4,518,288	\$5,684,530	\$730,181	\$5,684,530	7.8
2017	340	63	77	37	517	517	\$8,543,246	\$9,597,945	\$763,399	\$9,597,945	12.6
Total	656	235	217	57	1,165	1,165	\$20,267,174	\$25,746,281	\$2,560,254	\$25,746,281	10.1

¹¹⁷ Includes closing costs and capitalized interest for C-PACE and the Fair Market Value for Commercial/Residential Leases.

¹¹⁸ Includes incentives, interest rate buydowns and loan loss reserves.

CONNECTICUT GREEN BANK
5. PROGRAMS – SMART-E LOAN

Table 78. Smart-E Loan Project Capacity, Generation and Savings by FY Closed

Fiscal Year Closed	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	6.0	12,218	235	42	803	\$1,636	\$38,715
2014	348.9	865,283	15,593	3,043	55,476	\$93,770	\$2,138,233
2015	1,337.0	2,164,651	45,789	8,459	183,061	\$281,378	\$6,600,314
2016	939.8	1,660,416	33,992	6,837	142,486	\$215,677	\$5,004,880
2017	1,224.9	3,421,512	59,364	12,918	233,643	\$389,782	\$8,725,336
Total	3,856.7	8,124,080	154,973	31,299	615,469	\$982,243	\$22,507,478

Table 79. Smart-E Loan Project Averages by FY Closed

Fiscal Year Closed	Average Gross System Cost	Average Amount Financed	Average Installed Capacity (kW)	Average Number of Measures	Average Annual Saved / Produced (MMBtu)	Average Finance Term (months)	Average Finance Rate	Average DTI	Average FICO Score
2012	-	-	-	-	-	-	-	-	-
2013	\$21,380	\$17,467	2.0	1	14	100	5.49	54	711
2014	\$17,212	\$12,484	2.5	1	21	90	5.21	32	752
2015	\$28,211	\$19,080	4.7	2	30	100	4.18	30	754
2016	\$25,722	\$20,445	4.3	2	31	100	4.10	32	756
2017	\$18,565	\$16,525	2.4	2	25	102	2.78	20	746
Total	\$22,100	\$17,397	3.3	2	27	100	3.67	26	750

Table 80. Smart-E Loan Project Application Yield¹¹⁹ by FY Received

Fiscal Year Received	Applications Received	Applications in Review	Applications Approved	Applications Withdrawn	Applications Denied	Approved Rate	Denied Rate
2012	-	-	-	-	-	-	-
2013	19		14	1	5	74%	26%
2014	302		220	41	82	73%	27%
2015	553		410	79	143	74%	26%
2016	416		283	52	133	68%	32%
2017	1,029	29	796	75	204	80%	20%
Total	2,319	29	1,723	248	567	75%	25%

¹¹⁹ 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.

CONNECTICUT GREEN BANK
5. 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 81. 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 81. Smart-E Loan Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed¹²⁰

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Owner Occupied 1-4 Unit Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total 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%	1	33%	8,400	13%	0.0	0%	150,603	17%	0.0	\$0.06	0.0
2013	100%-120%	2	67%	55,740	87%	0.0	100%	203,157	23%	0.0	\$0.27	0.0
2013	>120%	0	0%	0	0%	0.0	0%	351,633	40%	0.0	\$0.00	0.0
2013	Total	3	100%	64,140	100%	0.0	100%	874,076	100%	0.0	\$0.07	0.0
2014	<60%	13	9%	157,653	6%	0.0	5%	57,673	7%	0.2	\$2.73	0.3
2014	60%-80%	16	11%	211,825	9%	0.0	6%	103,934	12%	0.2	\$2.04	0.2
2014	80%-100%	31	22%	564,220	23%	0.1	25%	149,038	17%	0.2	\$3.79	0.6
2014	100%-120%	26	18%	494,334	20%	0.1	16%	209,561	24%	0.1	\$2.36	0.3
2014	>120%	56	39%	1,016,132	42%	0.2	48%	348,270	40%	0.2	\$2.92	0.5
2014	Total	142	100%	2,444,163	100%	0.3	100%	868,476	100%	0.2	\$2.81	0.4
2015	<60%	12	4%	125,510	2%	0.0	0%	64,361	7%	0.2	\$1.95	0.0
2015	60%-80%	24	9%	351,015	4%	0.0	3%	96,305	11%	0.2	\$3.64	0.4
2015	80%-100%	57	20%	1,887,730	24%	0.2	13%	164,873	19%	0.3	\$11.45	1.0
2015	100%-120%	57	20%	1,671,772	21%	0.4	26%	184,613	21%	0.3	\$9.06	1.9
2015	>120%	132	47%	3,919,477	49%	0.8	58%	352,621	41%	0.4	\$11.12	2.2
2015	Total	282	100%	7,955,503	100%	1.3	100%	862,773	100%	0.3	\$9.22	1.5
2016	<60%	12	5%	160,327	3%	0.0	1%	64,361	7%	0.2	\$2.49	0.1
2016	60%-80%	21	10%	263,279	5%	0.0	1%	96,305	11%	0.2	\$2.73	0.1

¹²⁰ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. PROGRAMS – SMART-E LOAN

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Owner Occupied 1-4 Unit Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total Household
2016	80%-100%	38	17%	882,455	16%	0.1	15%	164,873	19%	0.2	\$5.35	0.8
2016	100%-120%	48	22%	1,244,713	22%	0.2	21%	184,613	21%	0.3	\$6.74	1.1
2016	>120%	102	46%	3,133,757	55%	0.6	62%	352,621	41%	0.3	\$8.89	1.7
2016	Total	221	100%	5,684,530	100%	0.9	100%	862,773	100%	0.3	\$6.59	1.1
2017	<60%	32	6%	539,124	6%	0.1	5%	64,361	7%	0.5	\$8.38	0.9
2017	60%-80%	55	11%	835,840	9%	0.1	10%	96,305	11%	0.6	\$8.68	1.3
2017	80%-100%	80	15%	1,174,158	12%	0.1	11%	164,873	19%	0.5	\$7.12	0.8
2017	100%-120%	128	25%	2,634,033	27%	0.4	29%	184,613	21%	0.7	\$14.27	1.9
2017	>120%	222	43%	4,414,790	46%	0.6	46%	352,621	41%	0.6	\$12.52	1.6
2017	Total	517	100%	9,597,945	100%	1.2	100%	862,773	100%	0.6	\$11.12	1.4
Total	<60%	69	6%	982,613	4%	0.1	2%	64,361	7%	1.1	\$15.27	1.3
Total	60%-80%	116	10%	1,661,958	6%	0.2	5%	96,305	11%	1.2	\$17.26	1.9
Total	80%-100%	207	18%	4,516,962	18%	0.5	14%	164,873	19%	1.3	\$27.40	3.2
Total	100%-120%	261	22%	6,100,592	24%	1.0	25%	184,613	21%	1.4	\$33.05	5.2
Total	>120%	512	44%	12,484,156	48%	2.1	54%	352,621	41%	1.5	\$35.40	5.9
Total	Total	1,165	100%	25,746,281	100%	3.9	100%	862,773	100%	1.4	\$29.84	4.5

Table 82. Smart-E Loan Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed¹²¹

Fiscal Year Closed	# Project Units				MW				Investment (Gross Cost)			
	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	3	2	1	33%	0.0	0.0	0.0	0%	\$64,140	3	2	1
2014	142	82	60	42%	0.3	0.2	0.1	36%	\$2,444,163	142	82	60
2015	282	189	93	33%	1.3	1.1	0.2	15%	\$7,955,503	282	189	93
2016	221	150	71	32%	0.9	0.8	0.2	16%	\$5,684,530	221	150	71
2017	517	350	167	32%	1.2	0.9	0.3	26%	\$9,597,945	517	350	167
Total	1,165	773	392	34%	3.9	3.1	0.8	21%	\$25,746,281	1,165	773	392

¹²¹ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. PROGRAMS – SMART-E LOAN

Distressed Community Penetration

For a breakdown of Smart-E project volume and investment by census tracts categorized by Distressed Communities – see Table 83. It should be noted that Smart-E is not an income targeted program.

Table 83. Smart-E Loan Activity in Distressed Communities by FY Closed

Fiscal Year Closed	Distressed	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	2010 Census Population	% Population Distribution	Investment / Capita	Watts / Capita	2010 Census Households	% Household Distribution	Investment / Household	Watts / Household
2012	Yes	0	0%	\$0	0%	0.0	0%	1,172,186	33%	\$0.00	0.0	449,097	33%	\$0.00	\$0.00
2012	No	0	0%	\$0	0%	0.0	0%	2,401,911	67%	\$0.00	0.0	921,990	67%	\$0.00	\$0.00
2012	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
2013	Yes	2	67%	\$55,740	87%	0.0	100%	1,124,337	31%	\$0.05	0.0	428,395	31%	\$0.13	\$0.01
2013	No	1	33%	\$8,400	13%	0.0	0%	2,449,760	69%	\$0.00	0.0	942,692	69%	\$0.01	\$0.00
2013	Total	3	100%	\$64,140	100%	0.0	100%	3,574,097	100%	\$0.02	0.0	1,371,087	100%	\$0.05	\$0.00
2014	Yes	21	15%	\$441,479	18%	0.1	22%	1,104,894	31%	\$0.40	0.1	420,721	31%	\$1.05	\$0.18
2014	No	121	85%	\$2,002,684	82%	0.3	78%	2,469,203	69%	\$0.81	0.1	950,366	69%	\$2.11	\$0.29
2014	Total	142	100%	\$2,444,163	100%	0.3	100%	3,574,097	100%	\$0.68	0.1	1,371,087	100%	\$1.78	\$0.25
2015	Yes	36	13%	\$654,711	8%	0.1	7%	1,123,207	31%	\$0.58	0.1	429,250	31%	\$1.53	\$0.20
2015	No	246	87%	\$7,300,792	92%	1.2	93%	2,450,890	69%	\$2.98	0.5	941,837	69%	\$7.75	\$1.33
2015	Total	282	100%	\$7,955,503	100%	1.3	100%	3,574,097	100%	\$2.23	0.4	1,371,087	100%	\$5.80	\$0.98
2016	Yes	65	29%	\$1,232,986	22%	0.1	13%	1,167,312	33%	\$1.06	0.1	445,638	33%	\$2.77	\$0.28
2016	No	156	71%	\$4,451,544	78%	0.8	87%	2,406,785	67%	\$1.85	0.3	925,449	67%	\$4.81	\$0.88
2016	Total	221	100%	\$5,684,530	100%	0.9	100%	3,574,097	100%	\$1.59	0.3	1,371,087	100%	\$4.15	\$0.69
2017	Yes	119	23%	\$1,791,845	19%	0.3	21%	1,167,312	33%	\$1.54	0.2	445,638	33%	\$4.02	\$0.58
2017	No	398	77%	\$7,806,101	81%	1.0	79%	2,406,785	67%	\$3.24	0.4	925,449	67%	\$8.43	\$1.04
2017	Total	517	100%	\$9,597,945	100%	1.2	100%	3,574,097	100%	\$2.69	0.3	1,371,087	100%	\$7.00	\$0.89
Total	Yes	243	21%	\$4,176,761	16%	0.6	14%	1,167,312	33%	\$3.58	0.5	445,638	33%	\$9.37	\$1.24
Total	No	922	79%	\$21,569,520	84%	3.3	86%	2,406,785	67%	\$8.96	1.4	925,449	67%	\$23.31	\$3.57
Total	Total	1,165	100%	\$25,746,281	100%	3.9	100%	3,574,097	100%	\$7.20	1.1	1,371,087	100%	\$18.78	\$2.81

CONNECTICUT GREEN BANK
5. PROGRAMS – SMART-E LOAN

Societal Impacts

Ratepayers in Connecticut enjoy of the societal benefits of the Smart-E Loan. Over the course of its existence, the program has supported the creation of 426 job years, avoided the lifetime emission of 86,722 tons of carbon dioxide, 91,519 pounds of nitrous oxide, 76,007 pounds of sulfur oxide, and 7,374 pounds of particulate matter as illustrated by Tables 84 and 85.

Table 84. Smart-E Loan Job Years Supported by FY Closed

	2012	2013	2014	2015	2016	2017	Total
Direct	-	0	18	58	46	46	168
Indirect and Induced	-	0	28	93	74	61	257
Total	-	1	46	152	121	107	426

Table 85. Smart-E Loan Avoided Emissions by FY Closed

	2012	2013	2014	2015	2016	2017	Total
CO2 Savings (tons)							
Annual	-	7	479	1,221	931	1,883	4,521
Lifetime	-	132	8,670	25,941	19,120	32,859	86,722
NOx Savings (pounds)							
Annual	-	8	517	1,381	979	1,774	4,660
Lifetime	-	146	9,439	29,657	20,497	31,780	91,519
SOx Savings (pounds)							
Annual	-	8	469	1,291	821	1,261	3,849
Lifetime	-	132	8,366	27,640	17,240	22,630	76,007
PM 2.5 (pounds)							
Annual	-	1	40	104	78	155	378
Lifetime	-	11	736	2,238	1,632	2,756	7,374

Financial Performance

To date there have been 2 defaults which have been charged off by the lenders, with original principal balances totaling \$55,000 or 0.3% of the portfolio and as of 6/30/2017 there are 3 delinquencies with original principle balances totaling \$21,685 or 0.1% of the portfolio. To date the secondary loan loss reserve has been used to reimburse one participating lender for one defaulted loan totaling \$20,277 or 0.1% of the portfolio.

The household customers that accessed the Smart-E Loan since its launch in 2013 had varying credit scores - see Table 86.

CONNECTICUT GREEN BANK
5. PROGRAMS – SMART-E LOAN

Table 86. Credit Score Ranges of Household Customers Using the Smart-E Loan by FY Closed

Fiscal Year Closed	Unknown		-639		640-679		680-699		700-719		720+		Total # Projects
	# Projects	% of Total	# Projects	% of Total	# Projects	% of Total	# Projects	% of Total	# Projects	% of Total	# Projects	% of Total	
2013	-	0.0%	-	0.0%	-	0.0%	2	66.7%	-	0.0%	1	33.3%	3
2014	-	0.0%	-	0.0%	15	10.6%	9	6.3%	12	8.5%	106	74.6%	142
2015	1	0.4%	1	0.4%	22	7.8%	16	5.7%	19	6.7%	223	79.1%	282
2016	-	0.0%	3	1.4%	14	6.3%	15	6.8%	28	12.7%	161	72.9%	221
2017	2	0.4%	14	2.7%	40	7.7%	52	10.1%	47	9.1%	362	70.0%	517
Total	3	0.3%	18	1.5%	91	7.8%	94	8.1%	106	9.1%	853	73.2%	1,165

Of the Smart-E Loans approved and closed with household customers, Table 87 presents the lenders offering the financing products in this program with accompanying data.

Table 87. 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	209	\$2,812,642	13.88%	\$1,319	\$40,000	\$13,458	2.48	100	19%
CorePlus Federal Credit Union	187	\$2,421,162	11.95%	\$1,993	\$45,107	\$12,947	4.63	84	12%
Eastern Savings Bank	227	\$5,643,010	27.84%	\$1,800	\$50,000	\$24,859	3.68	112	32%
First National Bank of Suffield	42	\$840,868	4.15%	\$3,778	\$40,000	\$20,021	3.39	104	7%
Ion Bank	46	\$558,043	2.75%	\$4,000	\$25,000	\$12,131	5.12	92	22%
Liberty Bank	23	\$307,434	1.52%	\$4,550	\$25,000	\$13,367	5.10	85	26%
Mutual Security Credit Union	92	\$1,863,756	9.20%	\$0	\$40,000	\$20,258	2.59	110	11%
Nutmeg State Financial Credit Union	226	\$4,054,099	20.00%	\$3,325	\$40,000	\$17,938	3.74	101	30%
Patriot Bank	43	\$598,337	2.95%	\$5,000	\$25,000	\$13,915	4.70	87	19%
Quinnipiac Bank & Trust	7	\$84,056	0.41%	\$8,550	\$16,556	\$12,008	4.85	98	59%
Thomaston Savings Bank	23	\$314,072	1.55%	\$2,500	\$25,000	\$13,655	4.12	98	36%
Union Savings Bank	28	\$511,842	2.53%	\$6,500	\$25,000	\$18,280	3.65	101	46%
Workers Federal Credit Union	12	\$257,854	1.27%	\$7,000	\$52,923	\$21,488	3.96	79	0%
Total	1,165	\$20,267,174	100.00%			\$17,397	3.67	100	25%

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 are town based and designed to use a combination of group purchasing, time-limited offers, and grassroots outreach. Solarize campaign efforts are augmented by local clean energy advocates and volunteers that effectively expedite the process of *going solar* – see Table 88. The Green Bank has also partnered with EnergizeCT and the utility companies and select municipalities to run Energize campaigns focused on insulation, natural gas conversions and high efficiency heating and cooling

CONNECTICUT GREEN BANK
5. PROGRAMS – SMART-E LOAN

equipment. The Green Bank launched a co-op marketing program for contractors and lenders in 2015 that helps fulfill its channel partners' need for high quality co-branded marketing materials, strategic and tactical planning resources, as well as advertising cost-sharing opportunities. The co-op marketing program and the Green Bank's own digital marketing and earned media initiatives constitute a key driver of volume in FY16 and FY17.

Table 88. Number of Projects, Investment, and Installed Capacity through Solarize Connecticut for the Smart-E Loan

	# of Projects	Investment (Gross Cost)	Installed Capacity (MW)
Solarize	117	\$4,306,579	1.1
Not Solarize	302	\$10,261,126	2.7
Not Solar	677	\$9,863,336	0.0
Unknown	69	\$1,315,241	0.1
Total	1,165	\$25,746,281	3.9
% Solarize	10%	17%	27%

The Green Bank Solarize Connecticut program provided a significant marketing channel and origination catalyst for the Smart-E Loan comprising nearly 10 to 20 percent of the total projects and investment and 27% of the installed capacity.¹²²

Table 89. Smart-E Loan Project Channels

Channel	# of Projects	Investment (Gross Cost)	Installed Capacity (MW)
Capital for Change/Home Energy Solutions	177	\$2,340,255	0.1
Other Energy Efficiency/HVAC Contractors	507	\$7,667,849	0.0
Solar Installers	422	\$14,746,962	3.8
Unknown	59	\$991,215	0.0
Total	1,165	\$25,746,281	3.9

Table 90. Smart-E Loan Measures

# of Measures	# of Projects
Unknown	61
1	578
2	347
3	95
4	39
5	23
6	13
7	6
8	1
9	2
Total	1,165

¹²² It should also be noted that Solarize was adapted to support a transition from propane and heating oil to natural gas through a pilot community-based marketing partnership with Norwich Public Utilities and SmartPower through Energize Norwich. Over 100 Smart-E Loans were originated through this pilot demonstrating that community-based marketing approaches could be adapted to support loan origination strategies.

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 deployment targeted at the state's low- to moderate-income (LMI) population. PosiGen develops and originates these solar projects as project sponsor, utilizing tax equity from multiple investors and senior debt capital from two Connecticut lenders (Enhanced Capital and Stonehenge Capital). The Green Bank supplied an initial debt advance of \$5,000,000 (and recently another \$3.5 million), which has since been subordinated to an additional \$8,500,000 advanced by Enhanced and Stonehenge to provide over \$25 million in lease financing for solar projects targeting LMI homeowners. The RSIP program's tiered LMI performance based incentive (PBI) provides PosiGen a significantly higher incentive for customers demonstrating these income requirements.

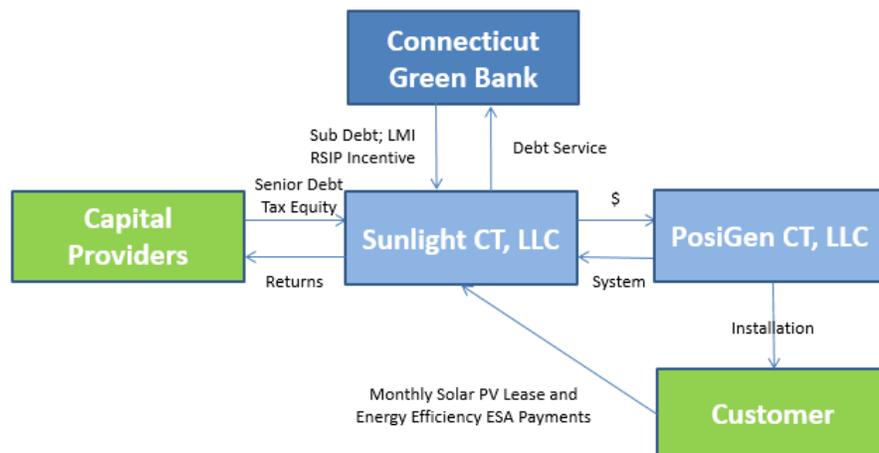
Through the partnership with PosiGen, the Connecticut Green Bank lowers the financial barriers to Connecticut LMI residential customers seeking to install solar PV with no up-front investment. PosiGen's model also includes an alternative underwriting approach that does not rely on credit scores and a community-based marketing approach – two key ingredients for targeting this hard to reach market segment. Capital provided to PosiGen to be able to offer consumers a solar PV lease and energy efficiency "Energy Savings Agreement" is returned 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 features¹²³ in combination with the support of the Connecticut Green Bank.

¹²³ Origination, servicing and financing managed by PosiGen.

CONNECTICUT GREEN BANK
5. PROGRAMS – LOW INCOME SOLAR LEASE

Figure 10. Low Income Solar Lease Legal Structure and Flows of Capital



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. The Green Bank also integrated a working capital module within the financing arrangements to enable PosiGen to focus its capital resources on expanding to Connecticut. 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
5. PROGRAMS – LOW INCOME SOLAR LEASE

Key Performance Indicators

The Key Performance Indicators for the Low-Income Solar Lease’s closed projects are reflected in Tables 91 through 93. These illustrate the volume of projects by year, investment, generation capacity installed, and the amount of energy saved and/or produced.

Table 91. Low Income Solar Lease Project Types and Investment by FY Closed

Fiscal Year Closed	EE¹²⁴	RE	RE/EE	# Projects	# Project Units	Investment (Gross Cost)¹²⁵	Green Bank Investment¹²⁶	Private Investment	Leverage Ratio
2012	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-
2015	-	4	-	4	4	\$109,380	\$36,000	\$73,380	3.0
2016	-	175	155	330	330	\$9,450,354	\$2,970,000	\$6,480,354	3.2
2017	-	154	473	627	627	\$17,336,078	\$5,643,000	\$11,693,078	3.1
Total	-	333	628	961	961	\$26,895,812	\$8,649,000	\$18,246,812	3.1

Table 92. Low Income Solar Lease Project Capacity, Generation and Savings by FY Closed

Fiscal Year Closed	Installed Capacity (kW)	Expected Annual Generation (kWh)	Expected Lifetime Savings or Generation (MWh)	Annual Saved / Produced (MMBtu)¹²⁷	Lifetime Saved / Produced (MMBtu)	Annual Cost Savings	Lifetime Cost Savings
2012	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-
2015	25.0	28,470	712	150	3,761	\$4,795	\$119,880
2016	2,106.0	2,398,313	59,958	12,584	314,590	\$395,604	\$9,890,100
2017	3,841.5	4,374,700	109,368	23,284	582,110	\$751,648	\$18,791,190
Total	5,972.5	6,801,483	170,037	36,018	900,461	\$1,152,047	\$28,801,170

¹²⁴ All projects that receive an RSIP incentive are required to do an energy audit/assessment.

¹²⁵ Includes closing costs and capitalized interest for C-PACE and the Fair Market Value for Commercial/Residential Leases.

¹²⁶ Includes incentives, interest rate buydowns and loan loss reserves.

¹²⁷ Includes only the MMBtus for the HES audit. MMTBtus for other ECMs are not included.

CONNECTICUT GREEN BANK
5. PROGRAMS – LOW INCOME SOLAR LEASE

Table 93. Low Income Solar Lease Project Averages by FY Closed

FY Closed	Average Gross System Cost	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 month¹²⁸
2012	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-
2015	\$27,345	\$27,345	6.3	38	240	\$79	-
2016	\$28,637	\$28,637	6.4	38	240	\$80	\$10
2017	\$27,649	\$27,649	6.1	37	240	\$81	\$10
Total	\$27,987	\$27,987	6.2	37	240	\$81	\$10

On average, 60% of all Posigen leases sold yield an installed, energized system.

Of the low-income households that installed solar PV, 65% of them also participated in the energy efficiency ESA, resulting in more comprehensive energy efficiency measures being included in the project.

¹²⁸ Posigen’s ESA provides energy efficiency measures valued at over \$2000 to lessees for between \$10-15 a month.

