CONNECTICUT
GREEN BANK SM

Board of Directors

Meeting Date

April 21, 2023

Board of Directors

Lonnie Reed Chair	**Vickie Hackett** Vice Chair Connecticut Department of Energy and Environmental Protection (DEEP)
Matthew Ranelli Secretary Partner Shipman & Goodwin	**Bettina Bronisz** State Treasurers Office State of Connecticut
Thomas Flynn Managing Member Coral Drive Partners	**Binu** Chandy Deputy Director DECD
Adrienne Farrar Houel President and CEO Greater Bridgeport Community Enterprises, Inc.	**Dominick Grant** Director of Investments Dirt Capital Partners
John Harrity Chair CT Roundtable on Climate and Jobs	**Brenda Watson** Executive Director Operation Fuel
Joanne Wozniak-Brown Office of Policy and Management (OPM)	**TBD**

75 Charter Oak Avenue, Suite 1 - 103, Hartford, CT 06106
T 860.563.0015
ctgreenbank.com

CONNECTICUT
GREEN BANK

April 14, 2023

Dear Connecticut Green Bank Board of Directors:

We have a regular meeting of the Board of Directors scheduled for **Friday, April 21, from 9:00-11:00 a.m.**

Please take note that this will be an online meeting.

This is going to be a very productive meeting as many of the C-PACE transactions we have been discussing with you are now coming before you. These projects still need to receive a determination by the utilities of whether or not they will receive incentives through the Non-residential Renewable Energy Solutions ("NRES") program, but we wanted to seek your contingent approval so that we can move forward with those that receive such approval once we receive notice from the utilities.

For the agenda, we have the following:

- **Consent Agenda** – we have several items on the consent agenda, including a unique set of items (i.e., plethora of C-PACE transactions), including:

    - Meeting Minutes for March 17, 2023
    - Under $500,000 and No More in Aggregate than $1,000,000 – there are three (3) C-PACE transactions from Berlin and Manchester totaling about $980,000
    - Five (5) C-PACE transactions for standard solar PV projects each under $700,000,[1] including the following projects:

        - **Danbury** – 232 kW solar PV project totaling $564,528
        - **East Hartford** – 223 kW solar PV project totaling $491,537
        - **Groton** – 239 kW solar PV project totaling $552,567
        - **Mystic** – 161 kW solar PV project (including roof improvements) totaling $595,435
        - **Stamford** – 185 kW solar PV project totaling $536,095

        If you would like us to present any of these transactions, please let us know during the week. We are simply trying to manage approval time.
    - C-PACE transaction extension for Redding

[1] Note – per the "Under $500,000 and No More in Aggregate than $1,000,000" staff transaction approval process, staff can approve transactions each under $500,000 and no more in aggregate than $1,000,000 between Deployment Committee or Board of Director meetings if they are consistent with the Comprehensive Plan and Budget. Given the volume of transactions we have, we are bringing forward all transactions less than $500,000, including several transactions less than $700,000 to be put on the Consent Agenda for your review and approval. This will reduce time on the agenda for such standardized review and approvals, and focus on larger transactions (i.e., those greater than $700,000 in value).

In addition to the items requiring resolution, there is also a document, including:

- FY23 through Q3 Progress to Targets
- Under $100,000 and No More in Aggregate than $500,000 Staff Restructurings

- **Financing Program Updates and Recommendations** – an FY23 through Q3 progress to targets update and transaction recommendations, including:

  - Seven (7) C-PACE transactions for projects greater than $700,000, including the following projects:

    - **Branford** – 320 kW solar PV project totaling $1,003,474
    - **Milford** – 1,250 kW solar PV project totaling $2,318,539
    - **Southington** – 516 kW solar PV project totaling $1,687,886
    - **South Windsor** – two (2) projects, including 1,415 kW solar PV project totaling $3,225,500 and 288 kW solar PV project totaling $710,783
    - **Stonington** – 298 kW solar PV, lighting, insulation, and HVAC project totaling $3,701,715
    - **Windsor** – 243 kW solar PV, lighting, and roof replacement project totaling $806,693

- **Incentive Program Updates and Recommendations** – an FY23 through Q3 progress to targets update.

- **Investment Updates and Recommendations** – several transaction recommendations, including:

    - ***Capital for Change*** – an opportunity to develop an ITC bridge loan product to support an energy efficiency and solar PV contractor that is potentially replicable
    - ***Inclusive Prosperity Capital*** – due to timing of the EPA's Greenhouse Gas Reduction Fund's RFP being delayed by 6 months, a modification to extend the loan repayment
    - **Skyview** – a modification to existing loan facility to allow for construction financing

- **Other Business** – and lastly, we are going to spend some time on the following:

    - ***RSIP Program Impact*** – an independent third party evaluation of the RSIP
    - **Communities LEAP** – an update on the Bridgeport project
    - **Other Business** – including the resignation of Mayor Laura Hoydick from the Board of Directors

Please note, those items *underlined, italicized, and highlighted* above, are materials coming by the close of business on Tuesday, April 18, 2023.

Have a great weekend.

Sincerely,

Bryan Garcia
President and CEO

AGENDA

Board of Directors of the
Connecticut Green Bank
75 Charter Oak Avenue
Hartford, CT 06106

Friday, April 21, 2023
9:00 a.m.– 11:00 a.m.

Dial (646) 749-3122
Access Code: 755-983-709

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

1. Call to Order

2. Public Comments – 5 minutes

3. Consent Agenda – 5 minutes

    a. Meeting Minutes of March 17, 2023
    b. Under $500,000 and No More in Aggregate than $1,000,000 Staff Transaction Approvals
    c. C-PACE Transaction – Danbury
    d. C-PACE Transaction – East Hartford
    e. C-PACE Transaction – Groton
    f. C-PACE Transaction – Mystic
    g. C-PACE Transaction – Stamford
    h. C-PACE Transaction Extension – Redding
    i. FY23 Q3 Progress to Targets
    j. Under $100,000 and No More in Aggregate than $500,000 Staff Restructurings

4. Financing Programs Updates and Recommendations – 40 minutes

    a. Progress to Target Updates
    b. C-PACE Transaction – Branford
    c. C-PACE Transaction – Milford
    d. C-PACE Transaction – Southington
    e. C-PACE Transaction – South Windsor (420 Ellington Road)
    f. C-PACE Transaction – South Windsor (688 Sullivan Avenue)
    g. C-PACE Transaction – Stonington
    h. C-PACE Transaction – Windsor

5. Incentive Programs Updates and Recommendations – 5 minutes

    a. Progress to Target Updates

6. Investment Updates and Recommendations – 15 minutes

    a. Capital for Change and EcoSmart Home Services – ITC Bridge Loan
    b. IPC Loan Facility – Modification
    c. Skyview Loan Facility – Modification

7. Environmental Infrastructure Updates – 5 minutes

8. Other Business – 45 minutes

    a. Residential Solar Investment Program: 2012-2022 Program Impact Evaluation and Future Recommendations
    b. Other Business

9. Adjourn

Join the meeting online at
https://meet.goto.com/755983709
Or call in using your telephone:
Dial (646) 749-3122
Access Code: 755-983-709

Next Regular Meeting: Friday, June 23, 2023 from 9:00-11:00 a.m.
Colonel Albert Pope Room at the
Connecticut Green Bank, 75 Charter Oak Avenue, Hartford

RESOLUTIONS

Board of Directors of the
Connecticut Green Bank
75 Charter Oak Avenue
Hartford, CT 06106

Friday, April 21, 2023
9:00 a.m.– 11:00 a.m.

Dial (646) 749-3122
Access Code: 755-983-709

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

1. Call to Order

2. Public Comments – 5 minutes

3. Consent Agenda – 5 minutes

    a. Meeting Minutes of March 17, 2023

Resolution #1

Motion to approve the meeting minutes of the Board of Directors for Marc 17, 2023

    b. Under $500,000 and No More in Aggregate than $1,000,000 Staff Transaction Approvals

Resolution #2

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

WHEREAS, Green Bank staff seeks Board review and approval of the funding requests listed in the Memo to the Board dated April 14, 2023 which were approved by Green Bank staff since the last Deployment Committee meeting and which are consistent with the Staff Approval Policy for Projects Under $500,000;

NOW, therefore be it:

RESOLVED, that the Board approves the funding requests listed in the Memo to the Board dated April 14, 2023 which were approved by Green Bank staff since the last Deployment Committee meeting. The Board authorizes Green Bank staff to approve funding requests in accordance with the Staff Approval Policy for Projects Under $500,000 in an aggregate amount to exceed $1,000,000 from the date of this Board meeting until the next Deployment Committee meeting.

c. C-PACE Transaction – Danbury

Resolution #3

WHEREAS, pursuant to Connecticut General Statute Section 16a-40g (the "Statute"), the Connecticut Green Bank (Green Bank) is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

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

WHEREAS, the Green Bank seeks to provide a **$564,528** construction and (potentially) term loan under the C-PACE program to Evelyn L. Wells, as surviving Trustee of the Testamentary Trust, Main 215-219 CGS LLC, and Main 215-219 SRS LLC, the building owners of 215-219 Main St, Danbury, CT (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated April 21, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

d. C-PACE Transaction – East Hartford

Resolution #4

WHEREAS, pursuant to Connecticut General Statute Section 16a-40g (the "Statute"), the Connecticut Green Bank (Green Bank) is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

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

WHEREAS, the Green Bank seeks to provide a **$491,537** construction and (potentially) term loan under the C-PACE program to 580 Tolland Street, LLC the building owner 580 Tolland Street East Hartford, CT (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated April 21, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

e. C-PACE Transaction – Groton

Resolution #5

WHEREAS, pursuant to Connecticut General Statute Section 16a-40g (the "Statute"), the Connecticut Green Bank (Green Bank) is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

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

WHEREAS, the Green Bank seeks to provide a **$552,567** construction and (potentially) term loan under the C-PACE program to Mystic Business Park LLC, the building owner of 800 Flanders Road, Mystic, CT (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated April 21st, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

f. C-PACE Transaction – Stonington/Mystic

Resolution #6

WHEREAS, pursuant to Connecticut General Statute Section 16a-40g (the "Statute"), the Connecticut Green Bank (Green Bank) is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

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

WHEREAS, the Green Bank seeks to provide a $**595,435** construction and (potentially) term loan under the C-PACE program to Unicorn Project, LLC the building owner of 247-251 Greenmanville Avenue Mystic, CT 06355 (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the

memorandum submitted to the Committee dated April 21st, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

g. C-PACE Transaction – Stamford

Resolution #7

WHEREAS, pursuant to Connecticut General Statute Section 16a-40g (the "Statute"), the Connecticut Green Bank (Green Bank) is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

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

WHEREAS, the Green Bank seeks to provide a **$536,095** construction and (potentially) term loan under the C-PACE program to Glenbrook Self Storage Property, LLC, the building owner of 317 Courtland Avenue, Stamford, CT (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated April 21, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

h. C-PACE Transaction Extension – Redding

Resolution #8

WHEREAS, pursuant to Conn. Gen. Stat. 16a-40g (the "Act") the Connecticut Green Bank ("Green Bank") is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

WHEREAS, pursuant to the C-PACE program, the Connecticut Green Bank Board of Directors (the "Board") or the Connecticut Green Bank Deployment Committee ("DC"), as may be applicable, approved and authorized the President of the Green Bank to execute financing agreements for the C-PACE projects described in the Memo submitted to the Board on April 21, 2023 (the "Finance Agreements");

WHEREAS, the Finance Agreements were authorized to be consistent with the terms, conditions, and memorandums submitted to the Board or DC, as may be applicable, and executed no later than 120 days from the date of such Board or DC approval; and

WHEREAS, due to delays in fulfilling pre-closing requirements the Green Bank will need more time to execute the Finance Agreements.

NOW, therefore be it:

RESOLVED, that the Board extends authorization of the Finance Agreements to no later than 120 days from April 22, 2022 and consistent in every other manner with the original Board authorization for the Finance Agreement.

i. FY23 Q3 Progress to Targets

j. Under $100,000 and No More in Aggregate than $500,000 Staff Restructurings

4. Financing Programs Updates and Recommendations – 40 minutes

a. Progress to Target Updates
b. C-PACE Transaction – Branford

Resolution #9

WHEREAS, pursuant to Connecticut General Statute Section 16a-40g (the "Statute"), the Connecticut Green Bank (Green Bank) is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

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

WHEREAS, the Green Bank seeks to provide a **$1,003,474** construction and (potentially) term loan under the C-PACE program to Elm Harbor Realty LLC, the building owner of 20 Elm Street, Branford, CT (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated April 21st, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

c. C-PACE Transaction – Milford

Resolution #10

WHEREAS, pursuant to Connecticut General Statute Section 16a-40g (the "Statute"), the Connecticut Green Bank (Green Bank) is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

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

WHEREAS, the Green Bank seeks to provide a **$2,318,539** construction and (potentially) term loan under the C-PACE program to Milford Holdings, LLC the building owner of 80 Wampus Lane, Milford CT 06460 (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated April 21st, 2023 and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

RESOLVED, that before executing the Loan, the President of the Green Bank and any other duly authorized officer of the Green Bank shall receive confirmation that the C-PACE

transaction meets the statutory obligations of the Statute, including but not limited to the savings to investment ratio and lender consent requirements; and

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

d. C-PACE Transaction – Southington

Resolution #11

WHEREAS, pursuant to Connecticut General Statute Section 16a-40g (the "Statute"), the Connecticut Green Bank (Green Bank) is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

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

WHEREAS, the Green Bank seeks to provide a **$1,687,886** construction and (potentially) term loan under the C-PACE program to Car-Sue Realty, LLC, the building owner of 44 Robert Porter Rd, Southington, CT 06489 (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated April 21, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

e. C-PACE Transaction – South Windsor (420 Ellington Road)

Resolution#12

WHEREAS, pursuant to Connecticut General Statute Section 16a-40g (the "Statute"), the Connecticut Green Bank (Green Bank) is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

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

WHEREAS, the Green Bank seeks to provide a $3,225,500 construction and (potentially) term loan under the C-PACE program to Admiral Holdings CT LLC the building owner of 420 Ellington Road, South Windsor, CT 06074 (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated April 21st, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

f. C-PACE Transaction – South Windsor (688 Sullivan Avenue)

Resolution #13

WHEREAS, pursuant to Connecticut General Statute Section 16a-40g (the "Statute"), the Connecticut Green Bank (Green Bank) is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

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

WHEREAS, the Green Bank seeks to provide a **$710,783** construction and (potentially) term loan under the C-PACE program to Admiral Holdings CT LLC, the building owner of 688

Sullivan Ave (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated April 21st, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

g. C-PACE Transaction – Stonington

Resolution#14

WHEREAS, pursuant to Connecticut General Statute Section 16a-40g (the "Statute"), the Connecticut Green Bank ("Green Bank") is directed to establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

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

WHEREAS, the Green Bank seeks to provide a **$3,701,715** term loan under the C-PACE program to Enko Realty, LLC., the building owner of 62 Maritime Dr., Mystic, Connecticut (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan.

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Green Bank Board of Directors (the "Board") dated December 9, 2022, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board;

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

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

h. C-PACE Transaction – Windsor

Resolution #15

WHEREAS, pursuant to Connecticut General Statute Section 16a-40g (the "Statute"), the Connecticut Green Bank (Green Bank) is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

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

WHEREAS, the Green Bank seeks to provide a **$765,948** construction and (potentially) term loan under the C-PACE program to Easter Seals Greater Hartford Rehabilitation Center Inc, the building owner of 70 Deerfield Rd, Windsor, CT 06489 (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated April 21, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

5. Incentive Programs Updates and Recommendations – 5 minutes

    a. Progress to Target Updates

6. Investment Updates and Recommendations – 15 minutes

    a. Capital for Change and EcoSmart Home Services – ITC Bridge Loan

Resolution #16

WHEREAS, the Connecticut Green Bank ("Green Bank") has established the Smart-E Loan program with financing agreements with various credit unions, community banks and a community development financial institution (Capital for Change ("C4C"));

WHEREAS, Green Bank desires to pilot an investment tax credit bridge loan pilot, in partnership with C4C, various credit unions and community bank partners in the Smart-E Program (the "ITC Loan Pilot");

WHEREAS, the ITC Loan Pilot would require Green Bank to either lend on an unsecured basis to C4C or to deposit funds with the other Smart-E lenders to fund the up to 18-month underlying ITC Bridge Loans as explained in the memorandum dated April 18, 2023 to the Green Bank Board of Directors (the "Board") (the "Concept Memo"); and

WHEREAS, Green Bank staff recommends approval by the Board for Green Bank to make loans or deposits up to an aggregate amount of $5 million as follows:

- Up to $2 million on an unsecured basis to C4C under a loan facility that would extend for a two and one-half year period (meaning a one-year draw period with the final loans being repaid 18 months from the end of the draw period), such loan facility being the "C4C Bridge Loan Facility"; and
- Up to $3 million in deposits to all other Smart-E lenders (credit unions or community banks) for periods and amounts that would approximately match the size and maturity of the underlying Smart-E Solar Option Loans (the "Bridge Loan Deposits").

NOW, therefore be it:

RESOLVED, that the Board approves the C4C Bridge Loan Facility and the Bridge Loan Deposits, to be implemented generally as described in the Concept Memo;

RESOLVED, that the President of the Green Bank; and any other duly authorized officer of the Green Bank, is authorized to execute and deliver, any contract or other legal instrument necessary to effect the C4C Bridge Loan Facility on such terms and conditions as are materially consistent with the Concept Memo; and

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

    b. IPC Loan Facility – Modification

Resolution #17

WHEREAS, the Connecticut Green Bank ("Green Bank") has an existing partnership with Inclusive Prosperity Capital, Inc. ("IPC") to lessen the burden of government, and to protect, promote and preserve the environment by, among other things, furthering the purpose of the Green Bank as described in Connecticut General Statute Section 16-245n(d)(1)(B);

WHEREAS, on June 13, 2018, the Green Bank Board of Directors ("Board") approved a Memorandum of Understanding ("MOU") governing the Green Bank's partnership with IPC as part of Green Bank's long-term sustainability plan and on June 25, 2021 extended pursuant to a strategic selection the MOU to end on June 30, 2026 (the "MOU Extension");

WHEREAS, the MOU included a Revolving Line of Credit ("RLC") intended to support IPC startup and operational costs for an amount not to exceed $150,000 outstanding and with a maturity date of June 30, 2021, which maturity date was extended to June 30, 2024 and the not to exceed amount was increased to $1,000,000 by the Board at a meeting duly held on December 18, 2020;

WHEREAS, the maturity date of the RLC was not extended at the time of the MOU Extension and, pursuant to a request by IPC, Green Bank staff has recommended to the Board to extend the maturity date of the RLC to June 30, 2026 (the "Amended Maturity Date") in line with the end of the MOU as more fully explained in a memorandum to the Board dated April 18, 2023 (the "Board Memo");

WHEREAS, since August 2020, IPC has drawn on and has remained current and in good-standing on all repayments associated with the RLC;

NOW, therefore be it:

RESOLVED, that the Board approves of the extended RLC with a maturity date of June 30, 2026 consistent with the Board Memo;

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

c. Skyview Loan Facility – Modification

Resolution #18

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

WHEREAS, the Green Bank Board of Directors (the "Board") approved at its meeting held on March 25, 2020 a senior secured loan facility ("Original Term Loan") transaction with a Skyview Ventures special purpose vehicle ("Skyview") in an amount not to exceed $2.3M as a Strategic Selection and Award pursuant to the Green Bank Operating Procedures Section XII given the special capabilities, uniqueness, strategic importance, urgency and timeliness, and multi-phase characteristics of the Original Term Loan transaction. The Original Term Loan was first

expanded to $3.5M, and then to $7M (the (Existing Term Loan"), as approved by the Board at its meetings on April 24 and October 23, 2020, respectively;

WHEREAS, as of November 2021, approximately 70% of the Existing Term Loan commitment has been advanced to finance PPA projects;

WHEREAS, in light of the financial incentives available (starting 2022) for the deployment of energy storage solutions ("ESS") projects, Skyview is developing a pipeline of ESS projects in CT; and

WHEREAS, given the rate of utilization of the Existing Term Loan by Skyview for Skyview PPA projects, and the opportunity to develop ESS projects, following diligence of Green Bank staff, Green Bank staff proposes increasing the Existing Term Loan size and amending its terms to allow for ESS project financing, and requests Board approval.

WHEREAS, the Green Bank Deployment Committee recommended that the Board approve of the staff's request to amend and restate the Board's existing approval of the Existing Term Loan transaction as described in the Project Qualification Memo submitted by the staff to the Deployment Committee and dated November 12, 2021 (the "Deployment Committee Memorandum")

NOW, therefore be it:

RESOLVED, that the Board approves staff's request to amend and restate the Board's existing approval of the Existing Term Loan transaction as described in the "Deployment Committee Memorandum and consistent with the memorandum to the Board dated December 10, 2021 (the "Memorandum") to include ESS projects to be qualified for future advances within the increased limit of $10,000,000 on terms and conditions substantially consistent with those described in the Memorandum as a Strategic Selection and Award pursuant to the Green Bank Operating Procedures Section XII given the special capabilities, uniqueness, strategic importance, urgency and timeliness, and multi-phase characteristics of the Existing Term Loan transaction.

7. Environmental Infrastructure Updates – 5 minutes

8. Other Business – 45 minutes

    a. Residential Solar Investment Program: 2012-2022 Program Impact Evaluation and Future Recommendations
    b. Other Business

Adjourn

Join the meeting online at
https://meet.goto.com/755983709
Or call in using your telephone:
Dial (646) 749-3122

Access Code: 755-983-709

Next Regular Meeting: Friday, June 23, 2023 from 9:00-11:00 a.m.
Colonel Albert Pope Room at the
Connecticut Green Bank, 75 Charter Oak Avenue, Hartford

ANNOUNCEMENTS

- **Mute Microphone** – in order to prevent background noise that disturbs the meeting, if you aren't talking, please mute your microphone or phone.

- **Chat Box** – if you aren't being heard, please use the chat box to raise your hand and ask a question.

- **Recording Meeting** – we continue to record and post the board meetings.

- **State Your Name** – for those talking, please state your name for the record.

CONNECTICUT GREEN BANK SM

Board of Directors Meeting

April 21, 2023

Online Meeting

Board of Directors

Agenda Item #1

Call to Order

Board of Directors

Agenda Item #2

Public Comments

Board of Directors

Agenda Item #3

Consent Agenda

Consent Agenda

Resolutions #1 through #7

1. **Meeting Minutes** – approve meeting minutes of March 17, 2023
2. **Under $500,000 and No More than $1,000,000** – three (3) staff approved C-PACE transactions totaling about $985,000 consistent with Comprehensive Plan and Budget
3. **C-PACE Transactions** – additional for Board approval, including:

Resolution #	Municipality	Installed Capacity	Amount	Interest Rate	Term
3	Danbury	232	$564,528	5.75%	20
4	East Hartford	223	$491,537	5.25%	20
5	Groton	239	$552,567	5.75%	20
6	Mystic	161	$595,435	5.75%	20
7	Stamford	185	$536,095	5.75%	20
	Total	**1,040 kW**	**$2,740,162**		

Consent Agenda (cont'd)

Resolution #8

8. **C-PACE Extension** – extension of time to close for previously approved C-PACE project

- **FY23 Q3 Progress to Targets** – for Incentive and Financing Programs, including progress towards Justice 40 goals
- **Under $100,000 and No More than $500,000** – staff approved restructured transactions (i.e., no transaction – just report out)

Board of Directors

Agenda Item #4a

Financing Program Updates and Recommendations

Progress to Targets

Financing Programs Updates

Through Q3 of FY23

CONNECTICUT GREEN BANK

Progress to Targets

ProgramSegment	Project Counter Actual	Project Counter Target	% of Target	Capital Deployed Actual	Capital Deployed Target	% of Target	MW Actual	MW Target	% of Target
Financing	655	882	74.3%	$38,280,280	$64,202,500	59.6%	1.8	7.6	23.1%

Progress to Targets

Program2	Project Counter Actual	Project Counter Target	% of Target	Capital Deployed Actual	Capital Deployed Target	% of Target	MW Actual	MW Target	% of Target
Commercial Lease	4	19	21.1%	$1,848,950	$13,710,000	13.5%	1.3	7.6	16.6%
CPACE	7	23	30.4%	$24,924,582	$31,000,000	80.4%	0.5	0.0	
Multi-Family Health and Safety		1			$892,500			0.0	
Multi-Family Term	1	6	16.7%	$400,000	$1,380,000	29.0%		0.6	
SBEA	643	839	76.6%	$11,106,747	$18,600,000	59.7%		0.0	

Vulnerable Community (excluding SBEA)

Vintage Vulnerable Community ProgramSegment	Not Vulnerable Capital Deployed	% of Total	Vulnerable Capital Deployed	% of Total	**Total Capital Deployed**	**% of Total**
Financing	$9,241,007	34.01%	$17,932,525	65.99%	**$27,173,532**	**100.00%**

Vulnerable Community (excluding SBEA)

Vintage Vulnerable Community ProgramName	Not Vulnerable Capital Deployed	% of Total	Vulnerable Capital Deployed	% of Total	**Total Capital Deployed**	**% of Total**
Commercial Lease	$1,848,950	100.00%			**$1,848,950**	**100.00%**
CPACE	$7,392,057	29.66%	$17,532,525	70.34%	**$24,924,582**	**100.00%**
Multi-Family Term			$400,000	100.00%	**$400,000**	**100.00%**

Board of Directors

Agenda Item #4b

C-PACE Transaction – Branford

20 Elm Street, Branford

Ratepayer Payback

- **$1,003,474** for a total of rooftop 330.2 kW solar pv (2 systems) and 2 roof replacements
- Projected savings are 31,483 **MMBtu** versus **$1,003,474** of ratepayer funds at risk.

- Ratepayer funds will be paid back in one of the following ways
  - (a) through a take-out by a private capital provider at the end of construction (project completion);
  - (b) subsequently, when the loan is sold down to a private capital provider; or
  - (c) repayment of the C-PACE benefit assessment by the property owner.

20 Elm Street, Branford

Terms and Conditions

- **$1,003,474** construction loan at 5% and term loan set at a fixed 5.75% over the 20-year term
- **$1,003,474** loan against the property

[redacted]

20 Elm Street, Branford

The Five W's

- **What?** Receive approval for a $1,003,474 construction and term loans under the C-PACE program to Elm Harbor Realty LLC to finance the construction of specified energy upgrades.
- **When?** Project to commence 2023.
- **Why?** Allow Green Bank to finance this C-PACE transaction, continue to build momentum in the market, and potentially provide term financing for this project until Green Bank sells it along with its other loan positions in C-PACE transactions.
- **Who?** Elm Harbor Realty LLC, the property owner of 20 Elm Street, Branford, CT.
- **Where?** 20 Elm Street, Branford, CT 06405

20 Elm Street, Branford

Project Tear Sheet

CONNECTICUT GREEN BANK

Address	20 Elm Street, Branford, CT 06405			
Owner	Elm Harbor Realty LLC			
Proposed Assessment	$1,003,474.00			
Term (*years*)	20			
Term Remaining (*months*)	Pending construction completion			
Annual Interest Rate	5.75%			
Annual C-PACE Assessment	$85,096.08			
Savings-to-Investment Ratio	1.74			
Average DSCR	[redacted]			
Lien-to-Value	[redacted]			
Loan-to-Value	[redacted]			
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year		1,337	1,337
	Over EUL		31,483	31,483
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year		$97,204.00	$97,204.00
	Over EUL		$2,916,105.00	$2,916,105.00
Objective Function	32.3 kBTU / ratepayer dollar at risk			
Location	Branford, CT			
Type of Building	Industrial			
Year of Build	2002			
Building Size (*sf*)	61,127			
Year Acquired by Owner	9/17/2003			
As-Complete Appraised Value	[redacted]			
Mortgage Lender Consent	[redacted]			
Proposed Project Description	330.2 kW DC PV system - 2 roofs			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Deployment Committee Approval			
Energy Contractor	[redacted]			

20 Elm Street, Branford

Key Financial Metrics

Table 1. Financial Metrics over EUL	
Savings to Investment Ratio (SIR)	1.82
Project cost	$974,800
Amount financed	$1,003,474
Gross total cost savings over EUL	$2,916,105
Total PACE + O&M payments over EUL	$1,676,127
% financed	100%
Owner equity contribution	$0
Interest rate	5.750%
Finance term, years	20

Table 2. Savings Summary	
Effective useful life – EUL (years)	30
Gross project cost	$974,800
Closing cost	$28,674
Financed amount (including closing costs)	$1,003,474
First year electric energy generation (kWh/yr)	391,595
First year electric energy generation (MMBtu/yr)	1,337
Total electric generation over EUL (MMBtu)	31,483
Netting tariff REC revenue (total over 20 years) ($)	$390,350
Netting tariff electric revenue (total over 20 years) ($)	$2,283,505
Total revenue from generation (total over 20 years) ($)	$2,673,855
Federal ITC	$242,250
MACRS for solar	$0

Resolution #5

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Green Bank Board of Directors (the "Board") dated April 14, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board;

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

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

Board of Directors

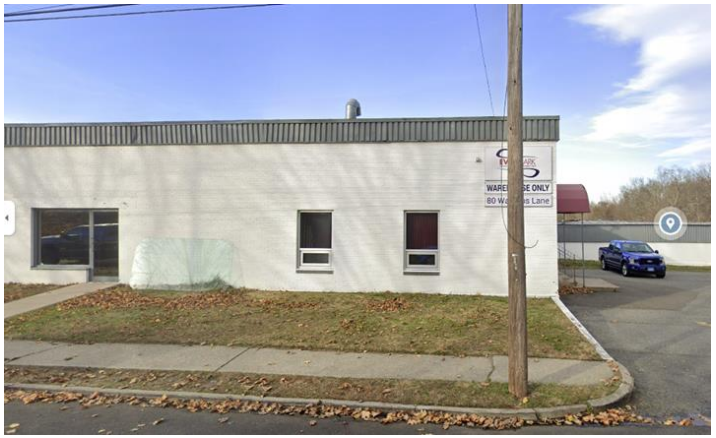
Agenda Item #4c

C-PACE Transaction – Milford

80 Wampus Lane, Milford

Ratepayer Payback

- **$2,318,539** for a 1.25MW (DC) Solar PV System
- Projected savings are **141,348 MMBtu** versus **$2,318,539** of ratepayer funds at risk.



- Ratepayer funds will be paid back in one of the following ways
  - (a) through a take-out by a private capital provider at the end of construction (project completion);
  - (b) subsequently, when the loan is sold down to a private capital provider; or
  - (c) repayment of the C-PACE benefit assessment by the property owner.

80 Wampus Lane, Milford

Terms and Conditions

- **$2,318,539** construction loan at 5% and term loan set at a fixed 5.75% over the 20-year term
- **$2,318,539** loan against the property

80 Wampus Lane, Milford

The Five W's

- **What?** Receive approval for a $2,318,539 construction and term loans under the C-PACE program to Milford Holdings LLC to finance the construction of specified energy upgrades.
- **When?** Project to commence 2023.
- **Why?** Allow Green Bank to finance this C-PACE transaction, continue to build momentum in the market, and potentially provide term financing for this project until Green Bank sells it along with its other loan positions in C-PACE transactions.
- **Who?** Milford Holdings LLC, the property owner of 80 Wampus Lane, Milford, CT.
- **Where?** 80 Wampus Lane, Milford, CT 06460

80 Wampus Lane, Milford

Project Tear Sheet

CONNECTICUT GREEN BANK

Address	80 Wampus Lane, Milford, CT 06460			
Owner	Milford Holdings LLC			
Proposed Assessment	$2,318,539			
Term (*years*)	20			
Term Remaining (*months*)	Pending construction completion			
Annual Interest Rate	5.75			
Annual C-PACE Assessment	$202,324			
Savings-to-Investment Ratio	1.61			
Average DSCR	[redacted]			
Lien-to-Value				
Loan-to-Value				
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year		5,860	5,860
	Over EUL		141,348	141,348
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year		$253,258.00	$253,258.00
	Over EUL		$6,317,376.00	$6,317,376.00
Objective Function	60.96 kBTU / ratepayer dollar at risk			
Location	Milford, CT			
Type of Building	Industrial			
Year of Build	1942			
Building Size (*sf*)	167993			
Year Acquired by Owner	5/24/2022			
As-Complete Appraised Value	[redacted]			
Mortgage Lender Consent				
Proposed Project Description	1.25MW DC Solar PV system			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Board of Director Approval			
Energy Contractor	[redacted]			

80 Wampus Lane, Milford

Key Financial Metrics

Table 1. Financial Metrics over EUL	
Savings to Investment Ratio (SIR)	1.61
Project cost	$2,268,539
Amount financed	$2,318,539
Gross total cost savings over EUL	$6,317,376
Total PACE + O&M payments over EUL	$3,931,551
% financed	100%
Owner equity contribution	$0
Interest rate	5.750%
Finance term, years	20

Table 2. Savings Summary	
Effective useful life – EUL (years)	30
Gross project cost	$2,268,539
Closing cost	$50,000
Financed amount (including closing costs)	$2,318,539
First year electric energy generation (kWh/yr)	1,717,000
First year electric energy generation (MMBtu/yr)	5,860
Total electric generation over EUL (MMBtu)	141,348
First year revenue from generation ($/yr)	$253,258
EUL revenue from generation ($)	$4,923,359
Federal ITC	$680,562
MACRS for solar	$713,456

Resolution #5

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Green Bank Board of Directors (the "Board") dated April 14, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board;

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

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

Board of Directors

Agenda Item #4d

C-PACE Transaction – Southington

44 Robert Porter Rd, Southington

Ratepayer Payback

- **$1,687,886** for a total of 516 kW in rooftop solar PV (2 systems) & roof replacement
- Projected savings are **44,920 MMBtu** versus **$1,687,886** of ratepayer funds at risk.

- Ratepayer funds will be paid back in one of the following ways
  - (a) through a take-out by a private capital provider at the end of construction (project completion);
  - (b) subsequently, when the loan is sold down to a private capital provider; or
  - (c) repayment of the C-PACE benefit assessment by the property owner.

44 Robert Porter Rd, Southington

Terms and Conditions

- **$1,687,886** construction loan at 5% and term loan set at a fixed 5.75% over the 20-year term
- **$1,687,886** loan against the property

[redacted]

44 Robert Porter Rd, Southington

The Five W's

- **What?** Receive approval for a $1,687,886 construction and term loans under the C-PACE program to Car-Sue Realty, LLC to finance the construction of specified energy upgrade
- **When?** Project to commence 2023
- **Why?** Allow Green Bank to finance this C-PACE transaction, continue to build momentum in the market, and potentially provide term financing for this project until Green Bank sells it along with its other loan positions in C-PACE transactions.
- **Who?** Car-Sue Realty, LLC, the property owner of 44 Robert Porter Rd, Southington, CT
- **Where?** 44 Robert Porter Rd, Southington, CT

44 Robert Porter Rd, Southington

Project Tear Sheet

CONNECTICUT GREEN BANK

Address	44 Robert Porter Road, Southington, CT 06489			
Owner	Car-Sue Realty LLC			
Proposed Assessment	$1,687,886.00			
Term (*years*)	20			
Term Remaining (*months*)	Pending construction completion			
Annual Interest Rate[1]	5.75			
Annual C-PACE Assessment	$143,108.00			
Savings-to-Investment Ratio	1.056			
Average DSCR	[redacted]			
Lien-to-Value				
Loan-to-Value				
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year	0	1,907	1,907
	Over EUL	0	44,920	44920
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year	$0.00	$123,443.00	$123,443.00
	Over EUL	$0.00	$3,086,075.00	$3,086,075.00
Objective Function	37.58 kBTU / ratepayer dollar at risk			
Location	Southington, CT			
Type of Building	Industrial			
Year of Build	1988			
Building Size (*sf*)	48,085			
Year Acquired by Owner	7/21/2017			
As-Complete Appraised Value[2]	[redacted]			
Mortgage Lender Consent				
Proposed Project Description	516 kW solar servicing two separate electrical services and making portions of the roof solar ready			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Deployment Committee Approval			
Energy Contractor	[redacted]			

44 Robert Porter Rd, Southington

Key Financial Metrics

CONNECTICUT GREEN BANK

Table 1. Financial Metrics over EUL	
Savings to Investment Ratio (SIR)	1.06
Project cost	$1,647,437
Amount financed	$1,687,886
Gross total cost savings over EUL	$3,086,075
Total PACE + O&M payments over EUL	$2,922,151
% financed	100%
Owner equity contribution	$0
Interest rate	5.750%
Finance term, years	20

Table 2. Savings Summary	
Effective useful life – EUL (years)	25
Gross project cost	$1,647,437
Closing cost	$40,449
Financed amount (including closing costs)	$1,687,886
First year electric energy generation (kWh/yr)	558,725
First year electric energy generation (MMBtu/yr)	1,907
Total electric generation over EUL (MMBtu)	44,920
Netting tariff REC revenue (total over 20 years) ($)	$560,146
Netting tariff electric revenue (total over 20 years) ($)	$1,594,505
Total revenue from generation (total over 20 years) ($)	$2,154,651
Federal ITC	$448,920
MACRS for solar	$267,107

Resolution #11

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated April 21, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

Board of Directors

Agenda Item #4e

C-PACE Transaction – South Windsor (420)

420 Ellington Rd, South Windsor

Ratepayer Payback

- **$3,225,500** for a 1.45 MW rooftop solar PV system
- Projected savings are **119,236 MMBtu** versus **$3,225,500** of ratepayer funds at risk.

- Ratepayer funds will be paid back in one of the following ways
  - (a) through a take-out by a private capital provider at the end of construction (project completion);
  - (b) subsequently, when the loan is sold down to a private capital provider; or
  - (c) repayment of the C-PACE benefit assessment by the property owner.

420 Ellington Rd, South Windsor

Terms and Conditions

- **$3,225,500** construction loan at 5% and term loan set at a fixed 5.75% over the 20-year term
- **$3,225,500** loan against the property

420 Ellington Rd, South Windsor

The Five W's

- **What?** Receive approval for a $3,225,500 construction and term loans under the C-PACE program to Admiral Holdings CT LLC to finance the construction of specified energy upgrade
- **When?** Project to commence 2023
- **Why?** Allow Green Bank to finance this C-PACE transaction, continue to build momentum in the market, and potentially provide term financing for this project until Green Bank sells it along with its other loan positions in C-PACE transactions.
- **Who?** Admiral Holdings CT LLC, the property owner of 420 Ellington Rd, South Windsor, CT
- **Where?** 420 Ellington Rd, South Windsor, CT

420 Ellington Rd, South Windsor

Project Tear Sheet

Address	420 Ellington Road, South Windsor, CT 06074			
Owner	Admiral Holdings CT LLC			
Proposed Assessment	$3,225,500.00			
Term (*years*)	20			
Term Remaining (*months*)	Pending construction completion			
Annual Interest Rate[1]	5.75%			
Annual C-PACE Assessment	$273,474.00			
Savings-to-Investment Ratio	1.35			
Average DSCR	[redacted]			
Lien-to-Value				
Loan-to-Value				
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year	0	5,062	5,062
	Over EUL	0	119,236	119,236
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year	$0.00	$344,957.80	$344,957.80
	Over EUL	$0.00	$6,899,156.00	$6,899,156.00
Objective Function	36.97 kBTU / ratepayer dollar at risk			
Location	South Windsor, CT			
Type of Building	Warehouse			
Year of Build	1971			
Building Size (*sf*)	17,760			
Year Acquired by Owner	1/1/2022			
As-Complete Appraised Value[2]	[redacted]			
Mortgage Lender Consent	[redacted]			
Proposed Project Description	1.45 MW solar PV system			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Deployment Committee Approval			
Energy Contractor	[redacted]			

420 Ellington Rd, South Windsor

Key Financial Metrics

Table 1. Financial Metrics over EUL	
Savings to Investment Ratio (SIR)	1.26
Project cost	$3,175,500
Amount financed	$3,225,500
Gross total cost savings over EUL	$6,899,156
Total PACE + O&M payments over EUL	$5,469,487
% financed	100%
Owner equity contribution	$0
Interest rate	5.750%
Finance term, years	20

Table 2. Savings Summary	
Effective useful life – EUL (years)	20
Gross project cost	$3,175,500
Closing cost	$50,000
Financed amount (including closing costs)	$3,225,500
First year electric energy generation (kWh/yr)	1,483,103
First year electric energy generation (MMBtu/yr)	5,062
Total electric generation over EUL (MMBtu)	119,236
First year revenue from generation ($/yr)	$270,666
EUL revenue from generation ($)	$5,163,746
Federal ITC	$952,650
MACRS for solar	$782,761

Resolution #12

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated April 21st, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

Board of Directors

Agenda Item #4f

C-PACE Transaction – South Windsor (688)

688 Sullivan Ave, South Windsor

Ratepayer Payback

- **$710,783** for a 287.9 kW rooftop solar PV system
- Projected savings are **20,123 MMBtu** versus **$710,783** of ratepayer funds at risk.

- Ratepayer funds will be paid back in one of the following ways
  - (a) through a take-out by a private capital provider at the end of construction (project completion);
  - (b) subsequently, when the loan is sold down to a private capital provider; or
  - (c) repayment of the C-PACE benefit assessment by the property owner.

688 Sullivan Ave, South Windsor

Terms and Conditions

- **$710,783** construction loan at 5% and term loan set at a fixed 5.75% over the 20-year term
- **$710,783** loan against the property

[redacted]

688 Sullivan Ave, South Windsor

The Five W's

- **What?** Receive approval for a **$**710,783 construction and term loans under the C-PACE program to Admiral Holdings CT LLC to finance the construction of specified energy upgrade
- **When?** Project to commence 2023
- **Why?** Allow Green Bank to finance this C-PACE transaction, continue to build momentum in the market, and potentially provide term financing for this project until Green Bank sells it along with its other loan positions in C-PACE transactions.
- **Who?** Admiral Holdings CT LLC, the property owner of 688 Sullivan Ave, South Windsor CT
- **Where?** 688 Sullivan Ave, South Windsor CT

688 Sullivan Ave, South Windsor

Project Tear Sheet

Address	688 Sullivan Avenue, South Windsor, CT 06074			
Owner	Admiral Holdings CT LLC			
Proposed Assessment	$710,783.00			
Term (*years*)	20			
Term Remaining (*months*)	Pending construction completion			
Annual Interest Rate[1]	5.75%			
Annual C-PACE Assessment	$60,264			
Savings-to-Investment Ratio	1.30			
Average DSCR	[redacted]			
Lien-to-Value				
Loan-to-Value				
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year	0	1,055	1,055
	Over EUL	0	20,123	20,123
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year	$0.00	$78,126.85	$78,126.85
	Over EUL	$0.00	$1,562,537.00	$1,562,537.00
Objective Function	28.31 kBTU / ratepayer dollar at risk			
Location	South Windsor, CT			
Type of Building	Warehouse			
Year of Build	1986			
Building Size (*sf*)	34,840			
Year Acquired by Owner	2022			
As-Complete Appraised Value[2]	[redacted]			
Mortgage Lender Consent				
Proposed Project Description	287.9 kW solar PV system			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Deployment Committee Approval			
Energy Contractor	[redacted]			

688 Sullivan Ave, South Windsor

Key Financial Metrics

Table 1. Financial Metrics over EUL	
Savings to Investment Ratio (SIR)	1.30
Project cost	$691,008
Amount financed	$710,783
Gross total cost savings over EUL	$1,562,537
Total PACE + O&M payments over EUL	$1,205,277
% financed	100%
Owner equity contribution	$0
Interest rate	5.750%
Finance term, years	20

Table 2. Savings Summary	
Effective useful life – EUL (years)	20
Gross project cost	$691,008
Closing cost	$19,775
Financed amount (including closing costs)	$710,783
First year electric energy generation (kWh/yr)	309,044
First year electric energy generation (MMBtu/yr)	1,055
Total electric generation over EUL (MMBtu)	20,123
First year revenue from generation ($/yr)	$62,109
EUL revenue from generation ($)	$1,184,901
Federal ITC	$207,302
MACRS for solar	$170,333

Resolution #13

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated April 21st, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

Board of Directors

Agenda Item #4g

C-PACE Transaction – Stonington

62 Maritime Drive, Mystic
Ratepayer Payback

- **$3,701,715** for lighting, insulation, HVAC controls and 298.6 kW solar PV system
- Projected savings are **111,327 MMBtu** versus **$3,701,715** of ratepayer funds at risk.

- Ratepayer funds will be paid back in one of the following ways
  - (a) through a take-out by a private capital provider at the end of construction (project completion);
  - (b) subsequently, when the loan is sold down to a private capital provider; or
  - (c) repayment of the C-PACE benefit assessment by the property owner.

62 Maritime Drive, Mystic

Terms and Conditions

- **$3,701,715** construction loan at 5% and term loan set at a fixed 5.60% over the 17-year term
- **$3,701,715** loan against the property

[redacted]

62 Maritime Drive, Mystic

The Five W's

- **What?** Receive approval for a $3,701,715 construction and term loans under the C-PACE program to Enko Realty LLC to finance the construction of specified energy upgrades.
- **When?** Project to commence 2023.
- **Why?** Allow Green Bank to finance this C-PACE transaction, continue to build momentum in the market, and potentially provide term financing for this project until Green Bank sells it along with its other loan positions in C-PACE transactions.
- **Who?** Enko Realty LLC, the property owner of 62 Maritime Drive, Stonington, CT.
- **Where?** 62 Maritime Drive, Stonington, CT.