CONNECTICUT GREEN BANK
5. 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 94. 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 94. Low Income Solar Lease Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed¹²⁹

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Owner Occupied 1-4 Unit Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total 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
2014	<60%	0	0%	0	0%	0.0	0%	57,673	7%	0.0	\$0.00	0.0
2014	60%-80%	0	0%	0	0%	0.0	0%	103,934	12%	0.0	\$0.00	0.0
2014	80%-100%	0	0%	0	0%	0.0	0%	149,038	17%	0.0	\$0.00	0.0
2014	100%-120%	0	0%	0	0%	0.0	0%	209,561	24%	0.0	\$0.00	0.0
2014	>120%	0	0%	0	0%	0.0	0%	348,270	40%	0.0	\$0.00	0.0
2014	Total	0	0%	0	0%	0.0	0%	868,476	100%	0.0	\$0.00	0.0
2015	<60%	3	75%	82,380	75%	0.0	76%	64,361	7%	0.0	\$1.28	0.3
2015	60%-80%	0	0%	0	0%	0.0	0%	96,305	11%	0.0	\$0.00	0.0
2015	80%-100%	0	0%	0	0%	0.0	0%	164,873	19%	0.0	\$0.00	0.0
2015	100%-120%	0	0%	0	0%	0.0	0%	184,613	21%	0.0	\$0.00	0.0
2015	>120%	1	25%	27,000	25%	0.0	24%	352,621	41%	0.0	\$0.08	0.0
2015	Total	4	100%	109,380	100%	0.0	100%	862,773	100%	0.0	\$0.13	0.0
2016	<60%	133	40%	3,738,342	40%	0.8	39%	64,361	7%	2.1	\$58.08	12.8

¹²⁹ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. PROGRAMS – LOW INCOME SOLAR LEASE

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Owner Occupied 1-4 Unit Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total Household
2016	60%-80%	62	19%	1,791,093	19%	0.4	19%	96,305	11%	0.6	\$18.60	4.1
2016	80%-100%	57	17%	1,684,711	18%	0.4	18%	164,873	19%	0.3	\$10.22	2.3
2016	100%-120%	37	11%	1,019,326	11%	0.2	11%	184,613	21%	0.2	\$5.52	1.2
2016	>120%	41	12%	1,216,881	13%	0.3	13%	352,621	41%	0.1	\$3.45	0.8
2016	Total	330	100%	9,450,354	100%	2.1	100%	862,773	100%	0.4	\$10.95	2.4
2017	<60%	240	38%	6,361,446	37%	1.4	36%	64,361	7%	3.7	\$98.84	21.8
2017	60%-80%	129	21%	3,454,829	20%	0.8	20%	96,305	11%	1.3	\$35.87	8.0
2017	80%-100%	116	19%	3,381,866	20%	0.7	19%	164,873	19%	0.7	\$20.51	4.5
2017	100%-120%	52	8%	1,505,487	9%	0.3	9%	184,613	21%	0.3	\$8.15	1.8
2017	>120%	90	14%	2,632,450	15%	0.6	15%	352,621	41%	0.3	\$7.47	1.7
2017	Total	627	100%	17,336,078	100%	3.8	100%	862,773	100%	0.7	\$20.09	4.5
Total	<60%	376	39%	10,182,168	38%	2.2	38%	64,361	7%	5.8	\$158.20	34.9
Total	60%-80%	191	20%	5,245,922	20%	1.2	20%	96,305	11%	2.0	\$54.47	12.1
Total	80%-100%	173	18%	5,066,577	19%	1.1	19%	164,873	19%	1.0	\$30.73	6.8
Total	100%-120%	89	9%	2,524,813	9%	0.6	9%	184,613	21%	0.5	\$13.68	3.1
Total	>120%	132	14%	3,876,331	14%	0.9	15%	352,621	41%	0.4	\$10.99	2.5
Total	Total	961	100%	26,895,812	100%	6.0	100%	862,773	100%	1.1	\$31.17	6.9

Table 95. Low Income Solar Lease Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed¹³⁰

Fiscal Year Closed	# Project Units				MW				Investment (Gross Cost)			
	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	0	0	0	0%	0.0	0.0	0.0	0%	\$0	\$0	\$0	0%
2015	4	1	3	75%	0.0	0.0	0.0	76%	\$109,380	\$27,000	\$82,380	75%
2016	330	78	252	76%	2.1	0.5	1.6	76%	\$9,450,354	\$2,236,208	\$7,214,146	76%
2017	627	142	485	77%	3.8	0.9	2.9	76%	\$17,336,078	\$4,137,937	\$13,198,141	76%
Total	961	221	740	77%	6.0	1.4	4.5	76%	\$26,895,812	\$6,401,145	\$20,494,667	76%

¹³⁰ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. PROGRAMS – LOW INCOME SOLAR LEASE

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 96. 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 96. Low Income Solar Lease Activity in Distressed Communities by FY Closed

Fiscal Year Closed	Distressed	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	2010 Census Population	% Population Distribution	Investment / Capita	Watts / Capita	2010 Census Households	% Household Distribution	Investment / Household	Watts / Household
2012	Yes	0	0%	\$0	0%	0.0	0%	1,172,186	33%	\$0.00	0.0	449,097	33%	\$0.00	\$0.00
2012	No	0	0%	\$0	0%	0.0	0%	2,401,911	67%	\$0.00	0.0	921,990	67%	\$0.00	\$0.00
2012	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
2013	Yes	0	0%	\$0	0%	0.0	0%	1,124,337	31%	\$0.00	0.0	428,395	31%	\$0.00	\$0.00
2013	No	0	0%	\$0	0%	0.0	0%	2,449,760	69%	\$0.00	0.0	942,692	69%	\$0.00	\$0.00
2013	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
2014	Yes	0	0%	\$0	0%	0.0	0%	1,104,894	31%	\$0.00	0.0	420,721	31%	\$0.00	\$0.00
2014	No	0	0%	\$0	0%	0.0	0%	2,469,203	69%	\$0.00	0.0	950,366	69%	\$0.00	\$0.00
2014	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
2015	Yes	2	50%	\$49,500	45%	0.0	44%	1,123,207	31%	\$0.04	0.0	429,250	31%	\$0.12	\$0.03
2015	No	2	50%	\$59,880	55%	0.0	56%	2,450,890	69%	\$0.02	0.0	941,837	69%	\$0.06	\$0.01
2015	Total	4	100%	\$109,380	100%	0.0	100%	3,574,097	100%	\$0.03	0.0	1,371,087	100%	\$0.08	\$0.02
2016	Yes	193	58%	\$5,501,159	58%	1.2	58%	1,167,312	33%	\$4.71	1.0	445,638	33%	\$12.34	\$2.74
2016	No	137	42%	\$3,949,195	42%	0.9	42%	2,406,785	67%	\$1.64	0.4	925,449	67%	\$4.27	\$0.96
2016	Total	330	100%	\$9,450,354	100%	2.1	100%	3,574,097	100%	\$2.64	0.6	1,371,087	100%	\$6.89	\$1.54
2017	Yes	375	60%	\$10,186,435	59%	2.2	59%	1,167,312	33%	\$8.73	1.9	445,638	33%	\$22.86	\$5.04
2017	No	252	40%	\$7,149,643	41%	1.6	41%	2,406,785	67%	\$2.97	0.7	925,449	67%	\$7.73	\$1.72
2017	Total	627	100%	\$17,336,078	100%	3.8	100%	3,574,097	100%	\$4.85	1.1	1,371,087	100%	\$12.64	\$2.80
Total	Yes	570	59%	\$15,737,094	59%	3.5	58%	1,167,312	33%	\$13.48	3.0	445,638	33%	\$35.31	\$7.81
Total	No	391	41%	\$11,158,718	41%	2.5	42%	2,406,785	67%	\$4.64	1.0	925,449	67%	\$12.06	\$2.69
Total	Total	961	100%	\$26,895,812	100%	6.0	100%	3,574,097	100%	\$7.53	1.7	1,371,087	100%	\$19.62	\$4.36

CONNECTICUT GREEN BANK
5. PROGRAMS – LOW INCOME SOLAR LEASE

Societal Impacts

Ratepayers in Connecticut are starting to feel the impact of the societal benefits of the Green Bank’s Low-Income Solar Lease. Over the course of its existence, the program has supported the creation of 187 job years, avoided the lifetime emission of 95,586 tons of carbon dioxide, 97,860 pounds of nitrous oxide, 69,888 pounds of sulfur oxide, and 8,397 pounds of particulate matter as illustrated by Tables 97 and 98.

Table 97. Low Income Solar Lease Job Years Supported by FY Closed

	2012	2013	2014	2015	2016	2017	Total
Direct	-	-	-	0	35	42	77
Indirect and Induced	-	-	-	1	56	54	111
Total	-	-	-	1	90	96	187

Table 98. Low Income Solar Lease Avoided Emissions by FY Closed

	2012	2013	2014	2015	2016	2017	Total
CO2 Savings (tons)							
Annual	-	-	-	16	1,348	2,459	3,823
Lifetime	-	-	-	400	33,706	61,479	95,586
NOx Savings (pounds)							
Annual	-	-	-	16	1,381	2,517	3,914
Lifetime	-	-	-	410	34,520	62,930	97,860
SOx Savings (pounds)							
Annual	-	-	-	12	987	1,797	2,796
Lifetime	-	-	-	292	24,676	44,920	69,888
PM 2.5 (pounds)							
Annual	-	-	-	1	118	216	336
Lifetime	-	-	-	35	2,961	5,401	8,397

Financial Performance

To date there have been no defaults and as of 7/31/2017¹³¹ there are 18 delinquencies totaling \$337,138 or 1.3% of the portfolio, well within expectations for a low-to-moderate income targeted using an alternative underwriting approach.

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.

¹³¹ June 30, 2017 loan servicing report is not available.

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 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 and 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 state's old and aging housing stock need for significant capital improvements and health and safety remediation, as well as a state budget crisis that impacts the housing sector. 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 programs primarily target the low- and moderate-income market in Connecticut but are also available to market rate properties as well, 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. There are two versions available – a high-touch version, the “Sherpa Loan” program, and an owner-managed version, the “Navigator Loan” program. Eligible assessment and design services funded under the pre-development loans include 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. Both loan programs include loan forgiveness provisions that allow owners the opportunity to have deferred and accrued costs forgiven if there are real physical and/or financial reasons a given project is unable to proceed to implementation (including, but not limited to, negative return-on-investment from improvements, prohibitive health and safety burden, etc.).

This program is supported by a revolving loan fund for loans of 0.0% to 2.99% and up to two-year terms. The affordable multifamily version of this program is housed at the Housing

CONNECTICUT GREEN BANK

5. PROGRAMS – MULTIFAMILY PROGRAMS

Development Fund, a local CDFI, and part of a \$5 million program-related investment from the MacArthur Foundation used to support the program. Additionally, \$1,000,000 of Green Bank funds are available.

- [**Sherpa Pre-Development Energy Loan**](#)¹³² funds a low-risk, one-stop solution for owners to analyze, design, and acquire funding for energy upgrades through a process managed by the Green Bank's designated technical service provider, the non-profit New Ecology, Inc.
- [**Navigator Pre-Development Energy Loan**](#)¹³³ funds pre-development costs for building owners who prefer to select and manage the energy professionals needed to scope and design their project.
- [**BenchmarkCT**](#)¹³⁴ is a performance assessment resource that provides one year of free energy benchmarking to measure the performance of a property or portfolio of properties against comparable buildings. The program is jointly funded by Green Bank and the Connecticut Housing Finance Authority.

Term Financing Solutions

- The Green Bank offers the following term financing options for project implementation¹³⁵.
[**Low Income Multifamily Energy \(LIME\) Loan**](#)¹³⁶ 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 unsecured loans 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.
- [**Solar-only**](#)¹³⁷ 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 lease facility (both leases and power purchase agreements are supported). See the Case 2 – Solar Lease for more information. Of particular note is the Multifamily Program's partnership with CHFA and their State Sponsored Housing Portfolio, a Solarize-style group

¹³² Sherpa Pre-Development Loan: http://www.ctgreenbank.com/wp-content/uploads/2017/03/Sherpa_Loan_web.pdf

¹³³ Navigator Pre-Development Energy Loan: http://www.ctgreenbank.com/wp-content/uploads/2017/03/Navigator_Loan_web.pdf

¹³⁴ BenchmarkCT: <http://www.wegowise.com/benchmarkct>

¹³⁵ 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.

¹³⁶ Low Income Multifamily Energy (LIME) Loan: <http://ctgreenbank.com/wp-content/uploads/2017/02/LIME-Loan-program-sheet.pdf>

¹³⁷ Solar Power Purchase Agreement: <http://ctgreenbank.com/wp-content/uploads/2017/02/Solar-PPA-program-sheet.pdf>

CONNECTICUT GREEN BANK
5. PROGRAMS – MULTIFAMILY PROGRAMS

purchasing model to increase deployment and drive down aggregate solar PV costs on housing authorities.

- **Commercial Property Assessed Clean Energy**¹³⁸ (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 has been limited, however, the Green Bank was pleased to see HUD issue guidance in 2017 that would allow C-PACE on HUD financed affordable multifamily properties. See Case 1 – C-PACE for more information.
- **Catalyst Financing**¹³⁹ is available for gap and health and safety financing to help spur implementation of energy improvements if adequate funds for merited projects cannot be secured from the programs here or other sources. The program is funded in part, by the MacArthur Foundation’s \$5 million program-related investment housed at the Housing Development Fund, as well as \$1.5 million of Green Bank balance sheet funds, as well as \$1.5 million in RGGI funds provide by DEEP to the Green Bank for energy-related health and safety remediation.

Key Performance Indicators

The Key Performance Indicators for Multifamily programs closed activity are reflected in Tables 99 through 101. 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 99. Multifamily Project Types and Investment by FY Closed

Fiscal Year Closed	EE	RE	RE/EE	# Projects	# Project Units	Amount Financed	Investment (Gross Cost) ¹⁴⁰	Green Bank Investment ¹⁴¹	Private Investment	Leverage Ratio
2012	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-
2014			1	1	120	\$250,000	\$420,000	\$9,367	\$420,000	44.8
2015	1	2	3	6	368	\$5,022,454	\$5,388,362	\$3,527,840	\$1,871,101	1.5
2016	2	17	12	31	1,769	\$14,677,683	\$15,313,030	\$1,473,342	\$14,008,165	10.4
2017		8	10	18	1,345	\$17,822,430	\$19,017,556	\$349,467	\$18,798,986	54.4
Total	3	27	26	56	3,602	\$37,772,568	\$40,138,948	\$5,360,015	\$35,098,252	7.5

¹³⁸ Commercial Property Assessed Clean Energy: <http://www.CPACE.com/>

¹³⁹ Catalyst Financing: <http://ctgreenbank.com/programs/multifamily/catalyst-fund/>

¹⁴⁰ Includes closing costs and capitalized interest for C-PACE and the Fair Market Value for Commercial/Residential Leases.

¹⁴¹ Includes incentives, interest rate buydowns and loan loss reserves.

CONNECTICUT GREEN BANK
5. PROGRAMS – MULTIFAMILY PROGRAMS

Table 100. Multifamily Project Capacity, Generation and Savings by FY Closed

Fiscal Year Closed	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	-	-	-	-	-	-	-
2014	0.0	0	0	0	0	\$69,534	
2015	914.0	3,943,030	97,540	13,454	332,806	\$433,542	
2016	1,429.8	1,904,598	44,023	6,498	150,207	\$531,183	
2017	1,010.6	1,150,883	28,772	3,927	98,170	\$375,183	
Total	3,354.5	6,998,511	170,335	23,879	581,183	\$1,409,443	

Table 101. Multifamily Project Averages by FY Closed

Fiscal Year Closed	Average Gross System Cost	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	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-
2014	\$420,000	\$250,000	\$2,083	0.0	0	9	0.00
2015	\$898,060	\$837,076	\$13,648	152.3	2,242	10	3.34
2016	\$493,969	\$473,474	\$8,297	46.1	210	12	5.94
2017	\$1,056,531	\$990,135	\$13,251	56.1	218	13	4.98
Total	\$716,767	\$674,510	\$10,487	59.9	426	12	4.88

CONNECTICUT GREEN BANK
5. PROGRAMS – MULTIFAMILY PROGRAMS

As the Green Bank’s Multifamily programs are partially income-targeted, Table 102 shows a breakdown of projects completed in a year by property type and reflects the number of units impacted.

Table 102. Multifamily Projects by Low to Moderate Income (LMI) or Market Rate Property by FY Closed

Fiscal Year Closed	Class	Product	# of Projects	# Units
2014	LMI	Term	1	120
	Total		1	120
2015	LMI	Term	5	286
	Market Rate	Term	1	82
	Total		6	368
2016	LMI	Pre-Dev	4	131
		Term	26	1,447
	Market Rate	Term	1	191
	Total		31	1,769
2017	LMI	Pre-Dev	3	135
		Term	14	1,110
	Market Rate	Pre-Dev	1	100
	Total		18	1,345
Total	LMI	Pre-Dev	7	266
	LMI	Term	46	2,963
	Market Rate	Pre-Dev	1	100
	Market Rate	Term	7	273
Total			56	3,602

CONNECTICUT GREEN BANK
5. PROGRAMS – MULTIFAMILY PROGRAMS

Area Median Income Band Penetration

For a breakdown of Multifamily volume and investment by census tracts categorized by Area Median Income bands – see Table 103. 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 103. Multifamily Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed¹⁴²

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Owner/Rental Occupied 5+ Unit Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total Household
2012	<60%	0	0%	0	0%	0.0	0%	70,561	35%	0.0	\$0.00	0.0
2012	60%-80%	0	0%	0	0%	0.0	0%	43,788	22%	0.0	\$0.00	0.0
2012	80%-100%	0	0%	0	0%	0.0	0%	39,234	20%	0.0	\$0.00	0.0
2012	100%-120%	0	0%	0	0%	0.0	0%	27,834	14%	0.0	\$0.00	0.0
2012	>120%	0	0%	0	0%	0.0	0%	19,133	10%	0.0	\$0.00	0.0
2012	Total	0	0%	0	0%	0.0	0%	200,550	100%	0.0	\$0.00	0.0
2013	<60%	0	0%	0	0%	0.0	0%	68,381	35%	0.0	\$0.00	0.0
2013	60%-80%	0	0%	0	0%	0.0	0%	45,202	23%	0.0	\$0.00	0.0
2013	80%-100%	0	0%	0	0%	0.0	0%	39,451	20%	0.0	\$0.00	0.0
2013	100%-120%	0	0%	0	0%	0.0	0%	25,294	13%	0.0	\$0.00	0.0
2013	>120%	0	0%	0	0%	0.0	0%	19,303	10%	0.0	\$0.00	0.0
2013	Total	0	0%	0	0%	0.0	0%	197,631	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%	420,000	100%	0.0	0%	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
2014	>120%	0	0%	0	0%	0.0	0%	20,384	10%	0.0	\$0.00	0.0
2014	Total	120	100%	420,000	100%	0.0	0%	198,951	100%	0.6	\$2.11	0.0
2015	<60%	16	4%	31,302	1%	0.0	0%	84,158	37%	0.2	\$0.37	0.0
2015	60%-80%	1	0%	0	0%	0.0	0%	44,668	19%	0.0	\$0.00	0.0
2015	80%-100%	113	31%	540,000	10%	0.0	0%	53,494	23%	2.1	\$10.09	0.0
2015	100%-120%	16	4%	52,060	1%	0.0	2%	24,388	11%	0.7	\$2.13	0.6
2015	>120%	222	60%	4,765,000	88%	0.9	98%	23,491	10%	9.5	\$202.84	38.3

¹⁴² Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. PROGRAMS – MULTIFAMILY PROGRAMS

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Owner/Rental Occupied 5+ Unit Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total Household
2015	Total	368	100%	5,388,362	100%	0.9	100%	230,199	100%	1.6	\$23.41	4.0
2016	<60%	289	19%	1,769,231	12%	0.1	7%	84,158	37%	3.4	\$21.02	1.0
2016	60%-80%	194	12%	1,177,394	8%	0.1	12%	44,668	19%	4.3	\$26.36	3.0
2016	80%-100%	569	37%	6,718,681	47%	0.6	48%	53,494	23%	10.6	\$125.60	10.5
2016	100%-120%	421	27%	4,601,498	32%	0.3	30%	24,388	11%	17.3	\$188.68	14.1
2016	>120%	84	5%	177,796	1%	0.0	4%	23,491	10%	3.6	\$7.57	1.9
2016	Total	1,557	100%	14,444,600	100%	1.2	100%	230,199	100%	6.8	\$62.75	5.1
2017	<60%	537	43%	11,989,255	68%	0.3	30%	84,158	37%	6.4	\$142.46	3.6
2017	60%-80%	315	25%	3,723,571	21%	0.2	24%	44,668	19%	7.1	\$83.36	5.4
2017	80%-100%	100	8%	6,450	0%	0.0	0%	53,494	23%	1.9	\$0.12	0.0
2017	100%-120%	255	21%	1,432,225	8%	0.3	29%	24,388	11%	10.5	\$58.73	11.9
2017	>120%	32	3%	595,320	3%	0.2	17%	23,491	10%	1.4	\$25.34	7.4
2017	Total	1,239	100%	17,746,821	100%	1.0	100%	230,199	100%	5.4	\$77.09	4.4
Total	<60%	842	26%	13,789,788	36%	0.4	12%	84,158	37%	10.0	\$163.86	4.6
Total	60%-80%	510	16%	4,900,965	13%	0.4	12%	44,668	19%	11.4	\$109.72	8.4
Total	80%-100%	902	27%	7,685,131	20%	0.6	18%	53,494	23%	16.9	\$143.66	10.5
Total	100%-120%	692	21%	6,085,783	16%	0.6	21%	24,388	11%	28.4	\$249.54	26.5
Total	>120%	338	10%	5,538,116	15%	1.1	36%	23,491	10%	14.4	\$235.75	47.7
Total	Total	3,284	100%	37,999,783	100%	3.1	100%	230,199	100%	14.3	\$165.07	13.4

CONNECTICUT GREEN BANK
5. PROGRAMS – MULTIFAMILY PROGRAMS

Table 104. Multifamily Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed¹⁴³

Fiscal Year Closed	# Project Units				MW				Investment (Gross Cost)			
	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	368	238	130	35%	0.9	0.9	0.0	0%	\$5,388,362	\$4,817,060	\$571,302	11%
2016	1,557	505	1,052	68%	1.2	0.4	0.8	67%	\$14,444,600	\$4,779,294	\$9,665,306	67%
2017	1,239	287	952	77%	1.0	0.5	0.5	54%	\$17,746,821	\$2,027,545	\$15,719,276	89%
Total	3,284	1,030	2,254	69%	3.1	1.8	1.3	43%	\$37,999,783	\$11,623,899	\$26,375,884	69%

¹⁴³ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. PROGRAMS – MULTIFAMILY PROGRAMS

Distressed Community Penetration

For a breakdown of Multifamily project volume and investment by census tracts categorized by Distressed Communities – see Table 105. 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 105. Multifamily Activity in Distressed Communities by FY Closed

Fiscal Year Closed	Distressed	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	2010 Census Population	% Population Distribution	Investment / Capita	Watts / Capita	2010 Census Households	% Household Distribution	Investment / Household	Watts / Household
2012	Yes	0	0%	\$0	0%	0.0	0%	1,172,186	33%	\$0.00	0.0	449,097	33%	\$0.00	\$0.00
2012	No	0	0%	\$0	0%	0.0	0%	2,401,911	67%	\$0.00	0.0	921,990	67%	\$0.00	\$0.00
2012	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
2013	Yes	0	0%	\$0	0%	0.0	0%	1,124,337	31%	\$0.00	0.0	428,395	31%	\$0.00	\$0.00
2013	No	0	0%	\$0	0%	0.0	0%	2,449,760	69%	\$0.00	0.0	942,692	69%	\$0.00	\$0.00
2013	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
2014	Yes	0	0%	\$0	0%	0.0	0%	1,104,894	31%	\$0.00	0.0	420,721	31%	\$0.00	\$0.00
2014	No	120	100%	\$420,000	100%	0.0	0%	2,469,203	69%	\$0.17	0.0	950,366	69%	\$0.44	\$0.00
2014	Total	120	100%	\$420,000	100%	0.0	0%	3,574,097	100%	\$0.12	0.0	1,371,087	100%	\$0.31	\$0.00
2015	Yes	211	57%	\$5,271,302	98%	0.9	98%	1,123,207	31%	\$4.69	0.8	429,250	31%	\$12.28	\$2.10
2015	No	157	43%	\$117,060	2%	0.0	2%	2,450,890	69%	\$0.05	0.0	941,837	69%	\$0.12	\$0.01
2015	Total	368	100%	\$5,388,362	100%	0.9	100%	3,574,097	100%	\$1.51	0.3	1,371,087	100%	\$3.93	\$0.67
2016	Yes	321	18%	\$1,932,553	13%	0.4	28%	1,167,312	33%	\$1.66	0.3	445,638	33%	\$4.34	\$0.89
2016	No	1,448	82%	\$13,380,477	87%	1.0	72%	2,406,785	67%	\$5.56	0.4	925,449	67%	\$14.46	\$1.12
2016	Total	1,769	100%	\$15,313,030	100%	1.4	100%	3,574,097	100%	\$4.28	0.4	1,371,087	100%	\$11.17	\$1.04
2017	Yes	497	37%	\$12,020,088	63%	0.3	25%	1,167,312	33%	\$10.30	0.2	445,638	33%	\$26.97	\$0.57
2017	No	848	63%	\$6,997,468	37%	0.8	75%	2,406,785	67%	\$2.91	0.3	925,449	67%	\$7.56	\$0.82
2017	Total	1,345	100%	\$19,017,556	100%	1.0	100%	3,574,097	100%	\$5.32	0.3	1,371,087	100%	\$13.87	\$0.74
Total	Yes	1,029	29%	\$19,223,943	48%	1.5	46%	1,167,312	33%	\$16.47	1.3	445,638	33%	\$43.14	\$3.48
Total	No	2,573	71%	\$20,915,005	52%	1.8	54%	2,406,785	67%	\$8.69	0.7	925,449	67%	\$22.60	\$1.95
Total	Total	3,602	100%	\$40,138,948	100%	3.4	100%	3,574,097	100%	\$11.23	0.9	1,371,087	100%	\$29.28	\$2.45

CONNECTICUT GREEN BANK
5. PROGRAMS – MULTIFAMILY PROGRAMS

Societal Impacts

While the programs are in their infancy, the Green Bank’s Multifamily Programs are starting to deliver societal impact to Connecticut ratepayers. Over the course of its existence, the program has supported the creation of 77 job years, avoided the lifetime emission of 91,665 tons of carbon dioxide, 84,487 pounds of nitrous oxide, 69,445 pounds of sulfur oxide, and 3,643 pounds of particulate matter as illustrated by Tables 106 and 107.

Table 106. Multifamily Job Years Supported by FY Closed

	2012	2013	2014	2015	2016	2017	Total
Direct	-	-	-	18	10	2	30
Indirect and Induced	-	-	-	29	16	3	47
Total	-	-	-	47	25	5	77

Table 107. Multifamily Avoided Emissions by FY Closed

	2012	2013	2014	2015	2016	2017	Total
CO2 Savings (tons)							
Annual	-	-	-	2,051	1,072	647	3,771
Lifetime	-	-	-	50,713	24,768	16,174	91,655
NOx Savings (pounds)							
Annual	-	-	-	1,726	1,114	662	3,502
Lifetime	-	-	-	42,381	25,551	16,555	84,487
SOx Savings (pounds)							
Annual	-	-	-	1,587	849	473	2,908
Lifetime	-	-	-	38,744	18,883	11,818	69,445
PM 2.5 (pounds)							
Annual	-	-	-	4	93	57	154
Lifetime	-	-	-	63	2,159	1,421	3,643

Financial Performance

To date there have been no defaults and as of 6/30/2017 there are no delinquencies.

Marketing

The Green Bank multifamily programs are built on partnerships with key housing organizations in Connecticut that support us 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 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 do direct outreach to property owners through a sales consultant who has a strong network of relationships with multifamily property owners and managers.

CONNECTICUT GREEN BANK
5. PROGRAMS – MULTIFAMILY PROGRAMS

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.