62 Maritime Drive, Mystic

Project Tear Sheet

CONNECTICUT GREEN BANK

Address	62 Maritime Dr., Mystic, CT 06106	
Owner	Enko Realty., LLC	
Proposed Assessment	$3,701,715	
Term (*years*)	17	
Term Remaining (*months*)	Pending construction completion	
Annual Interest Rate[1]	5.60%	
Annual C-PACE Assessment	$348,046	
Savings-to-Investment Ratio	1.56	
Average DSCR	[redacted]	
Lien-to-Value		
Loan-to-Value		
Projected Energy Savings (mmBTU)		Total
	First year	6,648
	Over EUL	111,327
Estimated Cost Savings (incl. ZRECs and tax benefits)	First year	$887,868
	Over EUL	$9,017,724
Objective Function	30.07 kBTU / ratepayer dollar at risk	
Location	Mystic	
Type of Building	Industrial	
Year of Build	1992	
Building Size (*sf*)	88,258	
Year Acquired by Owner	2020	
As-Complete Appraised Value[2]	[redacted]	
Mortgage Lender Consent	[redacted]	
Proposed Project Description	New and Retrofit Lighting, Insulation, HVAC & Controls, and a 298.6kw DC Solar PV system	
Est. Date of Construction Completion	Pending closing	
Current Status	Awaiting Board of Directors Approval	
Energy Contractor	[redacted]	

62 Maritime Drive, Mystic

Key Financial Metrics

Table 1. Financial Metrics over EUL	
Savings to Investment Ratio (SIR)	1.32
Project cost	$2,893,024
Amount financed	$2,958,385
Gross total cost savings over EUL	$6,102,036
Total PACE + O&M payments over EUL	$4,624,994
% financed	100%
Owner equity contribution	$0
Interest rate	5.600%
Finance term, years	17

Table 2. Measure Energy Savings Summary

Table 2. Savings Summary	
Effective useful life – EUL (years)	17
Gross project cost	$2,893,024
Closing cost	$65,360
Financed amount (including closing costs)	$2,958,385
Utility Incentives	$714,986
First year electric energy savings (kWh/yr)	1,584,533
First year electric energy savings (MMBtu/yr)	5,406
Total electric savings over EUL (mmBtu)	81,886
First year energy cost savings ($/yr)	$334,032
Total energy cost savings over EUL ($)	$6,102,036

Board of Directors

Agenda Item #4h

C-PACE Transaction – Windsor

70 Deerfield Road, Windsor

Ratepayer Payback

- **$765,948** for a 243 kW rooftop solar PV system, roof replacement & LED lighting
- Projected savings are **23,424 MMBtu** versus **$765,948** of ratepayer funds at risk.

- Ratepayer funds will be paid back in one of the following ways
  - (a) through a take-out by a private capital provider at the end of construction (project completion);
  - (b) subsequently, when the loan is sold down to a private capital provider; or
  - (c) repayment of the C-PACE benefit assessment by the property owner.

70 Deerfield Road, Windsor

Terms and Conditions

- **$765,948** construction loan at 5% and term loan set at a fixed 5.75% over the 20-year term
- **$765,948** loan against the property

[redacted]

70 Deerfield Road, Windsor

The Five W's

- **What?** Receive approval for a **$**765,948 construction and term loans under the C-PACE program to Easter Seals Greater Hartford Rehabilitation Center Inc to finance the construction of specified energy upgrade
- **When?** Project to commence 2023
- **Why?** Allow Green Bank to finance this C-PACE transaction, continue to build momentum in the market, and potentially provide term financing for this project until Green Bank sells it along with its other loan positions in C-PACE transactions.
- **Who?** Easter Seals Greater Hartford Rehabilitation Center Inc, the property owner of 70 Deerfield Road, Windsor, CT
- **Where?** 70 Deerfield Road, Windsor, CT

70 Deerfield Road, Windsor

Project Tear Sheet

Address	70 Deerfield Road Windsor, CT 06112			
Owner	**Easter Seals Greater Hartford Rehabilitation Center Inc**			
Proposed Assessment	$765,948			
Term (*years*)	20			
Annual Interest Rate	5.75%			
Annual C-PACE Assessment	$64,941			
Savings-to-Investment Ratio	1.02x			
Average DSCR	[redacted]			
Lien-to-Value	[redacted]			
Loan-to-Value	[redacted]			
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year	105	1,145	1171
	Over EUL	524	22,900	23424
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year	$7,111.40	$62,776.30	$64,554.15
	Over EUL	$35,557	$1,255,526	$1,291,083
Objective Function	58.24 kBTU / ratepayer dollar at risk			
Location	Windsor, CT			
Type of Building	Non-Profit/Office			
Year of Build	1979			
Building Size (*sf*)	21,500 sf			
Year Acquired by Owner	1991			
As-Is Appraised Value[1]	[redacted]			
Mortgage Lender Consent	[redacted]			
Proposed Project Description	243 kW Solar PV, roof replacement & LED lighting			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Board Approval			
Energy Contractor	[redacted]			

70 Deerfield Road, Windsor

Key Financial Metrics

Table 1. Financial Metrics over EUL	
Savings to Investment Ratio (SIR)	1.02
Project cost	$744,828
Amount financed	$765,948
Gross total cost savings over EUL	$1,291,083
Total PACE + O&M payments over EUL	$1,263,683
% financed	100%
Owner equity contribution	$0
Interest rate	5.750%
Finance term, years	20

Table 2. Savings Summary	
Effective useful life – EUL (years)	28
Gross project cost	$744,828
Closing cost	$21,121
Financed amount (including closing costs)	$765,948
First year electric energy generation (kWh/yr)	284,843
First year electric energy generation (MMBtu/yr)	972
Total electric generation over EUL (MMBtu)	22,900
First year revenue from generation ($/yr)	$57,245
EUL revenue from generation ($)	$1,092,113
Federal ITC	$163,413
MACRS for solar	$0
Utility Incentives	$23,760
First year electric energy savings (kWh/yr)	30,713
First year electric energy savings (MMBtu/yr)	105
Total electric savings over EUL (mmBtu)	524
First year natural gas savings (mmBtu/yr)	0
Total natural gas savings over EUL (mmBtu)	0
First year other fuel savings (mmBtu/yr)	0
Total other fuel savings over EUL (mmBtu)	0
First year energy cost savings ($/yr)	$6,699
Total energy cost savings over EUL ($)	$35,557

Resolution #15

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Committee dated April 21, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

Board of Directors

Agenda Item #5a

Incentive Program Updates and Recommendations

Progress to Targets

Incentive Programs Updates

Through Q3 of FY23

CONNECTICUT GREEN BANK

Progress to Targets

ProgramSegment	Project Counter Actual	Project Counter Target	% of Target	Capital Deployed Actual	Capital Deployed Target	% of Target	MW Actual	MW Target	% of Target
Incentive	1,053	1,180	89.2%	$81,942,177	$97,369,623	84.2%	42.8	49.9	85.7%

Progress to Targets

Program2	Project Counter Actual	Project Counter Target	% of Target	Capital Deployed Actual	Capital Deployed Target	% of Target	MW Actual	MW Target	% of Target
Energy Storage Solutions	176	380	46.3%	$65,581,344	$82,375,000	79.6%	42.5	49.7	85.5%
Smart-E	877	960	91.4%	$16,360,834	$14,994,623	109.1%	0.3	0.2	140.0%

Vulnerable Community

Vintage Vulnerable Community ProgramSegment	Not Vulnerable Capital Deployed	% of Total	Vulnerable Capital Deployed	% of Total	**Total Capital Deployed**	**% of Total**
Incentive	$49,062,878	59.87%	$32,879,299	40.13%	**$81,942,177**	**100.00%**

Vulnerable Community

Vintage Vulnerable Community ProgramName	Not Vulnerable Capital Deployed	% of Total	Vulnerable Capital Deployed	% of Total	**Total Capital Deployed**	**% of Total**
Energy Storage Solutions	$39,118,478	59.65%	$26,462,866	40.35%	**$65,581,344**	**100.00%**
Smart-E	$9,944,400	60.78%	$6,416,433	39.22%	**$16,360,834**	**100.00%**
Total	**$49,062,878**	**59.87%**	**$32,879,299**	**40.13%**	$81,942,177	100.00%

Energy Storage Solutions Vulnerable Community by Market

Vintage Vulnerable Community	Market	Capital Deployed	% of Total
Vulnerable	C&I	$25,426,884	96.09%
Vulnerable	Residential	$1,035,982	3.91%

Board of Directors

Agenda Item #6a

Investment Updates and Recommendations

Capital for Change and EcoSmart Home Services

Smart-E Investment Tax Credit Loan

Smart-E Investment Tax Credit Loan

- Contractors have used “0% ITC Loans” (30%) side by side with the Smart-E Loan (70%) to allow customers to fund 100% of PV project
- Contractors love Smart-E flexibility and low rates
- Problem with the Smart-E Loan is that it doesn’t “reamortize” – i.e., the monthly payment is not lowered after a prepayment of the Smart-E Loan (such as from the ITC check from US Treasury)
- Contractors used a 3rd party capital source (now discontinued) to fund this 30% ITC payment that comes from the US Treasury in 12-18 months … on a “same as cash” basis for the Homeowner (i.e., 0% interest if paid within 18 months – but “explodes” to >20% if not paid … Contractor pays points for 0% rate)
- **SOLUTION: Smart-E “ITC” Loan that plugs this gap in the market – but needs Green Bank funding to enable the buydown to be affordable – supporting Homeowners, Contractors and Smart-E Lender**

Smart-E Investment Tax Credit Loan

Solar Contractor

Contractor pays "points" to Smart-E Lender to buydown customer interest rate to 0% for the **ITC Loan** "same as cash" period

Homeowner uses "Regular" and "ITC" loans to pay contractor for 100% of the Project

"Regular" Smart-E Loan for 70% of project

"ITC" Smart-E Loan for 30% of project

Homeowner uses Investment Tax Credit to repay ITC Loan

Homeowner gets 30% Investment Tax Credit from US Treasury in 12-18 months

Smart-E Lender uses ITC Loan repayment from Homeowner to repay Green Bank(*)

Green Bank lends (or places "linked deposit") with Smart-E Lender (at approx. 3% per annum) to enable reasonable buydown rate for contractor

CONNECTICUT GREEN BANK

(*) Smart-E Lender must repay Green Bank regardless of repayment by Homeowner of the ITC Loan within 18 months of a Homeowner loan advance on a "portfolio" basis

Resolution #16

NOW, therefore be it:

RESOLVED, that the Board approves the C4C Bridge Loan Facility and the Bridge Loan Deposits, to be implemented generally as described in the Concept Memo;

RESOLVED, that the President of the Green Bank; and any other duly authorized officer of the Green Bank, is authorized to execute and deliver, any contract or other legal instrument necessary to effect the C4C Bridge Loan Facility on such terms and conditions as are materially consistent with the Concept Memo; and

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

Board of Directors

Agenda Item #6b

Investment Updates and Recommendations

IPC Loan Facility – Modification

TIPC Loan Facility – Modification

- In Dec 2020 – Green Bank expanded the IPC revolving line of credit ("LOC") to $1m secured by the remaining fees payable to IPC under the PSAs pursuant to the MOU
- In June 2021 – Green Bank and IPC mutually extended the MOU (from June 2024 to June 2026) but did not at that time bring the LOC in line with the extended MOU
- IPC has requested that Green Bank bring the LOC in line with the MOU, which as originally contemplated will rachet down at the remaining PSA fees decline
- Green Bank would also change the borrowing base from LIBOR (being discontinued) to SOFR

TIPC Loan Facility – Modification

	RLC Limit (Existing)	RLC Limit (New)	Remaining PSA
Dec-22	$ 1,000,000	$ 1,000,000	$ 3,073,993
Mar-23	$ 850,000	$ 1,000,000	$ 2,732,438
Jun-23	$ 700,000	$ 1,000,000	$ 2,390,883
Sep-23	$ 550,000	$ 1,000,000	$ 2,049,328
Dec-23	$ 400,000	$ 1,000,000	$ 1,793,162
Mar-24	$ 250,000	$ 1,000,000	$ 1,536,996
Jun-24	$ 150,000	$ 1,000,000	$ 1,280,830
Sep-24	$ -	$ 1,000,000	$ 1,024,664
Dec-24	$ -	$ 850,000	$ 853,887
Mar-25	$ -	$ 675,000	$ 683,110
Jun-25	$ -	$ 500,000	$ 512,333
Sep-25	$ -	$ 325,000	$ 341,556
Dec-25	$ -	$ 250,000	$ 256,167
Mar-26	$ -	$ 150,000	$ 170,778
Jun-26	$ -	$ 75,000	$ 85,389

Resolution #17

NOW, therefore be it:

RESOLVED, that the Board approves of the extended RLC with a maturity date of June 30, 2026 consistent with the Board Memo;

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

Board of Directors

Agenda Item #6c

Investment Updates and Recommendations

Skyview Loan Facility – Modification

Skyview Facility Amendment

Background and rationale

- **Background** – Senior secured term loan facility with a special purpose vehicle ("Skyview SPV") 100% owned by Skyview Ventures LLC (commercial solar developer; in business since 2008)
  - Skyview SPV develops commercial solar power purchase agreement ("PPA") projects in CT;
  - $6.6M deployed to date; 41 PPA projects financed
- **Why amend?** – Skyview SPV has a contracted pipeline of [redacted] beginning construction imminently, and seeks construction financing
  - Current facility terms and conditions do not meet CGB requirements for a construction financing facility

Skyview Facility Amendment

Overview of controls & changes

- **Controls**
  - Use milestone financing (i.e., do not finance 'ahead' of stage of construction);
  - Only finance projects that have reached milestones, to be defined by CGB;
  - Ring fence assets to ensure that CGB can 'step in' to contracts and complete construction, then own projects, if needed; and
  - Increase frequency of review of parent financial statements.
- **Changes**
  - Add specific conditions for advancing construction financing;
  - Charge a higher interest rate on construction vs term financing; and
  - Construction finance advances mature when project goes live.

Resolution #18

NOW, therefore be it:

RESOLVED, that the Board approves staff's request to modify the Existing Term Loan transaction consistent with the memorandum to the Board dated April 14, 2023, to enable the financing of the construction of commercial solar projects.

RESOLVED, that the President of the Green Bank; and any other duly authorized officer of the Green Bank, is authorized to execute and deliver, any contract or other legal instrument necessary to effect the modification of Existing Term Loan on such terms and conditions as are materially consistent with the Board Memo; and

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

Board of Directors

Agenda Item #7

Environmental Infrastructure Updates

Welcome Aboard

Director of Environmental Infrastructure

Leigh Whelpton

Executive Director

Conservation Finance Network

Board of Directors

Agenda Item #8a

Other Business

RSIP 2012-2022 Program Impact Evaluation and Future Recommendations

RSIP Evaluation and Recommendations

Sustaining Success

Dan Streit | Slipstream

Lee Shaver | Slipstream

April 21, 2023

Objectives

Evaluate RSIP's Impact and Effectiveness

- Cumulative Impacts
- Trends
- Equitable delivery

Compare RSIP with Northeast Residential Solar Programs

- Capacity
- Cost-effectiveness
- Equitable adoption

Recommendations

- Post-RSIP Market Status
- Green Bank future role

Methodology

Background research

RSIP Data Analysis

- Energy (Capacity and Production)
- Investment (Public and Private)
- Avoided Emissions (GHG and Particulate)
- Economic Impact (Cost savings, Jobs, and Taxes)

External Data Analysis

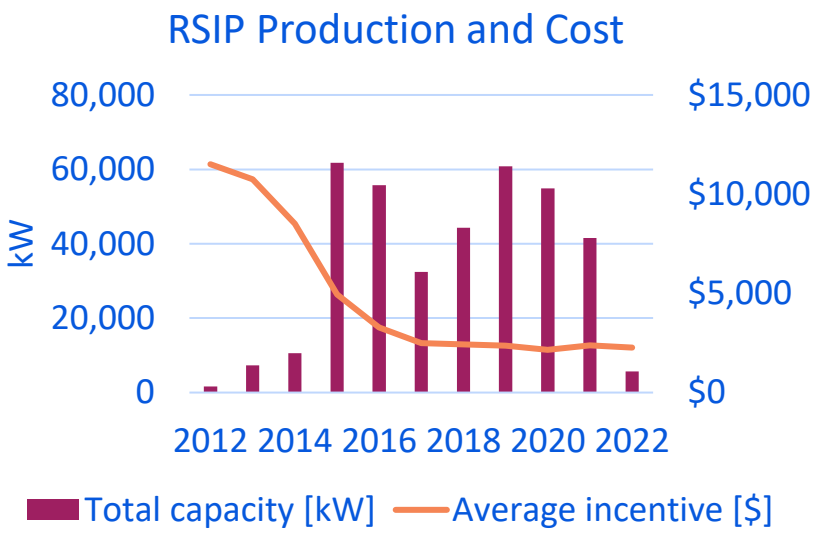
- Northeast state programs
- Regional adoption rates
- National trends

Stakeholder Interviews

- Electric utilities
- Solarize CT/SmartPower
- CT Solar and Storage Association
- Non-CT regulators and utilities

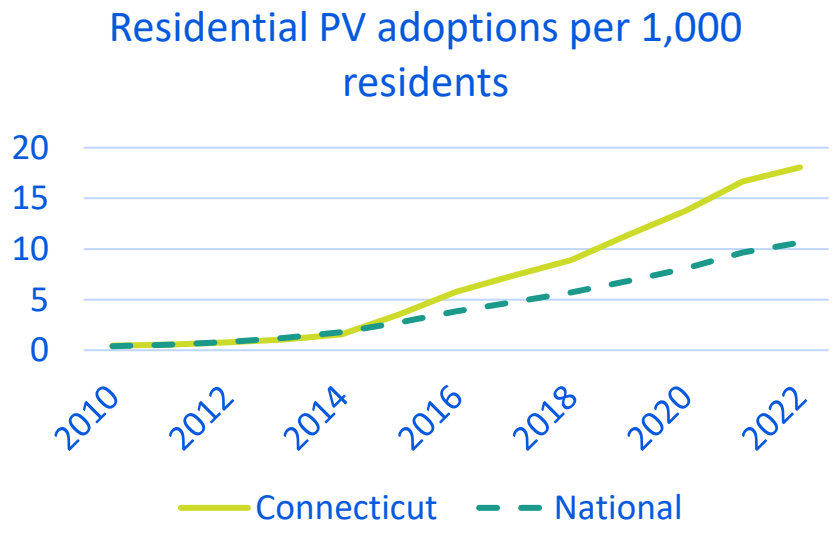
Results:
RSIP's Impact and Effectiveness

RSIP Production



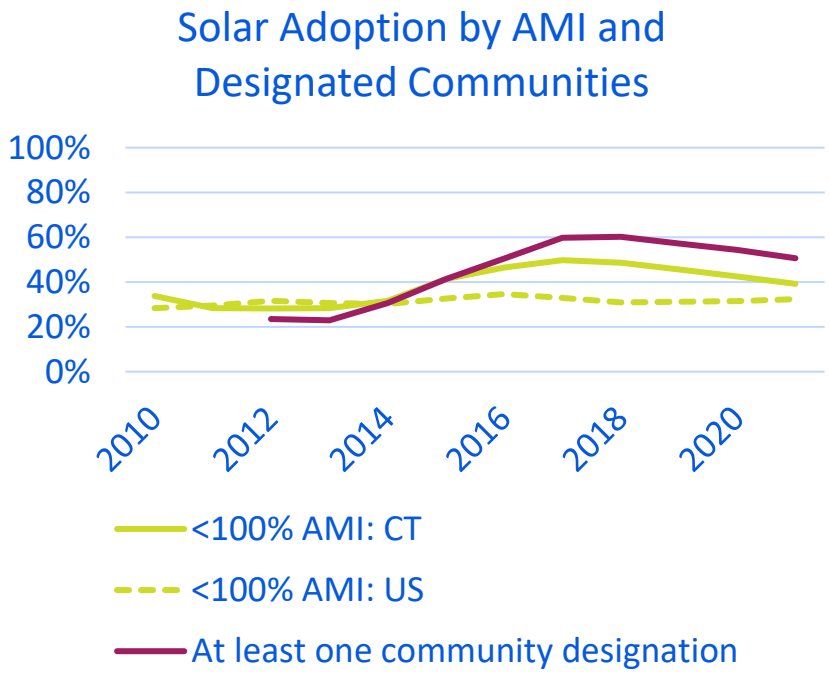
- RSIP's declining incentive blocks transformed the Connecticut market
- Initial high incentive investment jump-started state solar industry

PV adoption rate



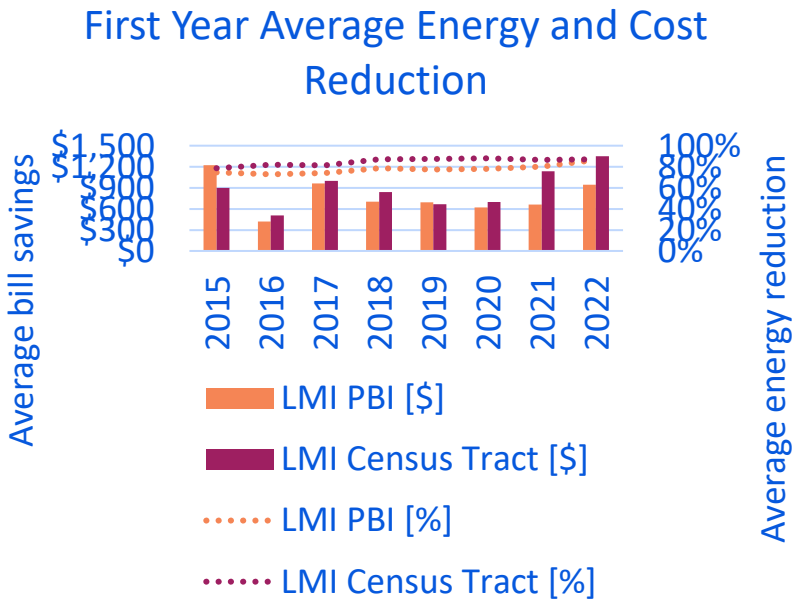
- Connecticut has exceeded the national rate of PV adoption since 2015
- Rate of adoption is increasing compared to national average

Adoption relative to income and community type



- Since 2015:
  - Adoption in communities below 100% AMI has exceeded US average
  - >50% of installations in designated communities
- Second most adoptions in <60% AMI bracket
- Offset 80%+ of electricity consumption for LMI participants

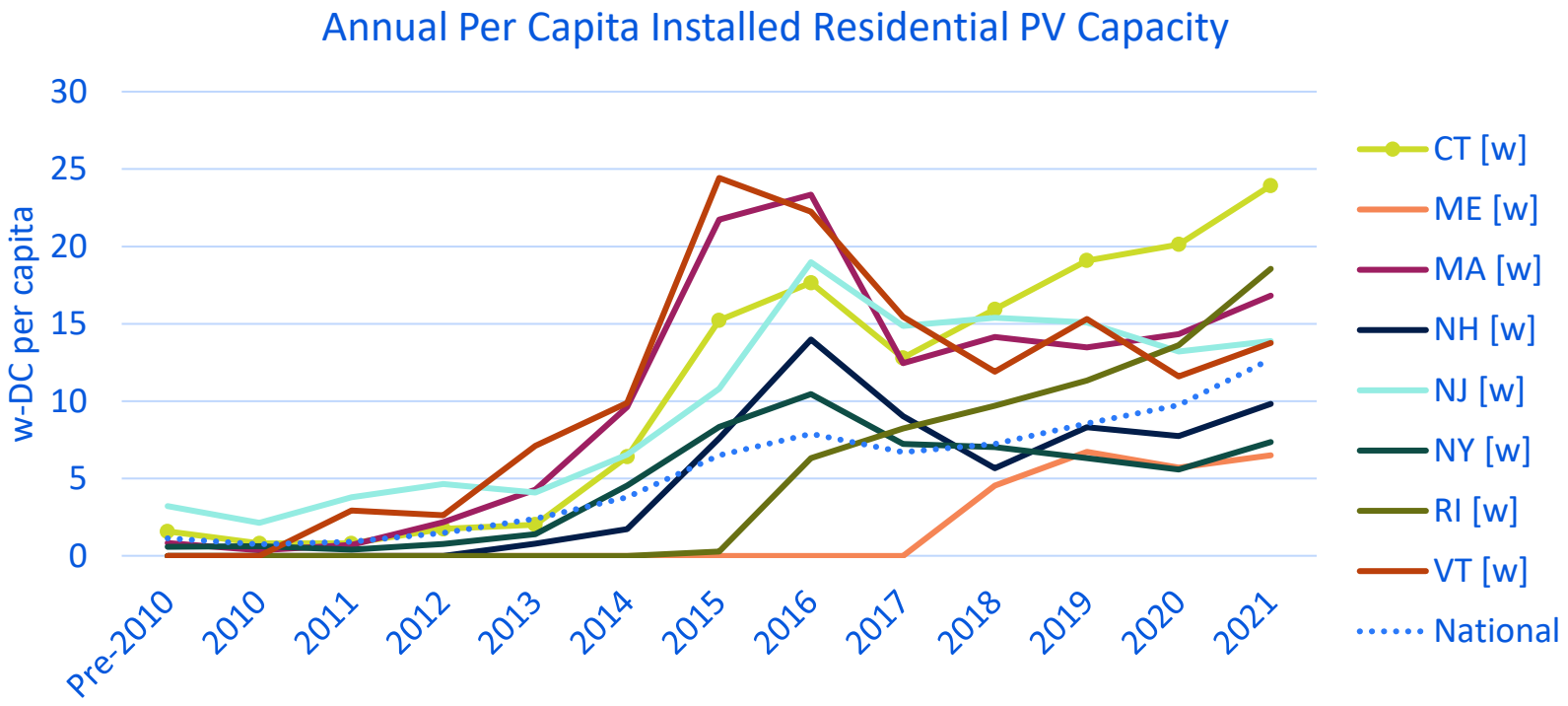
Total and relative energy and cost savings from PV adoption



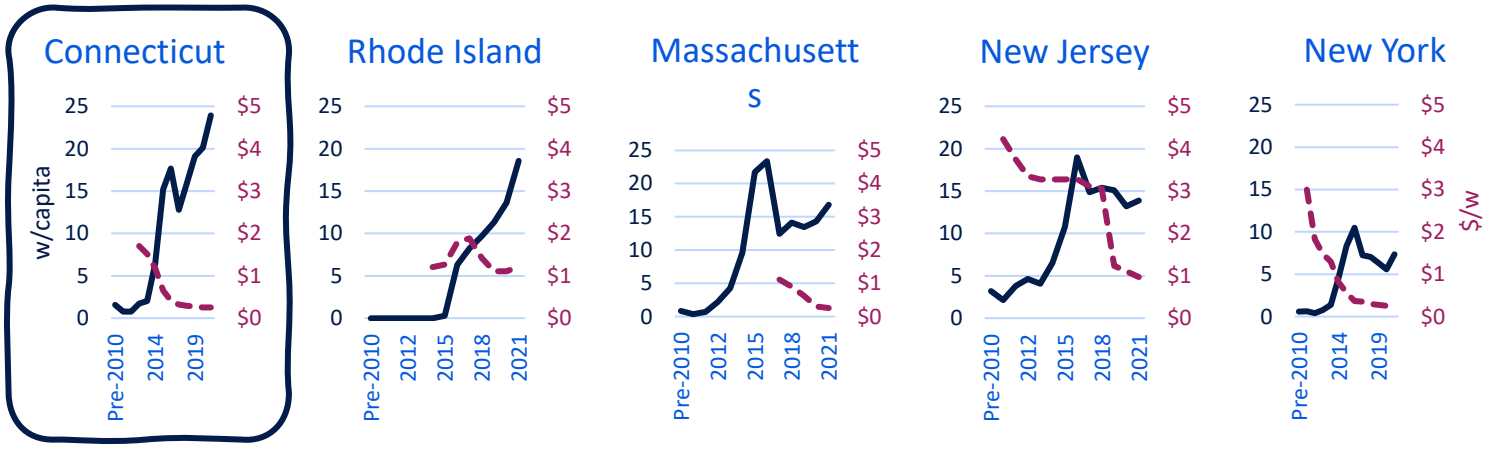
- Consistent reduction in usage around 80% for all program years
- Dollar savings for LMI census tracts increasing since 2020 relative to PBI

Results:
Regional Comparison

Connecticut leads national average and New England states in residential PV installations

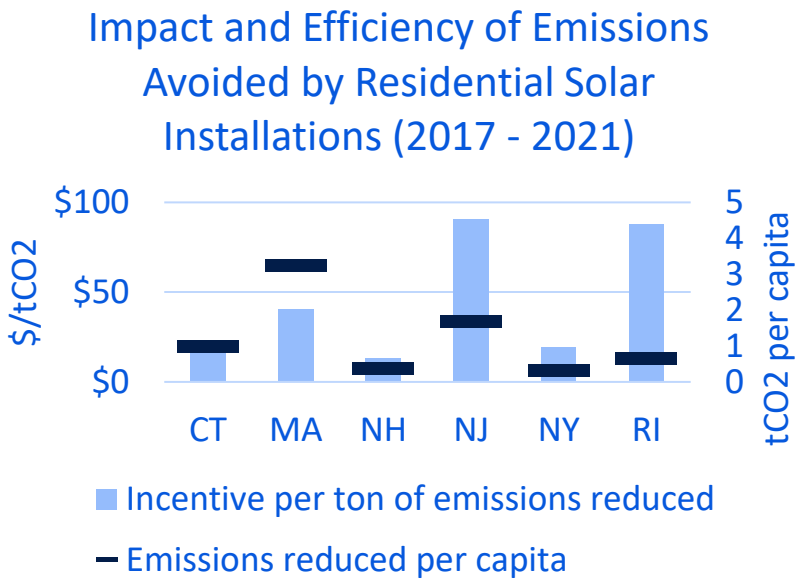


Incentive costs compared to adoption rates



Connecticut has the highest install rate, lowest incentive cost, and greatest spread between the two

Emissions reduction costs vs per capita rate



- Connecticut's cost per ton for emissions reductions is below regional average
- Rate of reduction is low for the region but notable compared to the low cost

Recommendations

Market Monitoring

- **Track ongoing residential solar adoption**
  - Regulatory filings
  - SEIA reports
  - Stakeholder feedback
- **Sustain "Trusted Convener" Role**
- **Leverage robust RSIP dataset**
  - Apply time-based analysis of RSIP interventions to new markets
  - Investigate cross-technology adoption patterns

Support Sustained LMI Adoption

- **Expand Partnerships in LMI Communities**
  - Support Solarize campaigns
  - Engage developers committed to LMI communities
- **Fill Gaps left by RRES**
  - Watch LMI adder participation rates
- **Explore new equity-driven financing tools**
  - Access federal funding opportunities
  - Use Green Bank Capital Solutions to fill financing gaps

Engage in “Solar +” Markets

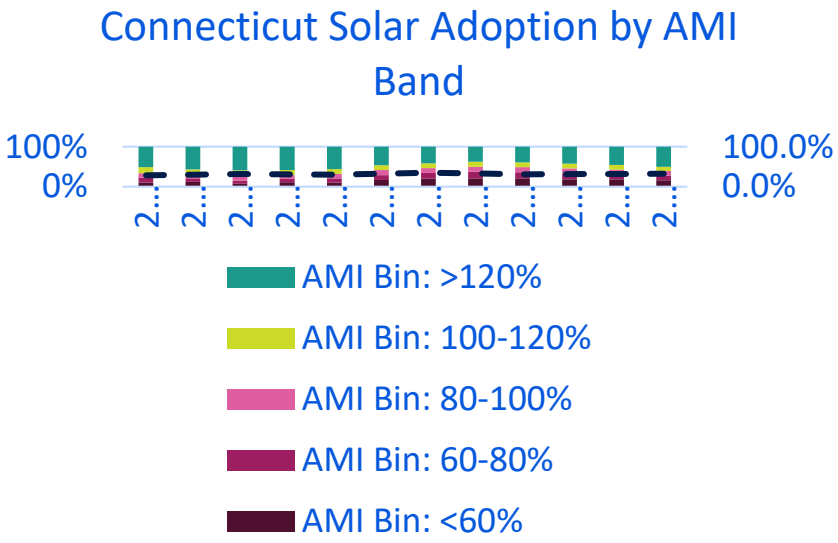
- **Expand existing residential solar industry relationships**
- **Leverage “Trusted Convener” reputation**
- **Build on insights on early adopter and mid-market customer datasets**

Questions and Discussion

Dan Streit
Senior Researcher dstreit@slipstreaminc.org

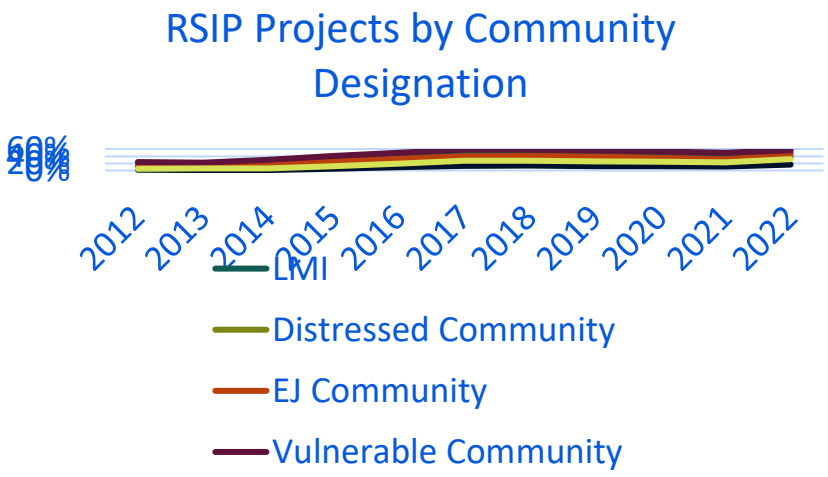
Lee Shaver
Senior Engineer lshaver@slipstresaminc.org

PV adoption relative to income



- Since 2015, adoption in AMI bins below 100% has exceeded national average
- Outside of the highest income bracket (>120%), adoption was highest in the lowest bracket (<60%)
- Electricity purchases reduced 80%+ for LMI households

PV adoption by community designation



- Since 2017, over 50% of projects happen in vulnerable and/or LMI communities
- Growth increased in 2022 after slow decline

Note: totals for some years exceeds 100% as communities may have multiple designations

CONNECTICUT GREEN BANK

Board of Directors

Agenda Item #8b

Other Business

Farewell
Board of Directors

Laura Hoydick

Mayor of Stratford

Appointed by Representative Vincent Candelora

Communities LEAP

Bridgeport a Phoenix Rising – Update

CONNECTICUT GREEN BANK

Board of Directors

Agenda Item #9

Adjourn

Subject to Changes and Deletions

BOARD OF DIRECTORS OF THE
CONNECTICUT GREEN BANK
Regular Meeting Minutes

Friday, March 17, 2023
9:00 a.m. – 11:00 a.m.

A regular meeting of the Board of Directors of the **Connecticut Green Bank** (the "Green Bank") was held on March 17, 2023.

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

Board Members Present: Bettina Bronisz, Binu Chandy, Dominick Grant, John Harrity, Adrienne Houël, Matthew Ranelli, Lonnie Reed, Victoria Hackett, Joanna Wozniak-Brown

Board Members Absent: Thomas Flynn, Laura Hoydick, Brenda Watson

Staff Attending: David Beech, Larry Campana, Shawne Cartelli, Louise Della Pesca, James Desantos, Mackey Dykes, Brian Farnen, Bryan Garcia, Sara Harari, Bert Hunter, Alex Kovtunenko, Cheryl Lumpkin, Jane Murphy, Ariel Schneider, Dan Smith, Eric Shrago, Marianna Trief

Others present: Michael Bishop and Tom Gelston from FuelCell Energy, John Ryor and Will Taylor from PURA

1. Call to Order

- Lonnie Reed called the meeting to order at 9:03 am.

2. Public Comments

- No public comments.

Bryan Garcia noted Agenda item 4c and 4d to follow item 3 and asked for a motion to approve.

Upon a motion made by Matthew Ranelli and seconded by John Harrity, the Board of Directors voted to approve the change to the Agenda. None opposed or abstained. Motion approved unanimously.

3. Consent Agenda
a. Meeting Minutes of January 20, 2023

Resolution #1

Motion to approve the meeting minutes of the Board of Directors for January 20, 2023.

b. Energy Storage Solutions

Resolution #2

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

WHEREAS, Green Bank staff seeks Board review and approval of the funding requests listed in the Memo to the Board dated October 21, 2022 which were approved by Green Bank staff since the last Deployment Committee meeting and which are consistent with the Staff Approval Policy for Projects Under $500,000;

NOW, therefore be it:

RESOLVED, that the Board approves the funding requests listed in the Memo to the Board dated March 17, 2023 which were approved by Green Bank staff since the last Deployment Committee meeting. The Board authorizes Green Bank staff to approve funding requests in accordance with the Staff Approval Policy for Projects Under $500,000 in an aggregate amount to exceed $1,000,000 from the date of this Board meeting until the next Deployment Committee meeting.

Upon a motion made by Victoria Hackett and seconded by Adrienne Houël, the Board of Directors voted to approve the Consent Agenda which includes Resolutions 1 – 2. None opposed and Bettina Bronisz abstained. Motion approved.

4. Investment Updates and Recommendations

a. Investment Modification Request (extension) – C4C (Co-Investment with Amalgamated Bank)

Agenda item 4a was addressed after item 4c.

- Bert Hunter reviewed the proposed extension request. The project is currently in documentation, but there is a concern to meet the March 31, 2023 deadline and so the extension is to April 30, 2023.
    - Bettina Bronisz asked about any concerns with current banking partners due to the recent bank failures. Bert Hunter responded the Green Bank's main bank is Webster Bank and a thorough examination of their position has been performed and determined

to be stable.

Resolution #3

WHEREAS, the Connecticut Green Bank ("Green Bank") entered into a Smart-E Loan program financing agreement with CEEFCo/Capital for Change ("C4C");

WHEREAS, C4C is the largest Smart-E lender on the Green Bank Smart-E platform;

WHEREAS, C4C, Amalgamated Bank and Green Bank have substantially completed negotiations for modification to the medium term loan facility (the "Modified Loan") to fund C4C's Smart-E Loan and other residential energy efficiency loan portfolio growth on revised terms as explained in the memorandum dated October 18 to the Connecticut Green Bank ("Green Bank") Board of Directors (the "Board") (the "Modification Memo") and approved by the Board at a meeting held October 21, 2022; and

WHEREAS, Green Bank staff obtained approval from the Board at a meeting held December 16, 2022 for an extension of the existing medium term revolving loan facility until a date not to exceed March 31, 2023 to provide time to complete and execute documentation for the Modified Loan; and

WHEREAS, Green Bank staff has advised the Board that documentation of the Modified Loan might not be completed until after March 31, 2023, and recommends approval by the Board of an additional extension of the existing medium term revolving loan facility until a date not to exceed April 30, 2023.

NOW, therefore be it:

RESOLVED, that the Board approves the extension of the existing medium term revolving loan facility until a date not to exceed April 30, 2023 generally consistent with the memorandum submitted to the Board dated March 10, 2023 (the "Board Memo");

RESOLVED, that the President of the Green Bank; and any other duly authorized officer of the Green Bank, is authorized to execute and deliver, any contract or other legal instrument necessary to effect the extension of the existing medium term revolving loan facility until a date not to exceed April 30, 2023 on such terms and conditions as are materially consistent with the Board Memo; and

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

Upon a motion made by Binu Chandy and seconded by Bettina Bronisz, the Board of Directors voted to approve Resolution 3. None opposed or abstained. Motion approved unanimously.

b. Investment Modification Request (extension) – C4C (LIME Facility)

- Bert Hunter summarized the history with Capital For Change's LIME Program and the proposed extension, as without it the availability period will end and there is a pipeline of

transactions that they would like to bring forward. The extension request is for 1 year and Bert Hunter reviewed the current projects and balance outstanding as well as the facility structure.

- John Harrity asked if there is any downside to this extension. Bert Hunter responded no, there have not been any losses and there have been several repayments over the history, so everything is current at the present time.

Resolution #4

WHEREAS, the Connecticut Green Bank ("Green Bank") has an existing Master Facility to fund the Low Income Multifamily Efficiency ("LIME") loan Program with Capital for Change ("C4C"), approved at the October 25, 2019 meeting of the Green Bank Board of Directors (the "Board"),

WHEREAS, C4C has been successful in deploying LIME Program loans using the Master Facility;

WHEREAS, in order to continue the successful deployment of capital into the LIME Program C4C has requested an extension of the availability period until March 31, 2024, approximately one year from the expiration of the availability period under the existing terms and conditions;

WHEREAS, Green Bank staff recommends the Board approve such extension of the availability period;

NOW, therefore be it:

RESOLVED, that the Board approves the extension of the availability period under the Master Facility until a date not to exceed March 31, 2024;

RESOLVED, that the President of the Green Bank; and any other duly authorized officer of the Green Bank, is authorized to execute and deliver, any contract or other legal instrument necessary to effect the extension of the availability period under the Master Facility for the LIME program on such terms and conditions as are materially consistent with the memorandum submitted to the Board on March 10, 2023; and

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

Upon a motion made by John Harrity and seconded by Binu Chandy, the Board of Directors voted to approve Resolution 4. None opposed or abstained. Motion approved unanimously.

c. Investment Modification Request – FuelCell Energy Groton Project (Co-Investment with Liberty Bank & Amalgamated Bank)

- Bert Hunter introduced Tom Gelston and Michael Bishop from FuelCell Energy then gave a project update. It has been operating at a reduced output and is expected to operate at full capacity within the year. He reviewed the proposed modification request including the Green Bank's exposure, term financing summary, financing structure, and risk mitigation.

- John Harrity asked how much carbon is saved in comparison to if the power was from the grid. Tom Gelston answered that it is about half the amount of carbon emissions are made in comparison to if it was powered from the grid. John Harrity asked if there is a prospect to go to green hydrogen energy. Tom Gelston answered that it is a possibility and that right now it is being fueled by pipeline natural gas., but the project is capable of being powered by multiple sources, including direct biogas, so it is a future option.
- Lonnie Reed asked if this project has led to any future projects with the military. Tom Gelston responded not yet, but there have been a couple ideas discussed as the project is being watched as part of the marketability will be getting the facility running and proven to work. However, the Navy in particular is focused on greening up their operations and reducing their carbon footprint, so there is at least one other base looking at this project as a future option.

Resolution #5

WHEREAS, in accordance with (1) the statutory mandate of the Connecticut Green Bank ("Green Bank") to foster the growth, development, and deployment of clean energy sources that serve end-use customers in the State of Connecticut, (2) the State's Comprehensive Energy Strategy ("CES") and Integrated Resources Plan ("IRP"), and (3) Green Bank's Comprehensive Plan (the "Comprehensive Plan") in reference to the CES and IRP, Green Bank continuously aims to develop financing tools to further drive private capital investment into clean energy projects;

WHEREAS, FuelCell Energy, Inc., of Danbury, Connecticut ("FCE") has used previously committed funding (the "Bridgeport Loan") from Green Bank to successfully develop a 15 megawatt fuel cell facility in Bridgeport, Connecticut (the "Bridgeport Project"), and FCE has operated and maintained the Bridgeport Project without material incident, is current on payments under the Bridgeport Loan;

WHEREAS, FCE has requested financing support from the Green Bank to develop a 7.4 megawatt fuel cell project in Groton, Connecticut located on the U.S. Navy submarine base and supported by a power purchase agreement ("PPA") with the Connecticut Municipal Electric Energy Cooperative ("CMEEC") (the "Navy Project");

WHEREAS, staff has considered the merits of the Navy Project and the ability of FCE to construct, operate and maintain the facility, support the obligations under the Loan throughout its 20-year term, and as set forth in the due diligence memorandum (the "Original Board Memo") to the Green Bank Board of Directors ("Board") dated December 18, 2020, has recommended this support be in the form of a term loan not to exceed $8,000,000, secured by all project assets, contracts and revenues as well as a pledge of revenues from an unencumbered project as explained in the Board Memo (the "Original Credit Facility");

WHEREAS, on the basis of that recommendation, the Board approved of the Credit Facility, in an amount not to exceed $8,000,000 with the provision that the Credit Facility be executed no later than 315 days from the date of authorization by the Board (June 16, 2021), which was further extended by the Board on a number of occasions, including in December 2022 to March 31, 2023;

WHEREAS, staff has considered the merits of the Navy Project, which as of December 2022 has now achieved commercial operations, and the ability of FCE to operate and maintain

the facility, support the obligations under the Original Credit Facility throughout its 20-year term, and as set forth in this due diligence memorandum (the "Board Memo") recommended this support be in the form of a term loan not to exceed $10,000,000, secured by the developer's equity in the project company (which controls all project assets, contracts and revenues) as well as other collateral and credit enhancements explained in the Board Memo (the "New Credit Facility");

WHEREAS, Green Bank staff recommends that the Green Bank Board of Directors ("Board") approve of the New Credit Facility, in an amount not to exceed $10,000,000;

NOW, therefore be it:

RESOLVED, that the Green Bank Board of Directors (the "Board") hereby approves the New Credit Facility in an amount not to exceed $10,000,000 for the Navy Project, as a ***strategic selection and award*** pursuant to Green Bank Operating Procedures Section XII;

RESOLVED, that the President of the Green Bank and any other duly authorized officer is authorized to take appropriate actions to provide the New Credit Facility to FCE (or a special purpose entity wholly-owned by FCE) in an amount not to exceed $10,000,000 with terms and conditions consistent with the memorandum submitted to the Board dated March 14, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 180 days from the date of authorization by the Board of Directors; and

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

Upon a motion made by Adrienne Houël and seconded by Dominick Grant, the Board of Directors voted to approve Resolution 5. None opposed and Matthew Ranelli and Victoria Hackett abstained. Motion approved.

d. Investment Approval Request – FuelCell Energy – Master Refinancing Facility (Co-Investment with Investec Bank and other bank participants)

- Bert Hunter reviewed the FuelCell Energy Master Refinancing Facility plan to then fund six fuel cell projects, three of which are in Connecticut, and all are manufactured at FuelCell Energy's Torrington, CT facility. The proposal is for the Green Bank to contribute $10 million of the $93.7 million facility, being split between a term loan portion and a letter of credit facility for support. This would only require a $2 million increase from what the Green Bank is already exposed due to the $8 million debt of the Bridgeport project to be repaid through recapitalization. All six of the projects are fully contracted PPAs with more than 95% to investment grade offtakers. Bert Hunter reviewed a simplified transactional organization chart, portfolio overview, and terms and conditions.
    - John Harrity asked if the jobs generated will be staying within Torrington and Michael Bishop responded that yes, FuelCell Energy is dedicated to Connecticut and as modules come up for replacement, those will be manufactured at the Connecticut factory. John Harrity asked if there are provisions in the loan that if that isn't the case if there are any penalties or anything, and Bert Hunter responded there are no workforce provisions, but the expectation is set and is structured in a way to benefit FuelCell Energy within Connecticut. Tom Gelston added the company's history and commitment

to Connecticut. Michael Bishop added that the company does have an outstanding long-term loan with the State that does have a requirement to retain a presence within the state.