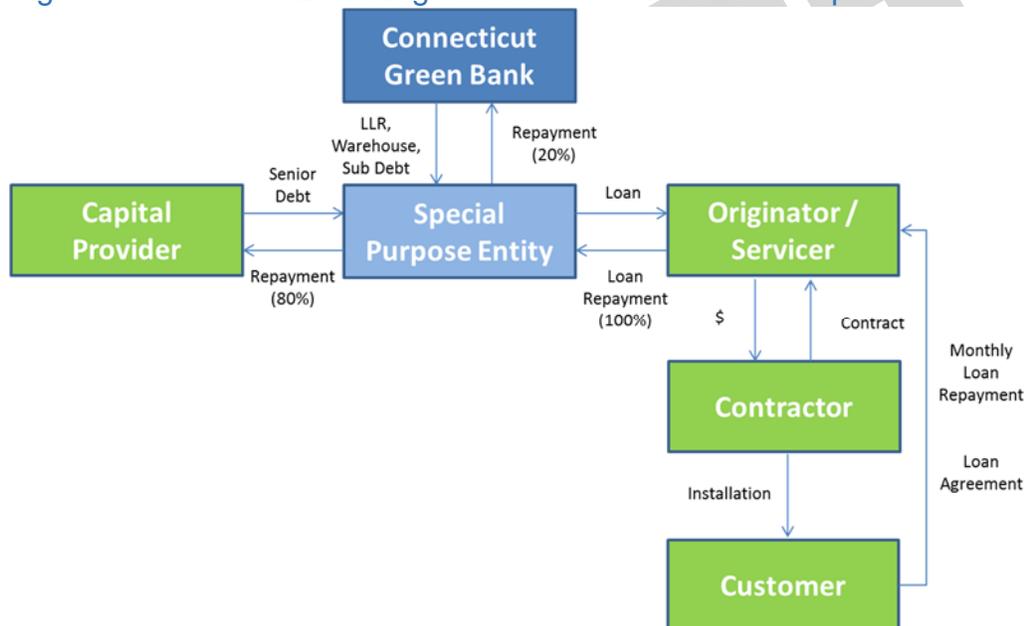
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FOR DISCUSSION PURPOSES ONLY

Case 7 – 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 11. CT Solar Loan Legal Structure and Flows of Capital



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 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

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LOAN

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.¹⁴⁴ And then it graduated to a [partnership between Sungage Financial and Digital Federal Credit Union](#) – with no resources from the Connecticut Green Bank.¹⁴⁵ 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 Tables 108 through 111. 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 108. CT Solar Loan Project Types and Investment by FY Closed

Fiscal Year Closed	EE ¹⁴⁶	RE	RE/EE	# Projects	# Project Units	Investment (Gross Cost) ¹⁴⁷	Green Bank Investment ¹⁴⁸	Private Investment	Leverage Ratio
2012	-	-	-	-	-	-	-	-	-
2013	-	3	-	3	3	\$86,899	\$5,025	\$86,899	17.3
2014	-	140	-	140	140	\$4,229,733	\$232,100	\$4,229,733	18.2
2015	-	136	-	136	136	\$4,279,512	\$222,549	\$4,279,512	19.2
2016	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-
Total		279		279	279	\$8,596,143	\$459,674	\$8,596,143	18.7

Table 109. CT Solar Loan Project Capacity, Generation and Savings by FY Closed

Fiscal Year Closed	Installed Capacity (kW)	Expected Annual	Expected Lifetime Savings or	Annual Saved /	Lifetime Saved /	Annual Cost Savings	Lifetime Cost Savings

¹⁴⁴ <http://www.businesswire.com/news/home/20140206005031/en/Sungage-Financial-CEFIA-Mosaic-Announce-5-Million#.VgRTgVIXL4Y>

¹⁴⁵ <http://www.ctgreenbank.com/ct-solar-loan-partner-graduates-connecticut-green-bank/>

¹⁴⁶ All projects that receive an RSIP incentive are required to do an energy audit/assessment.

¹⁴⁷ Includes closing costs and capitalized interest for C-PACE and the Fair Market Value for Commercial/Residential Leases.

¹⁴⁸ Includes incentives, interest rate buydowns and loan loss reserves.

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LOAN

		Generation (kWh)	Generation (MWh)	Produced (MMBtu)	Produced (MMBtu)		
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	1,068.2	1,216,503	30,413	4,151	103,768	\$163,037	\$4,075,920
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
Total	2,193.1	2,497,536	62,438	8,522	213,040	\$334,465	\$8,361,630

Table 110. CT Solar Loan Project Averages by FY Closed

Fiscal Year Closed	Average Gross System Cost	Average Amount Financed	Average Installed Capacity (kW)	Average Annual Saved / Produced (MMBtu)	Average Finance Term (months)	Average Finance Rate	Average DTI	Average FICO Score
2012	-	-	-	-	-	-	-	-
2013	\$28,966	\$19,658	5.7	22	180	5.58	0	758
2014	\$30,212	\$19,819	7.9	31	180	5.57	0	771
2015	\$31,467	\$22,942	7.9	31	180	3.34	0	771
2016	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-
Total	\$30,811	\$21,340	7.9	31	180	4.48	0	771

Table 111. CT Solar Loan Project Application Yield¹⁴⁹ by FY Received

Fiscal Year Received	Applications Received	Applications Approved	Applications Withdrawn	Applications Denied	Approved Rate	Denied Rate
2012	-	-	-	-	-	-
2013	14	12	5	2	86%	14%
2014	284	217	54	67	76%	24%
2015	164	146	37	18	89%	11%
2016	-	-	-	-	-	-
2017	-	-	-	-	-	-
Total	462	375	96	87	81%	19%

¹⁴⁹ 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
5. 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 112. It should be noted that the CT Solar Loan is not an income-targeted program.

Table 112. CT Solar Loan Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed¹⁵⁰

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total 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%	1	33%	32,100	37%	0.0	31%	109,189	12%	0.0	\$0.29	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%	36,574	42%	0.0	47%	203,157	23%	0.0	\$0.18	0.0
2013	>120%	1	33%	18,225	21%	0.0	22%	351,633	40%	0.0	\$0.05	0.0
2013	Total	3	100%	86,899	100%	0.0	100%	874,076	100%	0.0	\$0.10	0.0
2014	<60%	1	1%	8,273	0%	0.0	0%	57,673	7%	0.0	\$0.14	0.0
2014	60%-80%	3	2%	84,771	2%	0.0	2%	103,934	12%	0.0	\$0.82	0.2
2014	80%-100%	24	17%	597,628	14%	0.2	14%	149,038	17%	0.2	\$4.01	1.1
2014	100%-120%	49	35%	1,542,441	36%	0.4	37%	209,561	24%	0.2	\$7.36	2.0
2014	>120%	63	45%	1,996,620	47%	0.5	47%	348,270	40%	0.2	\$5.73	1.5
2014	Total	140	100%	4,229,733	100%	1.1	100%	868,476	100%	0.2	\$4.87	1.3
2015	<60%	1	1%	20,835	0%	0.0	0%	64,361	7%	0.0	\$0.32	0.1
2015	60%-80%	10	7%	269,810	6%	0.1	6%	96,305	11%	0.1	\$2.80	0.7
2015	80%-100%	18	13%	570,355	13%	0.1	13%	164,873	19%	0.1	\$3.46	0.8
2015	100%-120%	30	22%	960,907	22%	0.2	23%	184,613	21%	0.2	\$5.20	1.3
2015	>120%	77	57%	2,457,604	57%	0.6	58%	352,621	41%	0.2	\$6.97	1.8
2015	Total	136	100%	4,279,512	100%	1.1	100%	862,773	100%	0.2	\$4.96	1.2
2016	<60%	0	0%	0	0%	0.0	0%	64,361	7%	0.0	\$0.00	0.0
2016	60%-80%	0	0%	0	0%	0.0	0%	96,305	11%	0.0	\$0.00	0.0
2016	80%-100%	0	0%	0	0%	0.0	0%	164,873	19%	0.0	\$0.00	0.0

¹⁵⁰ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LOAN

Fiscal Year Closed	MSA AMI Band	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	Total Households	% Total Household Distribution	Project Units / 1,000 Total Households	Investment / Total Household	Watts / Total Household
2016	100%-120%	0	0%	0	0%	0.0	0%	184,613	21%	0.0	\$0.00	0.0
2016	>120%	0	0%	0	0%	0.0	0%	352,621	41%	0.0	\$0.00	0.0
2016	Total	0	0%	0	0%	0.0	0%	862,773	100%	0.0	\$0.00	0.0
2017	<60%	0	0%	0	0%	0.0	0%	64,361	7%	0.0	\$0.00	0.0
2017	60%-80%	0	0%	0	0%	0.0	0%	96,305	11%	0.0	\$0.00	0.0
2017	80%-100%	0	0%	0	0%	0.0	0%	164,873	19%	0.0	\$0.00	0.0
2017	100%-120%	0	0%	0	0%	0.0	0%	184,613	21%	0.0	\$0.00	0.0
2017	>120%	0	0%	0	0%	0.0	0%	352,621	41%	0.0	\$0.00	0.0
2017	Total	0	0%	0	0%	0.0	0%	862,773	100%	0.0	\$0.00	0.0
Total	<60%	2	1%	29,108	0%	0.0	0%	64,361	7%	0.0	\$0.45	0.1
Total	60%-80%	14	5%	386,681	4%	0.1	4%	96,305	11%	0.1	\$4.02	0.9
Total	80%-100%	42	15%	1,167,983	14%	0.3	14%	164,873	19%	0.3	\$7.08	1.8
Total	100%-120%	80	29%	2,539,922	30%	0.7	30%	184,613	21%	0.4	\$13.76	3.6
Total	>120%	141	51%	4,472,449	52%	1.1	52%	352,621	41%	0.4	\$12.68	3.2
Total	Total	279	100%	8,596,143	100%	2.2	100%	862,773	100%	0.3	\$9.96	2.5

Table 113. CT Solar Loan Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed¹⁵¹

Fiscal Year Closed	# Project Units				MW				Investment (Gross Cost)			
	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	3	2	1	33%	0.0	0.0	0.0	31%	\$86,899	\$54,799	\$32,100	37%
2014	140	112	28	20%	1.1	0.9	0.2	16%	\$4,229,733	\$3,539,061	\$690,671	16%
2015	136	107	29	21%	1.1	0.9	0.2	20%	\$4,279,512	\$3,418,511	\$861,001	20%
2016	0	0	0	0%	0.0	0.0	0.0	0%	\$0	\$0	\$0	0%
2017	0	0	0	0%	0.0	0.0	0.0	0%	\$0	\$0	\$0	0%
Total	279	221	58	21%	2.2	1.8	0.4	18%	\$8,596,143	\$7,012,371	\$1,583,772	18%

¹⁵¹ Excludes projects in unknown bands.

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LOAN

Distressed Community Penetration

For a breakdown of the CT Solar Loan project volume and investment by census tracts categorized by Distressed Communities – see Table 114. It should be noted that the CT Solar Loan is not an income-targeted program.

Table 114. CT Solar Loan Activity in Distressed Communities by FY Closed

Fiscal Year Closed	Distressed	# of Project Units	% Project Distribution	Investment (Gross System Cost)	% Investment Distribution	Installed Capacity (MW)	% MW Distribution	2010 Census Population	% Population Distribution	Investment / Capita	Watts / Capita	2010 Census Households	% Household Distribution	Investment / Household	Watts / Household
2012	Yes	0	0%	\$0	0%	0.0	0%	1,172,186	33%	\$0.00	0.0	449,097	33%	\$0.00	\$0.00
2012	No	0	0%	\$0	0%	0.0	0%	2,401,911	67%	\$0.00	0.0	921,990	67%	\$0.00	\$0.00
2012	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
2013	Yes	2	67%	\$68,674	79%	0.0	78%	1,124,337	31%	\$0.06	0.0	428,395	31%	\$0.16	\$0.03
2013	No	1	33%	\$18,225	21%	0.0	22%	2,449,760	69%	\$0.01	0.0	942,692	69%	\$0.02	\$0.00
2013	Total	3	100%	\$86,899	100%	0.0	100%	3,574,097	100%	\$0.02	0.0	1,371,087	100%	\$0.06	\$0.01
2014	Yes	26	19%	\$713,759	17%	0.2	18%	1,104,894	31%	\$0.65	0.2	420,721	31%	\$1.70	\$0.47
2014	No	114	81%	\$3,515,973	83%	0.9	82%	2,469,203	69%	\$1.42	0.4	950,366	69%	\$3.70	\$0.96
2014	Total	140	100%	\$4,229,733	100%	1.1	100%	3,574,097	100%	\$1.18	0.3	1,371,087	100%	\$3.08	\$0.81
2015	Yes	18	13%	\$450,815	11%	0.1	11%	1,123,207	31%	\$0.40	0.1	429,250	31%	\$1.05	\$0.27
2015	No	118	87%	\$3,828,697	89%	1.0	89%	2,450,890	69%	\$1.56	0.4	941,837	69%	\$4.07	\$1.01
2015	Total	136	100%	\$4,279,512	100%	1.1	100%	3,574,097	100%	\$1.20	0.3	1,371,087	100%	\$3.12	\$0.78
2016	Yes	0	0%	\$0	0%	0.0	0%	1,167,312	33%	\$0.00	0.0	445,638	33%	\$0.00	\$0.00
2016	No	0	0%	\$0	0%	0.0	0%	2,406,785	67%	\$0.00	0.0	925,449	67%	\$0.00	\$0.00
2016	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
2017	Yes	0	0%	\$0	0%	0.0	0%	1,167,312	33%	\$0.00	0.0	445,638	33%	\$0.00	\$0.00
2017	No	0	0%	\$0	0%	0.0	0%	2,406,785	67%	\$0.00	0.0	925,449	67%	\$0.00	\$0.00
2017	Total	0	0%	\$0	0%	0.0	0%	3,574,097	100%	\$0.00	0.0	1,371,087	100%	\$0.00	\$0.00
Total	Yes	46	16%	\$1,233,248	14%	0.3	15%	1,167,312	33%	\$1.06	0.3	445,638	33%	\$2.77	\$0.73
Total	No	233	84%	\$7,362,895	86%	1.9	85%	2,406,785	67%	\$3.06	0.8	925,449	67%	\$7.96	\$2.02
Total	Total	279	100%	\$8,596,143	100%	2.2	100%	3,574,097	100%	\$2.41	0.6	1,371,087	100%	\$6.27	\$1.60

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LOAN

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 supported the creation of 132 job years, avoided the lifetime emission of 34,990 tons of carbon dioxide, 47,187 pounds of nitrous oxide, 53,746 pounds of sulfur oxide, and 3,133 pounds of particulate matter as illustrated by Tables 115 and 116.

Table 115. CT Solar Loan Job Years Supported by FY Closed

	2012	2013	2014	2015	2016	2017	Total
Direct	-	1	25	25	0	0	51
Indirect and Induced	-	1	40	41	0	0	82
Total	-	1	65	66	0	0	132

Table 116. CT Solar Loan Avoided Emissions by FY Closed

	2012	2013	2014	2015	2016	2017	Total
CO2 Savings (tons)							
Annual	-	11	700	689	-	-	1,400
Lifetime	-	278	17,497	17,215	-	-	34,990
NOx Savings (pounds)							
Annual	-	17	988	883	-	-	1,887
Lifetime	-	417	24,702	22,068	-	-	47,187
SOx Savings (pounds)							
Annual	-	21	1,180	948	-	-	2,150
Lifetime	-	537	29,504	23,705	-	-	53,746
PM 2.5 (pounds)							
Annual	-	1	63	61	-	-	125
Lifetime	-	24	1,583	1,526	-	-	3,133

Financing Program

The CT Solar Loan was a financing product developed in partnership with [Sungage Financial](http://www.sungagefinancial.com/)¹⁵² that used credit enhancements (i.e., \$300,000 loan loss reserve and \$168,000 interest rate buy-downs)¹⁵³ in combination with a \$5 million warehouse of funds and \$1 million of subordinated 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

¹⁵² 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

¹⁵³ From repurposed American Recovery and Reinvestment Act funds

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LOAN

origination,¹⁵⁴ servicing,¹⁵⁵ and financing features in combination with the support of the Connecticut Green Bank.

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.

Financial Performance

To date there have been no defaults and as of 6/30/2017 there are 2 delinquencies with original principle balances totaling \$46,743 or 0.5% of the portfolio.

The household customers that accessed the CT Solar Loan since its launch in 2013 had varying credit scores – see Table 117.

Table 117. Credit Score Ranges of Household Customers Using the CT Solar Loan by FY Closed

Fiscal Year Closed	-639		640-679		680-699		700-719		720+		Total # Projects
	# Projects	% of Total	# Projects	% of Total	# Projects	% of Total	# Projects	% of Total	# Projects	% of Total	
2013	-	0.0%	-	0.0%	-	0.0%	-	0.0%	3	100.0%	3
2014	-	0.0%	-	0.0%	5	3.6%	7	5.0%	128	91.4%	140
2015	-	0.0%	-	0.0%	6	4.4%	8	5.9%	122	89.7%	136
Total	-	0.0%	-	0.0%	11	3.9%	15	5.4%	253	90.7%	279

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 118.

Table 118. Number of Projects, Investment, and Installed Capacity through Green Bank Solarize Connecticut for the CT Solar Loan Financing Product

	# of Projects	Investment (Gross Cost)	Installed Capacity (MW)
Solarize	168	\$4,929,399	1.3
Not Solarize	111	\$3,666,744	0.9
Total	279	\$8,596,143	2.2
% Solarize	60%	57%	59%

¹⁵⁴ Sungage Financial in partnership with local contractors

¹⁵⁵ Concord Servicing Corporation

CONNECTICUT GREEN BANK
5. PROGRAMS – CT SOLAR LOAN

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.

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CONNECTICUT GREEN BANK
5. PROGRAMS – PILOT PROGRAMS

Anaerobic Digestion and Combined Heat and Power Pilot Programs

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 can be used as grants, power purchase agreements or loans. There are 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 to not exceed 5 MW in size. Both pilot programs support projects at no more than \$450 per kW on a grant basis.

Key Performance Indicators

The Key Performance Indicators for the AD and CHP Pilot Programs closed activity are reflected in Tables 119 through 121. 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 119. AD and CHP Pilot Project Types and Investment by FY Closed

Fiscal Year Closed	EE	RE	RE/EE	# Projects	# Project Units	Investment (Gross Cost) ¹⁵⁶	Green Bank Investment ¹⁵⁷	Private Investment	Leverage Ratio
2012	-	-	-	-	-	-	-	-	-
2013		2		2	2	\$3,189,000	\$304,500	\$2,884,500	10.5
2014		1		1	1	\$6,300,000	\$630,000	\$5,670,000	10.0
2015		2		2	2	\$642,578	\$60,750	\$581,828	10.6
2016		1		1	1	\$10,500,000	\$1,997,403	\$8,502,597	5.3
2017		1		1	1	\$3,401,392	\$502,860	\$2,898,532	6.8
Total		7		7	7	\$24,032,970	\$3,495,513	\$20,537,457	6.9

Table 120. AD and CHP Pilot Project Capacity, Generation and Savings by FY Closed

Fiscal Year Closed	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	
Total	5,625.0	43,462,740	651,941	528,410	7,926,152	40,000

¹⁵⁶ Includes closing costs and capitalized interest for C-PACE and the Fair Market Value for Commercial/Residential Leases.

¹⁵⁷ Includes incentives, interest rate buydowns and loan loss reserves.

CONNECTICUT GREEN BANK
5. PROGRAMS – PILOT PROGRAMS

Table 121. AD and CHP Pilot Project Averages by FY Closed

Fiscal Year Closed	Average Gross System Cost	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
Total	\$3,433,281	\$357,180	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 219 job years as illustrated by Table 122.

Table 122. AD and CHP Pilot Job Years Supported by FY Closed

	2012	2013	2014	2015	2016	2017	Total
Direct	-	20	39	4	0	21	84
Indirect and Induced	-	32	62	7	0	34	135
Total	-	51	101	11	0	55	219

CONNECTICUT GREEN BANK
5. PROGRAMS – STRATEGIC INVESTMENTS

Strategic Investments

As opportunities present themselves, the Green Bank from time to time is part of the capital stack for 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, 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 is reflected in Tables 123 through 125. 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 123. Strategic Project Types and Investment by FY Closed

Fiscal Year Closed	EE	RE	RE/EE	Other	# Projects	# Project Units	Investment (Gross Cost) ¹⁵⁸	Green Bank Investment ¹⁵⁹	Private Investment	Leverage Ratio
2012	-	-	-	-	-	-	-	-	-	-
2013		1			1	1	\$70,800,000	\$5,800,000	\$65,000,000	12.2
2014	-	-	-	-	-	-	-	-	-	-
2015		1		1	2	2	\$56,500,000	\$3,227,000	\$53,273,000	17.5
2016	-	-	-	-	-	-	-	-	-	-
2017		1			1	1	\$4,538,212	\$3,900,000	\$638,212	1.2
Total		3			4	4	\$131,838,212	\$12,927,000	\$118,911,212	10.2

Table 124. Strategic Project Capacity, Generation and Savings by FY Closed

Fiscal Year Closed	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	118,260	465,850	403,503
2016	-	-	-	-	-
2017	193.0	825,052	20,626	2,815	70,377
Total	19,993.0	254,003,249	1,305,718	866,788	4,455,111

¹⁵⁸ Includes closing costs and capitalized interest for C-PACE and the Fair Market Value for Commercial/Residential Leases.

¹⁵⁹ Includes incentives, interest rate buydowns and loan loss reserves.

CONNECTICUT GREEN BANK
5. PROGRAMS – STRATEGIC INVESTMENTS

Table 125. Strategic Project Averages by FY Closed

Fiscal Year Closed	Average Gross System Cost	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	2,815
Total	\$32,959,553	\$3,231,750	4,998.3	216,697

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 1,119 job years, avoided the emission 153,004 tons of carbon dioxide, 689,616 pounds of nitrous oxide, 503,689 pounds of sulfur oxide, and 4,644 pounds of particulate matter as illustrated by Tables 126 and 127.

Table 126. Strategic Job Years Supported by FY Closed

	2012	2013	2014	2015	2016	2017	Total
Direct	-	340	0	0	0	0	340
Indirect and Induced	-	779	0	0	0	0	779
Total	-	1,119	0	0	0	0	1,119

Table 127. Strategic Avoided Emissions by FY Closed

	2012	2013	2014	2015	2016	2017	Total
CO2 Savings (tons)							
Annual	-	7,876	0	4,235	0	429	12,540
Lifetime	-	78,761	0	63,528	0	10,715	153,004
NOx Savings (pounds)							
Annual	-	63,009	0	3,377	0	355	66,741
Lifetime	-	630,089	0	50,658	0	8,869	689,616
SOx Savings (pounds)							
Annual	-	45,623	0	2,628	0	322	48,572
Lifetime	-	456,231	0	39,414	0	8,044	503,689
PM 2.5 (pounds)							
Annual	-	0	0	310	0	0	310
Lifetime	-	0	0	4,644	0	0	4,644

6. Appendix

Community Activity Table

See the Municipality Tables in here: [FY17 CAFR NFS Appendix.xlsx](#)

Contractor Activity Table

See the Contractor Tables in here: [FY17 CAFR NFS Appendix.xlsx](#)

Trained Contractor Table

See the Trained Contractor table in here: [FY17 CAFR NFS Appendix.xlsx](#)

Calculations and Assumptions

Table 128. Capacity Factors and Expected Useful Life (EUL) By Technology

Technology	Capacity Factor	EUL
AD	0.80	15
CHP	0.90	15
EE	0	12
Fuel Cell	0.90	10
Geothermal	0	25
Hydro	0.49	25
PV	0.13	25
PV/Biomass	0.13	25
Solar Thermal	0	20
Wind	0.18	15

Table 129. Job Year Factors by Year Approved by Technology

	2009 Factors - Approved prior to 6/30/2016			2016 Factors - Approved after 7/1/2016		
	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 Manufacturing	4.8	11.0	15.8	4.9	6.4	11.3
Fuel Cell R&D/Engineering ¹	0.0	0.0	0.0	2.9	3.8	6.7
Solar PV - Residential	5.9	9.5	15.4	3.9	5.1	9.0
Solar PV - Non-Residential	3.4	5.4	8.8	3.1	4.0	7.1
Ductless Split Heat Pump	0.0	0.0	0.0	6.7	8.7	15.4
Geothermal	8.3	13.3	21.6	6.7	8.7	15.4
Solar Thermal	7.6	12.2	19.8	5.6	7.3	12.9
Wind Installation	0.0	0.0	0.0	6.2	8.0	14.2
Hydro Installation	0.0	0.0	0.0	6.2	8.0	14.2
EV Charging Stations - Installation	0.0	0.0	0.0	3.1	4.0	7.1
Storage Installation ¹	0.0	0.0	0.0	2.2	2.9	5.1
CHP ²	6.2	9.9	16.1	6.2	8.1	14.3

CONNECTICUT GREEN BANK
6. APPENDIX

	2009 Factors - Approved prior to 6/30/2016			2016 Factors - Approved after 7/1/2016		
	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					
	Energy Efficiency					
Residential	12.9	20.6	33.5	-	-	-
Residential Lighting ¹	0.0	0.0	0.0	7.7	10.0	17.7
Residential Home Energy Solutions (HES) - Audits ¹	0.0	0.0	0.0	7.8	10.2	18.0
Residential HES - Weatherization & HVAC	0.0	0.0	0.0	5.6	7.3	12.9
Residential Gas Conversion	0.0	0.0	0.0	5.6	7.3	12.9
Small Business Energy Advantage	9.1	14.6	23.7	6.2	8.0	14.2
Large Commercial and Industrial	7.6	12.2	19.8	5.6	7.3	12.9

1. Not currently being used.
2. Developed by Green Bank.

Table 130. Residential Single Family Annual and Lifetime MMBTUs and Cost Savings

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
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.

CONNECTICUT GREEN BANK
6. APPENDIX

Table 131. Average Emission Rates by Year Completed by Technology

	Year Completed				
	2016 ⁴	2015	2014	2013	2012 ⁵
	CO2 tons				
AD	0.000	0.000	0.000	0.000	0.000
CHP	0.000	0.000	0.000	0.000	0.000
EE Only ¹	0.543	0.570	0.549	0.555	0.536
Fuel Cell ²	0.068	0.068	0.068	0.068	0.068
Geothermal ²	0.400	0.400	0.400	0.400	0.400
Hydro ²	0.520	0.520	0.520	0.520	0.520
Solar PV ¹	0.562	0.575	0.551	0.572	0.558
Solar Thermal ²	0.547	0.547	0.547	0.547	0.547
Wind ¹	0.537	0.575	0.562	0.558	0.523
	NOX pounds				
AD	0.000	0.000	0.000	0.000	0.000
CHP	0.000	0.000	0.000	0.000	0.000
EE Only ¹	0.480	0.648	0.739	0.741	0.548
Fuel Cell ²	0.540	0.540	0.540	0.540	0.540
Geothermal ²	0.335	0.335	0.335	0.335	0.335
Hydro ²	0.430	0.430	0.430	0.430	0.430
Solar PV ¹	0.575	0.697	0.790	0.859	0.689
Solar Thermal ²	0.453	0.453	0.453	0.453	0.453
Wind ¹	0.428	0.642	0.760	0.737	0.469
	SO2 pounds				
AD	0.000	0.000	0.000	0.000	0.000
CHP	0.000	0.000	0.000	0.000	0.000
EE Only ¹	0.340	0.665	0.890	0.952	0.732
Fuel Cell ²	0.391	0.391	0.391	0.391	0.391
Geothermal ²	0.297	0.297	0.297	0.297	0.297
Hydro ²	0.390	0.390	0.390	0.390	0.390
Solar PV ¹	0.411	0.698	0.956	1.107	0.911
Solar Thermal ²	0.411	0.411	0.411	0.411	0.411
Wind ¹	0.333	0.723	1.012	1.000	0.643
	PM2.5 pounds³				
AD	0.000	0.000	0.000	0.000	0.000
CHP	0.000	0.000	0.000	0.000	0.000
EE Only ¹	0.043	0.045	0.045	0.045	0.045
Fuel Cell ²	0.000	0.000	0.000	0.000	0.000
Geothermal ²	0.000	0.000	0.000	0.000	0.000
Hydro ²	0.000	0.000	0.000	0.000	0.000
Solar PV ¹	0.049	0.050	0.050	0.050	0.050
Solar Thermal ²	0.000	0.000	0.000	0.000	0.000
Wind ¹	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 2010 - 2014 are unavailable and use the 2015 rates.
4. 2016 rates are used for projects completed in 2017 and those pending completion.
5. 2012 rates are used for projects completed prior to 2012.

Index of Figures and Tables

Table 132. Figures

Figure 1. Green Bank KPI Capital Deployment Chart by FY Closed	89
Figure 2. Green Bank Cumulative Green Bank Funds Invested by Type by FY Closed	90
Figure 3. Connecticut Green Bank Program Logic Model – Including Subsidies and Financing	106
Figure 4. Societal Benefits – Environmental Protection and Economic Development – from Greater Private Capital Investment	110
Figure 5. Legal Structure and Flows of Capital for C-PACE	112
Figure 6. Legal Structure and Flows of Capital for the CT Solar Lease	124
Figure 7. RSIP Legal Structure and Flows of Capital	136
Figure 8. Program Logic Model for the Residential Solar Investment Program (RSIP)	146
Figure 9. Legal Structure and Flows of Capital for the Smart-E Loan	148
Figure 10. Low Income Solar Lease Legal Structure and Flows of Capital	157
Figure 11. CT Solar Loan Legal Structure and Flows of Capital	175

Table 133. Tables

Table 1. Composition of the Board of Directors of the Connecticut Green Bank for FY 2017	76
Table 2. Summary of State of Financial Interest Filings with the Office of State Ethics for FY 2017	80
Table 3. Small Business Procurement	80
Table 4. Minority Business Enterprise Procurement	81
Table 5. Human and Financial Resources of the Green Bank FY 2012 vs FY 2017	81
Table 6. Green Bank Impact FY 2012 vs FY 2017	81
Table 7. Green Bank Deployment Efficiency FY 2012 vs FY 2017	82
Table 8. Green Bank Actuals vs Targets by FY Closed	83
Table 9. Green Bank Project Activity by FY Closed	84
Table 10. Green Bank Number of Multifamily Housing Units Impacted by FY Closed	84
Table 11. Green Bank Clean Energy Investment by Source - Public and Private by FY Closed	84
Table 12. Green Bank Clean Energy Projects - Average Public and Private Investments by FY Closed	85
Table 13. Green Bank Sector Leverage Ratios by FY Closed	85
Table 14. Green Bank Installed Capacity, Estimated Generation and Energy Saved and/or Produced by FY Closed	86
Table 15. Green Bank Projects by Technology by FY Closed	87
Table 16. Green Bank Project Types by FY Closed	88
Table 17. Current and Non-Current Assets	89
Table 18. Green Bank Ratio of Capital Invested as Subsidies, Credit Enhancements, and Loans and Leases by FY Closed	90
Table 19. Green Bank Job Years Supported by FY Closed	91
Table 20. Green Bank Avoided Emissions by FY Closed	92
Table 21. Green Bank Greenhouse Gas Equivalencies (based on reductions of CO ₂ tons) by FY Closed	93

CONNECTICUT GREEN BANK
6. APPENDIX

Table 22. The “Top 5” Energy, Environment, and Economy Metrics based on FY 2017 Closed Activity 94

Table 23. The “Top 5” Energy, Environment, and Economy Metrics based on FY 2012 – 2017 Closed Activity 94

Table 24. Overview of Population and Households in 2015 American Community Survey (ACS) Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands 95

Table 25. Overview of Population and Households in 2015 American Community Survey (ACS) Metropolitan Statistical Area (MSA) State Median Income (SMI) Bands 95

Table 26. Green Bank Residential Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed 96

Table 27. Green Bank Residential Activity in Metropolitan Statistical Area (MSA) State Median Income (SMI) Bands by FY Closed 98

Table 28. Green Bank Residential Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed 100

Table 29. Green Bank Residential Activity in Metropolitan Statistical Area (MSA) State Median Income (SMI) Bands Above or Below 100% by FY Closed 101

Table 30. Distressed and Not Distressed Municipalities, Population, and Households in Connecticut 101

Table 31. Green Bank Commercial and Residential Activity in Distressed Communities by FY Closed 102

Table 32. Credit Score Ranges of Household Borrowers Using Residential Financing Programs 103

Table 33. Green Bank Commercial and Residential Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 80% by FY Closed 104

Table 34. Green Bank Activity in Residential and Commercial Markets by FY Closed 105

Table 35. C-PACE Project Types and Investment by FY Closed..... 113

Table 36. C-PACE Project Capacity, Generation and Savings by FY Closed..... 113

Table 37. C-PACE Project Averages by FY Closed 114

Table 38. C-PACE Project Application Yield by FY Received 114

Table 39. Types of End-Use Customers Participating in C-PACE 115

Table 40. Municipalities Participating in C-PACE 115

Table 41. C-PACE Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed 119

Table 42. C-PACE Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed..... 120

Table 43. C-PACE Activity in Distressed Communities by FY Closed 121

Table 44. C-PACE Job Years Supported by FY Closed 122

Table 45. C-PACE Avoided Emissions by FY Closed..... 122

Table 46. Commercial Solar Lease Project Types and Investment by FY Closed 125

Table 47. Residential Solar Lease Project Investment by FY Closed 125

Table 48. Commercial Solar Lease Project Capacity, Generation and Savings by FY Closed . 126

Table 49. Residential Solar Lease Project Capacity, Generation and Savings by FY Closed .. 126

Table 50. Commercial Solar Lease Project Averages by FY Closed..... 126

Table 51. Residential Solar Lease Project Averages by FY Closed 127

Table 52. Residential Solar Lease Project Application Yield by FY Received 127

CONNECTICUT GREEN BANK
6. APPENDIX

Table 53. Types of End-Use Customers Participating in Commercial Solar Lease 127

Table 54. Commercial Solar Lease Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed 128

Table 55. Residential Solar Lease Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed 129

Table 56. Commercial Solar Lease Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed 131

Table 57. Residential Solar Lease Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed 131

Table 58. Commercial Solar Lease Activity in Distressed Communities by FY Closed 132

Table 59. Residential Solar Lease Activity in Distressed Communities by FY Closed 133

Table 60. Commercial and Residential Solar Lease Job Years Supported by FY Closed 134

Table 61. Commercial and Residential Solar Lease Avoided Emissions by FY Closed 134

Table 62. Credit Score Ranges of Household Customers Using the CT Solar Lease by FY Closed 135

Table 63. Number of Projects, Investment, and Installed Capacity through Green Bank Solarize Connecticut for the CT Solar Lease Financing Product 135

Table 64. RSIP Subsidy by Step and Incentive Type 136

Table 65. RSIP Project Types and Investment by FY Closed 137

Table 66. RSIP Project Capacity, Generation and Savings by FY Closed 137

Table 67. RSIP Project Averages by FY Closed 138

Table 68. RSIP Project Application Yield by FY Received 138

Table 69. RSIP Systems Closed through the Subsidy by Step 138

Table 70. RSIP Third Party Owned vs Homeowner-owned Systems 139

Table 71. RSIP Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed 139

Table 72. RSIP Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed 141

Table 73. RSIP Activity in Distressed Communities by FY Closed 142

Table 74. RSIP Job Years Supported by FY Closed 143

Table 75. RSIP Avoided Emissions by FY Closed 143

Table 76. RSIP Green Bank Solarize Volume, Capacity and Cost Data by FY Closed 144

Table 77. Smart-E Loan Project Types and Investment by FY Closed 148

Table 78. Smart-E Loan Project Capacity, Generation and Savings by FY Closed 149

Table 79. Smart-E Loan Project Averages by FY Closed 149

Table 80. Smart-E Loan Project Application Yield by FY Received 149

Table 81. Smart-E Loan Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed 150

Table 82. Smart-E Loan Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed 151

Table 83. Smart-E Loan Activity in Distressed Communities by FY Closed 152

Table 84. Smart-E Loan Job Years Supported by FY Closed 153

Table 85. Smart-E Loan Avoided Emissions by FY Closed 153

Table 86. Credit Score Ranges of Household Customers Using the Smart-E Loan by FY Closed 154

CONNECTICUT GREEN BANK
6. APPENDIX

Table 87. Smart-E Loan Lenders..... 154

Table 88. Number of Projects, Investment, and Installed Capacity through Solarize Connecticut for the Smart-E Loan 155

Table 89. Smart-E Loan Project Channels..... 155

Table 90. Smart-E Loan Measures 155

Table 91. Low Income Solar Lease Project Types and Investment by FY Closed 158

Table 92. Low Income Solar Lease Project Capacity, Generation and Savings by FY Closed. 158

Table 93. Low Income Solar Lease Project Averages by FY Closed 159

Table 94. Low Income Solar Lease Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed 160

Table 95. Low Income Solar Lease Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed..... 161

Table 96. Low Income Solar Lease Activity in Distressed Communities by FY Closed..... 162

Table 97. Low Income Solar Lease Job Years Supported by FY Closed 163

Table 98. Low Income Solar Lease Avoided Emissions by FY Closed 163

Table 99. Multifamily Project Types and Investment by FY Closed 166

Table 100. Multifamily Project Capacity, Generation and Savings by FY Closed..... 167

Table 101. Multifamily Project Averages by FY Closed 167

Table 102. Multifamily Projects by Low to Moderate Income (LMI) or Market Rate Property by FY Closed..... 168

Table 103. Multifamily Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed 169

Table 104. Multifamily Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed..... 171

Table 105. Multifamily Activity in Distressed Communities by FY Closed 172

Table 106. Multifamily Job Years Supported by FY Closed 173

Table 107. Multifamily Avoided Emissions by FY Closed..... 173

Table 108. CT Solar Loan Project Types and Investment by FY Closed..... 176

Table 109. CT Solar Loan Project Capacity, Generation and Savings by FY Closed..... 176

Table 110. CT Solar Loan Project Averages by FY Closed 177

Table 111. CT Solar Loan Project Application Yield by FY Received 177

Table 112. CT Solar Loan Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands by FY Closed 178

Table 113. CT Solar Loan Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands Above or Below 100% by FY Closed..... 179

Table 114. CT Solar Loan Activity in Distressed Communities by FY Closed..... 180

Table 115. CT Solar Loan Job Years Supported by FY Closed 181

Table 116. CT Solar Loan Avoided Emissions by FY Closed 181

Table 117. Credit Score Ranges of Household Customers Using the CT Solar Loan by FY Closed 182

Table 118. Number of Projects, Investment, and Installed Capacity through Green Bank Solarize Connecticut for the CT Solar Loan Financing Product 182

Table 119. AD and CHP Pilot Project Types and Investment by FY Closed..... 184

Table 120. AD and CHP Pilot Project Capacity, Generation and Savings by FY Closed..... 184

Table 121. AD and CHP Pilot Project Averages by FY Closed 185

CONNECTICUT GREEN BANK
6. APPENDIX

Table 122. AD and CHP Pilot Job Years Supported by FY Closed 185
Table 123. Strategic Project Types and Investment by FY Closed 186
Table 124. Strategic Project Capacity, Generation and Savings by FY Closed..... 186
Table 125. Strategic Project Averages by FY Closed 187
Table 126. Strategic Job Years Supported by FY Closed 187
Table 127. Strategic Avoided Emissions by FY Closed 187
Table 128. Capacity Factors and Expected Useful Life (EUL) By Technology 188
Table 129. Job Year Factors by Year Approved by Technology 188
Table 130. Residential Single Family Annual and Lifetime MMBTUs and Cost Savings 189
Table 131. Average Emission Rates by Year Completed by Technology..... 190
Table 132. Figures 191
Table 133. Tables..... 191

DRAFT
FOR DISCUSSION PURPOSES ONLY

CONNECTICUT GREEN BANK
Audit, Compliance and Governance
Committee Presentation
for the Audit of the fiscal year ended
June 30, 2017

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The passion to unlock potential

CT Green Bank - Audit Results

Agenda:

- Engagement Scope and Reporting
- Financial Highlights
- Required Auditors' Communications
- Closing
- Audit Team Contact Information

CT Green Bank - Audit Results

Engagement Scope and Reporting

- The audit was performed under the following standards:
 - Auditing Standards Generally Accepted in the United States of America (GAAS).
 - The standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States (GAGAS).

CT Green Bank - Audit Results

Engagement Scope and Reporting (continued)

- Reporting Results in the Financial Statements:
 - Reporting under GAAS:
 - Unmodified audit opinion.
 - Reporting under GAGAS:
 - Reporting on Internal Control and Compliance at the Financial Statement Level
- Under Internal Control
- No Material Weakness or Significant Deficiencies were identified.
- Under Compliance
- No instances of noncompliance were identified.

CT Green Bank - Audit Results

Financial Highlights – Statement of Net Assets (in thousands)

Net Position (in thousands)		<u>2017</u>	<u>2016</u>	Increase (Decrease)
Cash and cash equivalents-unrestricted	\$	37,911	\$ 48,072	\$ (10,161)
Cash and cash equivalents-restricted		21,301	9,750	11,551
Bonds receivable		3,329	3,492	(163)
Portfolio investments		-	1,000	(1,000)
Solar lease notes		8,113	9,008	(895)
Program loans		42,206	33,268	8,938
Capital assets, net		61,510	58,115	3,395
Other assets		<u>17,382</u>	<u>14,124</u>	<u>3,258</u>
Total Assets		<u>191,752</u>	<u>176,829</u>	<u>14,923</u>
Deferred Outflows of Resources				
Deferred amount for pensions		<u>9,978</u>	<u>2,575</u>	<u>7,403</u>
Total deferred outflows of resources		<u>9,978</u>	<u>2,575</u>	<u>7,403</u>

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CT Green Bank - Audit Results

Financial Highlights – Statement of Net Assets (in thousands)

	<u>2017</u>	<u>2016</u>	Increase (Decrease)
Current liabilities	13,698	6,964	6,734
Unearned revenue	872	6,258	(5,386)
Pension liabilities	25,245	16,096	9,149
Other long term liabilities	3,020	2,528	492
Fair value of interest rate swap	541	1,628	(1,087)
Long term debt, less current maturities	<u>29,691</u>	<u>18,567</u>	<u>11,124</u>
 Total liabilities	 <u>73,067</u>	 <u>52,042</u>	 <u>21,025</u>
 Net Position			
Invested in capital assets	61,510	58,115	3,395
 Restricted Net Position:			
Non-expendable	1	1	-
Restricted - energy programs	21,301	9,750	11,551
Unrestricted	<u>45,851</u>	<u>59,496</u>	<u>(13,645)</u>
 Total Net Position	 \$ <u>128,663</u>	 \$ <u>127,362</u>	 \$ <u>1,301</u>

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CT Green Bank - Audit Results

Financial Highlights

2017 Financial Analysis

- Total assets of the Green Bank increased to \$191.7MM during 2017, an increase of \$14.9MM. This was principally due to an increase of \$8.9MM in program loans to support renewable energy installations and \$3.4MM in energy efficiency upgrades for residential and commercial property owners in CT.
- Total liabilities increased \$21.0MM due to primarily to increases in long-term debt associated with bond issuances, advances under CGB's credit facility with Key Bank and increases CGB's allocation of the CT State Employee Retirement System net pension liability.
- Total Net Position increased slightly however the components of net position changes most notably in CGB's restricted portion of net position which increased \$11.6MM to \$21.3MM at June 30, 2017.

CT Green Bank - Audit Results

Financial Highlights – Statement of Changes in Net Assets (in thousands)

	2017	2016	Increase (Decrease)
Revenues	<u>\$ 33,970</u>	<u>\$ 37,788</u>	<u>\$ (3,818)</u>
Operating Expenses			
Grants and programs	34,682	27,228	7,916
General and administrative expense	<u>4,928</u>	<u>4,706</u>	<u>222</u>
Total Operating Expenses	<u>39,610</u>	<u>31,472</u>	<u>8,138</u>
Operating Income	(5,640)	6,316	(15,116)
Non-Operating Revenues (Expenses)			
Interest earned	3,145	2,614	705
Interest expense	(1,222)	(731)	(612)
Investment loss realize and unrealized	(94)	(33)	1,177
Unrealized gain (loss) on interest rate swap	1,087	(968)	(308)
Provision for loan losses	(956)	(1,022)	(458)
Capital contribution	6,446	12,294	5,450
Distribution to member	(437)	(301)	(196)
Unrealized loss on investment	<u>(1,000)</u>	<u>--</u>	<u>(1,000)</u>
Net Change	<u>\$ 1,329</u>	<u>\$ 18,196</u>	<u>\$ 15,867</u>

CT Green Bank - Audit Results

Financial Highlights

2017 Operating Activity

- The Green Bank had operating revenues of approximately \$34MM for the year ended June 30, 2017 which was a decrease from the prior year of approximately \$3.8MM. This was mainly due to a decrease in Regional Greenhouse Gas Initiative (RGGI) auction clearing price average and the diversion of \$800K of proceeds earmarked to go to the State of CT under P.A. 16-3.
- Total operating expenses increased approximately \$8.1MM during 2017, due principally to increases in grant and program expense increases associated with financial incentives to residential and commercial property owners to install renewable energy or energy efficiency measures.
- Net Non-Operating Revenues (Expenses) were approximately \$7.0MM. This was mostly attributable to capital contributions of \$6.4MM received from CT SL2, LLC's investor member.

CT Green Bank - Audit Results

Required Auditors' Communications

- Required communications to those charged with governance (Audit Committee/Board of Directors):

Qualitative Aspects of Accounting Practices.

Management is responsible for the selection and use of appropriate accounting policies.

- We noted no transactions entered into by the governmental unit 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.

CT Green Bank - Audit Results

- **Required Auditors' Communications (continued)**
- **Qualitative Aspects of Accounting Practices (continued)**

Accounting Estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. The most sensitive estimates affecting the financial statements were as follows:

- **Loan Loss Reserves** – Managements estimate is based on certain historical data and currently known information related to amounts written off or deemed uncollectable.
- **SWAP Fair Value Calculation** – Managements estimate is based on a third party valuation performed by
- **Net Pension Liability** - Management's estimate of the net pension liability is based on an actuarial valuation utilizing various assumptions and estimates approved by management.
- **Asset Retirement Obligation**- Management's estimate of the asset retirement obligation is based upon amounts calculated by management.

CT Green Bank - Audit Results

- **Required Auditors' Communications (continued)**
- **Qualitative Aspects of Accounting Practices (continued)**
 - We have evaluated the key factors and assumptions used to develop the above estimates in determining that they are reasonable in relation to the financial statements taken as a whole. The results of our procedures gave no indication of management bias in the development of the estimates in the financial statements.
 - The financial statement disclosures are neutral, consistent and clear. There were no sensitive disclosures affecting the financial statements.

CT Green Bank - Audit Results

- **Required Auditors' Communications (continued)**

- **Difficulties Encountered in Performing the Audit**

Professional standards require us to communicate any significant difficulties encountered with management encountered during the performance of our audit.

- We encountered no significant difficulties in dealing with management in performing and completing our audit.

- **Corrected and Uncorrected Misstatements**

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management.

- No uncorrected misstatements were identified in connection with our audit of the financial statements for the fiscal year ended June 30, 2017.

CT Green Bank - Audit Results

- **Required Auditors' Communications (continued)**

- **Disagreements with Management**

A disagreement with management is a financial accounting, reporting or auditing matter, whether or not resolved to our satisfaction that could be significant to the financial statements or the auditors' report.

- We are pleased to report that no such disagreements arose during the course of our audit.

- **Management Representations**

- We will requested certain representations from management prior to the final issuance of our Auditors Report.

CT Green Bank - Audit Results

- **Required Auditors' Communications (continued)**
- **Management Consultations with Other Independent Accountants**

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a “second opinion” on certain situations. If a consultation involves application of an accounting principle to the governmental unit’s financial statements or a determination of the type of auditor’s opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts.

- To our knowledge, there were no such consultations with other accountants.

CT Green Bank - Audit Results

- **Required Auditors' Communications (continued)**
- **Other Audit Findings or Issues**

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the governmental unit's auditors.

- Any such discussion that occurred took place in the normal course of our professional relationship and our responses were not a condition to our retention.

CT Green Bank - Audit Results

- **Required Auditors' Communications (continued)**
- **Other Matters**

With respect to the supplementary information accompanying the financial statements, we made certain inquiries of management and evaluated the form, content and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements.

- We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

CT Green Bank - Audit Results

- **Required Auditors' Communications (continued)**

This information is intended solely for the use of Audit, Compliance and Governance Committee and the Board of Directors and management of Connecticut Green Bank, and is not intended to be and should not be used by anyone other than these specified parties.

- **Closing**

BlumShapiro would like to thank the professional staff of Connecticut Green Bank that participated with us in the performance of the audit. CGB's staff was very responsive and helpful to our inquiries and requests which allowed both BlumShapiro and management to meet the financial reporting deadlines that had been established.

CT Green Bank - Audit Results

Audit Team Contact Information

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Memo

To: Audit, Compliance and Governance Committee

From: Brian Farnen (General Counsel and CLO), Bryan Garcia (President and CEO), Bert Hunter (Executive Vice President and CIO)

CC: Mackey Dykes, Dale Hedman, and Kerry O'Neill,

Date: October 11, 2017

Re: Request for Adjustment in Officer Approvals – Funding Requests below \$500,000 and in Aggregate less than \$1,000,000

BACKGROUND

On January 18, 2013, the Connecticut Green Bank (“Green Bank”) Board of Directors approved of a recommendation brought forth by the Deployment Committee to approve the authorization of Green Bank staff to evaluate and approve program 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 – **see Appendix I for the Resolution**. This policy is consistent with that of the Connecticut Clean Energy Fund (CCEF), the predecessor to Green Bank, who’s Board passed a similar resolution permitting staff to approve funding requests below \$300,000.

On July 18, 2014, the Connecticut Green Bank (“Green Bank”) Board of Directors approved of a recommendation brought forth by the Deployment Committee to approve the authorization of Green Bank staff to evaluate and approve program 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 \$1,000,000 from the date of the last Deployment Committee meeting – **see Appendix II for the Resolution**.

By authorizing Green Bank staff to approve funding requests below \$300,000 within clear established guidelines, Green Bank staff is further empowered to manage the day to day operations of Green Bank consistent with the broader vision of the Green Bank Board. Green

Bank staff, with the support of the Deployment Committee, is now requesting an adjustment in the policy to increase the funding request amount limit from \$300,000 to \$500,000.

JUSTIFICATION FOR REQUEST FOR ADJUSTMENT

Green Bank staff is making this request due to the increased funding request amounts per project, especially within the C-PACE and Solar Lease programs. Additionally, Green Bank has operationalized increased standardization with the relevant financing documents, underwriting and technical review for such programmatic projects.

RESOLUTION

WHEREAS, pursuant to Section 5.3.1 of the Connecticut Green Bank (Green Bank) Bylaws, the Audit, Compliance & Governance (ACG) Committee is charged with the review and approval of, and in its discretion recommendations to the Board regarding, all governance and administrative matters affecting the Green Bank, including but not limited to matters of corporate governance and corporate governance policies;

WHEREAS, on January 18, 2013, the Board of Directors authorized 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 ("Staff Approval Policy for Projects Under \$300,000").

WHEREAS, On July 18, 2014, the Connecticut Green Bank ("Green Bank") Board of Directors approved of a recommendation brought forth by the Deployment Committee to approve the authorization of Green Bank staff to evaluate and approve program 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 \$1,000,000 from the date of the last Deployment Committee meeting

NOW, therefore be it:

RESOLVED, that the Green Bank Deployment Committee hereby recommends that the Board of Directors adopt a resolution amending the Staff Approval Policy to increase the program funding request for Projects Under \$300,000 to \$500,000 with an aggregate amount limit of \$1,000,000 from the date of the last Deployment Committee meeting.

Appendix I
Policy on Staff Approval of Program Funding Requests
(Resolution of the CEFIA Board of Directors on January 18, 2013)

WHEREAS, pursuant to Section 5.3.3 of the CEFIA Bylaws, the CEFIA Deployment Committee has been granted the authority to evaluate and approve funding between \$300,000 and \$2,500,000; and

WHEREAS, CEFIA staff requests that staff have the authority to evaluate and approve funding requests less than \$300,000, which are consistent with the CEFIA Comprehensive Plan and approved within CEFIA's fiscal year budget; and

WHEREAS, the Audit, Compliance & Governance Committee recommends approval to the Board of Directors to authorize CEFIA 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 CEFIA officer, consistent with the CEFIA Comprehensive Plan, approved within CEFIA's fiscal budget and in an aggregate amount not to exceed \$500,000 from the date of the last Deployment Committee meeting.

NOW, therefore be it:

RESOLVED, that the CEFIA Board of Directors hereby approves the authorization of CEFIA staff to evaluate and approve program funding requests less than \$300,000 which are pursuant to an established formal approval process requiring the signature of a CEFIA officer, consistent with the CEFIA Comprehensive Plan, approved within CEFIA's fiscal budget and in an aggregate amount not to exceed \$500,000 from the date of the last Deployment Committee meeting.