- Lonnie Reed asked if the transportation accessibility into the Torrington plant has been improved. Michael Bishop responded that in general hiring labor has been challenging and they have been looking to various sources to attract talent. Transportation is one item that has been explored but no specific transportation solution has been established. Tom Gelston added that work has been done to grow the interest in their advanced manufacturing and that their starting wage has been increased recently.
- Victoria Hackett asked since there is a strong sense of commitment to Connecticut, would there be any harm in adding in a workforce provision.
- Victoria Hackett asked how many projects were selected by DEEP procurement. Bert Hunter responded that Bridgeport was a Project 150, Pfizer was a commercial transaction, and he wasn't sure about CSCU. Michael Bishop answered for CSCU there was a State grant when the project was initially constructed but it was not under a broad procurement program. Bryan Garcia added it was the On-Site Distributed Generation program of the Clean Energy Fund which would have been a programmatic RFP. Matthew Ranelli and Mackey Dykes agreed about CSCU. Victoria Hackett asked if the Green Bank has entered into similar transactions with companies that are in PPAs with the utilities. Bert Hunter responded where the Green Bank is financing with utility involvement is ZREC and LREC contracts. Marianna Trief added that the offtaker for the Colbrook facility is the utility company.
- Victoria Hackett asked about other instances where there have been a refinance for companies under a PPA. Bert Hunter answered broadly, the PosiGen transaction is similar, though instead of a utility company it is a residential PPAs.
- Brian Farnen clarified that Norton Rose Fulbright will be the counsel for the overall facility and the Green Bank's counsel will be Nancy Hancock from Wiggin and Dana.
- John Harrity added that under the Biden administration's policies for green technology there is a great emphasis for companies that have Union workforces, and he expressed his concern for the opposition against Unions and worker organization, and though he does not want to engage in discussion at this time, he urged FuelCell Energy to look more closely at that given the Biden administration's view about that kind of activity.

Resolution #6

WHEREAS, in accordance with (1) the statutory mandate of the Connecticut Green Bank ("Green Bank") to foster the growth, development, and deployment of clean energy sources that serve end-use customers in the State of Connecticut, (2) the State's Comprehensive Energy Strategy ("CES") and Integrated Resources Plan ("IRP"), and (3) Green Bank's Comprehensive Plan (the "Comprehensive Plan") in reference to the CES and IRP, Green Bank continuously aims to develop financing tools to further drive private capital investment into clean energy projects;

WHEREAS, FuelCell Energy, Inc., of Danbury, Connecticut ("FCE") has used previously committed loans from Green Bank to successfully develop a 15 megawatt fuel cell facility in Bridgeport, Connecticut (the "Bridgeport Project"), and FCE has operated and maintained the Bridgeport Project without material incident, is current on payments under the loan;

WHEREAS, FCE is now establishing a $93.7 million senior secured credit facility ("Credit Facility") to recapitalize a 32.3 MW portfolio of six fuel cell power plants, which includes the Bridgeport Project and two other Connecticut projects which together comprise 68% of the projects by capacity (the "Portfolio");

WHEREAS, the Green Bank staff is proposing a $10 million participation by the Green Bank in the Credit Facility;

WHEREAS, this proposed $10 million participation by Green Bank in the term loan portion of the Credit Facility would represent a $2 million increase in Green Bank current exposure to FCE projects as 100% of FCE indebtedness supported by the Bridgeport Project (totaling ~$8 million as of the date of this memorandum and one of the CT Projects being recapitalized) would be repaid to Green Bank upon the recapitalization of the Portfolio.

NOW, therefore be it:

RESOLVED, that the Green Bank Board of Directors (the "Board") hereby approves the participation in the Credit Facility in an amount not to exceed $10,000,000, as a strategic selection and award pursuant to Green Bank Operating Procedures Section XII; and

RESOLVED, that the President of the Green Bank and any other duly authorized officer is authorized to take appropriate actions to participate in the Credit Facility to FCE (or a special purpose entity wholly-owned by FCE) in an amount not to exceed $10,000,000 with terms and conditions consistent with the memorandum submitted to the Board dated March 14, 2023, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 180 days from the date of authorization by the Board of Directors; and

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

Upon a motion made by Dominick Grant and seconded by John Harrity, the Board of Directors voted to approve Resolution 6. None opposed and Victoria Hackett and Matthew Ranelli abstained. Motion approved.

e. Investment Modification Request – PosiGen – 1st & 2nd Lien Credit Facility (Co-Investment with other bank participants)

- Bert Hunter summarized the proposed refinance and expansion of the 1st Lien Facility. The lender is changing from Forbright Bank to Brookfield and they are increasing their exposure with a lower and fixed interest rate made available. The 2nd Lien Facility, which includes the Green Bank and other participants, will have no material changes but requires amended documentation. He reviewed the new facility summary. He added that the Resolution was vetted by Wiggin and Dana to confirm the Green Bank would be fully in conformity with what needs to be done under the revised agreements. He emphasized that the Green Bank's exposure is not changing and there are no other material changes for the Green Bank.

Resolution #7

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

WHEREAS, the Green Bank Board of Directors (the "Board") previously authorized and later amended (in December 2022) approval for Green Bank's participation in a back leverage credit facility (the "BL Facility") collateralized by all of PosiGen's solar PV system and energy efficiency leases in the United States as part of PosiGen's strategic growth plan, as well as a facility to finance performance based incentives earned by PosiGen on its solar PV portfolio in Connecticut;

WHEREAS, PosiGen is now in the process of refinancing and upsizing its BL Facility (the "New BL Facility"), as explained in the memorandum to the Board dated March 10, 2023 (the "Board Memo"); and

WHEREAS, PosiGen repayment performance is satisfactory.

NOW, therefore be it:

RESOLVED, that the Board confirms its authorizations granted in December 2022 for the Green Bank to amend its existing 2nd lien facility as part of the New BL Facility to allow for an upsized Green Bank position together with the new first lien lender, Brookfield Asset Management ("Brookfield"), as set forth in the Board Memo; and be it further

RESOLVED, that the Board confirms its authorizations granted in December 2022 for the Green Bank to advance up to $9.3 million in 2nd lien financing associated with the New BL Facility, in addition to serving as an agent for third-party participation to increase those participations to reduce Green Bank's exposure as explained in the Board Memo; and be it further

RESOLVED, that the Green Bank may enter into such additional amendments to, or amendments and restatements of, the SLCF documents, instruments, and certificates as Brookfield may reasonably require or which are contemplated under the SLCF as Green Bank's proper officers deem necessary in connection with Brookfield's refinancing of the FLCF, including without limitation to the Second Lien Credit Agreement, as amended from time to time, and that certain Intercreditor Agreement, dated as of September 28, 2021, by and between Forbright Bank, Green Bank, the Green Finance Authority, PosiGen Backleverage, LLC, PosiGen Backleverage Holdco, LLC, and PosiGen, Inc., as amended from time to time; and be it further

RESOLVED, that each of Green Bank's proper officers be, and each of them hereby is, acting alone, authorized, empowered and directed, for and on behalf of the Green Bank to: (i) do or cause to be done all such acts and things, (ii) pay or cause to be paid all such costs and expenses, (iii) execute and deliver in the name of and on behalf of the Green Bank, all instruments, documents and other documents, (iv) to make changes and amendments thereto or to waive any conditions to performance by the Green Bank, in each case, as may be deemed, in his or her sole discretion, to be appropriate, desirable or necessary in order to carry out and comply with the purposes and intent of the foregoing resolutions, to consummate all of the actions contemplated thereby and to fully perform and/or cause the Green Bank to fully perform its obligations under the documents contemplated thereby, the execution and delivery

of any such documents, or the taking of any such action, by such proper officer to be conclusive evidence of his or her approval thereof; and be it further

RESOLVED, that each of Green Bank's proper officers, acting or signing singly, is hereby authorized and empowered on behalf of and in the name of the Green Bank to negotiate, execute and deliver all such other instruments and documents, to pay all fees and expenses and to do all such other acts and things as, in such proper officer's judgment, may be necessary or advisable to carry out the purposes and intent of the foregoing resolutions; and be it further

RESOLVED, that all actions taken and things done by each of the Green Bank's proper officers in connection with all actions taken and things done in contemplation of the foregoing resolutions, as the same appear of record or in the usual course of business to date, including all actions taken by any of them in good faith and in the reasonable belief that such actions were or would be in the best interests of the Green Bank are hereby approved, ratified and confirmed; and be it further

RESOLVED, that any and all actions heretofore or hereinafter taken on behalf of the Green Bank by any of said persons or entities within the terms of the foregoing are hereby approved, ratified and confirmed as the acts and deeds of the Green Bank.

Upon a motion made by John Harrity and seconded by Bettina Bronisz, the Board of Directors voted to approve Resolution 7. None opposed or abstained. Motion approved unanimously.

Bettina Bronisz left the meeting at 10:01 am.

5. Other Business

a. PURA Presentation – 2022 Clean & Renewable Energy Report

- Bryan Garcia introduced John Ryor and Will Taylor from PURA. Josh Ryor reviewed the overall docket and report creation process, the purpose of the report, current programs and procurements, and future reports and dockets. The major takeaways of the report show there is continued, steady clean energy deployment since the mid-2010s, with 2021 and 2022 being the most successful years in Connecticut for residential solar deployment. There are continued efforts to improve deployment in underserved locations, to bring shared clean energy facilities online, and to understand how the programs fit into broader climate policies and RPS.
- Will Taylor and Josh Ryor reviewed the program history, details, and objectives for the RRES program, NRES program, SCEF program, ESS program, and EV Charging program.
- Josh Ryor summarized the goals for future reports. Bryan Garcia added that there is more data within the report that can be read regarding policy, enabling markets, and market impact as well.
    - Adrienne Houël asked about workforce conservation projections, if there is a plan forward and what the objectives are for a 2-year or 5-year term. Josh Ryor responded that although he does not have a good answer right now, but commented that for energy efficiency and conservation, the CL&M plan is overseen by the Energy Efficiency Board and DEEP, so PURA does not have as much insight or data on that, but agreed he thinks it is a good area to look into further for PURA's programs. He apologized for not being able to respond more accurately but noted that something heard from developers

is a desire for long-term certainty with clear policies that won't change drastically, and that is why the ESS program and EV Charging programs are 9 years long. PURA wants to make it clear that they are committed for the long term. Adrienne Houël encouraged looking at the projections as more people look closely at the measures to stop climate change on all levels of the government.

- Adrienne Houël asked in relation to SCEF, how the community can own the means of production. There are the technical means to do it, but do the policies and financial means exist to facilitate it. Josh Ryor responded it would be difficult to change the current program to be able to do it, but there are models available to examine to potentially adapt it.
- John Harrity asked what is being done to take advantage of the federal money available under Biden's climate change programs. Josh Ryor responded that PURA's process requires an adjudicated process in order to change programs, and there are some restrictions on communication because of that process, but noted it is in the best interest of the State for State Agencies to coordinate to receive as much federal funding as possible and are effectively distributing it, and so the Green Bank, PURA, and DEEP are coordinating to try to do just that. He also noted there are annual processes to ensure the programs are achieving their objectives, which includes incorporating federal funding and aligning incentives. Bryan Garcia added that Representative Allie-Brennan chairs a Sustainable and Renewable Energy Caucus which asked the same question and he said he would share that presentation. As well, the Board has been very supportive of the Green Bank's "Dream Big" strategy and the staff is preparing to make the most of the provisions made available in the IRA.
- Dominick Grant asked in relation to the residential battery storage deployment and the slow uptake of it, has there been any consideration if that continues to be slow to reallocate the program goals if there is more demand for C&I to realign the tranches. Will Taylor responded for the slow update and program change, the requirement to participate in Active and Passive Dispatch events was a factor causing residential customers to look at other programs. Thus the program was changed so starting in January 1, 2023, projects may elect to not participate in Passive Dispatch. Josh Ryor added that because of a previous Legacy battery storage program, there is hesitation from developers to move over to the new program, but having only 1 program going forward should be the most cost-effective for ratepayers and be better overall. As well, PURA did consider reallocating the megawatts, but at this time the cost-benefit is more well defined for residential than for C&I, but this may be reevaluated at a future date.

b. Other Business

- James Desantos gave an update on the current legislative session which is from January 4 to June 7, 2023. About 1000 bills have been introduced during this long session, and about 121 pieces have been tracked by the Green Bank. He summarized the progress as bills have been introduced or changed until now. He highlighted HB 6851, SB 961, HB 6764, SB 7, and the next steps in the legislative process.

Matthew Ranelli left the meeting at 11:00 am. Victoria Hackett left the meeting at 11:04 am.

- David Beech gave an update to the Green Liberty Notes offerings. The last 3 have been sold out, the most recent offering selling out in just 5 days. In total there have been 291 investors, 420 investments, and over $1 million has been invested.
  - Lonnie Reed asked about the interest rates look like going forward, as she's received questions from financial acquaintances. Bert Hunter responded that market

conditions are volatile and there are disagreements within the market itself about the federal plan for rates so there are very unusual market conditions right now and the path is unclear but for the loan purchases, the relationship should maintain positive. They are following the path of the market rates generally. Bert Hunter noted that these notes are not SCRF backed but they are backed by multiple cashflows, and by covenant there will be at least a two times coverage by debt service, so everyone should be assured there will be enough cash to cover the notes.

6. Adjourn

Upon a motion made by John Harrity and seconded by Adrienne Houël, the Board of Directors Meeting adjourned at 11:12 am.

Respectfully submitted,

_____

Lonnie Reed, Chairperson

Memo

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

From: Bryan Garcia (President and CEO)

CC:

Date: 4/14/2023

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

---

At the October 20, 2017 Board of Directors (BOD) meeting of the Connecticut Green Bank ("Green Bank") it was resolved that the BOD approves the authorization of Green Bank staff to evaluate and approve funding requests less than $500,000 which are pursuant to an established formal approval process requiring the signature of a Green Bank officer, consistent with the Comprehensive Plan, approved within Green Bank's fiscal budget and in an aggregate amount not to exceed $1,000,000 from the date of the last Deployment Committee meeting. This memo provides an update on funding requests below $500,000 that were evaluated and approved. During this period, 3 projects were evaluated and approved for funding in an aggregate amount of approximately $984,655. If members of the board or committee would be interested in the internal documentation of the review and approval process Green Bank staff and officers go through, then please request it.

---

257 Woodlawn Road: A C-PACE Project in Berlin, CT

Address	257 Woodlawn Road, Berlin, CT 06708		
Owner	New Britain Transportation Company		
Proposed Assessment	$339,007		
Term (*years*)	20		
Term Remaining (*months*)	Pending construction completion		
Annual Interest Rate[1]	5.25%		
Annual C-PACE Assessment	$27,797		
Savings-to-Investment Ratio	1.16		
Average DSCR	[redacted]		
Lien-to-Value			
Loan-to-Value			
Projected Energy Savings (mmBTU)			Total
	First year		390
	Over EUL		7,445
Estimated Cost Savings (incl. ZRECs and tax benefits)	First year		$165,112
	Over EUL		$644,166
Objective Function	28.07 kBTU / ratepayer dollar at risk		
Location	Berlin CT		
Type of Building	Industrial		
Year of Build	1972		
Building Size (*sf*)	14,400		
Year Acquired by Owner	2003		
As-Complete Appraised Value[2]	[redacted]		
Mortgage	[redacted]		
Proposed Project Description	95.9 kW Solar PV and new Roof		
Est. Date of Construction Completion	Pending Closing		
Energy Contractor	[redacted]		

[redacted]

233 Woodlawn Road: A C-PACE Project in Berlin, CT

Address	233 Woodlawn Road, Berlin, CT 06708		
Owner	New Britain Transportation Company		
Proposed Assessment	$182,148		
Term (*years*)	20		
Term Remaining (*months*)	Pending construction completion		
Annual Interest Rate[3]	5.25%		
Annual C-PACE Assessment	$14,819		
Savings-to-Investment Ratio	1.09		
Average DSCR	[redacted]		
Lien-to-Value			
Loan-to-Value			
Projected Energy Savings (mmBTU)			Total
	First year		200
	Over EUL		3,823
Estimated Cost Savings (incl. ZRECs and tax benefits)	First year		$78,690
	Over EUL		$257,469
Objective Function	20.99 kBTU / ratepayer dollar at risk		
Location	Berlin CT		
Type of Building	Industrial		
Year of Build	1970		
Building Size (*sf*)	8,650		
Year Acquired by Owner	2003		
As-Complete Appraised Value[4]	[redacted]		
Mortgage			
Proposed Project Description	48.8 kW Solar PV and new Roof		
Est. Date of Construction Completion	Pending Closing		
Energy Contractor	[redacted]		

[redacted]

200-220 Hale Road: A C-PACE Project in Manchester, CT

Address	200-220 Hale Road Manchester, CT 06042	
Owner	Nasra Manchester LLC	
Proposed Assessment	$463,500	
Term (*years*)	15	
Term Remaining (*months*)	180	
Annual Interest Rate	5.00%	
Annual C-PACE Assessment	$44,495	
Savings-to-Investment Ratio	2.19	
Average DSCR	[redacted]	
Lien-to-Value		
Loan-to-Value		
Projected Energy Savings (mmBTU)	Year 1	1,090 mmBTU
	Over 20 Year EUL	20,797 mmBTU
Estimated Cost Savings (incl. ZRECs and tax benefits)	Year 1[5]	$293,641
	Over 20 Year EUL	$1,463,474
Objective Function	44.87 kBTU / ratepayer dollar at risk	
Location	Manchester	
Type of Building	Retail for two tenants	
Year of Build	1992	
Building Size (*sf*)	92,400 sf (95,132 sf in technical report)	
Year Acquired by Owner	2022	
As-Is Appraised Value[6]	[redacted]	
Mortgage Lender Consent	[redacted]	
Proposed Project Description	251 kW PV Solar System	
Est. Date of Construction Completion	To be determined	
Current Status	Awaiting Staff Approval	
Energy Contractor	[redacted]	

[redacted]

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Resolution

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

WHEREAS, Green Bank staff seeks Board review and approval of the funding requests listed in the Memo to the Board dated April 14, 2023 which were approved by Green Bank staff since the last Deployment Committee meeting and which are consistent with the Staff Approval Policy for Projects Under $500,000;

NOW, therefore be it:

RESOLVED, that the Board approves the funding requests listed in the Memo to the Board dated April 14, 2023 which were approved by Green Bank staff since the last Deployment Committee meeting. The Board authorizes Green Bank staff to approve funding requests in accordance with the Staff Approval Policy for Projects Under $500,000 in an aggregate amount to exceed $1,000,000 from the date of this Board meeting until the next Deployment Committee meeting.

215-219 Main ST: A C-PACE Project in Danbury, CT

Address	215-219 Main St, Danbury, CT 06810			
Owner	Wells Evelyn L TR & Main 215-219			
Proposed Assessment	$564,528			
Term (*years*)	20			
Term Remaining (*months*)	Pending construction completion			
Annual Interest Rate	5.75			
Annual C-PACE Assessment	$49,353.00			
Savings-to-Investment Ratio	1.34			
Average DSCR	[redacted]			
Lien-to-Value				
Loan-to-Value				
Projected Energy Savings (mmBTU)[1]		EE	RE	Total
	Per year		998	998
	Over EUL		23,504	23,504
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year		$58,754.00	$58,754.00
	Over EUL		$1,285,402.65	$1,285,402.65
Objective Function	41.63 kBTU / ratepayer dollar at risk			
Location	Danbury, CT			
Type of Building	Retail			
Year of Build	1935			
Building Size (*sf*)	27,481			
Year Acquired by Owner	10/13/2016			
As-Complete Appraised Value[2]	[redacted]			
Mortgage Lender Consent	[redacted]			
Proposed Project Description	We are installing a Solar Panel system to supply energy to our five tenants at the building. Our solar contractor is Smart Roofs Solar, with whom we have just signed a service agreement. We will be applying to Netting based incentives with Eversource and are seeking financing.			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Deployment Committee Approval			
Energy Contractor	[redacted]			

[redacted]

580 Tolland Street: A C-PACE Project in East Hartford, CT

Address	580 Tolland Street, East Hartford, CT 06108			
Owner	580 Tolland Street LLC			
Proposed Assessment	$491,536.60			
Term (*years*)	20			
Term Remaining (*months*)	Pending construction completion			
Annual Interest Rate[1]	5.25%			
Annual C-PACE Assessment	$41,125.50			
Savings-to-Investment Ratio	1.79x			
Average DSCR	[redacted]			
Lien-to-Value				
Loan-to-Value				
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year	0	1,018	1,018
	Over EUL	0	24,565	24,565
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year	$0.00	$59,969.00	$59,969.00
	Over EUL	$0.00	$1,430,671.00	$1,430,671.00
Objective Function	49.98 kBTU / ratepayer dollar at risk			
Location	East Hartford, CT			
Type of Building	Industrial flex space facility			
Year of Build	1949			
Building Size (*sf*)	31,668			
Year Acquired by Owner	1/26/2016			
As-Complete Appraised Value[2]	[redacted]			
Mortgage Lender Consent	[redacted]			
Proposed Project Description	223kW DC Solar project			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Deployment Committee Approval			
Energy Contractor	[redacted]			

[redacted]

800 Flanders Road: A C-PACE Project in Groton, CT

Address	800 Flanders Road, Mystic, CT 06355			
Owner	Mystic Business Park LLC			
Proposed Assessment	$552,567			
Term (*years*)	20			
Term Remaining (*months*)	Pending construction completion			
Annual Interest Rate	5.75%			
Annual C-PACE Assessment	$47,115			
Savings-to-Investment Ratio	1.51			
Average DSCR	[redacted]			
Lien-to-Value				
Loan-to-Value[1]				
Projected Energy Savings (mmBTU)			RE	Total
	Per year		924	924
	Over term		18,484	18,484
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year[2]		$70,908	$70,908
	Over term		$1,418,162	$1,418,162
Objective Function	41.3 kBTU / ratepayer dollar at risk			
Location	Groton			
Type of Buildings	Warehouses			
Year of Build	2001 to 2010[3]			
Building Size (*sf*)	57,500 sf			
Year Acquired by Owner	2008			
As-Is Appraised Value[4]	[redacted]			
Mortgage Lender Consent	[redacted]			
Proposed Project Description	Rooftop solar PV (239kW)			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Staff Approval			
Energy Contractor	[redacted]			

[redacted]

247-251 Greenmanville Avenue: A C-PACE Project in Mystic, CT

Address	247-251 Greenmanville Avenue, Mystic, CT 06355	
Owner	Unicorn Project, LLC	
Proposed Assessment	$595,435	
Term (*years*)	20	
Term Remaining (*months*)	Pending construction completion	
Annual Interest Rate	5.75%	
Annual C-PACE Assessment	$50,484	
Savings-to-Investment Ratio	1.35x	
Average DSCR over Term	[redacted]	
Lien-to-Value		
Loan-to-Value		
Projected Energy Savings (mmBTU)[1]	Year 1	856
	Over 25 Year EUL	21,343
Estimated Cost Savings (incl. ZRECs and tax benefits)[1]	Year 1	$273,422
	Over 25 Year EUL	$1,364,864
Objective Function	35.84 kBTU / ratepayer dollar at risk	
Location	Mystic, CT	
Type of Building	Motel and Restaurant	
Year of Build	1965	
Building Size (*sf*)	24,783	
Year Acquired by Owner	1998	
As-Complete Appraised Value[2]	[redacted]	
Mortgage Outstanding		
Mortgage Lender Consent		
Proposed Project Description	161.5 kW PV; roof improvements	
Est. Date of Construction Completion	Pending closing	
Current Status	Awaiting Board of Directors Approval	
Energy Contractor	[redacted]	

[redacted]

317 Courtland Ave: A C-PACE Project in Stamford, CT

Address	317 Courtland Avenue, Stamford, CT 06906			
Owner	Glenbrook Self Storage Property LLC			
Proposed Assessment	$536,095.00			
Term (*years*)	20			
Term Remaining (*months*)	Pending construction completion			
Annual Interest Rate[1]	5.75%			
Annual C-PACE Assessment	$45,453.00			
Savings-to-Investment Ratio	1.02			
Average DSCR	[redacted]			
Lien-to-Value				
Loan-to-Value				
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year	0	616	616
	Over EUL	0	14,520	14520
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year	$0.00	$36,988.08	$36,988.08
	Over EUL	$0.00	$924,702.00	$924,702.00
Objective Function	27.08 kBTU / ratepayer dollar at risk			
Location	Stamford, CT			
Type of Building	Warehouse			
Year of Build	1988			
Building Size (*sf*)	58,318			
Year Acquired by Owner	2022			
As-Complete Appraised Value[2]	[redacted]			
Mortgage Lender Consent	[redacted]			
Proposed Project Description	185 KW Rooftop Solar Array			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Deployment Committee Approval			
Energy Contractor	[redacted]			

[redacted]

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CONNECTICUT GREEN BANK

Memo

To: The Connecticut Green Bank Board of Directors

From: Alysse A. Lembo-Buzzelli, Associate Director, Financing Programs; Mackey Dykes, Vice President, Financing Programs;

CC: Bryan Garcia, President & CEO; Alex Kovtunenko, Deputy General Counsel, Financing Programs; Brian Farnen, General Counsel and CLO

Date: April 14, 2023

Re: Extending timeline for closing certain C-PACE transactions

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Summary

The Connecticut Green Bank Board of Directors (the "Board") or the Connecticut Green Bank Deployment Committee ("DC"), as may be applicable, has previously approved and authorized C-PACE financing for the following property:

Project Address	Approved	Expired	Project Amount
100 Redding Road, Redding, CT 06896	12/16/22 by Board	4/15/2022	$3,213,498

The financing agreement(s) listed above (the "Financing Agreements") were authorized to be consistent with the terms, conditions, and memorandums submitted to the Board/DC and made no later than 120 days from the date of Board/DC approval.