Appendix II
Policy on Staff Approval of Program Funding Requests
(Resolution of the Green Bank Board of Directors on July 18, 2014)

WHEREAS, pursuant to Section 5.3.1 of the Connecticut Green Bank (the “Green Bank”) Bylaws, the Audit, Compliance & Governance (ACG) Committee is charged with the review and approval of, and in its discretion recommendations to the Green Bank Board of Directors (the “Board”) regarding, all governance and administrative matters affecting the Green Bank, including but not limited to matters of corporate governance and corporate governance policies;

WHEREAS, on January 18, 2013, 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 (“Staff Approval Policy for Projects Under \$300,000”);

WHEREAS, on May 15, 2014 the Green Bank Deployment Committee voted in favor of recommending that the Board adopt a resolution amending the Staff Approval Policy for Projects Under \$300,000 to increase the aggregate amount limit from \$500,000 to \$1,500,000 from the date of the last Deployment Committee meeting; and

WHEREAS, on June 4, 2014 the Green Bank Audit, Compliance and Governance Committee voted in favor of recommending that the Board adopt a resolution amending the Staff Approval Policy for Projects Under \$300,000 to increase the aggregate amount limit from \$500,000 to \$1,000,000 from the date of the last Deployment Committee meeting.

NOW, therefore be it:

RESOLVED, that the Green Bank Board of Directors hereby adopts a resolution amending the Staff Approval Policy for Projects Under \$300,000 to increase the aggregate amount limit from \$500,000 to \$1,000,000 from the date of the last Deployment Committee meeting.

CONNECTICUT GREEN BANK

BYLAWS

PURSUANT TO

Section 16-245n of the
Connecticut General Statutes

Adopted: October 17, 2015

Revised: December 16, 2016

ARTICLE I
NAME, PLACE OF BUSINESS

- 1.1. **Name of the Green Bank.** The name of the Green Bank shall be, in accordance with the Statute, the "Connecticut Green Bank".
- 1.2. **Office of the Green Bank.** The office of the Green Bank shall be maintained at such place or places within the State of Connecticut as the Board may designate.

ARTICLE II
BOARD OF DIRECTORS

- 2.1. **Powers.** The powers of the Green Bank are vested in and exercised by a Board of Directors which may exercise all such authority and powers of the Green Bank and do all such lawful acts and things as are necessary to carry out the Comprehensive Plan and the purposes of the Green Bank as provided in the Resolution of Purposes, or as are otherwise authorized or permitted by the Statute or other provisions of the General Statutes, including the authorization of expenditures and use of funds from the Clean Energy Fund created by Section 16-245n(c) of the General Statutes, formerly known as the Renewable Energy Investment Fund, and the Green Connecticut Loan Guaranty Fund created by Section 16a-40f(b) of the General Statutes.
- 2.2. **Chairperson.** The Chairperson of the Board shall be appointed by the Governor. The Chairperson shall perform the duties imposed by the Statute, these Bylaws, and by resolution of the Board, and shall preside at all meetings of the Board which he or she attends. At each meeting the Chairperson shall submit such recommendations and information as the Chairperson may consider appropriate concerning the business, affairs, and policies of the Green Bank. The Chairperson shall serve at the pleasure of the

Governor but no longer than the term of office of the Governor or until the Chairperson's successor is appointed and qualified, whichever is longer.

- 2.3. **Vice Chairperson.** The Board shall elect from its members a Vice Chairperson. The Vice Chairperson shall perform the duties imposed by the Statute, these Bylaws, and by resolution of the Board. In the absence or incapacity of the Chairperson, the Vice Chairperson shall perform all the duties and responsibilities of the Chairperson. In the absence or incapacity of the Vice Chairperson, or in case of his or her resignation or death, the Board shall elect its members an acting Vice Chairperson during the time of such absence or incapacity or until such time as the Board shall elect a new Vice Chairperson. The Vice Chairperson shall serve until a successor is elected by the Board.
- 2.4. **Secretary.** A Secretary may be elected by the Board. The Secretary shall perform the duties imposed by the Statute, these Bylaws, and by resolution of the Board. In the absence or incapacity of the Secretary, or in case of a resignation or death, the Board shall elect from their number an acting Secretary who shall perform the duties of the Secretary during the time of such absence or incapacity or until such time as the Board shall elect a new Secretary. The Secretary shall serve until a successor is elected by the Board.
- 2.5. **Delegation of Powers.** The Board may, by resolution, delegate to the President or other officers of the Green Bank such powers of the Green Bank as they believe are necessary, advisable, or desirable to permit the timely performance of the functions of the Green Bank and to carry out the plans, policies, procedures, and decisions of the Board, except that such delegation shall not include any duties or responsibilities required by the Statute

or these Bylaws to be performed by the Chairperson or the Board or otherwise in conflict with law.

- 2.6. **Directors.** The Directors shall be appointed and serve as provided in the Statute.

ARTICLE III OFFICERS AND EMPLOYEES

- 3.1. **Officers.** The Board shall have the power to create positions for such officers as it may deem to be in the interests of the Green Bank, and shall define the powers and duties of all such officers. All such officers shall be subject to the orders of the Board and serve at its pleasure. Such officers shall include a President and may include a Director of Finance and Chief Investment Officer, a General Counsel and such other officers as the Board may determine to be appropriate. The Board shall be responsible for determining or approving compensation for each officer.
- 3.2. **President.** The Board shall hire a President. The President shall be the chief executive officer of the Green Bank and shall have such duties and responsibilities as may be determined by the Board, except that the duties and responsibilities of the office of President shall not include those required by the Statute or these Bylaws to be performed by the Chairperson or the Board or otherwise in conflict with law. The President shall be a non-voting, *ex officio* member of the Board pursuant to the Statute. The Board may delegate to such other person or persons all or part of the duties of the President. The President may, with the approval of the Board, assign or delegate to the officers and employees of the Green Bank any of the powers that, in the opinion of the President, may be necessary, desirable, or appropriate for the prompt and orderly transaction of the business of the Green Bank.

- 3.3. **Acting President.** The Board may, by resolution adopted by a majority vote, appoint some other person to serve as Acting President and perform the duties of the President in the event of the death, inability, absence, or refusal to act of the President. The Acting President shall be subject to all of the same restrictions placed upon the President.
- 3.4. **Chief Investment Officer.** The Board may appoint a Chief Investment Officer (CIO). The CIO shall have such duties and responsibilities as may be determined by the Board, except that the duties and responsibilities of the office of CIO shall not include those required by the Statute or these Bylaws to be performed by the Chairperson or the Board or otherwise in conflict with law. The CIO shall not be a Director.
- 3.5. **General Counsel.** The Board may appoint a General Counsel. The General Counsel shall be the chief legal officer of the Green Bank and shall have such duties and responsibilities as may be determined by the Board, except that the duties and responsibilities of the office of General Counsel shall not include those required by the Statute or these Bylaws to be performed by the Chairperson or the Board or otherwise in conflict with law. The General Counsel shall not be a Director.
- 3.6. **Additional Officers and Other Personnel.** The Green Bank may from time to time employ such other personnel as it deems necessary to exercise its powers, duties, and functions pursuant to the Statute and any and all other laws of the State of Connecticut applicable thereto. The President shall develop a staffing plan which shall include without limitation a chart of positions and position descriptions for the Green Bank, personnel policies and procedures, and related compensation levels. Such staffing plan may provide for officers of the Green Bank in addition to those specifically provided for in these Bylaws, and the appointment of such officers shall be in the discretion of the

President, except as the Board may otherwise determine. The President shall deliver the staffing plan to the Budget and Operations Committee for its review and approval pursuant to Article V, Section 5.3.2 hereof.

- 3.7. **Signature Authority; Additional Duties.** The President and officers of the Green Bank shall have such signature authority as is provided in the Green Bank's Operating Procedures, and as may from time to time be provided by resolution of the Board. The officers of the Green Bank shall perform such other duties and functions as may from time to time be required.

ARTICLE IV BOARD MEETINGS

- 4.1. **Regular Meetings.** Regular meetings of the Board or any Committee for the transaction of any lawful business of the Green Bank shall be held in accordance with a schedule of meetings established by the Board or such Committee, provided that the Board shall meet at least six (6) times per fiscal year through either a regularly scheduled or special meeting.
- 4.2. **Special Meetings.** The Chairperson may, when the Chairperson deems it expedient, call a special meeting of the Board for the purpose of transacting any business designated in the notice of such meeting. The Committee Chair of any Committee may, when the Committee Chair deems it expedient, call a special meeting of such Committee for the purpose of transacting any business designated in the notice of such meeting.
- 4.3. **Legal Requirements.** All meetings of the Board or any Committee shall be noticed and conducted in accordance with the applicable requirements of the Statute and the Connecticut Freedom of Information Act, including without limitation applicable

requirements relating to the filing with the Secretary of the State of any schedule of regular meetings and notices of special meetings, meeting notices to Directors and Committee members, public meeting requirements, the filing and public availability of meeting agenda, the recording of votes and the posting or filing of minutes, the addition of agenda items at any regular meeting, and the holding of any executive session.

4.4. **Order of Business.** The order of business of any meeting of the Board or any Committee shall be as set forth in the agenda for such meeting, provided that the Board or Committee may vary the order of business in its discretion.

4.5. **Organization.**

4.5.1. At each meeting of the Board, the Chairperson, or in the absence of the Chairperson, the Vice Chairperson, or in the absence of both, a Director chosen by a majority of the Directors then present, shall act as Presiding Officer. The Secretary, or a staff member designated by the President, shall prepare or direct the preparation of a record of all business transacted at such meeting. Such record when adopted by the Directors at the next meeting and signed by the Chairperson or the Secretary shall be the official minutes of the meeting.

4.5.2. At each meeting of a Committee, the Committee Chair, or in the absence of the Committee Chair any other Committee member designated by the majority of the Committee members then present, shall act as Presiding Officer. The President, a staff member designated by the President, or any Committee member chosen by the Presiding Officer, shall prepare or direct the preparation of a record of the business transacted at such meeting. Such record when adopted by a majority of the Committee members in attendance at the next

meeting and signed by the Committee Chair shall be the official minutes of the Committee meeting.

4.6. **Attendance.** A Director or a member of a Committee may participate in a meeting of the Board or of such Committee by means of teleconference, videoconference, or similar communications equipment enabling all Directors and Committee members participating in the meeting to hear one another, and participation in a meeting pursuant to this Section shall constitute presence in person at such a meeting. Directors or their designees who miss more than three (3) consecutive meetings shall be asked to become more active on the Board. In the event of further absence, the Board may decide by majority vote to recommend to the appointing authority that the appointment be reconsidered.

4.7. **Quorum.**

4.7.1. A majority of the Directors then in office shall constitute a quorum for the transaction of any business or the exercise of any power of the Green Bank.

4.7.2. A majority of the Director-members of a Committee shall constitute a quorum, provided that, except in the case of an advisory committee, such quorum shall consist of a minimum of three (3) Directors, at least one (1) of which shall not be a State employee.

4.8. **Enactment.** When a quorum is present, an affirmative vote of a majority of Directors in attendance at Board or Committee meetings shall be sufficient for action, including the passage of any resolution, except as may otherwise be required by these Bylaws or applicable law. Non-Director members of any Committee may participate in the Committee's discussions and deliberations and may join in the Committee's recommendations to the Board, but shall not have a vote on any matters as to which the

Committee is exercising the powers of the Board, including without limitation, any funding decisions.

- 4.9. **Designation of Substitutes for Directors.** If authorized by the Statute, then a Director may appoint a designee to serve as the Director's representative on the Board with full power to act and to vote on that Director's behalf. For the purposes of maintaining consistency and efficiency in Board matters, alternating attendance between the Director and his or her designee is strongly discouraged. If not authorized by statute, then a Director may not name or act through a designee. An authorized appointment of a designee shall be made by filing with the Board a short bio of the designee, the designee's CV, and a certificate substantially similar to the following:

"Certificate of Designation

I, _____, a member of the Board of Directors of the Connecticut Green Bank, do hereby designate _____ [Name & Title] to represent me at the meetings of the Board or committees thereof with full powers to act and vote on my behalf. This designation shall be effective until expressly revoked in writing.

[Name]"

ARTICLE V COMMITTEES

- 5.1. **Delegation Generally.** The Board may delegate any and all things necessary or convenient to carry out the purposes of the Green Bank to three (3) or more Directors, provided that at least one (1) of which shall not be a State employee, and, to the extent of

powers, duties, or functions not by law reserved to the Board, to any officer or employee of the Green Bank as the Board in its discretion shall deem appropriate.

5.2. **Appointments; Quorum; Transaction of Business; Recordkeeping.**

5.2.1. **Appointments.** The Chairperson shall appoint all Committee Chairs. The Committee Chair need not be a Director on the Deployment Committee any *ad hoc* committee, or an advisory committee.

5.2.2. **Quorum.** If necessary to achieve a quorum at any meeting of a Committee other than an advisory committee, then the Chairperson or the Vice Chairperson may sit, participate, and vote as an alternate member of such committee at such meeting.

5.2.3. **Report of Committee Actions.** Each Committee shall report to the Board on such Committee's actions and activities at the Board meeting next following each Committee meeting.

5.2.4. **Recordkeeping.** Committee recordkeeping shall be in accordance with Article IV, Section 4.5.2 hereof.

5.3. **Standing Committees.** The Green Bank shall have four (4) Standing Committees of the Board consisting of an Audit, Compliance, and Governance Committee, a Budget and Operations Committee, a Deployment Committee, and a Joint Committee of the Energy Conservation Management Board and the Connecticut Green Bank. Each Standing Committee may form subcommittees in its discretion, but no such subcommittee shall exercise powers of the Board unless authorized by the Board to do so.

5.3.1. **Audit, Compliance, and Governance Committee.** The Audit, Compliance, and Governance Committee shall consist of no less than three (3) Directors

appointed by the Chairperson on a biennial basis, at least one (1) of which shall not be a State employee. The principal functions, responsibilities, and areas of cognizance of the Audit, Compliance, and Governance Committee shall be as follows: (i) recommendation to the Board as to the selection of auditors; (ii) meetings with the auditors to review the annual audit and formulation of an appropriate report and recommendations to the Board with respect to the approval of the audit report; (iii) review of the audit and compliance findings of the Auditors of Public Accounts, and meetings with the staff auditors there as appropriate; (iv) review with the auditors, President, and senior finance staff of the adequacy of internal accounting policies, procedures and controls; (v) review of the sufficiency of financial and compliance reports required by statute; (vi) recommendation to the Board as to the selection of the Green Bank's ethics liaison and ethics compliance officer(s); (vii) review of the adequacy of employee education and training on ethics and related legal requirements; (viii) review and approval of, and in its discretion recommendations to the Board regarding, all governance and administrative matters affecting the Green Bank, including but not limited to matters of corporate governance, corporate governance policies, committee structure and membership, management qualifications and evaluation, and Board and Standing Committee self-evaluation; (ix) oversight of the Green Bank's legal compliance programs, including but not limited to compliance with state contracting and ethics requirements; (x) management succession planning; (xi) oversight of any Director conflict of interest matters; (xii) as-needed review of

any staff recommendations to the Board regarding the Green Bank's regulatory or policy initiatives including but not limited to the Comprehensive Plan and other clean energy regulatory or policy evidentiary matters before the Public Utilities Regulatory Authority and other state and federal commissions and tribunals that may affect clean energy development and/or the Green Bank's statutory mandate; (xiii) acting as a resource to the appointing authorities with respect to the identification and recruitment of qualified and interested private sector Director candidates; and (xvi) the exercise of such authority as may from time to time be delegated by the Board to the Audit, Compliance, and Governance Committee within its areas of cognizance.

- 5.3.2. **Budget and Operations Committee.** The Budget and Operations Committee shall consist of no less than three (3) Directors appointed by the Chairperson on a biennial basis, at least one (1) of which shall not be a State employee. Additionally, the Chairperson or the Vice Chairperson shall be a non-voting *ex officio* member of the committee, subject to the provisions of Article V, Section 5.2.2 hereof. The principal functions, responsibilities, and areas of cognizance of the Budget and Operations Committee shall be as follows: (i) to recommend and monitor compliance with prudent fiscal policies, procedures, and practices to assure that the Green Bank has the financial resources and financial strategy necessary to carry out its statutory responsibilities and mission, including oversight of the Green Bank's budget process, asset and liability management, asset risk management, insurance and loss prevention, and performance measurement; (ii) recommendation to the Board as to approval of the annual

operating budget and plan of operation; (iii) oversight of space planning and office leases, systems, and equipment, and procedures and practices with respect to purchasing; (iv) to recommend and monitor compliance with policies, programs, procedures, and practices to assure optimal organizational development, establishment of policies, programs, procedures and practices to assure optimal organizational development, the recruitment and retention of qualified personnel and the just and fair treatment of all employees of the Green Bank, including employment policies and practices, employee training, development, evaluation and advancement, employee compensation and benefits, and matters of employee separation and severance; (v) review and approval of the Green Bank staffing plan as developed by the President; (vi) with respect to reallocation of amounts between approved budget line items in excess of ten thousand dollars (\$10,000) but not exceeding seventy-five thousand dollars (\$75,000) in total, approval of such reallocation; (vii) with respect to increases to the operating budget or unbudgeted disbursements in amounts in excess of ten thousand (\$10,000) but not exceeding seventy-five thousand (\$75,000), approval of such increases; and (viii) the exercise of such authority as may from time to time be delegated by the Board to the Budget and Operations Committee within its areas of cognizance.

5.3.3. **Deployment Committee.** The Deployment Committee shall consist of no more than six (6) members total, consisting of no less than three (3) Directors and up to three (3) non-Directors, all appointed by the Chairperson on a biennial basis, and at least one (1) of the Director-members shall not be a State employee.

Additionally, the State Treasurer, or her or his designee, shall be a voting *ex officio* member of the committee. Additionally, the Chairperson or the Vice Chairperson shall be a non-voting *ex officio* member of the committee, subject to the provisions of Article V, Section 5.2.2 hereof. The non-Director members of the Deployment Committee shall each have expertise in such areas as: project finance, levelized cost of clean energy, investment banking, commercial lending, tax-exempt or tax-advantaged financing or municipal banking, or clean energy policy. The principal functions, responsibilities, and areas of cognizance of the Deployment Committee shall be as follows: (i) to recommend and monitor compliance with program, project, and investment guidelines, criteria, policies, and practices supporting the Green Bank's statutory mission and management of such by the Green Bank's professional staff; (ii) with respect to loans, loan guarantees, loan loss reserves, credit enhancements, debt support programs, debt, debt-like, grants, equity, near-equity, and related measurement and verification studies and evaluation audit funding requests, including but not limited to the Residential Solar program, the Combined Heat and Power pilot program, the Anaerobic Digestion pilot program, and the Condominium Renewable Energy grant program, between ~~three~~five hundred thousand dollars (~~\$5300,000~~) and two million five hundred thousand dollars (\$2,500,000), evaluation and approval of such requests on behalf of the Board so long as such approval is within the Green Bank's approved Operations and Program Budget; (iii) with respect to loans, loan guarantees, loan loss reserves, credit enhancements, debt support programs, debt, debt-like, grants, equity and near-

equity funding requests which exceed two million five hundred thousand dollars (\$2,500,000), evaluation of such requests and recommendation to the Board regarding such requests; (iv) oversight of policies and practices relating to the evaluation and recommendation of initial investments, follow-on investments, investment modifications and restructurings, and the sale or other disposition of investments by the Green Bank's professional investment staff; (v) oversight of policies and practices relating to investment management by the Green Bank's professional investment staff, including implementation of investment exit strategies; (vi) except to the extent of any investment powers expressly reserved to the Board itself in any resolution of the Board, to approve on behalf of the Board investments, follow-on investments, investment modifications and restructurings, and the sale or other disposition of investments; (vii) to review and recommend to the Board the issuance of bonds, notes or other obligations of the Green Bank, and upon such approval, to sell, issue and deliver such bonds, notes or obligations on behalf of the Green Bank; and (viii) the exercise of such other authority as may from time to time be delegated by the Board to the Deployment Committee within its areas of cognizance.

5.3.4. Joint Committee of the Energy Conservation Management Board and the Connecticut Green Bank. The Standing Committee Related to the Joint Committee of the Energy Conservation Management Board and the Board of Directors of the Green Bank shall consist of no more than (2) voting Directors and (2) nonvoting members who shall be appointed by the Chairperson on a biennial basis to serve on both this Standing Committee and the Joint Committee. Said

Directors of this Standing Committee shall be charged with joining with four (4) members, no more than (2) voting Directors and (2) nonvoting members, from the Energy Conservation Management Board to form the Joint Committee as required pursuant to 16-245m(d)(2) of the General Statutes.

5.3.4.1. The principal functions, responsibilities and areas of cognizance of this Standing Committee shall be as follows: (i) to work with the Joint Committee to examine opportunities to coordinate the programs and activities contained in the plan developed under section 16-245n (c) of the General Statutes with the programs and activities contained in the plan developed under section 16-245m(d)(1) of the General Statutes; and (ii) to work with the Joint Committee 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.

5.3.4.2. This Standing Committee, in consultation with and upon approval of the Joint Committee, is authorized to vote and allocate funding in an amount not to exceed three hundred thousand dollars (\$300,000.00) per program or project so long as such program or project is within the Green Bank's approved Operations and Program Budget, consistent with the Green Bank's Comprehensive Plan, within an approved program of the Board or Deployment Committee and consistent with the credit and investment guidelines, criteria, policies, and practices

approved by the Board. No resolution of the Joint Committee to approve an expenditure of funds may be approved without an affirmative vote of at least two (2) voting Directors of the Connecticut Green Bank.

5.3.4.3. Notwithstanding anything contained in these Bylaws to the contrary, the Joint Committee may adopt its own bylaws which shall govern the conduct and operations of the Joint Committee. If there are conflicting provisions between these Bylaws and any bylaws adopted by the Joint Committee, these Bylaws shall be controlling.

5.3.5. Additional Standing Committees or *ad hoc* committees of the Board may be formed by the Board at its discretion by resolution setting forth the purposes and responsibilities of such additional Standing Committee or *ad hoc* committee. Each additional Standing Committee or *ad hoc* committee shall have at least three (3) members who are Directors, at least one (1) of which shall not be a State employee.

5.4. **Advisory Committees.**

5.4.1. The Board may form such advisory committees as the Board in its discretion may determine to be appropriate to advise and assist the Board, any Standing Committee of the Board, or management of the Green Bank in the performance of its statutory responsibilities. Such advisory committees may include as members such individuals as may be knowledgeable in the subject matter whether or not Directors or employees of the Green Bank.

- 5.4.2. Members of an advisory committee who are not Directors or employees of the Green Bank shall be considered "members of an advisory board" for purposes of the Connecticut Code of Ethics for Public Officials.
- 5.4.3. Public confidence in the recommendations and other actions of an advisory committee requires that advisory committee members avoid both actual conflicts of interest and situations that might give the appearance of a conflict of interest. It is to be expected, however, that many advisory committee members will have outside business or professional interests relating to the Green Bank's statutory mission. It is not intended that such outside business or professional interests be considered a conflict of interest, provided that an advisory committee member shall not participate in any deliberation or vote, and shall not take any other affirmative action as an advisory committee member, with respect to a matter in which such member has an interest which is in substantial conflict with the proper discharge of the duties and responsibilities of membership on the advisory committee. For this purpose, the determination of whether an advisory committee member has an interest which is in substantial conflict with the duties and responsibilities of membership on the advisory committee shall be made in the same manner as provided in Section 1-85 of the Connecticut General Statutes for conflicting interests of public officials. In addition to disclosures required by law, the existence and nature of any such substantial conflict shall be promptly disclosed to the Committee Chair.

**ARTICLE VI
FISCAL YEAR**

- 6.1. **Fiscal Year.** The fiscal year of the Green Bank shall extend from July 1 through the following June 30 except as the same may be otherwise determined by resolution of the Board.

**ARTICLE VII
CONFLICTS OF INTEREST**

- 7.1. Public confidence in the recommendations and other actions of the Board and Committees requires that Directors avoid both actual conflicts of interest and situations that might give the appearance of a conflict of interest. Given the statutory qualifications for membership on the Board, it is to be expected, however, that some Directors will have outside business or professional interests relating to the Green Bank's statutory mission. It is not intended that such outside business or professional interests be considered a conflict of interest, provided that a Director shall not participate in any deliberation or vote, and shall not take any other affirmative action as a Director or Committee member, with respect to a matter in which such Director has an interest which is in substantial conflict with the proper discharge of the duties and responsibilities of membership on the Board or such Committee. For this purpose, the determination of whether a Director has an interest which is in substantial conflict with the duties and responsibilities of membership on the Board or a Committee shall be made in the manner provided in Section 1-85 of the Connecticut General Statutes for conflicting interests of public officials. The existence and nature of any potential conflict of interest shall be promptly disclosed to the Chairperson (or, in the case of the Chairperson, to the Vice Chairperson) and otherwise as may be required by Section 1-86 of the Connecticut General Statutes.

- 7.2. With respect to potential conflicts of interest, as defined in Section 1-86(a) of the Connecticut General Statutes and pursuant thereto and pursuant to Section 1-81-30(c) of the Regulations of Connecticut State Agencies, the Member shall either (1) excuse himself or herself from participating in any deliberation or vote on the matter and may not otherwise take any affirmative action on the matter or (2) shall prepare a written statement prepared under penalty of false statement describing the matter requiring action and the nature of the potential conflict and explaining why, despite the potential conflict, such Member is able to vote and otherwise participate fairly, objectively, and in the public interest, and shall deliver a copy of such statement to the Office of State Ethics and shall enter a copy of the statement in the minutes of the Board or committee, as applicable.
- 7.3. In addition to the steps described in Section 7.1 and 7.2, above, a conflicted or potentially conflicted Director:
- 7.3.1. is strongly encouraged to leave the room during discussion and vote on the matter at hand; and
 - 7.3.2. shall not participate in such discussion and vote; and
 - 7.3.3. shall not have access to non-public confidential information regarding the matter at hand.

ARTICLE VIII COMPENSATION

- 8.1. No Director or Committee member shall at any time receive or be entitled to receive any compensation for the performance of his or her duties as a Director, but may be

reimbursed by the Green Bank for reasonable and necessary expenses incurred in the performance of such duties.

ARTICLE IX PARLIAMENTARY AUTHORITY

- 9.1. Robert's Rules of Order, current revised edition, shall govern the proceedings of the Board when not in conflict with these Bylaws.

ARTICLE X AMENDMENT

- 10.1. **Amendment or Repeal.** These Bylaws may be amended or repealed or new Bylaws may be adopted by the affirmative vote of a Super Majority of the Directors then in office. The Green Bank may adopt rules for the conduct of its business, and the adoption of such rules shall not constitute an amendment of these Bylaws.

ARTICLE XII DEFINITIONS

- 11.1. **Definitions.** Unless the context shall otherwise require, the following words and terms shall have the following meanings:
- 11.1.1. "Green Bank" means the Connecticut Green Bank, as created and existing pursuant to the Statute.
 - 11.1.2. "Board" means the board of directors of the Green Bank appointed and serving pursuant to the Statute.
 - 11.1.3. "Chairperson" means the Chairperson of the Board appointed pursuant to the Statute.

- 11.1.4. "Committee" means any committee of or formed by the Board, including any Standing Committee, *ad hoc* committee, or advisory committee.
- 11.1.5. "Committee Chair" means the Chairperson of a Committee.
- 11.1.6. "Comprehensive Plan" means the plan developed by the Green Bank pursuant to section 16-245n(c) of the General Statutes.
- 11.1.7. "Connecticut Freedom of Information Act" means the Connecticut Freedom of Information Act, Connecticut General Statutes § 1-200 *et seq.*, as amended.
- 11.1.8. "Director" means a voting member of the Board appointed pursuant to the Statute.
- 11.1.9. "General Statutes" means the Connecticut General Statutes, as amended.
- 11.1.10. "Majority", whether capitalized or lowercase, means one more than half.
- 11.1.11. "President" means the President of the Green Bank hired by and serving at the pleasure of the Board of Directors of the Green Bank.
- 11.1.12. "Presiding Officer" has the meaning attributed to that term in Article IV, Section 4.5 of these Bylaws.
- 11.1.13. "Resolution of Purposes" means a resolution of the Board adopted pursuant to the penultimate sentence of Section 16-245n(d) of the General Statutes.
- 11.1.14. "Secretary" means the Secretary of the Board elected pursuant to the Statute and these Bylaws.
- 11.1.15. "Standing Committee" means a Standing Committee established by these Bylaws or another standing committee appointed by the Board for a specified period of time for the purpose of carrying out one or more functions of the Green Bank.

- 11.1.16. "Statute" means Connecticut General Statutes § 16-245n, as amended.
- 11.1.17. "Super Majority" means two thirds rounded up to the next whole integer.
- 11.1.18. "Vice Chairperson" means the Vice Chairperson of the Board elected pursuant to these Bylaws.

ARTICLE XIII
AUTHORITY

- 13.1. These Bylaws are adopted pursuant to the Statute and effective as of December 16,2016.



Connecticut Green Bank Annual Report Metrics and Reporting Review *Final Findings*

August 18, 2017

CONFIDENTIAL & PROPRIETARY

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SustainAbility.com

Contents



Introduction

How the assessment is organized

Slide 4

Metrics Benchmark & Guidance

Review of metrics, methodologies and transparency for CGB and three benchmark companies

Slides 5-18

Reporting Benchmark & Guidance

Review of reporting and communications approach for CGB and four benchmark companies

Slides 19-42



Introduction



Introduction

SustainAbility is pleased to present our benchmark analysis and recommendations to Connecticut Green Bank (CGB) to support the organization in assessing the quality of its impact reporting related to clean energy programs.

We have organized our assessment into two main areas as follows:

- 1. Metrics Benchmark & Guidance:** Benchmark of three companies to compare what metrics (financial & investment and social & environmental) were being used along with analysis of the methodologies, transparency, verification and stakeholder engagement.
- 2. Reporting Benchmark & Guidance:** Benchmark of four companies/examples to evaluate the effectiveness of impact reporting communications with a specific focus on written reports and how metrics are portrayed.



Metrics Benchmark & Guidance



Metrics Benchmark

CGB has asked SustainAbility to review its clean energy deployment program reporting metrics, including associated impact metrics and evaluation methodology. The following benchmark companies and questions were considered to assess CGB's level of maturity on metrics.

Metrics Benchmark:

- CT Green Bank (*Note: we used 2016 reporting for comparison*)
- UK Green Investment Bank Reporting/Communications
- Goldman Sachs Clean Energy Impact Report
- NY Green Bank Reporting/Communications

Questions to address:

- What is the company's main purpose in communicating metrics and methodologies? What stakeholders or processes are the main recipients of reporting?
- What metrics are being used by companies compared to those used by CT Green Bank? What are the similarities and differences?
- What is the methodology behind the metrics being used and how transparent is the company about that methodology?
- What underlying assumptions and/or models are being used to calculate metrics?
- What stakeholders were engaged as part of developing the methodology behind the metrics?



Metrics Benchmark Summary

CGB ranks highly compared to benchmark companies in terms of the overall quality of metrics & methodology. CGB leads on financial and investment metrics, falling only slightly behind Green Investment Bank on social and environmental metrics and ranks high on transparency, verification and stakeholder engagement.

Quality of Metrics & Methodology

Low

High



	NY Green Bank	Goldman Sachs	Connecticut Green Bank	Green Investment Bank
Financial & Investment Metrics	<ul style="list-style-type: none"> Basics Mobilization ratio 	<ul style="list-style-type: none"> Basics Specific project breakdowns Target to finance/invest 	<ul style="list-style-type: none"> Basics Mobilization ratio Plus several additional risk and evaluation metrics 	<ul style="list-style-type: none"> Basics Mobilization ratio Specific project breakdowns
Social & Environmental Metrics	<ul style="list-style-type: none"> Basics 	<ul style="list-style-type: none"> Basics People employed globally 	<ul style="list-style-type: none"> Basics Job Years, direct, indirect, induced 	<ul style="list-style-type: none"> Basics NOx, SOx and PM avoided Green Impact Forecast Accuracy Operational metrics (diversity, pay, corp. GHGs)
Transparency	Low	Medium	High	High, except certain methodologies
Verification	Financials audit	No mention	Financials audit + verification opinion	Financials audit + impact assurance by Deloitte
Stakeholder Engagement	Advisory Committee + industry engagement	Consulted with industry experts	Multiple experts (Opinion Dynamics, Dusky, Eversource, etc.)	UK's Department for Business, Energy and Industrial Strategy



Metrics Purpose & Audience

CGB describes specific uses for metrics compared to the other benchmark companies that are mostly focused on communicating impact to investors.

			
<ul style="list-style-type: none">• Identify and estimate CGB’s market, energy and social impacts, track progress• Report on program efficiency and effectiveness• Provide assessment to support issuance of green bonds• Report progress to internal and external stakeholders: Consumers, Capital Providers, Contractors, Policy-makers	<ul style="list-style-type: none">• General communication with external stakeholders, with a focus on investors.	<ul style="list-style-type: none">• Developed methodology for communicating with Investors	<ul style="list-style-type: none">• General communication with external stakeholders, with a focus on investors and taxpayers.



Financial and Investment Metrics

All companies benchmarked include financial and investment metrics around capital invested/deployed and number of projects with some variation on how projects are grouped. Besides not having a financing target like Goldman Sachs, CGB has more robust metrics than the benchmarked companies (see bold) including default, delinquency and repayments rates along with average FICO scores and DTI ratios. All three green banks report on ratio of public to private capital deployed (mobilization).

			
<ul style="list-style-type: none"> • Available private loan pool (\$) • Green Bank funds available for credit enhancements (\$) • Ratio of public to private capital deployed • Total capital deployed (total amount of the loan) (\$) • Weighted average interest rate • Weighted average loan term • Awareness of financial options • Application approval rate • Green Bank customer acquisition costs (\$) • Number of active enrolled contractors (#) • Annual default rate • Average delinquency rate • Early repayment rate • Average and minimum FICO • Average and minimum DTI ratio 	<ul style="list-style-type: none"> • Target to finance and invest (\$) in clean energy by 2025 • Capital invested (\$) • New Energy Deployment – (\$) invested in and (#) of companies and projects • Refinancings (\$) invested in and (#) of companies and projects • Clean tech ecosystems (capital to facilitate the development of advanced clean technologies)- (\$) invested in and (#) of companies and projects • Total revenue generated by companies Goldman Sachs invested in (\$) 	<ul style="list-style-type: none"> • Private capital (£) brought in for every £1 invested by UK GB • Capital commitment (£) • Projects (#) financed • Total transaction value (£) • Direct investments (£) and Fund investments (£) in: <ul style="list-style-type: none"> • Offshore wind • Waste and bioenergy • Energy efficiency • Onshore renewables 	<ul style="list-style-type: none"> • Mobilization ratio of total project costs to NYGB investment • Total projects cost enabled by NYGB (\$) • Overall investments to date (\$) • Active pipeline (\$) • Investment proposals received (\$)



Social and Environmental Metrics

Across the companies benchmarked, UK Green Investment Bank has more robust environmental metrics as it includes fossil fuel consumption avoided and also data on NO_x , SO_x and particulate emissions avoided (although it does not extrapolate this to health impacts). Only CGB and Goldman Sachs include employment related metrics while UK Green Investment Bank includes additional operational social metrics.

			
<ul style="list-style-type: none"> • Installed renewable energy capacity (MW) • CO2 emissions reduced (tons) <ul style="list-style-type: none"> • Equivalent trees planted (acres) • Home equivalents (#) • Cars off the road (#) • Job years created: direct, indirect, induced (#) • Clean energy projects: completed, approved, closed (#) • Investment in low income solar lease program (\$) <ul style="list-style-type: none"> • Projects (#) for solar (kW) • Investment (\$) in Smart-E loans (#) <ul style="list-style-type: none"> • Solar (kW) • C-Pace investments (\$): <ul style="list-style-type: none"> • Projects (#) for solar (kW) 	<ul style="list-style-type: none"> • New energy catalyzed (GW) due to investments <ul style="list-style-type: none"> • Wind, solar, other (GW) • New energy deployment (\$) through financing • Financed new energy (GW) • Refinanced operating assets (GW) • Avoiding of GHG (MT) <ul style="list-style-type: none"> • Equiv. to carbon sequestered by size of forest (acres), cars off road (#) • Employment of people globally (#) <p>Operational:</p> <ul style="list-style-type: none"> • Publishes its own ESG report for overall company, which covers employee and operations metrics (http://www.goldmansachs.com/s/esg-report/index.html) 	<ul style="list-style-type: none"> • CO2eq avoided (kt) <ul style="list-style-type: none"> • Equal to taking (#) of cars off the road or (acres) of forest • Energy demand reduced (MWh) • Renewable energy generated (GWh) <ul style="list-style-type: none"> • Equal to energy used to power (#) homes • Fossil fuel consumption avoided (ktoe) • NO_x, SO_x and PM emissions avoided (t) • Waste to landfill avoided (kt) <ul style="list-style-type: none"> • Equal to waste of (#) households • Materials recycled (kt) • Green Impact Forecast Accuracy <p>Operational:</p> <ul style="list-style-type: none"> • Material health and safety incidents (#) • Materially adverse environmental incidents (#) • Corporate GHG footprint (t CO₂e) + intensity (kg CO₂e/m²/yr). Includes offices, travel. • Staff turnover (%) • Gender diversity (%) on board, senior managers, employees • Pay ratio: Director to median salary (%) 	<ul style="list-style-type: none"> • Lifetime energy saved by fuel type from energy efficiency projects (MMWh/MMBtu) and/or lifetime clean energy generated (MWh) • First-year energy saved by fuel type from energy efficiency projects (MWh/MMBtu) and/or estimated first-year clean energy generated (MWh) • Lifetime and first-year energy saved from combined heat and power (CHP) (MWh and MMBtu) • Clean energy generation installed capacity (MW) from CHP • Other clean energy generation installed capacity (MW) • GHG emissions reductions (metric tons)



Transparency Around Methodology

CGB provides the most detailed information about methodologies used to calculate metrics with thorough footnotes and links for every social and environmental metric in the CAFR, which are also specifically outlined in the Evaluation Framework. NY Green Bank includes footnotes and calculation examples in its Annual Review document, while Goldman Sachs and the Green Investment Bank include methodology references in their reports, but neither is as robust as CGB.

			
<p>Transparency (High):</p> <ul style="list-style-type: none">• Footnotes and links throughout CAFR and whenever metrics are introduced• Specific methodologies outlined in Evaluation Framework• Includes measurability evaluation and data sources in Evaluation Framework	<p>Transparency (Medium):</p> <ul style="list-style-type: none">• Methodology section included at the end of the report, with references for baseloads and calculations	<p>Transparency (Medium):</p> <ul style="list-style-type: none">• Methodology is explained at the end of impact reports and in the Green Impact Reporting Criteria document• Includes 'Green Impact Forecast Accuracy' scoring, but does not reveal the "proprietary" methodology behind this	<p>Transparency (Low):</p> <ul style="list-style-type: none">• Methodology is outlined in the Annual Review which includes a sample calculation, but seems limited• April 2017, NYGB undertook a review and revision of its metrics reporting, including to reflect rounding to three significant digits, consistent with NYSERDA's approach and methodology

Methodologies Review



Both Goldman Sachs and Connecticut Green Bank use EPA's Greenhouse Gas Equivalencies Calculator, but when calculating emissions saved, methodologies vary more widely across the companies benchmarked.

Metric					Analysis
Employment/ Jobs	Job Years (Direct & Indirect) Calculated based on per \$1 million invested using Navigant Consulting report in 2010 and 2016.	People employed globally Calculated based on the people employed by the companies they have invested in or helped finance	Does not report on employment/jobs.	Does not report on employment/jobs.	CGB is more specific about how job years are calculated based on a study interviewing over 100 companies and researching over 130 to develop the Navigant methodology.
Emissions Savings (CO2, NOx, SOx, PM)	2017 report will be based on DOE's AVERT model to calculate emissions savings (tons CO2), NOx, SOx and PM.	GHGs avoided are calculated based on US EPA eGRID model. NOx, SOx and PM are not reported.	The Offshore Wind Fund example calculates the net Green Impact by comparing to baselines using GIB's proprietary reference sources or provided to GIB by relevant third parties or obtained from publicly available sources. Grid connected projects calculated using the methodology set out in the International Financial Institutions (IFI) approach	Both the Annual Review and Quarterly report mention emissions avoided, but do not provide clarity on where these numbers originate or the methodologies used. One Transaction Profile for retrofitting LTMI housing mentions using NYSERDA conversion factors which are not explained (see footnote 6).	NY Green Bank is the laggard, not reporting or referencing methodologies used for calculations. Both CGB and Goldman Sachs use US based models for calculations, relevant as projects are US based, whereas GIB uses UK based models. The three models used by CGB, GS, and GIB rely on calculating emissions savings based on the emissions from baseline energy sources, but datasets and methodologies vary. These are further discussed in the following slide.
GHG Equivalency	Calculated based on EPA's Greenhouse Gas Equivalencies Calculator . Note: Need to add footnote to CAFR referencing EPA.	Calculated based on EPA's Greenhouse Gas Equivalencies Calculator .	Does not report equivalencies.	Includes mention of one equivalency in letter from the president (annual report) but no footnote or reference to how this was calculated.	Both Goldman Sachs and CGB use EPA's calculator which relies on underlying eGRID data for calculations. These equivalencies seem sound, but keep beware of aging underlying datasets moving forward.



Methodologies Review

Focusing on the methodologies used to calculate emissions and emissions equivalencies, CGB's use of AVERT and the EPA GHG Equivalencies calculator appears to be the best option when compared to other methodologies, but explanations, references and footnotes should still be used throughout reporting to uphold transparency.

CGB: AVERT	Goldman Sachs: eGRID	GIB Methodology
<p>Overall: AVERT is a tested and strong tool to use for calculating reduced emissions and appears to be stronger than eGRID.</p> <ul style="list-style-type: none"> External and internal peer reviews Transparent Allows for more custom calculations that reflect variations in hourly impacts of different EE programs or RE resources Allows for comparison based on 10 U.S. regions <p>Data Sets: Region based baseload emissions – actual data from 2007-2015 – allows for understanding emission reductions during high demand days.</p> <p>Note: The AVERT manual state that the tool is not intended for analysis more than 5 year from baseline. CGB should consider this if choosing to report lifetime impacts.</p>	<p>Overall: eGRID is used by several government entities, but does not allow for the same granularity of calculations that AVERT allows for.</p> <ul style="list-style-type: none"> External and internal peer reviews Transparent Allows for comparison to available plant-specific data for all U.S. electricity generating plants that provide power to the electric grid and report data to the U.S. government Allows comparison to baseloads by 10 U.S. regions or 21 sub-regions <p>Data Sets: eGRID data is available for the years 1996 through 2000, 2004, 2005, 2007, 2009, 2010, 2012 and 2014</p>	<p>Overall: Methodology for calculating compared to baselines is not provided and it is unclear which data sets are used. Also important to note that the GIB approach is forward looking and likely better suited for European based projects versus those in the US, so is less relevant for CGB.</p> <ul style="list-style-type: none"> IFI methodology is from Nov. 2015 and uses an Operating Margin (OM) and Build Margin (BM) process for calculating offsets. The OM represents the marginal generating capacity in the existing dispatch hierarchy that will most likely be displaced by the project. The BM is the cohort of the prospective power plants whose construction and operation would be affected by the project, based on an assessment of planned and expected new generation capacity. This helps take into account expected changes in a country's generation mix 5-10 years into the future.
<p>AVERT vs. eGRID Comparison: The AVERT tool appears to be more complex and accurate for calculating GHG emissions, compared to other tools such as eGRID. A 2015 evaluation completed by the Virginia Department of Mines, Minerals, and Energy (DMME) concluded that AVERT should “always yield a more accurate assessment of emissions reductions than an eGRID averaging method” if applied correctly. An Alliance to Save Energy 2015 report states that AVERT “exceeds eGRID in forecasting power, while avoiding the data availability and cost issues inherent in the use of proprietary grid operator dispatch models”. In this report the Alliance introduces CarbonCount a new tool to evaluate bond investments in U.S. based EE and RE projects as “reduced CO2/\$1,000 invested.” This tool also uses AVERT to quantify impacts.</p>		<p>Data sets: GIB calculates Green Impact using reference data obtained from, among others, by the Ecoinvent life cycle inventory datasets for the calculation of environmental impacts. Green Impact is also calculated based on data supplied by the International Energy Agency (IEA), specifically from the 2015 editions of the World Energy Statistics and Balances dataset and the CO2 Emissions from Fuel Combustion dataset.</p>

Methodologies Review



All companies benchmarked include some references to the underlying frameworks, these are outlined in the chart below.

			
<p>Methodology references:</p> <ul style="list-style-type: none"> • Job Years, direct & indirect, calculated based on Navigant Consulting report in 2010 and 2016. • Emissions savings for CO2, NOx, SOx, PM based on DOE's AVERT model for solar PV, wind, energy efficiency projects. • Emissions reductions from other technologies based on ISO-New England • GHG equivalencies calculated based on EPA's Greenhouse Gas Equivalencies Calculator. • Public health benefits being considered, based on COBRA model. 	<p>Methodology references:</p> <ul style="list-style-type: none"> • Emissions impact from MWh produced in the US, based on capacity factors from US Energy Information Administration. • GHG avoided in the US based on annual non-baseload CO2 output emission rate from US EPA eGRID analysis. • GHG equivalencies calculated based on EPA's Greenhouse Gas Equivalencies Calculator • Does not discuss methodology for calculating jobs 	<p>Methodology references:</p> <ul style="list-style-type: none"> • Calculates the net Green Impact by comparing to baselines using GIB's proprietary reference sources or provided to GIB by relevant third parties or obtained from publicly available sources. • For grid connected projects it uses the methodology set out in the International Financial Institutions (IFI) approach to GHG accounting for renewable energy projects and the IFI approach to GHG accounting for energy efficiency projects. • Green impact calculation based on Interdepartmental Analyst Group (IAG) with guidance from the GHG Protocol for Project Accounting Guidelines. • GHG emissions reduction for non-UK energy efficiency projects determined in alignment with International Performance Measurement and Verification Protocol (IPMVP) • GHG emissions reduction and other impacts from waste projects determined using Waste and Resources Assessment Tool for the Environment (WRATE) • Green Impact forecast accuracy determined from project parameters & in-house experience 	<p>Methodology references:</p> <ul style="list-style-type: none"> • GHG emissions reductions for electric generation and energy efficiency savings calculated using conversation factor from New York State Energy Research and Development Authority (NYSERDA).



Metrics Verification & Stakeholder Engagement

All three green investment banks obtain independent assurance on financial statements, while CGB has sought additional verification and Green Investment Bank has also obtained assurance on impact data by Deloitte. In terms of stakeholder engagement, CGB and NY Green Bank seem to have the most robust approaches.

			
<p>Verification:</p> <ul style="list-style-type: none"> Independent audit by Blum Shapiro & Company on financial statements in annual report Verification sought through Opinion Dynamics and Dusky Energy Consulting team Cadmus has conducted evaluations of CGB's Residential Solar Investment Program (RSIP) to assess the cost-effectiveness of the program from multiple stakeholder perspectives. Evaluation was conducted in 2015 and 2016. <p>Stakeholder Engagement:</p> <ul style="list-style-type: none"> Opinion Dynamics and Dusky Energy Consulting team engaged in defining key indicators and metrics for impact evaluation Also engaged individuals from Eversource Energy, PAH Associates, Energy Futures Group, United Illuminating Company Reference to members of the Green Bank Network 	<p>Verification:</p> <ul style="list-style-type: none"> No mention of external or third-party verification for information in its Clean Energy Impact Report <p>Stakeholder Engagement:</p> <ul style="list-style-type: none"> Mentions consulting with industry experts in developing methodology 	<p>Verification:</p> <ul style="list-style-type: none"> Independent assurance by Deloitte on corporate impact data, portfolio performance-related green impact data and the application of the Equator Principles <p>Stakeholder Engagement:</p> <ul style="list-style-type: none"> Working with UK's Department for Business, Energy and Industrial Strategy 	<p>Verification:</p> <ul style="list-style-type: none"> Independent audit on financial statements by KPMG <p>Stakeholder Engagement:</p> <ul style="list-style-type: none"> NYGB has an advisory committee which includes President & CEO of Citi Foundation, Managing Director & Founder of The Lightsmith Group and Chairman of J.H. Whitney Investment Management; the Committee helps provide guidance for planning, strategy, business development, market intelligence and product development. NYGB conducted thousands of meetings and conversations with clean energy market participants, presented at clean energy industry events, industry round tables, working groups, as well as regular mailings, a new LinkedIn page and interviews with industry stakeholders



Metrics – Other Resources

Below are additional resources for CGB to consider when moving forward with reporting in the future to further enhance the relevance and meaningfulness of its social impact metrics.



Investment Leaders Group

In a joint [report](#) by Investment Leaders Group and Cambridge Institute for Sustainability Leadership, titled “*In search of impact: Measuring the full value of capital*”, the authors outline a new framework to help the investment community measure non-financial impacts and contribution to sustainable development.

The report highlights the “decent work” metric as an example in which the simple metric for job creation is insufficient, citing varying levels of pay, job security and working conditions. The authors propose three levels of increasing refinement for this metric that CGB can consider for future development of metrics:

- **Base metric:** Total number of direct jobs, adjusted for national rates of unemployment and vulnerable employment
- **Stretch metric:** Total number of jobs, direct and contracted, with compensation above 60% of the national median wage, adjusted for national rates of unemployment and vulnerable employment
- **Ideal metric:** Total number of jobs, direct and indirect, in formal open-ended contracts **with compensation above the living wage**, adjusted for national rates of unemployment and vulnerable employment



In addition to existing social impact metrics, CGB can consider additional metrics that communicate positive impacts of increasing deployment of solar and renewable energy, such as in public health.

The American Lung Association publishes a “*State of the Air*” [report](#) discussing health impacts of air quality around the US, including highlighting – in addition to carbon emissions – the ozone and particle pollution that arises from electricity generation from power plants. Taking steps to reduce the carbon pollution from electricity generation, the report states, could prevent up to 3,600 premature deaths and up to 90,000 asthma attacks in children in 2030.

Of the benchmark companies, UK Green Bank reports on metrics for SO_x, NO_x, and PM emissions avoided, further highlighting its contribution to reducing environmental impacts. Reporting on such metrics, and even taking it a step further to highlight health impacts, could help CGB expand the communication of its contributions while engaging with a wider network of stakeholders.



Metrics – Green Bonds Research Findings

A focused search to try to identify innovative ways Green Bonds are reporting on social impact metrics proved fairly unfruitful. This work did uncover some useful practices or frameworks to be aware of which are outlined below.

Social and health impacts: Our review did not uncover any green bonds reporting examples that extrapolate health impacts based on reduced NOx, SOx and PM. The majority of green bonds impact reporting focuses on metrics like annual energy savings, annual energy produced, renewable capacity added and annual emissions avoided. Two discussions with investors focused on green bonds guided us to look at development bank green bond issuances, but these also did not seem to have any advanced health or social impacts reporting except for one [World Bank infrastructure project in China](#) (see #8, p. 12) that reports SOx and PM avoided.

GDP Growth, Tax Revenue Deferred: We did a further search to try to identify examples of green bond projects discussing GDP growth or tax revenue deferred and could not find any examples.

Transparency around risk of not delivering on expected savings: CGB may consider including some language in reporting that discusses the potential that some EE and RE investments may not deliver on expected emissions reductions.

Solar reporting Considerations: Some guidelines also reference the need to consider the potential negative impacts of solar on local communities or fragile ecosystems (when developing large arrays). This may not be relevant for CGB where most installs focus on single or multi family homes.

Energy Efficiency Reporting Considerations:

CGB may consider the Low Carbon Buildings criteria under the [Climate Bonds Standard](#), which sets out what property assets are eligible for certification and covers three different types of property assets:

[Commercial buildings:](#) Buildings must be in the top 15% of their city in terms of emissions performance. This “hurdle rate” in emissions terms ratchets down to zero (carbon) in 2050.

[Residential buildings:](#) Existing instruments such as local building codes, energy rating schemes (e.g. US Energy Star) and energy labeling schemes (e.g. Energy Performance Certificates in the UK) are leveraged as proxies for the achievement of the 15% hurdle rate.

[Upgrade projects:](#) Building improvements that achieve emission reductions of 30% to 50% (depending on bond term) from a baseline will qualify for certification.