Due to delays in fulfilling pre-closing requirements, including lender consent, the C-PACE program staff requests more time from the Board to close and execute the Financing Agreements. The staff requests an additional 120 days from the date of this Board meeting to execute the Financing Agreements for the transaction(s) listed above.

Resolutions

WHEREAS, pursuant to Conn. Gen. Stat. 16a-40g (the "Act") the Connecticut Green Bank ("Green Bank") is directed to, amongst other things, establish a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy ("C-PACE");

WHEREAS, pursuant to the C-PACE program, the Connecticut Green Bank Board of Directors (the "Board") or the Connecticut Green Bank Deployment Committee ("DC"), as may be applicable, approved and authorized the President of the Green Bank to execute financing agreements for the C-PACE projects described in the Memo submitted to the Board on April 21, 2023 (the "Finance Agreements");

WHEREAS, the Finance Agreements were authorized to be consistent with the terms, conditions, and memorandums submitted to the Board or DC, as may be applicable, and executed no later than 120 days from the date of such Board or DC approval; and

WHEREAS, due to delays in fulfilling pre-closing requirements the Green Bank will need more time to execute the Finance Agreements.

NOW, therefore be it:

RESOLVED, that the Board extends authorization of the Finance Agreements to no later than 120 days from April 22, 2022 and consistent in every other manner with the original Board authorization for the Finance Agreement.

Submitted by: Bryan Garcia, President & CEO; Alex Kovtunenko, Deputy General Counsel, Financing Programs; Brian Farnen, General Counsel and CLO

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CONNECTICUT GREEN BANK

Memo

To: Connecticut Green Bank Board of Directors

From: Eric Shrago

CC: Bryan Garcia, Sergio Carrillo, and Mackey Dykes

Date: April 21, 2023

Re: Fiscal Year 2023 Progress to Targets and Activity in Vulnerable Communities through Q3

The following memo outlines Connecticut Green Bank (CGB) progress to targets and capital deployed, including investments in vulnerable communities[1] for Fiscal Year (FY) 2023 as of March 30, 2022.

Table 1. CGB Totals Progress to Targets

Progress to Targets

YearFiscal	Project Counter Actual	Project Counter Target	% of Target	Capital Deployed Actual	Capital Deployed Target	% of Target	MW Actual	MW Target	% of Target
2023	1,708	2,062	82.8%	$120,222,457	$161,572,123	74.4%	44.5	57.5	77.4%

Table 2. CGB Totals Vulnerable Communities (excluding SBEA)

Vulnerable Community (excluding SBEA)

Vintage Vulnerable Community YearFiscal	Not Vulnerable Capital Deployed	% of Total	Vulnerable Capital Deployed	% of Total	**Total Capital Deployed**	**% of Total**
2023	$58,303,885	53.43%	$50,811,825	46.57%	**$109,115,710**	**100.00%**

[1] CGB Performance Metrics Power BI data source: https://app.powerbi.com/groups/289235dd-d77d-4043-8dae-d232a51a116a/reports/dcec3754-1e52-4c0c-b579-cfa7df20379c/ReportSection3a1e4346c50856c3c008

Table 3. Financing Programs Progress to Targets

Progress to Targets

ProgramSegment	Project Counter Actual	Project Counter Target	% of Target	Capital Deployed Actual	Capital Deployed Target	% of Target	MW Actual	MW Target	% of Target
Financing	655	882	74.3%	$38,280,280	$64,202,500	59.6%	1.8	7.6	23.1%

Progress to Targets

Program2	Project Counter Actual	Project Counter Target	% of Target	Capital Deployed Actual	Capital Deployed Target	% of Target	MW Actual	MW Target	% of Target
Commercial Lease	4	19	21.1%	$1,848,950	$13,710,000	13.5%	1.3	7.6	16.6%
CPACE	7	23	30.4%	$24,924,582	$31,000,000	80.4%	0.5	0.0	
Multi-Family Health and Safety		1			$892,500			0.0	
Multi-Family Term	1	6	16.7%	$400,000	$1,380,000	29.0%		0.6	
SBEA	643	839	76.6%	$11,106,747	$18,600,000	59.7%		0.0	

Table 4. Financing Programs Vulnerable Communities (excluding SBEA)

Vulnerable Community (excluding SBEA)

Vintage Vulnerable Community ProgramSegment	Not Vulnerable Capital Deployed	% of Total	Vulnerable Capital Deployed	% of Total	**Total Capital Deployed**	**% of Total**
Financing	$9,241,007	34.01%	$17,932,525	65.99%	**$27,173,532**	**100.00%**

Vulnerable Community (excluding SBEA)

Vintage Vulnerable Community ProgramName	Not Vulnerable Capital Deployed	% of Total	Vulnerable Capital Deployed	% of Total	**Total Capital Deployed**	**% of Total**
Commercial Lease	$1,848,950	100.00%			**$1,848,950**	**100.00%**
CPACE	$7,392,057	29.66%	$17,532,525	70.34%	**$24,924,582**	**100.00%**
Multi-Family Term			$400,000	100.00%	**$400,000**	**100.00%**

Table 5. Incentive Programs FY 2023 Progress to Targets

Progress to Targets

ProgramSegment	Project Counter Actual	Project Counter Target	% of Target	Capital Deployed Actual	Capital Deployed Target	% of Target	MW Actual	MW Target	% of Target
Incentive	1,053	1,180	89.2%	$81,942,177	$97,369,623	84.2%	42.8	49.9	85.7%

Progress to Targets

Program2	Project Counter Actual	Project Counter Target	% of Target	Capital Deployed Actual	Capital Deployed Target	% of Target	MW Actual	MW Target	% of Target
Energy Storage Solutions	176	380	46.3%	$65,581,344	$82,375,000	79.6%	42.5	49.7	85.5%
Smart-E	877	960	91.4%	$16,360,834	$14,994,623	109.1%	0.3	0.2	140.0%

Table 6. Incentive Programs Vulnerable Communities

Vulnerable Community

Vintage Vulnerable Community ProgramSegment	Not Vulnerable Capital Deployed	% of Total	Vulnerable Capital Deployed	% of Total	**Total Capital Deployed**	**% of Total**
Incentive	$49,062,878	59.87%	$32,879,299	40.13%	**$81,942,177**	**100.00%**

Vulnerable Community

Vintage Vulnerable Community ProgramName	Not Vulnerable Capital Deployed	% of Total	Vulnerable Capital Deployed	% of Total	**Total Capital Deployed**	**% of Total**
Energy Storage Solutions	$39,118,478	59.65%	$26,462,866	40.35%	**$65,581,344**	**100.00%**
Smart-E	$9,944,400	60.78%	$6,416,433	39.22%	**$16,360,834**	**100.00%**
Total	**$49,062,878**	**59.87%**	**$32,879,299**	**40.13%**	$81,942,177	100.00%

Energy Storage Solutions Vulnerable Community by Market

Vintage Vulnerable Community	Market	Capital Deployed	% of Total
Vulnerable	C&I	$25,426,884	96.09%
Vulnerable	Residential	$1,035,982	3.91%

Table 7. Current Reporting Periods for Smart-E Lenders

ProgramName	Latest Current Reporting Period
Smart-E	**03/01/2023**
Capital For Change	03/01/2023
CorePlus Federal Credit Union	03/01/2023
Eastern Connecticut Savings Bank	03/01/2023
First National Bank of Suffield	03/01/2023
Ion Bank	03/01/2023
Liberty Bank	03/01/2023
Mutual Security Credit Union	03/01/2023
Nutmeg State Financial Credit Union	03/01/2023
Patriot Bank	03/01/2023
Quinnipac Bank & Trust	
Thomaston Savings Bank	01/01/2023
Union Savings Bank	03/01/2023
Workers Federal Credit Union	03/01/2023

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Memo

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

From: Bryan Garcia (President and CEO)

CC:

Date: 4/21/2023

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

---

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

During this period, 0 projects were evaluated and approved for payment restructure in an aggregate amount of approximately $0. If members of the board or committee would be interested in the internal documentation of the review and approval process Green Bank staff and officers go through, then please request it.

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

20 Elm Street: A C-PACE Project in Branford, CT

Address	20 Elm Street, Branford, CT 06405			
Owner	Elm Harbor Realty LLC			
Proposed Assessment	$1,003,474.00			
Term (*years*)	20			
Term Remaining (*months*)	Pending construction completion			
Annual Interest Rate	5.75%			
Annual C-PACE Assessment	$85,096.08			
Savings-to-Investment Ratio	1.74			
Average DSCR	[redacted]			
Lien-to-Value				
Loan-to-Value				
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year		1,337	1,337
	Over EUL		31,483	31,483
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year		$97,204.00	$97,204.00
	Over EUL		$2,916,105.00	$2,916,105.00
Objective Function	32.3 kBTU / ratepayer dollar at risk			
Location	Branford, CT			
Type of Building	Industrial			
Year of Build	2002			
Building Size (*sf*)	61,127			
Year Acquired by Owner	9/17/2003			
As-Complete Appraised Value	[redacted]			
Mortgage Lender Consent				
Proposed Project Description	330.2 kW DC PV system - 2 roofs			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Deployment Committee Approval			
Energy Contractor	[redacted]			

80 Wampus Lane, Milford, CT 06460: A C-PACE Project in Milford, CT

Address	80 Wampus Lane, Milford, CT 06460			
Owner	Milford Holdings LLC			
Proposed Assessment	$2,318,539			
Term (*years*)	20			
Term Remaining (*months*)	Pending construction completion			
Annual Interest Rate	5.75			
Annual C-PACE Assessment	$202,324			
Savings-to-Investment Ratio	1.61			
Average DSCR	[redacted]			
Lien-to-Value				
Loan-to-Value				
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year		5,860	5,860
	Over EUL		141,348	141,348
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year		$253,258.00	$253,258.00
	Over EUL		$6,317,376.00	$6,317,376.00
Objective Function	60.96 kBTU / ratepayer dollar at risk			
Location	Milford, CT			
Type of Building	Industrial			
Year of Build	1942			
Building Size (*sf*)	167993			
Year Acquired by Owner	5/24/2022			
As-Complete Appraised Value	[redacted]			
Mortgage Lender Consent	[redacted]			
Proposed Project Description	1.25MW DC Solar PV system			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Board of Director Approval			
Energy Contractor	[redacted]			

44 Robert Porter Road: A C-PACE Project in Southington, CT

Address	44 Robert Porter Road, Southington, CT 06489			
Owner	Car-Sue Realty LLC			
Proposed Assessment	$1,687,886.00			
Term (*years*)	20			
Term Remaining (*months*)	Pending construction completion			
Annual Interest Rate[1]	5.75			
Annual C-PACE Assessment	$143,108.00			
Savings-to-Investment Ratio	1.056			
Average DSCR	[redacted]			
Lien-to-Value				
Loan-to-Value				
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year	0	1,907	1,907
	Over EUL	0	44,920	44920
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year	$0.00	$123,443.00	$123,443.00
	Over EUL	$0.00	$3,086,075.00	$3,086,075.00
Objective Function	37.58 kBTU / ratepayer dollar at risk			
Location	Southington, CT			
Type of Building	Industrial			
Year of Build	1988			
Building Size (*sf*)	48,085			
Year Acquired by Owner	7/21/2017			
As-Complete Appraised Value[2]	[redacted]			
Mortgage Lender Consent	[redacted]			
Proposed Project Description	516 kW solar servicing two separate electrical services and making portions of the roof solar ready			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Deployment Committee Approval			
Energy Contractor	[redacted]			

[redacted]

420 Ellington Road: A C-PACE Project in South Windsor, CT

Address	420 Ellington Road, South Windsor, CT 06074			
Owner	Admiral Holdings CT LLC			
Proposed Assessment	$3,225,500.00			
Term (*years*)	20			
Term Remaining (*months*)	Pending construction completion			
Annual Interest Rate[1]	5.75%			
Annual C-PACE Assessment	$273,474.00			
Savings-to-Investment Ratio	1.35			
Average DSCR	[redacted]			
Lien-to-Value				
Loan-to-Value				
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year	0	5,062	5,062
	Over EUL	0	119,236	119,236
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year	$0.00	$344,957.80	$344,957.80
	Over EUL	$0.00	$6,899,156.00	$6,899,156.00
Objective Function	36.97 kBTU / ratepayer dollar at risk			
Location	South Windsor, CT			
Type of Building	Warehouse			
Year of Build	1971			
Building Size (*sf*)	17,760			
Year Acquired by Owner	1/1/2022			
As-Complete Appraised Value[2]	[redacted]			
Mortgage Lender Consent	[redacted]			
Proposed Project Description	1.45 MW solar PV system			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Deployment Committee Approval			
Energy Contractor	[redacted]			

[redacted]

688 Sullivan Avenue: A C-PACE Project in South Windsor, CT

Address	688 Sullivan Avenue, South Windsor, CT 06074			
Owner	Admiral Holdings CT LLC			
Proposed Assessment	$710,783.00			
Term (*years*)	20			
Term Remaining (*months*)	Pending construction completion			
Annual Interest Rate[1]	5.75%			
Annual C-PACE Assessment	$60,264			
Savings-to-Investment Ratio	1.30			
Average DSCR	[redacted]			
Lien-to-Value				
Loan-to-Value				
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year	0	1,055	1,055
	Over EUL	0	20,123	20,123
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year	$0.00	$78,126.85	$78,126.85
	Over EUL	$0.00	$1,562,537.00	$1,562,537.00
Objective Function	28.31 kBTU / ratepayer dollar at risk			
Location	South Windsor, CT			
Type of Building	Warehouse			
Year of Build	1986			
Building Size (*sf*)	34,840			
Year Acquired by Owner	2022			
As-Complete Appraised Value[2]	[redacted]			
Mortgage Lender Consent	[redacted]			
Proposed Project Description	287.9 kW solar PV system			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Deployment Committee Approval			
Energy Contractor	[redacted]			

[redacted]

62 Maritime Dr.: A C-PACE Project in Mystic, CT

Address	62 Maritime Dr., Mystic, CT 06106	
Owner	Enko Realty., LLC	
Proposed Assessment	$3,701,715	
Term (*years*)	17	
Term Remaining (*months*)	Pending construction completion	
Annual Interest Rate[1]	5.60%	
Annual C-PACE Assessment	$348,046	
Savings-to-Investment Ratio	1.56	
Average DSCR	[redacted]	
Lien-to-Value		
Loan-to-Value		
Projected Energy Savings (mmBTU)		Total
	First year	6,648
	Over EUL	111,327
Estimated Cost Savings (incl. ZRECs and tax benefits)	First year	$887,868
	Over EUL	$9,017,724
Objective Function	30.07 kBTU / ratepayer dollar at risk	
Location	Mystic	
Type of Building	Industrial	
Year of Build	1992	
Building Size (*sf*)	88,258	
Year Acquired by Owner	2020	
As-Complete Appraised Value[2]	[redacted]	
Mortgage Lender Consent	[redacted]	
Proposed Project Description	New and Retrofit Lighting, Insulation, HVAC & Controls, and a 298.6kw DC Solar PV system	
Est. Date of Construction Completion	Pending closing	
Current Status	Awaiting Board of Directors Approval	
Energy Contractor	[redacted]	
Notes		

[redacted]

70 Deerfield Road: A C-PACE Project in Windsor, CT

Address	70 Deerfield Road Windsor, CT 06112
Owner	**Easter Seals Greater Hartford Rehabilitation Center Inc**
Proposed Assessment	$765,948
Term (*years*)	20
Annual Interest Rate	5.75%
Annual C-PACE Assessment	$64,941
Savings-to-Investment Ratio	1.02x
Average DSCR	[redacted]
Lien-to-Value	
Loan-to-Value	

		EE	RE	Total
Projected Energy Savings (mmBTU)	Per year	105	1,145	1171
	Over EUL	524	22,900	23424
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year	$7,111.40	$62,776.30	$64,554.15
	Over EUL	$35,557	$1,255,526	$1,291,083

Objective Function	58.24 kBTU / ratepayer dollar at risk
Location	Windsor, CT
Type of Building	Non-Profit/Office
Year of Build	1979
Building Size (*sf*)	21,500 sf
Year Acquired by Owner	1991
As-Is Appraised Value[1]	[redacted]
Mortgage Lender Consent	[redacted]
Proposed Project Description	243 kW Solar PV, roof replacement & LED lighting
Est. Date of Construction Completion	Pending closing
Current Status	Awaiting Board Approval
Energy Contractor	[redacted]

[redacted]

75 Charter Oak Avenue, Suite 1 - 103, Hartford, CT 06106
T 860.563.0015
ctgreenbank.com

CONNECTICUT GREEN BANK

Memo

To: Connecticut Green Bank ("Green Bank") Board of Directors (the "Board")

From: Bert Hunter, EVP & Chief Investment Officer

CC: Bryan Garcia, President and CEO; Sergio Carrillo, Managing Director of Incentive Programs, Brian Farnen, General Counsel and CLO; Jane Murphy, EVP of Finance & Administration, Eric Shrago, VP of Operations

Date: April 18, 2023

Re: Pilot Expansion of Smart-E Loan Program: Smart-E Solar Option Loan (ITC Bridge Loan Product)

Background & Summary of Request for Approval

In 2013, the Connecticut Green Bank (the "Green Bank") Board of Directors (the "Board") approved what is now the Green Bank's flagship residential loan product offered through a network of local credit unions, community banks and a community development financial institution (CDFI) – Capital for Change (or "C4C"). Smart-E financing, offered by the Green Bank in partnership with Eversource and United Illuminating / Avangrid (UI), Connecticut Natural Gas and Southern Connecticut Gas, utilizes select local lenders and contractors. The Smart-E program offers long-term, low-interest financing to help homeowners upgrade their home's energy performance with no money down. Since inception, more than $110 million in loans have been originated. A variety of measures are eligible for financing, shown here:

Home Performance/Efficiency

- Attic, wall, or floor insulation
- Duct sealing
- Air sealing
- Window replacement

Heating and Cooling

- Air source heat pump
- Ground source heat pump
- Central air conditioning
- Ductless mini-split heat pump
- High efficiency furnace / boiler
- Steam boiler

Water Heating

- Heat pump water heater
- Indirect water heater - natural gas
- On-demand tankless water heater

Renewables

- Solar PV system
- Solar battery storage
- Solar hot water
- Electric vehicle recharging station

Health and Safety

- Asbestos removal
- Mold remediation

Related Energy Improvements

- ENERGY STAR appliances
- Roof repair for solar
- Tree removal for solar
- Conversion to natural gas

Financing for solar PV systems has been exceedingly important throughout the life of the program. In March, the Green Bank was approached by one of its leading installers – EcoSmart – who brought to Green Bank staff's attention that a product that they used to finance the investment tax credit (ITC) portion of a homeowner's project was no longer available in the Connecticut market due to the originating lender being acquired and the new owner not continuing this financing. This financing was a flexible, "side-by-side" arrangement whereby the ITC loan could be paired with a loan for the non-ITC portion of the project cost. EcoSmart has used the Green Bank Smart-E loan due to its favorable rates and flexible approach (i.e., able to cover the solar PV as well as expenses associated with site preparation, such as tree trimming, roof reinforcement, etc.). EcoSmart would then pair the Smart-E loan with the ITC loan – with the ITC loan being "bought down" to offer to the customer a "same as cash" loan for the 30% ITC which the homeowner would receive in 12-18 months. Without this ITC loan product in the market to pair with Smart-E, EcoSmart's (and other PV and battery storage installers) stand to lose a market which is unable to fund the ITC out of pocket. This forces the customer to take out a loan including the 30% ITC with a much higher monthly payment, which is then a disincentive to the sale.

Staff requests approval for a pilot to expand the Smart-E loan program to include a Smart-E Solar Option Loan (including battery storage as it is eligible for the ITC) which would operate similarly to the "side-by-side" same-as-cash arrangement whereby a 0% ITC loan could be paired with a Smart-E Loan for the non-ITC portion of the project cost as explained below.

Concept & Pilot Design

After understanding this barrier in the residential solar market, Green Bank staff suggested a concept to EcoSmart and C4C as a pilot, called the Smart-E Solar Option Loan which has the following features:

Homeowner	The Homeowner – buying the solar PV system (or battery storage system or a combination of the two) gets two loans: 1. A Smart-E Solar Option Loan at 0% "same as cash" interest up to 8 months for the ITC the Homeowner is to receive after filing its tax return with the IRS 2. A regular Smart-E Loan (at regular Smart-E interest rates) for the balance of the solar PV system not covered by the Solar Option Loan
Contractor	The Contractor processes the regular Smart-E loan and the Smart-E Solar Option Loan as they would under the existing program, but pays a 6% fee to the Lender for the "same as cash" benefit for 18 months on tax credit portion of the loan
Lender	Receives funding from Green Bank at 3% per annum rate for the 18-month period covered by the Smart-E Solar Option Loan. The Lender effectively earns a 1.5% fee for the arrangement which is only made available if the Homeowner closes on a Smart-E loan for the balance of the project's cost (i.e., the Smart-E Solar Option Loan cannot be issued in the absence of the other Smart-E loan. If the Homeowner applies for and closes on a Smart-E Solar Option Loan, they must also apply for and close on a regular Smart-E Loan for the balance of the project's cost not covered by the Smart-E Solar Option Loan

Smart-E's Solar Option Loan is designed to work with the federal solar tax credit to lock in lower monthly payments by applying the full amount of the credit.

- The customer closes on the Smart-E Solar Option Loan and the Smart-E Loan to cover 100% of the cost of the solar PV system.
- If Customer prepays AT LEAST the amount of their scheduled tax credit (equal to the Smart-E Solar Option Loan) not later than the due date for their 18th monthly payment – Customer KEEPS THEIR LOW MONTHLY PAYMENT on the Smart-E Loan until the end of their loan.
- If Customer pays down their Smart-E Solar Option Loan by less than 100%, the Customer's monthly payment on the Smart-E Loan goes up (to cover the principal of the Smart-E Solar Option Loan *not* paid off.

Concept Example

Homeowner buys a solar PV system for $25,000

The tax credit is expected to be 30% of $25,000 or $7,500; *after* credit price: $17,500

10 year *regular* Smart-E loan 5.99% for $17,500 → $194.20 loan repayment per month

For the $7,500 portion (the Smart-E Solar Option Loan) – contractor is charged a fee by Lender of 6% ($450), whichallows customer to *avoid* interest on this portion of the purchase for *up to* 18 months.

If the customer prepays the scheduled credit of at least $7,500 and makes that scheduled credit payment in month 18 or sooner, customer's monthly payment on the *regular* Smart-E Loan is *protected* (i.e., will not increase – remains $194.20 from the 19th payment to the end of the loan).

If the customer *does not* prepay the scheduled credit of at least $7,500, customer's monthly payment *increases*

- Assuming *NO PREPAYMENT* whatsoever, loan will increase to balance outstanding after 18 months of payment, or $15,493 + $7,500 + ($7,500 x 5.99% x 18/12 months = $673.88) = $16,166.87 and loan repayment increases to $296.65 per month), Lender "books" a fee of $673.88 being the interest the borrower would have paid had the full amount of the loan been in place on Day 1
- If the customer prepays the Smart-E Solar Option Loan by *less than* $7,500 and makes that payment in month 18 (or sooner), customer's monthly payment will rise, but by less than the rise to $296.65 shown above.

NOTE: Customer must be underwritten on the basis of a potential payment of $296.65 as this is the highest potential payment that would result (in this example).

Green Bank Loan to the Smart-E LENDER

Green Bank would lend or deposit funds in the amount of the Option Loan ($7,500 in the example above) for 18 months for a 3% rate (or – if the lender has a published 18-month CD rate which is less, then at that lower rate – or at the closest savings rate that is available). Payment of interest by the Smart-E Lender to Green Bank would be due 18 months from loan date or (if sooner) when customer makes the full repayment of the Option Loan.

Green Bank Estimate for Capital Required for Pilot Loans to Smart-E LENDERs

Based on discussions with EcoSmart, and assuming an average project of $35,000 for solar, the ITC would be $10,500. For one installer, a deployment rate of 50-100 seems to be the feasible range. So, total loan volume from a smaller company would be $500,000 to $1 million in ITC only (Smart-E Solar

Option Loan) financing. Using $1 million as the high-water mark per contractor and even using 5 contractors at the level of volume as EcoSmart would mean a $5 million commitment by Green Bank. Accordingly, even though it is not likely that the Smart-E Solar Option Loan would generate $5 million in the first year of rollout, Green Bank staff requests approval by the Board to make loans or deposits up to an aggregate amount of $5 million as follows:

- Up to $2 million on an unsecured basis to C4C under a loan facility that would extend for a two and one-half year period (meaning a one-year draw period with the final loans being repaid 18 months from the end of the draw period); and
- Up to $3 million in deposits to all other Smart-E lenders (credit unions or community banks) for periods and amounts that would approximately match the size and maturity of the underlying Smart-E Solar Option Loans.

Green Bank staff views the relative short-term nature of the underlying loans (18 month Smart-E Solar Option Loans) with C4C being of relatively contained risk, and the loans would be to the parent entity and would benefit from cash flows from the C4C portfolio loans as well as and cash flow streams from CEEFCo (where Green Bank lends on a secured basis together with Amalgamated Bank). If the underlying loans 18 month Smart-E Solar Option Loans are not repaid by the homeowner, the loans convert to Smart-E regular loans which are then funded 60% by Amalgamated Bank and 40% by Green Bank, meaning that Green Bank's risk is (a) reduced by 60% at that point in time and (b) converts to a loan that is secured together with a pool of other Smart-E loans.

Green Bank Financial Statements

How is the project investment accounted for on the balance sheet?
Green Bank's advances lead to a reduction in cash and cash equivalents on the asset side of the Green Bank's balance sheet and a concomitant increase in either (a) short-term loans (for extensions of unsecured credit to C4C) or (b) deposits with financial institution (for other Smart-E lenders).

Resolutions

WHEREAS, the Connecticut Green Bank ("Green Bank") has established the Smart-E Loan program with financing agreements with various credit unions, community banks and a community development financial institution (Capital for Change ("C4C"));

WHEREAS, Green Bank desires to pilot an investment tax credit bridge loan pilot, in partnership with C4C, various credit unions and community bank partners in the Smart-E Program (the "ITC Loan Pilot");

WHEREAS, the ITC Loan Pilot would require Green Bank to either lend on an unsecured basis to C4C or to deposit funds with the other Smart-E lenders to fund the up to 18-month underlying ITC Bridge Loans as explained in the memorandum dated April 18, 2023 to the Green Bank Board of Directors (the "Board") (the "Concept Memo"); and

WHEREAS, Green Bank staff recommends approval by the Board for Green Bank to make loans or deposits up to an aggregate amount of $5 million as follows:

- Up to $2 million on an unsecured basis to C4C under a loan facility that would extend for a two and one-half year period (meaning a one-year draw period with the final loans being repaid 18 months from the end of the draw period), such loan facility being the "C4C Bridge Loan Facility"; and

- Up to $3 million in deposits to all other Smart-E lenders (credit unions or community banks) for periods and amounts that would approximately match the size and maturity of the underlying Smart-E Solar Option Loans (the “Bridge Loan Deposits”).

NOW, therefore be it:

RESOLVED, that the Board approves the C4C Bridge Loan Facility and the Bridge Loan Deposits, to be implemented generally as described in the Concept Memo;

RESOLVED, that the President of the Green Bank; and any other duly authorized officer of the Green Bank, is authorized to execute and deliver, any contract or other legal instrument necessary to effect the C4C Bridge Loan Facility on such terms and conditions as are materially consistent with the Concept Memo; and

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

Submitted by: Bryan Garcia, President and CEO and Bert Hunter, EVP and CIO

75 Charter Oak Avenue, Suite 1 - 103, Hartford, CT 06106
T 860.563.0015
ctgreenbank.com

CONNECTICUT GREEN BANK

MOU Modification Memo

To: Connecticut Green Bank Board of Directors

From: Bert Hunter, EVP & Chief Investment Officer

CC: Bryan Garcia, President and CEO; Sergio Carrillo, Managing Director of Incentive Programs, Brian Farnen, General Counsel and CLO; Jane Murphy, EVP of Finance & Administration, Eric Shrago, VP of Operations

Date: April 18, 2023

Re: Extension of Inclusive Prosperity Capital, Inc. Revolving Line of Credit Under the Memorandum of Understanding

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Background

In December 2020, the Connecticut Green Bank ("Green Bank") Board of Directors (the "Board") approved the expansion of a Revolving Line of Credit ("RLC") in the amount of $1 million to support Inclusive Prosperity Capital, Inc. ("IPC") ongoing operational costs as part of the key agreements underpinning the Green Bank / IPC relationship, including a Memorandum of Understanding ("MOU") which remains in force today. (Please refer to the Board Memorandum of December 18, 2020 found at Appendix 1.) IPC has made full use of the RLC and has remained current and in good-standing on all repayments associated therewith without fail from inception.

In June 2021, the Board approved an extension of the Green Bank / IPC relationship by adding two additional years to the MOU, which extended our arrangement from the end of FY24 until the end of FY26. At the time of the June 2021 approval, Green Bank did not realign the RLC to the extended sunset of the MOU. As a consequence, unless the RLC is modified, IPC's availability under the RLC would gradually diminish and then end altogether at the end of June 2024 (the original end of the MOU). IPC has submitted a request to Green Bank to extend the RLC until the sunset of the revised MOU arrangements in June 2026. Green Bank staff supports this request on the same basis that the original RLC was established, being that security would be in the form of a first security pledge of services fees to be received by IPC from Green Bank under IPC's PSAs with Green Bank. Consequently, availability under the RLC would step-down generally in line with extended PSA fees due to IPC as follows:

	RLC Limit (Existing)	RLC Limit (New)	Remaining PSA
Dec-22	$ 1,000,000	$ 1,000,000	$ 3,073,993
Mar-23	$ 850,000	$ 1,000,000	$ 2,732,438
Jun-23	$ 700,000	$ 1,000,000	$ 2,390,883
Sep-23	$ 550,000	$ 1,000,000	$ 2,049,328
Dec-23	$ 400,000	$ 1,000,000	$ 1,793,162
Mar-24	$ 250,000	$ 1,000,000	$ 1,536,996
Jun-24	$ 150,000	$ 1,000,000	$ 1,280,830
Sep-24	$ -	$ 1,000,000	$ 1,024,664
Dec-24	$ -	$ 850,000	$ 853,887
Mar-25	$ -	$ 675,000	$ 683,110
Jun-25	$ -	$ 500,000	$ 512,333
Sep-25	$ -	$ 325,000	$ 341,556
Dec-25	$ -	$ 250,000	$ 256,167
Mar-26	$ -	$ 150,000	$ 170,778
Jun-26	$ -	$ 75,000	$ 85,389

Interest on the facility would be adjusted from one month LIBOR to the secured overnight funding rate (SOFR) plus the existing margin of 2.40%.

Recommendation

Given IPC's successful performance to date under the various key agreements that govern the relationship between the Green Bank and IPC, including the Professional Service Agreements ("PSAs") for programs that IPC administers on behalf of the Green Bank (as discussed further below) and the existing RLC, Green Bank staff recommends the proposed extension of the RLC as detailed in this memo in line with the extended MOU arrangements.

Resolutions

WHEREAS, the Connecticut Green Bank ("Green Bank") has an existing partnership with Inclusive Prosperity Capital, Inc. ("IPC") to lessen the burden of government, and to protect, promote and preserve the environment by, among other things, furthering the purpose of the Green Bank as described in Connecticut General Statute Section 16-245n(d)(1)(B);

WHEREAS, on June 13, 2018, the Green Bank Board of Directors ("Board") approved a Memorandum of Understanding ("MOU") governing the Green Bank's partnership with IPC as part of Green Bank's long-term sustainability plan and on June 25, 2021 extended pursuant to a strategic selection the MOU to end on June 30, 2026 (the "MOU Extension");

WHEREAS, the MOU included a Revolving Line of Credit ("RLC") intended to support IPC startup and operational costs for an amount not to exceed $150,000 outstanding and with a maturity date of June 30, 2021, which maturity date was extended to June 30, 2024 and the not to exceed amount was increased to $1,000,000 by the Board at a meeting duly held on December 18, 2020;

WHEREAS, the maturity date of the RLC was not extended at the time of the MOU Extension and, pursuant to a request by IPC, Green Bank staff has recommended to the Board to extend the maturity date of the RLC to June 30, 2026 (the "Amended Maturity Date") in line with the end of the MOU as more fully explained in a memorandum to the Board dated April 18, 2023 (the "Board Memo");

WHEREAS, since August 2020, IPC has drawn on and has remained current and in good-standing on all repayments associated with the RLC;

NOW, therefore be it:

RESOLVED, that the Board approves of the extended RLC with a maturity date of June 30, 2026 consistent with the Board Memo;

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

Submitted by: Bert Hunter, EVP and CIO

Appendix 1

845 Brook Street, Rocky Hill, CT 06067
T 860.563.0015
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CONNECTICUT GREEN BANK

MOU Modification Memo

To: Connecticut Green Bank Board of Directors

CC: Bryan Garcia, President and CEO; Brian Farnen, General Counsel and CLO; Eric Shrago, Managing Director of Operations;

From: Bert Hunter, EVP and CIO[1]

Date: December 18, 2020

Re: Expansion of Inclusive Prosperity Capital, Inc. Revolving Line of Credit Under the Memorandum of Understanding

Background

On June 13, 2018 the Connecticut Green Bank ("Green Bank") Board of Directors (the "Board") approved key agreements underpinning the launch of Inclusive Prosperity Capital, Inc. ("IPC") including a Memorandum of Understanding ("MOU") which remains in force today and an outline of IPC's existence as a distinct entity, legal and ethical opinions supporting IPC's spin-out from the Green Bank, and general rules of engagement between IPC and Green Bank post spin-out. The MOU included a Revolving Line of Credit ("RLC") intended to support IPC startup and operational costs:

> 4. **Start-Up Funding** - Green Bank providing revolving line of credit in an amount not to exceed $150,000 at OTT's Short Term Investment Fund (STIF) rate to cover initial startup costs, including:
>
> – the development of IT and telecommunications infrastructure;
>
> – the implementation of its own accounting software;
>
> – performance of its own audit and tax filings;
>
> – the purchase of insurance; and
>
> – the development of its own branding, among other costs.

IPC has drawn the full $150,000 and currently pays an annual interest rate on drawn funds calculated at the STIF rate (defined above) which has varied monthly since the draw from 0.07% - 0.18%. As IPC continues to grow and incur startup operational costs, IPC is requesting an increase in the amount of the RLC under the MOU to up to $1,000,000, and in exchange IPC is offering to provide security in the form of a first security pledge of services fees to be received by IPC from Green Bank under the IPC PSAs associated with the Green Bank MOU with IPC. Additionally, there would be an increase in the annual interest rate on drawn RLC funds to 30-day LIBOR (or its equivalent post-LIBOR) plus 2.40%, in line with the current market for secured, short-term credit facilities.

[1] This memo written with support of Chris Magalhaes, CIO, IPC

As a 501(c)(3) non-profit, non-stock corporation registered in Connecticut, IPC cannot raise traditional equity for growth and therefore must rely on operating cash, grants, and flexible credit facilities to help fund operations and expansion, especially during this critical "start-up growth" phase of IPC's existence. Since inception in August 2018 through October 2020, IPC has accrued the following expenses across key categories (including those contemplated under the original MOU language associated with the RLC), totaling approximately $1.2M:

- **IT/Telecommunications Infrastructure**: **$203,754**
  - $48,611 through FYE 6/30/2019
  - $104,429 through FYE 6/30/2020
  - $50,714 through 10/31/2020

- **Professional Services (Account/Audit/Legal/Consulting)**: **$710,902**
  - $144,569 through FYE 6/30/2019
  - $483,841 through FYE 6/30/2020
  - $82,492 through 10/31/2020

- **Insurance**: **$112,640**
  - $27,774 through FYE 6/30/2019
  - $62,849 through FYE 6/30/2020
  - $22,017 through 10/31/2020

- **Program Development/Administration and Branding**: **$153,814**
  - $113,195 through FYE 6/30/2019
  - $32,088 through FYE 6/30/2020
  - $8,531 through 10/31/2020

IPC expects to continue its trajectory of growth and expenditure, in similar fashion to its experience to date, and would look to utilize the expanded RLC facility to facilitate "smoothing out" the expenditures associated with that growth via a flexible capital facility that is drawn upon based on need and repaid with corporate Net Assets. Specifically with respect to repayment, IPC is able to tap both cash from operations (in the form of investment income and fee payments for services provided across its business lines) and cash from financing (in the form of additional capital raised for growth/operations as well as for releasing equity in pre-funded investments) to manage the balance outstanding on the RLC facility. IPC expects to continue to optimize draws and repayments on the RLC relative to cash flows and capitalization by balancing the benefits the RLC affords (i.e. added flexibility for expenditures/growth) with the added costs and interest associated with the facility (i.e. by paying down principal with cheaper sources of capital and balance sheet cash to minimize unnecessary interest expense).

Expanded Facility Details

The expanded and extended RLC facility would increase the available principal balance to IPC from $150k to $1M, and would increase the interest rate to the Green Bank to 30-day LIBOR + 2.40% P.A. The facility maturity date (i.e. the date by which Green Bank can choose to either demand full repayment or roll the facility) would be extended from June 30, 2021 to June 28, 2024 (i.e., the last business day pursuant to the MOU arrangements between Green Bank and IPC). Security would be in the form of a first security pledge of services fees to be received by IPC from Green Bank under IPC's PSAs with Green Bank. Availability under the RLC would step-down generally in line with anticipated PSA fees due to IPC as follows:

Date	RLC Availability
Prior to 12/31/22	$1,000,000
12/31/22 to 3/30/23	$850,000
3/31/23 to 6/29/23	$700,000
6/30/23 to 9/29/23	$550,000
9/30/23 to 12/30/23	$400,000
12/31/23 to 3/30/24	$250,000
3/30/24 to 6/27/24	$150,000

Since August 10, 2020 IPC has drawn on and kept outstanding $150k of the original RLC, and has remained current and in good-standing on all repayments associated therewith.

IPC Impact to Green Bank and in Connecticut

As noted in the Memo to the Board dated June 12, 2019 for the Board meeting held on June 28, 2019, within the first year of operations IPC had already delivered meaningful benefit to the Green Bank and the Connecticut market.

From the start, IPC has been an important component of the Green Bank's long-term sustainability strategy by managing programs on behalf of the Green Bank and helping drive capital and project deployment to underserved areas of the market:

> **Nonprofit Organization – Inclusive Prosperity Capital**
> The final element of the Sustainability Plan was to create an independent 501(c)3 nonprofit organization for the purposes of reducing operating expenses of the Green Bank, while seeking to continue to serve its mission by attracting mission-oriented investors in underserved market segments and providing investment opportunities for the Green Bank.[8]

Through its first year in operation, IPC successfully delivered on its targets and *"…led to a reduction in operating expenses and an increase in investment opportunities for the Green Bank…"* as noted below:

IPC, though its PSAs with the Green Bank, is delivering on the targets established – see Table 6.

Table 6. FY 2019 Targets and Actuals (as of June 1, 2019) for IPC

Product	PSA	Project Targets	Project Actuals (06-01-19)	Investment Target ($MM)	Investment Actuals ($MM) (06-01-19)	Installed Capacity Target (kW)	Installed Capacity Actuals (kW) (06-01-19)
Smart-E Loan	5410	540	595	$8.8	$7.6	600	700
Multifamily[10]	5411	19	18	$2.6	$2.8	300	260
Solar PPA	5412	25	18	$14.1	$12.5	6,300	3,900
Solar for All	5413	586	645	$15.6	$18.6	3,600	4,500
Total		**1,170**	**1,276**	**$41.1**	**$41.4**	**10,800**	**9,360**

In its first-year contract with the Green Bank, IPC has delivered measurable results supporting its mission to reach underserved market segments.

☑ **Nonprofit Organization** – the successful creation of Inclusive Prosperity Capital, led by its partners (DEEP, Kresge Foundation, and the Green Bank), has led to a reduction in operating expenses and an increase in investment opportunities for the Green Bank, while attracting other mission-related investors in underserved market segments.

Through its second year in operation, IPC continued the trend by exceeding project targets across all programs with the exception of the Solar PPA due to timing on state solar projects.

Product	PSA	Project Targets	Project Actuals (06-30-20)	Investment Target ($MM)	Investment Actuals ($MM) (06-30-20)	Installed Capacity Target (kW)	Installed Capacity Actuals (kW) (06-30-20)
Smart-E Loan	5410	540	737	$7.2	$10.0	500	900
Multifamily Pre-Development	5411	2	4	$0.1	$1.0	n/a	n/a
Multifamily Term	5411	8	14	$1.3	$8.1	200	2,000
Solar PPA	5412	18	3	$23.5	$1.4	10,600	400
Solar For All	5413	615	625	$17.2	$15.7	4,200	3,900
Total		**1,183**	**1,383**	**$49.3**	**$36.2**	**15,500**	**7,200**

IPC Financial Position and Growth

IPC has grown at almost every level of the organization: number full-time employees (12 to date, and 4 additional in recruitment), capital available for project-level investments (approximately $50M across 3rd Party Debt, Program-Related Investment ("PRI"), Tax Equity, Grants, and Balance Sheet cash), number of investments (IPC has 1 investment each in the LMI and affordable multifamily sectors in CT and a 3rd multifamily loan in the process of closing, has recently acquired 4 distributed solar PV projects sourced by the Green Bank, and is in various stages of co-investing with the Green Bank on additional projects in Connecticut), and financial sustainability.

IPC's consolidated financials as of October 30, 2020 show Total Assets of approximately $8.8M relative to Total Liabilities of approximately $1.9M for Total Net Assets of $6.9M. IPC has thus maintained a solvent and healthy balance sheet as its grown since inception. And while IPC's long-term financial position and health remains positive, IPC does face increasing demand for short-term liquidity in order to facilitate its growth.

Recommendation

Given IPC's successful performance to date under the various key agreements that govern the relationship between the Green Bank and IPC, including the Professional Service Agreements ("PSAs") for programs that IPC administers on behalf of the Green Bank (as discussed further below) and the existing RLC, and given IPC's continued growth and need for liquidity to help fund start-up operational costs (in line with the MOU), Green Bank staff recommends the proposed expansion and extension of the RLC as detailed in this memo.

Resolutions

WHEREAS, the Connecticut Green Bank ("Green Bank") has an existing partnership with Inclusive Prosperity Capital, Inc. ("IPC") to lessen the burden of government, and to protect, promote and preserve the environment by, among other things, furthering the purpose of the Green Bank as described in Connecticut General Statute Section 16-245n(d)(1)(B) ;

WHEREAS, on June 13, 2018, the Green Bank Board of Directors ("Board") approved a Memorandum of Understanding ("MOU") governing the Green Bank's partnership with IPC as part of Green Bank's long-term sustainability plan;

WHEREAS, the MOU included a Revolving Line of Credit ("RLC") intended to support IPC startup and operational costs for an amount not to exceed $150,000 outstanding and with a maturity date of June 30, 2021;

WHEREAS, since August 2020, IPC has drawn on and kept outstanding $150k of the original RLC, and has remained current and in good-standing on all repayments associated therewith;

WHEREAS, IPC is seeking to expand and extend the maturity date of the RLC up to $1,000,000 outstanding and with a maturity date of June 30, 2024 (the "Amended Maturity Date") to facilitate smoothing out continued expenditures associated operations and growth, as more fully explained in a memorandum to the Board dated December 18, 2020 (the "Board Memo");

WHEREAS, staff of the Green Bank, having fully considered the proposed uses by IPC for the RLC facility and the sources and likelihood for repayment of the RLC facility not later than the Amended Maturity Date, recommend the expanded and extended RLC to the Board for approval, as more fully explained in the Board Memorandum;

NOW, therefore be it:

RESOLVED, that the Board approves of the expanded and extended RLC for up to $1,000,000 outstanding and with a maturity date of June 30, 2024 consistent with the Board Memo;

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

Submitted by: Bert Hunter, EVP and CIO

75 Charter Oak Avenue, Suite 1 - 103, Hartford, CT 06106
T 860.563.0015
ctgreenbank.com

CONNECTICUT GREEN BANK

Memo

To: Board of Directors, Connecticut Green Bank

From: Louise Della Pesca, Consultant, Clean Energy Investments and Bert Hunter, EVP & CIO

CC: Bryan Garcia, President and CEO; Brian Farnen, General Counsel and CLO; Jane Murphy, EVP Finance and Administration

Date: April 14, 2023

Re: Skyview Ventures debt facility amendment to enable construction financing

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Introduction

In 2020, Connecticut Green Bank ("CGB") arranged a senior secured term loan facility ("Term Loan Facility") to finance the development, longer term financing and refinancing of solar PV projects owned by a special purpose vehicle of Skyview Ventures LLC ("Skyview SPV"). After multiple amendments approved by the CGB Board of Directors (the "Board"), the Term Loan Facility commitment now stands at $10M. Forty-one (41) projects, deploying $6.6M of the commitment, have been financed to date (see Appendix 1). This memorandum makes a request for the Board to approve an amendment to the Term Loan Facility documentation to (1) finance the construction of commercial solar PV projects in Connecticut ("Solar Projects") and (2) increase the interest rate charged on debt advances that are used specifically to finance the construction of Solar Projects.