Metrics – Data Spreadsheet Questions

Based on the data spreadsheet review, SustainAbility has the following questions:

- 1. Annual Energy Savings:** Annual MMBTU → Sum of data inputs from individual projects. Are these calculated in the same way from each location?
- 2. Emissions:** CO₂, NO_x, SO_x, PM Savings → Metrics based on capacity factors from AVERT, based on Expected annual generation (kWh), which is based on calculated kW. kW is determined based on a formula to use an output from either of two cells, depending on which one is higher: kWAC and kWSTC. What are these referring to, and what is the difference between the two?
- 3. Jobs Years:** Direct → Direct Job Years metric is based on factor multiplier from Navigant study. Prior to this calculation in the spreadsheet, a number is input for Direct Jobs Input. Where does this original number come from?
- 4. Use of Avert:** Did you not use AVERT in 2016 or prior years? (See footnote 20 in 2016 CAFR, p. 91) And you did not include emissions reductions estimates for wind and EE projects, but you will this year through AVERT?
- 5. Lifetime Generation:** How do you plan to use the lifetime generation? Will you be reporting both annual and lifetime emissions impacts? Do both come from Avert? Might be more transparent to report on annual only as the Avert manual notes this tool is not best for estimating projects greater than 5 years out from baseline.



Reporting and Communications Benchmark & Guidance



Reporting and Communications Benchmark

SustainAbility evaluated the reporting and communications of three companies and the 2016/17 Conservation & Load Management Plan in order to identify best practices and suggestions for CT Green Bank to apply to its next annual report. For the purposes of this benchmark we focused mainly on the reports, but have also included some analysis on the other communication tools each company uses as well.

Reporting Benchmark:

- CT Green Bank
- UK Green Investment Bank Reporting/Communications
- Goldman Sachs Clean Energy Impact Report
- NY Green Bank Reporting/Communications
- ***TBC: 2016-2018 Conservation & Load Management Plan***

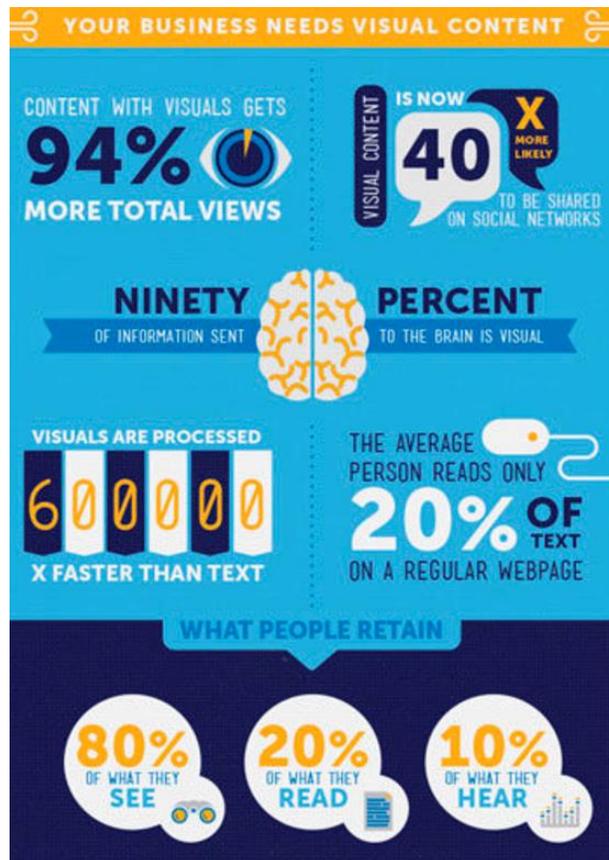
Questions to address:

- What communications tools does the company employ (sustainability report, website, etc.)?
- How are companies portraying metrics to stakeholders? What graphics/visuals are being used to demonstrate metrics?
- How are they conveying values? - metric tons, cars removed etc.?



Utilizing Visuals to Improve Engagement

As CGB looks to evolve its reporting, it will be important to consider the power of visuals and storytelling to improve the speed with which stakeholders process the information and, perhaps more importantly, how actively they engage with the information and remember it.



According to research by 3M, humans are able to process visuals 60,000 times faster than text. This is an important reality to consider as CGB seeks to share information with an increasingly busy audience with a limited attention span.

Using this page as an example, visuals are also more engaging and memorable. When you consider reading this text versus looking at the image to the left, which is more interesting? Which is your eye drawn to first?

With the average person reading only 20% of the text on a webpage and retaining 80% of what they see versus only 20% of what they read, visuals and graphics become a powerful tool for ensuring your audience absorbs and retains what you decide to communicate.

Source: <https://www.fastcompany.com/3035856/why-were-more-likely-to-remember-content-with-images-and-video-infogr>

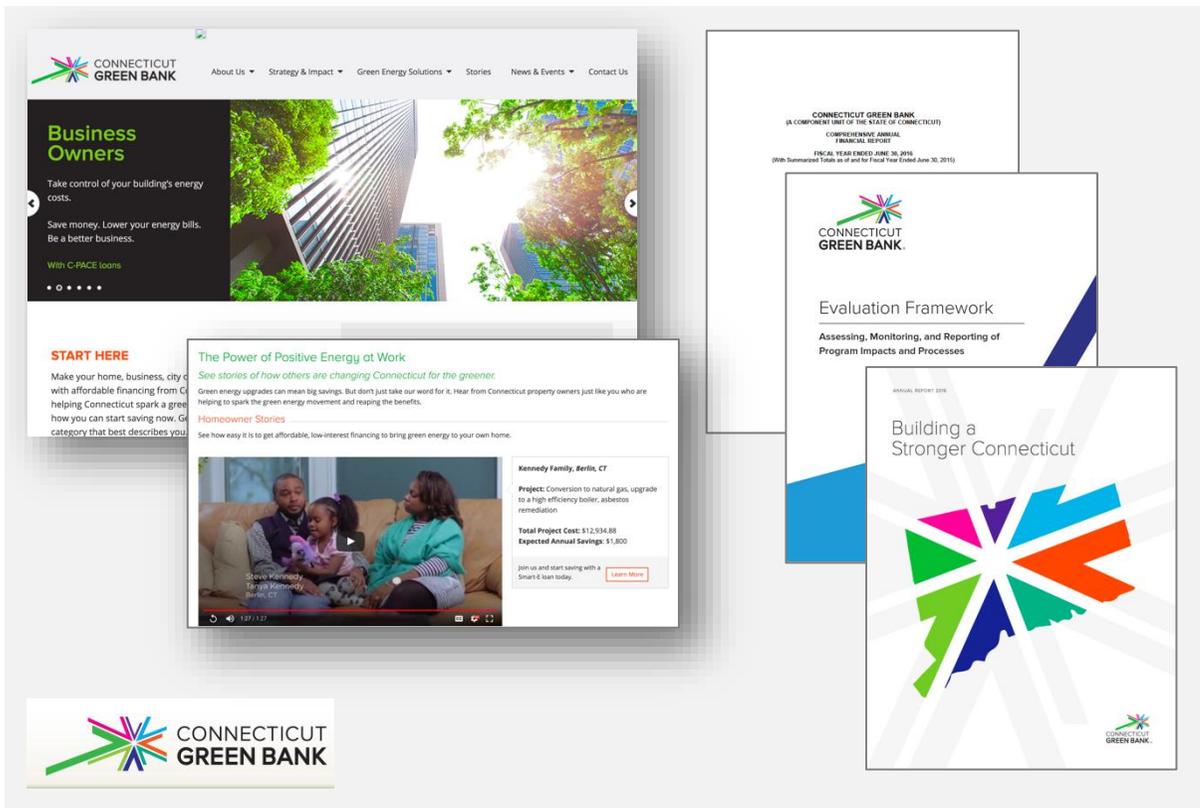


Connecticut Green Bank

Connecticut Green Bank – Communication Tools



CGB utilizes several tools including its website, videos and reports to communicate corporate impact. Of these, the online videos are extremely useful for engaging external stakeholders and the annual report and CAFR combined provide best in class transparency and data.



1. Website
2. Annual Report
3. Comprehensive Annual Financial Report
4. Evaluation Framework
5. Program Evaluation Studies
6. Stories Videos

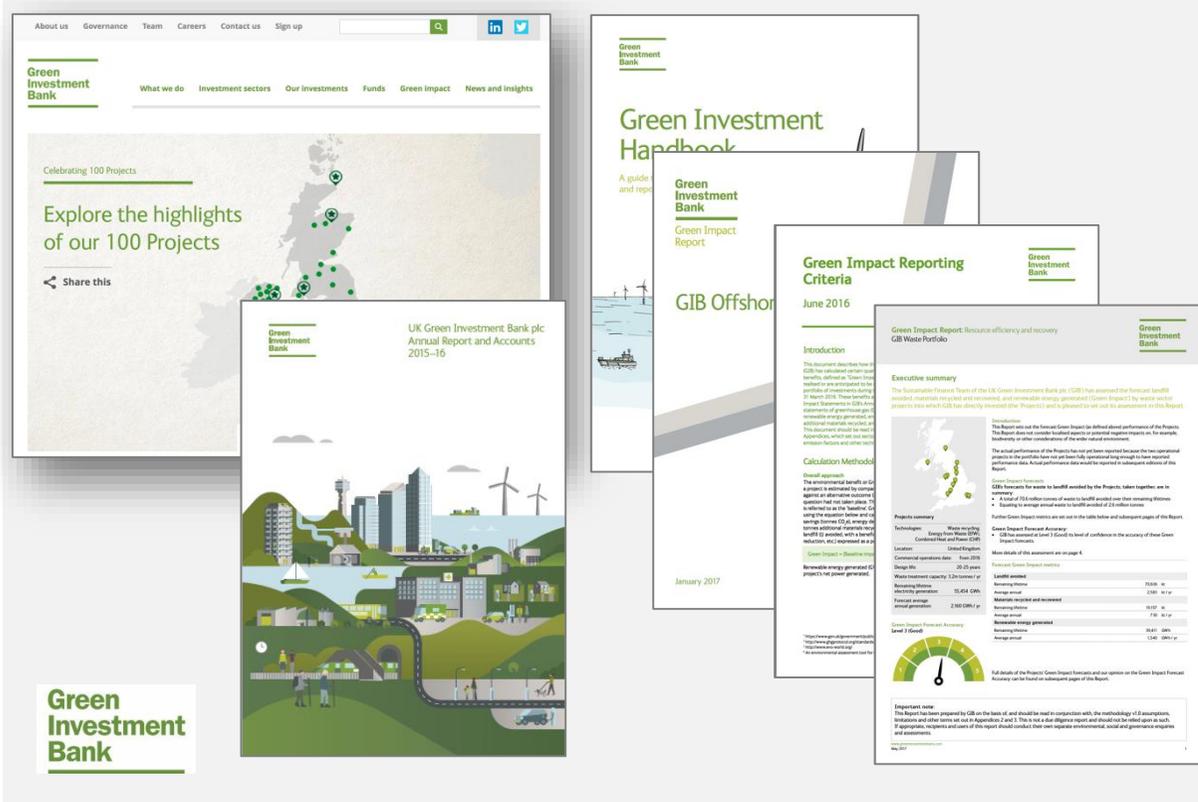


UK Green Investment Bank

UK Green Investment Bank – Communication Tools



The UK Green Investment bank utilizes a website, annual report, policies and impact reports to communicate progress and environmental impact. The Green Impact Reports and Annual Report exhibit several useful reporting techniques for CGB to consider which are outlined in the following slides.



1. Website
2. Annual Report
3. Green Investment Handbook
4. Policies
 - Corp. Environmental Policy
 - Green Investment Policy
 - Responsible Investment Policy
 - Green Impact Reporting Criteria
 - Green Investment Principles
 - Corp. GHG Emissions and Reporting Criteria
5. Green Impact Reports
 - Offshore Wind Farm
 - Offshore Wind Fund
 - Waste Portfolio
 - Banque Centrale Populaire



UK Green Investment Bank – Useful Techniques

Green Impact Report

Green Impact Report
GIB Offshore Wind Fund

Executive summary

The Sustainable Finance Team of the UK Green Investment Bank plc ('GIB'), acting on behalf of GIB Financial Services (GIB FS), has assessed the Green Impact of the Projects which make up the GIB Offshore Wind Fund portfolio (the 'Projects') and is pleased to set out its assessment in this Report.

Summary of Projects

Name: 1. Lincs
2. & 3. Lynn and Inner Dowsing
4. Sheringham Shoal
5. Rylt Flats
6. Gwynt y Môr

Technology: Offshore Wind

Location: UK

Commercial operations date: 2009-2015

Design life: 20-25 years

Number of turbines: 402

Generation capacity: 1,447 MW

Remaining lifetime generation: 81,279 GWh

Forecast average annual generation: 4,513 GWh

Green Impact Forecast Accuracy:
Level 5 (Very High)

Green Investment classification

- Each of the Projects is forecast to achieve positive Green Impact, based on GIB's Green Impact assessment criteria
- An investment in the GIB Offshore Wind Fund may accordingly be classified as a Green Investment.

Green Impact forecasts
GIB's Green Impact forecasts for the Projects taken together, are in summary:

- A total of 39,810 t_e CO₂e of greenhouse gas emissions avoided over the Projects' remaining lifetime
- Equating to average annual greenhouse gas emissions avoided of 1,995 t_e CO₂e

More details are in the table below and on pages 3 and 4.

Green Impact Forecast Accuracy:

- GIB has assessed at Level 5 (Very High) its level of confidence in the accuracy of these Green Impact forecasts.

More details of this assessment are on page 4.

Green Impact performance
All of the Projects are currently operational. The quantified Green Impact performance of the Projects to date, since they were acquired by the GIB Offshore Wind Fund, is provided on page 5. The actual Green Impact performance achieved by the Projects to date is 0.7% above the Green Impact forecasts.

Green Impact forecast metrics

Greenhouse gas emissions avoided (carbon dioxide equivalent)	
Remaining lifetime	35,210 t _e CO ₂ e
Average annual	1,955 t _e CO ₂ e/yr
Fossil fuel consumption avoided (oil equivalent)	
Remaining lifetime	15,350 t _{oil} e
Average annual	852.4 t _{oil} e/yr
Other emissions to air avoided (oxides of nitrogen)	
Remaining lifetime	35,260 t _e NO _x
Average annual	1,958 t _e NO _x /yr

Full details of the Projects' Green Impact forecasts and our opinion on the Green Impact Forecast Accuracy can be found on subsequent pages of this Report.

Important note: This Report has been prepared by GIB on the basis of, and should be read in conjunction with, the methodology, assumptions, limitations and other terms set out in Appendices 2 and 3.

www.greeninvestmentbank.com
January 2017

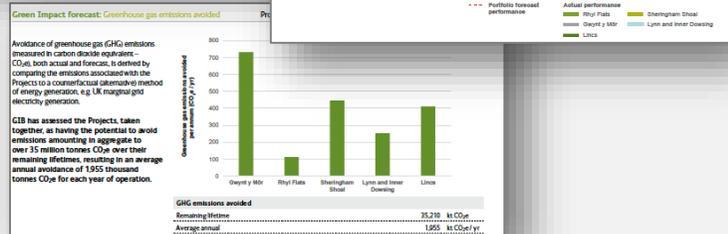
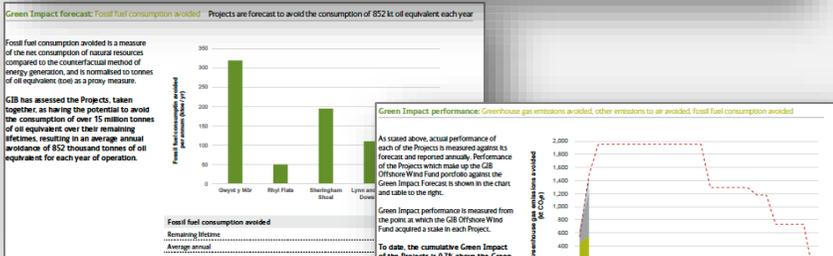
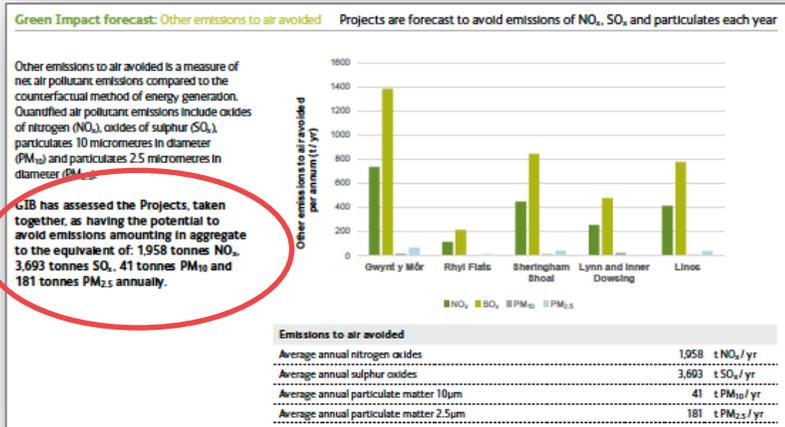
Executive Summary One Pager: Each green impact report includes a one page executive summary with key statistics about the project, fund or bond, impact forecasts and relevant metrics. This format provides a useful high level overview by project.

CGB Application: This executive summary format could be used to give quick highlights from CGB programs like the Residential Solar Investment Program, CT Solar Loan, CT Solar Lease, Smart E Loan, Low Income Solar Lease and ESA or C-Pace. This could be used in place of some of the information in the CAFR or included as an appendix in the Annual Report.



UK Green Investment Bank – Useful Techniques

Green Impact Report



Use of Graphs/Charts to Visualize Impact: The Offshore Wind Fund Report also includes several bar charts that visualize avoided:

- CO₂ equivalent emissions
- NO_x, SO_x and particulates
- Fuel consumption (potential compared to oil equivalent)
- Overall GHG emissions over time

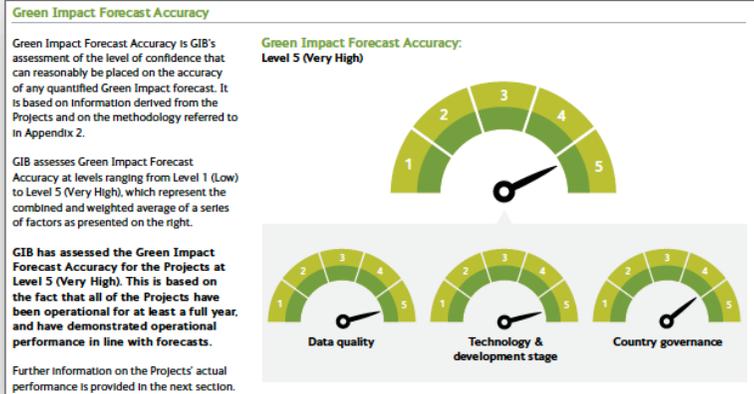
Each chart also includes language on the total potential avoided emissions as well (see red circle in the screenshot to the left). The GIB does *not* utilize any references like “number of cars off the road” or other examples in these reports to help the audience grasp the overall impact.

CGB Application: Consider including bar charts to indicate impact. The data included in several of the tables of the CAFR could be represented in chart form to help the audience more quickly grasp the information and impact. The NO_x, SO_x and particulates avoided are particularly useful and in this case are calculated based on associated emissions from a baseline method of energy generation (in this case the UK marginal grid electricity generation).



UK Green Investment Bank – Useful Techniques

Green Impact Report



Green Impact Forecast Accuracy: Each Green Impact Report also includes a section outlining the the level of confidence that can be reasonably placed on the accuracy of the forecast. The assessment utilizes a 1 (low) - 5 (Very High) rating system and is calculated by taking a combined and weighed average of scores for the following factors:

- Data Quality
- Technology & Development stage
- Country Governance

The underlying data for each individual factor score is based on “proprietary modelling techniques and comparative data developed and owned by Green Investment Bank, or by third party owners and made available under license to the Green Investment Bank.”

CGB Application: CGB already includes “measurability” ratings in the Evaluation Framework and could consider including some visual representation of these measures if and when they are used in the Annual Report.

UK Green Investment Bank – Useful Techniques



Green Impact Report

Alignment with the Sustainable Development Goals

The United Nations Sustainable Development Goals² are a set of 17 goals for sustainable development adopted by the UN in 2015, each with associated targets to be achieved by 2030.

The BCP Green Bond, and the Projects for which its proceeds will be used, will contribute to the following Sustainable Development Goals:



Avoided emissions of NO_x, SO_x, and particulate matter by the Projects will result in human health benefits.



The Projects will generate clean, renewable electricity.



The BCP Green Bond demonstrates innovative climate finance investment and supports the development of renewable energy infrastructure.



The renewable electricity generated by the Projects will avoid the consumption of fossil fuels to generate electricity.



The BCP Green Bond issuer and investors will be supporting action to tackle climate change through investment into infrastructure which avoids greenhouse gas emissions.

Alignment with Sustainable Development Goals (SDGs): The most recent impact report from GIB outlines the impact of the Green Bond the Green Investment Bank will support issuing by Banque Centrale Populaire. This report includes an additional section outlining which SDGs the bond is expected to contribute to and a very short explanation for why.

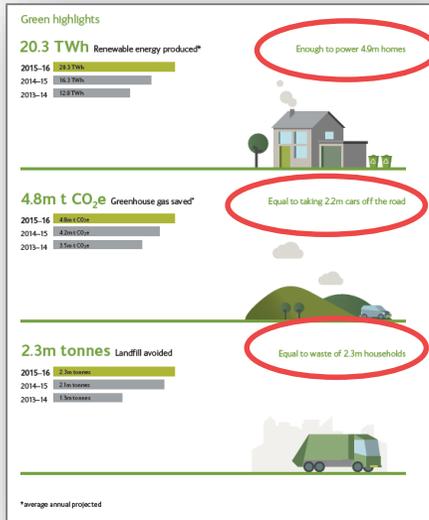
CGB Application: The SDGs have become a focus for many corporations since they were launched in 2015. Several companies have gone through a strategic process to identify which SDGs they are best suited to impact and have begun communicating this through annual reports and their websites. CGB could include a similar discussion in the next annual report or CAFR. Several of the SDGs outlined by Green Investment Bank could be relevant for CGB.



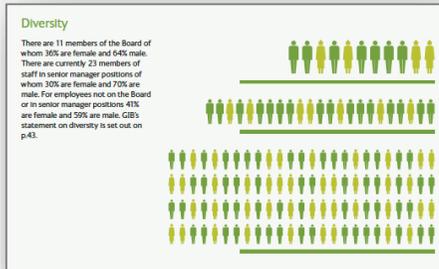
UK Green Investment Bank – Useful Techniques

Annual Report

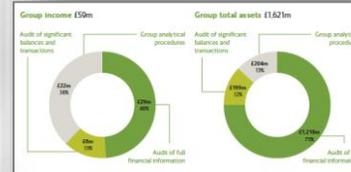
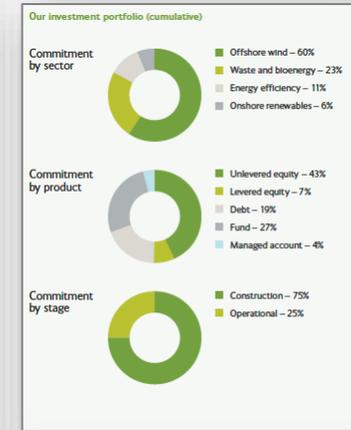
Visuals & Equivalents



Infographics & Icons



Doughnut Charts



Use of Visuals, Graphics and Equivalents: The Green Investment Bank Annual Report is cleanly designed and makes use of some useful charts and infographics to convey several data points. These were not widely used throughout the report, but in instances where they were, provided helpful context.

Visuals & Equivalents – The Green Highlights on p.10 uses equivalent statements “Enough to power 4.9m homes” to help the reader put renewable energy produced, GHG saved or landfill avoided into context. The report also uses simple graphics to convey the source of energy savings, such as the home, car or garbage truck.

Doughnut Charts - The doughnut charts are helpful for quickly demonstrating percentages.

Infographics & Icons - The use of icons in the highlights section and the diversity infographic help effectively guide the reader.

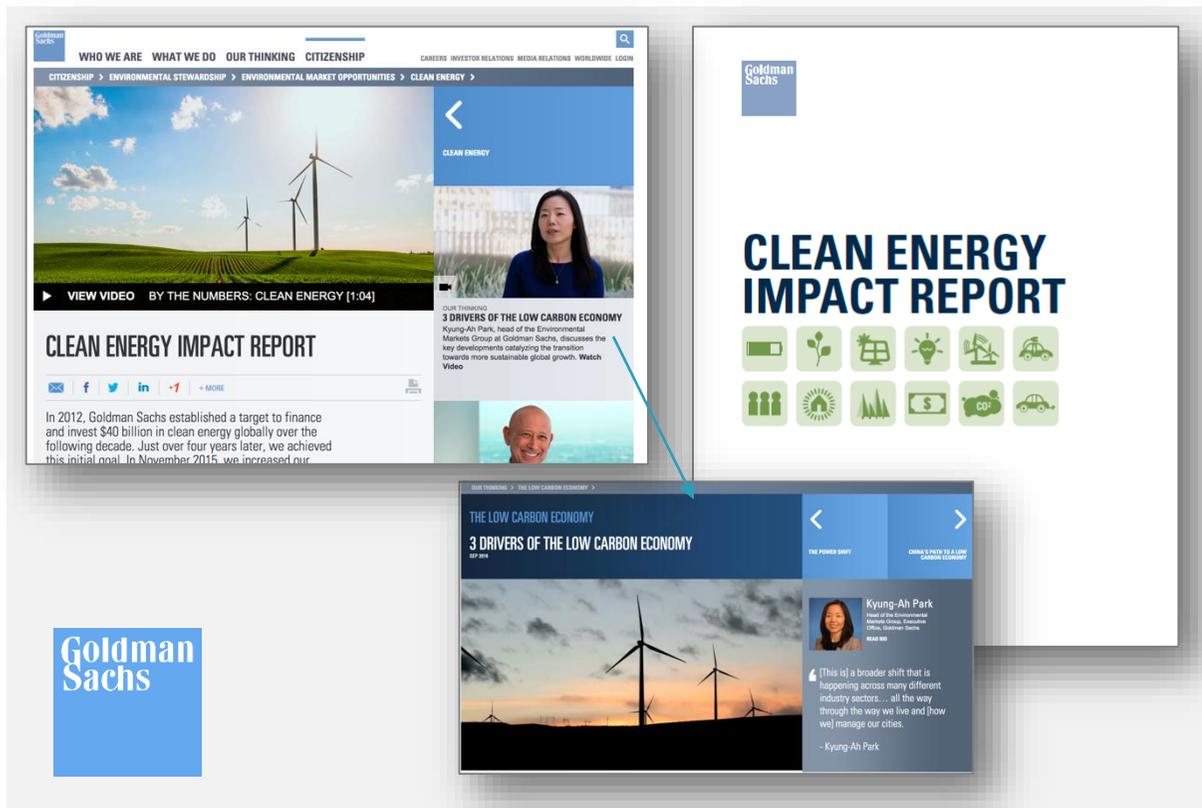
CGB Application: CGB can consider using some of these reporting visualization tools in the annual report to convey information and data more effectively.



Goldman Sachs Clean Energy

Goldman Sachs Clean Energy – Communication Tools

Goldman Sachs uses a video and report strategy to communicate the impacts from its clean energy investments. Videos can be an effective way to communicate data, but simple videos such as these may not add enough value to be worth the production cost.



1. Website Landing Page
2. Clean Energy Impact Report
3. Clean Energy “By the Numbers” Video
4. Our Thinking “3 Drivers of the Low Carbon Economy” Video



Goldman Sachs Clean Energy– Useful Techniques

Clean Energy Impact Report

Introduction

In 2012, Goldman Sachs established a target to finance and invest \$40 billion in clean energy globally over the following decade. Just over four years later, we achieved this initial goal. In November 2015, we increased our existing target to \$150 billion by 2025, expanding our ambitions and underscoring our commitment to mobilizing capital to scale up clean energy and foster sustainable economic development.

Goldman Sachs has a long-standing commitment to harnessing innovative market solutions to address critical environmental challenges, in particular climate change. Since energy accounts for the vast majority of greenhouse gas emissions, clean energy is key to addressing climate change. It also brings benefits of energy diversification and security, technology innovation and green jobs, as well as sustainable economic growth and health improvements.

Clean energy is at an inflection point as rapid cost declines have facilitated significant growth of the industry. However, the clean energy sector, and renewable energy generation in particular, is capital intensive, with high upfront costs and payback materializing over subsequent years. As such, the ability to mobilize capital and facilitate efficient financing is particularly important.

Clean energy companies often look to the capital markets to meet their capital needs, but due to a variety of barriers there is still insufficient capital available relative to the global need.

As a leading financial institution, we play an important role in mobilizing capital, facilitating innovative financing mechanisms and helping to address market barriers to scale up clean energy and aid in the transition to a low carbon economy.

In 2012, when there was significant volatility in the capital markets for clean energy, we set our original goal for deploying \$40 billion in capital to reinforce our long-term commitment to and conviction in the sector.

In May 2016, we reached and exceeded our initial goal with the completion of over \$41 billion in financings and investments. With this capital, we have helped clients establish themselves as major clean energy producers around the world. For example, we have invested in clean energy developers, including the largest offshore wind developer globally and one of the largest Indian independent renewable developers. We have also made a number of investments to help expand access to clean energy for underserved markets.



Targets and Comparison: In the introduction of the report, Goldman Sachs outlines a high level investment target for 2025 and the amount of progress so far against that target both in the text and with a graphic.

CGB Application: While targets are not a reporting requirement, they can help demonstrate a long term vision and help external stakeholders gauge progress. There are some targets outlined in the July 21 memo to the board, but these do not seem to appear in the CAFR or annual report. CGB could consider establishing goals or targets for impact areas (perhaps around Innovate, Education, and Activate) or against the following outcome areas:

- Reduced Energy Costs
- Jobs Created
- Energy Saved
- Green Homes
- Green House Gasses Avoided

If CGB does decide to establish goals graphics like those to the left can be a useful way to demonstrate progress to date.



Goldman Sachs Clean Energy– Useful Techniques

Clean Energy Impact Report



Summary Infographics: Goldman Sachs includes both a high level summary infographic of the total impact from the full portfolio and also separate summaries for investments and financing (new energy deployment, refinancing, clean tech ecosystems). These graphics are a helpful way to quickly gauge the impact from each work stream.

CGB Application: CGB already includes an annual summary “by the numbers” page, but might consider adding some icons like Goldman Sachs does, to help bring these numbers to life. A similar “by the numbers” format could also be used to share highlights from CGB programs like the Residential Solar Investment Program, CT Solar Loan, CT Solar Lease, Smart E Loan, Low Income Solar Lease and ESA or C-Pace. Goldman Sachs also uses equivalent comparisons (red circles) on these summaries pages which are covered on the next slide.

Goldman Sachs Clean Energy– Useful Techniques



Clean Energy Impact Report

Key Impact Highlights

Investments and financings in capital we have harnessed... investments and financings in new... investments and financings in new... (GW) of new renewable... which can power the equivalent... U.S. homes with clean energy.

The aggregate new generation includes 4.5 gigawatts from investments and nearly 27 gigawatts from the companies we have financed.

- ▶ We have helped clients **refinance almost 15 gigawatts of solar and wind**, freeing up balance sheets for new development.
- ▶ In addition, we have helped companies **finance and deploy advanced clean energy technologies** ranging from electric vehicles and smart grids to solar components and advanced bio-products.
- ▶ Collectively, the clean energy technologies supported by our financings and investments will **avoid 74 million metric tons of greenhouse gas** in 2016, equivalent to the carbon sequestered by 70 million acres of forests or taking 16 million cars off the road. Taking into consideration the electricity produced throughout the life of these assets, which averages more than 20 years, the impact will be multiple folds greater than this annual number.
- ▶ In aggregate, the companies we have invested in and helped finance **employed more than 129,000 people in green jobs and generated total revenues of over \$34 billion** in fiscal year 2015. The revenue these companies produce and the jobs they create catalyze the broader growth of the clean energy industry across the value chain and drive an even greater indirect economic impact.

EQUIVALENT TO THE CARBON SEQUESTERED BY **70 MILLION ACRES OF FOREST** OR **16 MILLION CARS OFF THE ROAD**

▶ The 27 gigawatts of new renewable assets can power more than 4.5 million U.S. homes.

DID YOU KNOW?
27 GW OF ENERGY IS ENOUGH TO POWER **4.5 MM** U.S. HOMES
OR THE EQUIVALENT OF ALL OF NEW YORK CITY AND WESTCHESTER COUNTY

Equivalencies: Similar to the UK Green Investment Bank, Goldman Sachs uses equivalencies to help the reader understand large numbers. In several instances, the report copy includes a comparison of the total GHGs reduced to the equivalent amount of cars taken off the road or acres of forest added. The report also uses a small infographic to compare the amount of renewable energy produces to the number of U.S. homes that energy can power.

CGB Application: CGB includes several equivalency calculations (Home equivalents, cars off the road, and acres of trees planted) in the CAFR which could be used more widely in the Annual Report in combination with infographics or other visuals to help demonstrate impact.

Goldman Sachs Clean Energy– Useful Techniques



Clean Energy Impact Report

Logos

Investing in Clean Energy

Among our \$2.5 billion in investments, there are a number of strategic investments where we are an equity investor with board positions in clean energy developers. We have facilitated strong growth and enabled the companies to focus on building renewable energy projects at scale. In addition, we have invested directly into renewable energy projects across the range of capital structures, including equity and tax equity, as well as debt. We have also invested in mid-sized companies, where our capital helps scale up operations and increase market penetration. Finally, through our impact investment platform, we have invested in underserved communities to provide more equitable and affordable access to clean energy. The following are highlights of select investments:

Clean Energy Developers	Project-Level Investments
<p>One of the largest independent renewable developers in India with 1 GW of installed capacity</p>	<p>150 MW wind farm in Mexico</p>
<p>Largest offshore wind developer globally with 1.7 GW of new wind capacity in the past two years</p>	<p>200 MW wind farm in Texas</p>
<p>Renewable development platform in Japan helping to transition to a clean energy mix post-Fukushima</p>	<p>165 MW of distributed solar across the U.S.</p>
Mid-Sized Growth Investments	Clean Energy Access
<p>Distributed solar developer focused on commercial and industrial projects in China</p>	<p>Solar and energy efficiency for low/moderate income (LMI) families in Louisiana, New York and Connecticut</p>
<p>Distributed and utility solar developer focused on projects across Singapore and southeast Asia</p>	<p>Distributed solar for a portfolio of single-family homes in Salt Lake City, predominantly leased to LMI families</p>
<p>Minnesota-based manufacturer of solar modules designed for commercial and industrial projects</p>	<p>Largest public housing Energy Performance Contract to improve energy efficiency for 10,000 residents</p>

Charts & Graphs



Logos, Charts & Graphs:

Logos - Goldman Sachs uses logos well to bring information for developers, investments, partners and transactions to life. When covering lists, like in the pages shown to the left, logos can help break up the page.

Charts & Graphs – Goldman Sachs also uses a limited number of pie charts and bar graphs to bring other data to life.

CGB Application: Logos would be particularly useful for adding some color to the various tables in the CAFR or could be used in the Annual Report when discussing partners, installers, contractors and programs like PosiGen or C-PACE.

Select Transactions

	<p>In September 2013, we underwrote the first rated solar securitization globally via the Japan Mega Solar Bond Trust. This structure has enabled developers to raise capital against the operating cash flows of renewable projects that are under construction and newly constructed, while providing investors with direct exposure to higher yielding clean infrastructure assets. In doing so, it has brought together developers and institutional investors and opened up a new investor base through capital market financings.</p>
	<p>In July 2013, we were a joint book runner for the IPO of NRG Yield, the first U.S. YieldCo. NRG Yield acquired clean energy assets from its parent company NRG Energy, freeing up its balance sheet, while providing investors with a liquid investment that provides the benefits of both yield and growth. Subsequent financings included a follow-on equity financing and debt financing to fund the acquisition of the Alta Wind Facility, a one-gigawatt wind farm in the western U.S. and at the time the largest operating wind farm in the country.</p>
	<p>In December 2014, we acted as joint lead book runner on a \$204 million, 20-year issuance for Energia Edifica, a Peninsular wind farm operator of ContourGlobal. This was the first green project bond issued in Latin America, demonstrating that green bonds can be viable financing vehicles for issuers to raise project-specific debt in emerging markets. This transaction won the Bond of the Year award from Environmental Finance in 2015.</p>



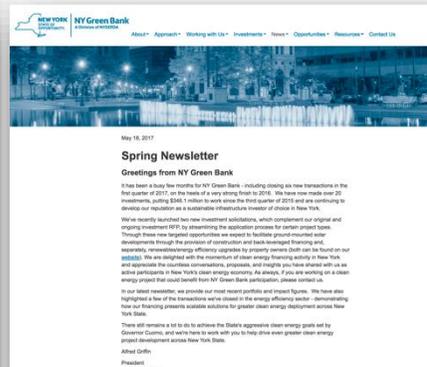
NY Green Bank



NY Green Bank – Communication Tools

The NY Green Bank has a very simple website including pages for basic newsletters and links to quarterly reports which open in a PowerPoint presentation format. It also includes impact metrics and goals in its Annual Review & Business Plan report found in its public filings.

1. Website
2. Annual Review & Business Plan
3. Quarterly Metrics Reports
4. Newsletters





NY Green Bank – Useful Techniques

Annual Review & Business Plan

Figure 8: Estimated Portfolio Lifetime GHG Emissions Reductions as of March 31, 2017

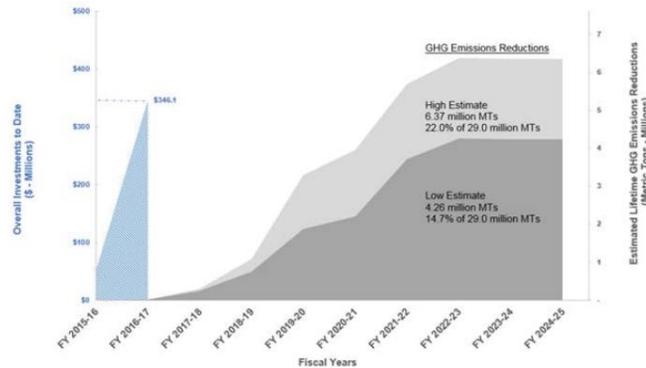
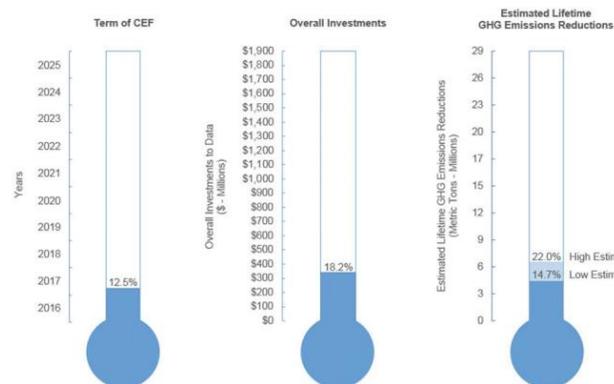


Figure 10: On Track to Meet Key CEF Goals as of March 31, 2017



GHG Emissions Targets & Projections: Within its Annual Review and Business Plan report, NYGB discusses its projected impact on GHG emissions reductions through its activities. In the first chart it shows high and low estimates for its performance projected into the future. It also displays this information in thermometer chart form, where it shows time elapsed for the term of the Clean Energy Fund (CEF) (which ends in 2025) and corresponding progress against overall investments and estimated GHG emissions reductions goals. By displaying it in thermometer form, NYGB is able to demonstrate that it is on track to meet goals by comparing percentages against time, investment dollars and metric tons of GHG emissions.

CGB Application: CGB could use similar charts to show estimated emissions projections and the impact portfolios of projects have over time.



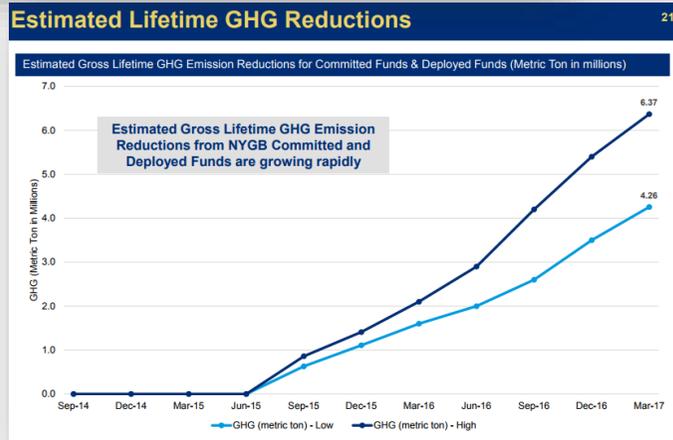
NY Green Bank – Useful Techniques

Quarterly Reports (PowerPoints)

Progress Against 2016 – 2017 Plan Deliverables		
Goal	Progress	
Put ratepayer funds to work:	Commit \$200.0 million in new investments each year	NYGB has committed \$292.0 million (146% of goal) in FY 2016 - 2017 ending March 31, 2017, with new transactions moving towards close. Current Portfolio is \$344.3 million (\$346.1 million Overall Investments to Date)
Mobilize capital:	Achieve average mobilization ratio of 3:1, and 8:1 across portfolio by end of CEF in 2025	NYGB's current portfolio-wide mobilization ratio meets the required 3:1 and is on track to achieve an 8:1 mobilization ratio by 2025, including through recycling capital for investment in new transactions
Drive towards self-sufficiency:	Continue to grow revenues and manage expenses to reach self-sufficiency by 2018	Over \$12.9 million in revenues has been generated since NYGB's inception
Strong Active Pipeline:	Maintain an Active Pipeline of at least \$300.0 million	Active Pipeline of potential investments proceeding to close is \$591.7 million
Reduce GHG Emissions:	Contribute to CEF objectives and in turn REV & the CES	Current Portfolio represents up to: 341.0 MW of new clean energy installations in NYS, 9.71 million MWh of clean energy generation, 1.23 million MWh saved, 10.3 million MMBtus saved, and estimated lifetime GHG reductions of between 4.3 and 6.37 million metric tons over the life of underlying projects

Reporting on GHG Reductions: NYGB's Quarterly Metrics Report, includes GHG emissions reductions metrics as part of its Plan Deliverables, along with other financial and investment goals. Additionally, it also shows in chart form rapid growth of the organization's estimated lifetime GHG emissions reductions, with both low and high estimates.

CGB Application: The use of charts to demonstrate impact over time can be a useful tool for engaging stakeholders with data. CGB could use similar line charts to visualize reduced GHG emissions over time.





***TBC: Connecticut Conservation and
Load Management Plan***

Eversource Energy, The United
Illuminating Company, Connecticut
Natural Gas, Southern Connecticut
Gas



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Memo

To: Audit, Compliance and Governance Committee

From: Eric Shrago, Director of Operations

Date: October 3, 2017

Re: CAFR Non-Financial Statistics Audit and Reporting Benchmarking

The Green Bank consistently seeks to be as transparent as possible when reporting externally and strives to provide an accurate depiction of the societal benefits of our projects. Along these themes, we engaged SustainAbility, an Environmental Social Governance and Corporate Social Responsibility consulting firm with considerable experience engaging financial services clients to review our reporting efforts. We tasked them to benchmark our reports against others and to assess our methodologies for evaluating our impact as part of our Evaluation Framework.

SustainAbility produced an opinion (attached) of our Non-Financial Statistics from the Consolidated Annual Financial Report and will review their findings from this and the benchmarking exercise at the upcoming meeting.



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Connecticut Green Bank
845 Brook Street
Rocky Hill, CT 06067

31st August 2017

To the Board of Directors
Connecticut Green Bank

Report on Non-Financial Metrics

In July 2017, the Connecticut Green Bank (the company) asked SustainAbility, Inc., to conduct an independent, external review of the metrics, and underlying data collection and calculation methods, outlined in the non-financial statistics section of the company's Comprehensive Annual Financial Report.

SustainAbility evaluated the company's data collection methods and performance calculation methodologies as well as the degree of transparency exhibited by the company in reporting on the following metrics: Capital Deployed, Projects Completed, Clean Energy Generated, Job Years, CO₂ savings, NO_x, SO_x and Particulate Matter avoided. SustainAbility also benchmarked Connecticut Green Bank's procedures against those of three other banks to identify possible gaps in metrics coverage and/or performance that the company's future reporting might consider encompassing.

Based on the information provided to SustainAbility by the company and our understanding of best practice in goal setting, measurement and disclosure, it is our opinion that the company'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, demonstrates a high level of transparency as relative to the peer financial institutions benchmarked.

Yours,

Christina Wong
Senior Manager
SustainAbility



Memo

To: Audit, Compliance and Governance Committee

From: Eric Shrago, Director of Operations

Date: October 3, 2017

Re: Public Health Impact Measurement

Describing the public health impact of the portfolio of projects supported by the Connecticut Green Bank helps illustrate the contributions of the organization and is a key part of the Societal Impact section of the Evaluation Framework. At present, the organization does not have a methodology to assess such impact.

In consultation with the US Environmental Protection Agency (EPA) the CT Department of Energy and Environmental Protection (DEEP), and the CT Department of Public Health, the organization's staff identified the EPA's CoBenefits Risk Assessment (CoBRA) as a respected tool for assessing the public health impacts of air quality changes resulting from emissions reductions of supported by Green Bank projects. The CoBRA tool is built to work in conjunction with the AVOIDed Emissions and geneRation Tool (AVERT) adopted by the organization this year as its methodology for assessing air quality improvements associated with our projects. Green Bank staff will use the outputs from AVERT (SO_x, NO_x, CO₂, and PM_{2.5}) as inputs into CoBRA for the model to generate estimates of the number of cases avoided of specific health outcomes and the economic costs of these. Staff from DEEP, DPH, and EPA are supportive of the Green Bank communicating the impact of projects supported by the Green Bank in terms of public health.

Resolution

RESOLVED, that the Audit, Compliance and Governance Committee hereby recommends to the Board of Directors for approval on its consent agenda the proposed US Environmental Protection Agency CoBenefits Risk Assessment (CoBRA) Model for the Evaluation and Measurement of the public health impact of Green Bank supported projects.

EVALUATION FRAMEWORK

SOCIETAL PERFORMANCE

Public Health Impact Overview

An important measurement of success for the Connecticut Green Bank (Green Bank) and its programs is how our investment activity improves the air quality of the state. This is measured by the decrease in the amount of nitrogen oxides (NO_x), sulfur dioxide (SO₂), and particulate matter (PM_{2.5}) emitted by the region's fossil fuel electric generation due to Green Bank projects.

The changes in quantities of these emissions impact the quality of health of those that breathe this air. Air pollution influences the prevalence and severity of asthma, bronchitis, coronary disease, and even death.

The Green Bank uses the US Environmental Protection Agency's (EPA) Co-Benefit Risk Assessment (CoBRA) model to calculate and report on the public health benefits of the Green Bank's clean energy investment activity in Connecticut.

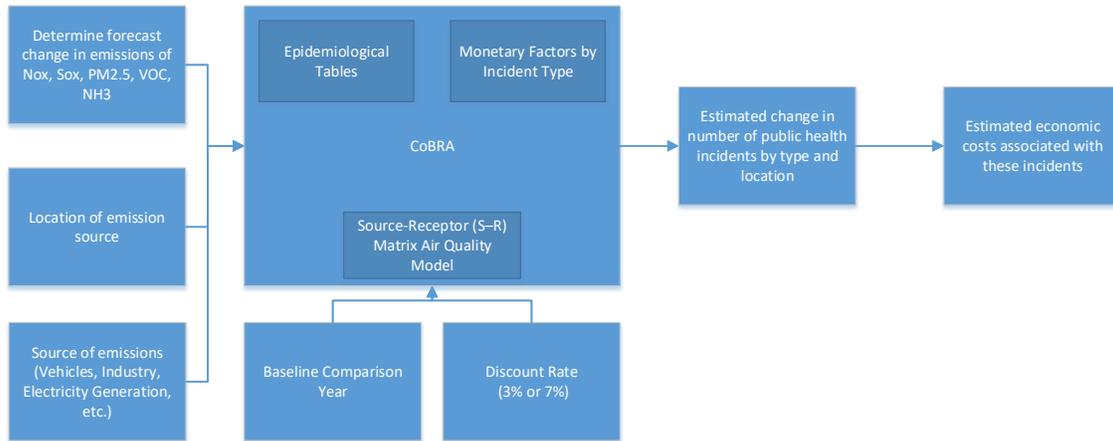
The Green Bank will include public health impacts of its programs as part of the Societal Benefits in its Comprehensive Annual Financial Report, green bonds issuances, and other communications.

Methodology

The Green Bank has long recognized the environmental benefits of its investments. After working with the Connecticut Department of Energy and Environmental Protection (DEEP), Connecticut Department of Public Health (DPH) and the US Environmental Protection Agency, the Green Bank adopted the EPA's CoBRA to model the public health impacts of the air quality benefits associated with Green Bank projects.

CoBRA is a complex model that uses a baseline of emissions and models the increase or decrease in public health incidents and their costs based on the change in emissions of nitrogen oxides (NO_x), sulfur dioxide (SO₂), particulate matter (PM_{2.5}), volatile organic compounds (VOC) and ammonia (NH₃). The tool takes into account the method through which these are emitted (vehicles, energy production, type of industry, etc) and their location. It then uses an air dispersion model (Source-Receptor (S-R) Matrix) and standard EPA epidemiological estimation methods to gauge the change in number of incidents. It then applies monetary factors to give an economic impact of these emission changes. The graphic below presents a simplified representation of the model.

Figure 1: CoBRA Flow



Users input the emissions changes, the source of those changes, and their location.

The COBRA model determines the public health impacts and the associated economic costs based on a user selected discount rate.

The Green Bank will directly run a project or projects’ environmental impacts through the CoBRA model to obtain the associated public health benefits that its projects support. CoBRA will report back the low and high estimates of avoided incidents, locations, and associated costs of the following health outcomes:

- Acute Bronchitis
- Asthma Exacerbation
- Emergency Room Visits, Asthma
- Hospital Admits, All Respiratory
- Hospital Admits, Cardiovascular (except heart attacks)
- Infant Mortality
- Lower Respiratory Symptoms
- Minor Restricted Activity Days
- Mortality
- Nonfatal Heart Attacks
- Upper Respiratory Symptoms
- Work Loss Days

Example of Health Impacts

The following shows an example of public health impacts associated with the decrease of 155 tons of PM_{2.5}, 1,169 ton decrease in SO₂, and a 2,331 ton decrease in NO_x (the equivalent of what the Green Bank’s projects avoid emitting in one year).

CT Emissions Decrease (in tons)			Location of impact	Value of Total Health Benefits	
PM 2.5	SO2	NOx		low estimate	high estimate
7	98	116	Connecticut	\$ 1,223,570.82	\$ 2,765,762.89

		Rest of US	\$ 2,746,739.14	\$ 6,208,562.73
		Nationwide	\$ 3,970,309.96	\$ 8,974,325.62

Further information about the CoBRA is available at: https://www.epa.gov/sites/production/files/2017-10/documents/cobra_user_manual_september2017_508_v2.pdf

About the Connecticut Green Bank

The Connecticut Green Bank was established by the Connecticut General Assembly on July 1, 2011 as a part of Public Act 11-80. As the nation’s first full-scale green bank, it is leading the clean energy finance movement by leveraging public and private funds to scale-up renewable energy deployment and energy efficiency projects across Connecticut. The Green Bank’s success in accelerating private investment in clean energy is helping Connecticut create jobs, increase economic prosperity, promote energy security and address climate change. For more information about the Connecticut Green Bank, please visit www.ctgreenbank.com

About the Department of Energy and Environmental Protection

The Connecticut Department of Energy and Environmental Protection (DEEP) was established on July 1, 2011 with the consolidation of the Department of Environmental Protection, the Department of Public Utility Control, and energy policy staff from other areas of state government. It is charged with conserving, improving and protecting the natural resources and the environment of the state of Connecticut as well as making cheaper, cleaner and more reliable energy available for the people and businesses of the state. The agency is also committed to playing a positive role in rebuilding Connecticut’s economy and creating jobs – and to fostering a sustainable and prosperous economic future for the state. For more information about the Connecticut Department of Energy and Environmental Protection, please visit www.ct.gov/deep

About the Department of Public Health

Established in 1878, the Department of Public Health (DPH) is the lead agency in protection of the public’s health, and in providing health information, policy and advocacy. DPH is a central part of a comprehensive network of public health services, and is a partner to local health departments for which it provides advocacy, training and certification, technical assistance and consultation, and specialty services that are not available at the local level. The agency is responsible for providing accurate health information to the Governor, the Legislature, the federal government and local communities. This information is used to monitor the health status of Connecticut’s residents, set health priorities and evaluate the effectiveness of health initiatives. The agency is also a regulator focused on health outcomes, maintaining a balance between assuring quality and administrative burden on the personnel, facilities and programs regulated. DPH is currently staffed by approximately 800 employees organized into fourteen branches, sections, and offices; each tasked with ensuring and/or providing services to help the agency achieve its mission. For more information about the Connecticut Department of Public Health, please visit <http://www.ct.gov/dPh/site/default.asp>

About the United States Environmental Protection Agency

The mission of the EPA is to protect human health and the environment. For more information about the United States Environmental Protection Agency, please visit www.epa.gov