Background

Since its approval in March of 2020, the existing Term Loan Facility with Skyview SPV has expanded from $2.3M to $10M. Through 11 separate advances, CGB has deployed $6.6M against 41 Solar Projects, representing a total of 5.1MW capacity. Sixty-six percent (66%) of the facility has been deployed in approximately three years and Skyview SPV has a healthy pipeline of projects in development (refer to Appendix 1). As of March 2023 month end, approximately $5.9M is outstanding under the Term Loan Facility, i.e., ~$700k has already been repaid.

The most recent memorandum to the Board concerning the Term Loan Facility, dated December 2021, is included as Appendix 3. At its meeting held December 17, 2021, the Board resolved that the Term Loan Facility could be deployed to finance battery energy storage systems ("BESS") projects. The pipeline of BESS projects that Skyview SPV was

developing at that time did not progress due t[redacted]

[redacted]

However, Skyview SPV continues to develop a pipeline of Solar Projects that is currently over [redacted]in capacity. By amending the Term Loan Facility to allow for the financing of construction activities, CGB will be able to support the deployment of clean energy in Connecticut while earning interest income that contributes to the financial stability of CGB. Every Solar Project in the Skyview SPV pipeline that is 'contracted', i.e., an off-take arrangement has been secured, will benefit schools and municipalities in CT. The uncontracted portion of the pipeline, which makes up ~80% of the pipeline, will benefit businesses through providing lease income to the site hosts. Once the Solar Projects are constructed, the construction loans will convert to term loans, thereby providing long term interest income to CGB.

Response to Capital Solutions Request for Proposals

Skyview Ventures LLC, acting on behalf of its wholly owned subsidiary Skyview SPV, submitted a response to the CGB Capital Solutions Request for Proposals in a bid to expand the Green Bank's overall commitment beyond the existing $10 million. Staff anticipates returning to the Board with this request later in 2023, pending further diligence.

Underwriting Summary

CGB staff performed the following underwriting activities to support this memorandum to the Board:

- Analysis of four years (2019 to 2022) of financial statements of Skyview Ventures LLC
- Analysis of the 2022 unaudited financial statements of Skyview SPV

The underwriting results are included as Appendix 2. In summary:

Skyview Ventures LLC

- [redacted]

[redacted]

Skyview SPV

- Staff obtained quarterly (unaudited) financial statements for 2022 to calculate the debt service coverage ratio ("DSCR"). Note that the only debt held by Skyview SPV is the Term Loan Facility.
- [redacted]

[1] https://carvalinvestors.com/

- The cause of the lower than expected DSCR was less energy production in 2022 than expected, driven mainly by unfavorable weather conditions in summer 2022. This resulted in 7% less production than forecast. This performance is consistent with CGB's own portfolio of commercial solar projects in 2022.

[redacted]However, a way to minimize the impact of future underperformance would be to size future debt advances using a higher DSCR, for example, 1.40x. Staff will continue to monitor the DSCR per Skyview SPV quarterly financial statements and adjust the sizing of future debt advances accordingly.

[redacted] staff and Skyview have a long, consistent and positive performance relationship across the 41 projects financed to date (two of which CGB developed). Staff also takes comfort in the ringfenced security structure in place which firewalls CGB's security from the rest of Skyview in the event Skyview for any reason should become unable to perform. Staff reminds the Board of the capability Staff has to manage a portfolio of solar PV assets, which it does actively with a large, CGB-owned portfolio. Accordingly, CGB supports the modification of the existing facility to Skyview and, if the need should arise, could manage this incremental portfolio of solar PV assets which provide direct benefit to several communities across the state alongside CGB's existing portfolio.

Amendment to Term Loan Facility documentation

An amendment to the Term Loan Facility (hereinafter referred to as the "Loan Facility") documentation is required to enable construction financing for Solar Projects. The amendment would cover:

- Conditions precedent to making construction loan advances, including but not limited to:
    - Definition of construction milestones that must be attained before an advance is made
    - Clarification, if required after discussion with legal counsel, of the ring fencing protection such that CGB could step in and complete construction and own the assets if borrower failed to complete construction (bearing in mind that these projects are considered essential community assets in the municipalities where they are located).
- Maturity date of construction advances: the date that the Solar Project in question commences commercial operations
- Interest rate for construction debt advances: to be set at [redacted]the term loan interest rate for the Solar Project in question
- Reporting covenants: requiring financial statements on a quarterly, rather than annual basis
- DSCR: option to increase to from current 1.35x to 1.40x when sizing term debt advances, at lender discretion

Ratepayer Payback

How much clean energy is being produced (i.e. kWh over the projects' lifetime) from the project versus the dollars of ratepayer funds at risk?

Based on the assumption that the full $10M Loan Facility commitment could be used to finance Solar Projects, the forecast kWh over the projects' lifetime is 180,000,000 kWh of energy. The kWh / $ ratepayer funders at risk is forecast to be 18.3.

Capital Extended

How much of the ratepayer and other capital that Green Bank manages is being expended on the project?

The Loan Facility will not exceed $10.0M in outstanding principal as of the end of the availability period, however due to principal repayments during the availability period, actual advances may exceed $10 million somewhat.

Recommendation

In conclusion, staff recommends that the Board approve an amendment to the Loan Facility to enable financing the construction of Solar Projects by Skyview SPV under the existing $10m funding facility.

Resolutions

WHEREAS, the Connecticut Green Bank ("Green Bank") Board of Directors approved at its meeting held on March 25, 2020 a senior secured loan facility ("Original Term Loan") transaction with a Skyview Ventures special purpose vehicle ("Skyview") in an amount not to exceed $2.3M as a Strategic Selection and Award pursuant to the Green Bank Operating Procedures Section XII given the special capabilities, uniqueness, strategic importance, urgency and timeliness, and multi-phase characteristics of the Original Term Loan transaction. The Original Term Loan was first expanded to $3.5M, then to $7M and then to $10M (the (Existing Term Loan"), as approved by the Board at its meetings on April 24 and October 23, 2020, and December 17, 2021 respectively;

WHEREAS, Skyview has drawn $6.6M of the Existing Term Loan commitment at March 31, 2023 and has a contracted pipeline of commercial solar projects in development with a value that exceeds the remaining commitment of the Existing Term Loan;

WHEREAS, given the rate of utilization of the Existing Term Loan by Skyview for longer term financing of commercial solar projects, and the new opportunity to provide construction financing for Skyview's pipeline, following diligence of Green Bank staff, Green Bank staff proposes amending the terms of the Existing Term Loan to allow for commercial solar project construction financing, and requests Board approval.

NOW, therefore be it:

RESOLVED, that the Board approves staff's request to modify the Existing Term Loan transaction consistent with the memorandum to the Board dated April 14, 2023, to enable the financing of the construction of commercial solar projects.

RESOLVED, that the President of the Green Bank; and any other duly authorized officer of the Green Bank, is authorized to execute and deliver, any contract or other legal instrument necessary to effect the modification of Existing Term Loan on such terms and conditions as are materially consistent with the Board Memo; and

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

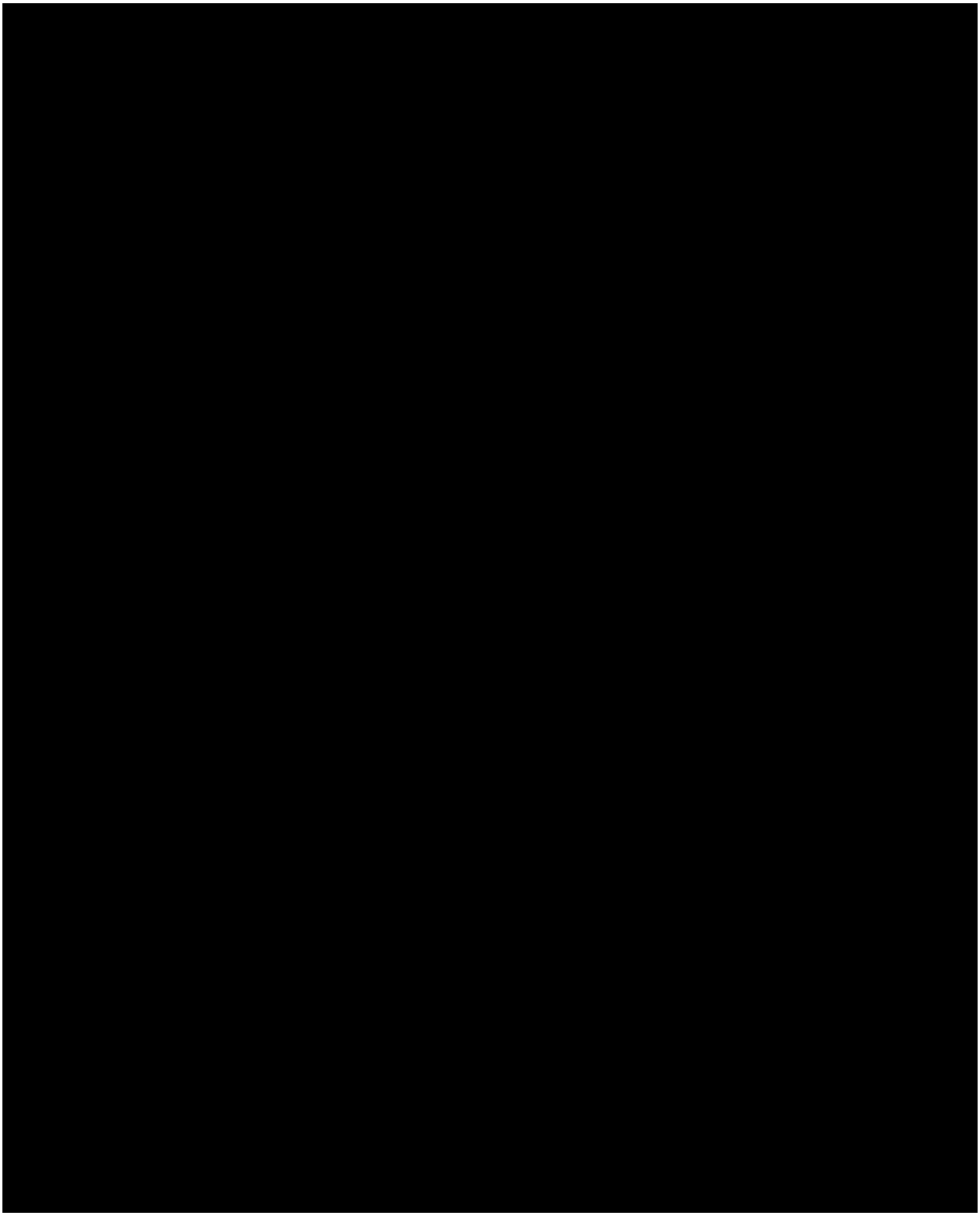
Submitted by: Louise Della Pesca, Consultant, Clean Energy Finance and Bert Hunter, EVP & CIO

Appendix 1: Projects Financed to Date using Loan Facility

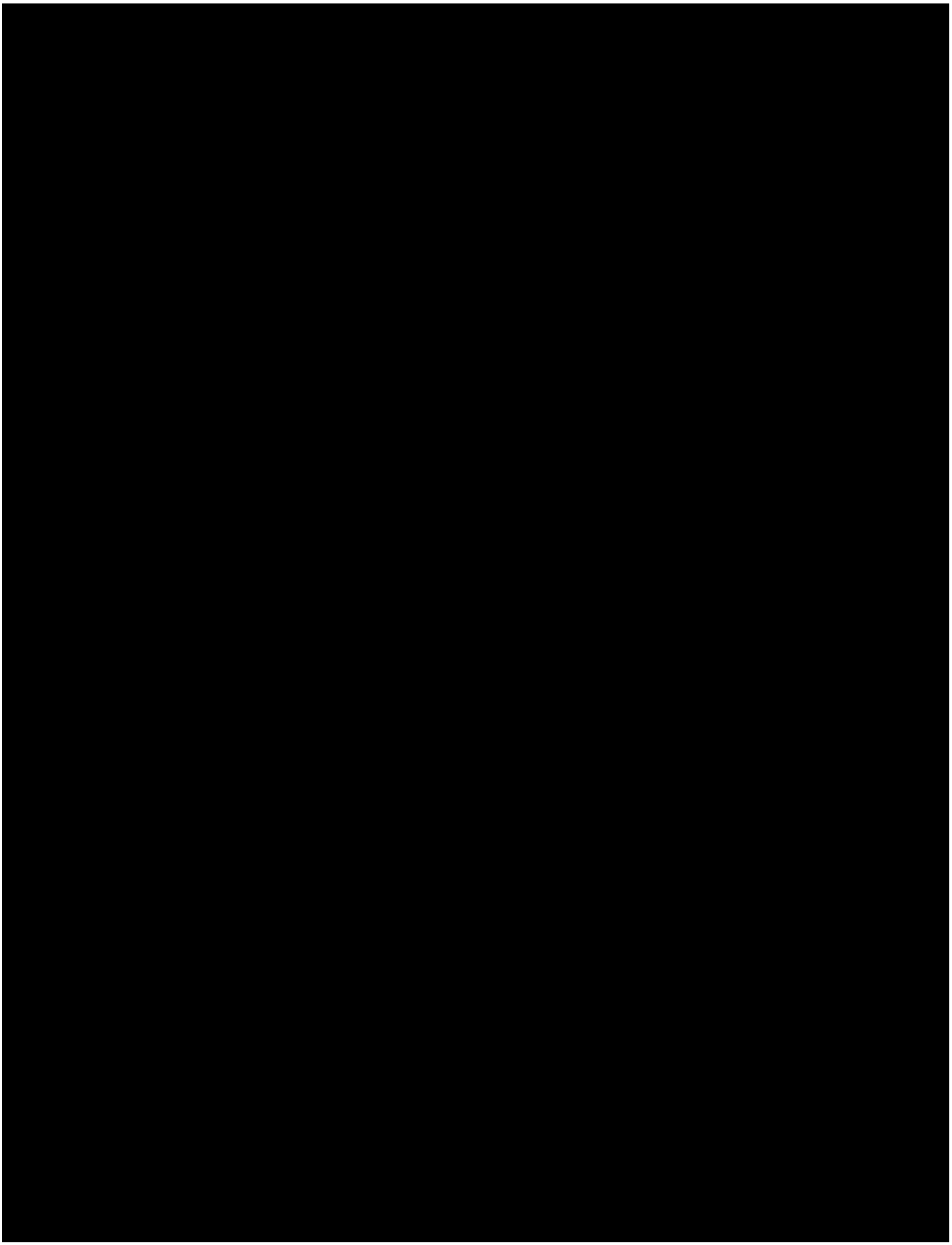
#	Project Name (host)	Location	Size	Year placed in service
1	Reef Fire Department (Town of Fairfield)	Fairfield	25.50	2014
2	Operation Hope (Town of Fairfield)	Fairfield	20.60	2014
3	Fairfield Theater Company (Town of Fairfield)	Fairfield	63.20	2014
4	Fairfield Public Library (Town of Fairfield)	Fairfield	66.65	2015
5	Fairfield REC Center (Town of Fairfield)	Fairfield	84.40	2015
6	Fairfield Animal Shelter (Town of Fairfield)	Fairfield	53.90	2016
7	Jennings Beach (Town of Fairfield)	Fairfield	25.17	2016
8	Woods Middle School 1 (Town of Fairfield)	Fairfield	113.78	2016
9	Jennings Firehouse (Town of Fairfield)	Fairfield	38.50	2017
10	Fairfield Animal Shelter 2 (Town of Fairfield)	Fairfield	28.60	2017
11	Transfer Station Roof (Town of Fairfield)	Fairfield	10.40	2017
12	Penfield Pavilion (Town of Fairfield)	Fairfield	54.75	2019
13	Fairfield Regional Fire School (Town of Fairfield)	Fairfield	75.19	2019
14	Senior Center (Town of Fairfield)	Fairfield	87.80	2019
15	Transfer Station (Town of Fairfield)	Fairfield	37.44	2019
16	South School (New Canaan Public Schools Board of Education)	New Canaan	305.00	2019
17	West Shore School (Milford Board of Education)	Milford	223.04	2019
18	Goshen Center School (Regional School District No. 6)	Goshen	88.90	2019
19	Margaret Egan Center (City of Milford)	Milford	76.38	2020
20	Duncaster Retirement Center (Duncaster, Inc.)	Bloomfield	76.73	2020
21	The Unquowa School (Unquowa School, Inc.)	Fairfield	56.00	2020
22	Roger Ludlowe Middle School (Town of Fairfield)	Fairfield	196.00	2020
23	Burr Elementary School (Town of Fairfield)	Fairfield	82.10	2020
24	Holland Hill School (Town of Fairfield)	Fairfield	83.90	2020
25	Newtown Community Center (Town of Newtown)	Newtown	130.00	2021
26	Newtown Police (Town of Newtown)	Newtown	130.00	2021
27	Warren School (Regional School District No. 6)	Warren	70.50	2021
28	East School (New Canaan Public Schools Board of Education)	New Canaan	268.00	2021
29	Metro Storage (Metro WH Storage LLC)	West Haven	115.00	2021
30	Scotland Elementary School (Town of Ridgefield)	Ridgefield	130.00	2021
31	Kingswood Condominiums (The Kingswood Association, Inc.)	Stamford	229.20	2021

32	Athletic Center (Marvelwood School)	Kent	72.495	2021
33	Dining Hall (Marvelwood School)	Kent	114.21	2021
34	Education Building (Marvelwood School)	Kent	175.365	2021
35	Ridgebury Elementary School (Town of Ridgefield)	Ridgefield	130.1	2021
36	Fairfield County Hospice (Fairfield County Hospice House)	Fairfield	30.6	2022
37	Waveny Care Center (Waveny LifeCare Network, Inc.)	New Canaan	260.58	2022
38	Maloney High School 1 (City of Meriden)	Meriden	314.88	2022
39	Maloney High School 2 (City of Meriden)	Meriden	315.29	2022
40	Maloney High School 1 (City of Meriden)	Meriden	314.88	2022
41	Maloney High School 2 (City of Meriden)	Meriden	315.29	2022
			5,090.32	

Appendix 2: Skyview SPV Project Pipeline CONFIDENTIAL



Appendix 3: Underwriting Analysis



Appendix 4: Memo to Board for approval of expansion to $10M facility size (excluding Appendices to the Memo)

Memo

To: Board of Directors, Connecticut Green Bank

From: Louise Della Pesca, Consultant, Clean Energy Finance and Bert Hunter, EVP & CIO

CC: Bryan Garcia, President and CEO; Brian Farnen, General Counsel and CLO; Jane Murphy, EVP Finance and Administration

Date: December 10, 2021

Re: Skyview facility amendment to increase commitment and enable energy storage debt financing

---

Introduction

In 2020, Connecticut Green Bank ("CGB") arranged a senior secured term loan facility ("Term Loan Facility") to finance the development, longer term financing and refinancing of solar PV projects owned by a special purpose vehicle of Skyview Ventures LLC ("Skyview SPV"). After multiple amendments approved by the CGB Board of Directors (the "Board"), the Term Loan Facility commitment now stands at $7 million. 35 projects, deploying $4.9M of the commitment, have been financed to date. This memorandum makes a request for the Board to approve an amendment to the Term Loan Facility documentation to (1) increase the commitment to $10 million; (2) enable financing of energy storage solutions ("ESS") projects in Connecticut, with a focus on vulnerable communities (e.g., distressed municipalities) and resilience (e.g., grid edge, critical facilities, displacing fossil fuel generators, small businesses); and (3) enable Skyview SPV to reborrow such amounts until the expiration of the availability period for new projects so long as the commitment as increased is not breached. At its meeting held November 17, 2021 the CGB Deployment Committee passed a resolution that recommended Board approval of the amendment to the Term Loan Facility.

Background

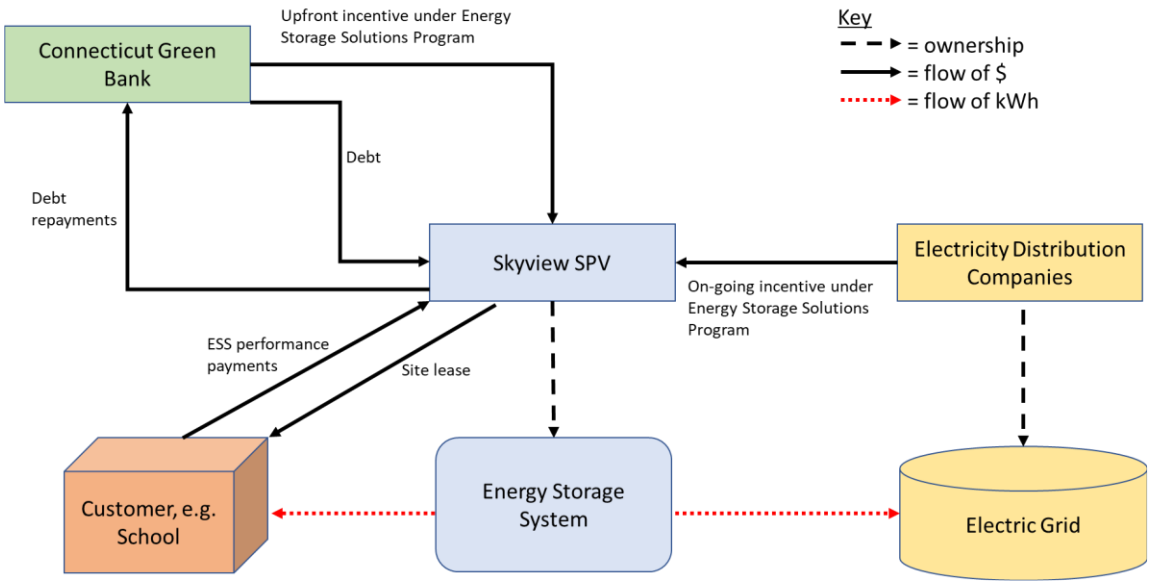
Since its approval in March of 2020, the existing Term Loan Facility with Skyview SPV has expanded from $2.3M to $7M. Through nine separate advances, CGB has deployed $4.9M against 35 solar facilities, representing a total of 3.5MW capacity. 70% of the facility has been deployed in approximately 18 months and Skyview SPV has a healthy pipeline of projects in development. As of October month end, approximately $4.6M is outstanding under the facility, i.e., ~$300k has already been repaid.

The most recent memorandum to the Board concerning the Term Loan Facility, dated June 2021, is included as Appendix 2 [not included here].

In July 2021, the Public Utilities Regulatory Authority issued a Final Decision in Docket No. 17-12-03RE03 establishing a statewide electric storage program (herein referred to as "Energy Storage Solutions" or the "Program"). The Program launches January 1, 2022 and through its Marketing Plan, is designed to encourage the deployment of ESS, such as lithium-ion batteries, in CT through the use of upfront and long-term performance-based financial incentives. Consequently, Skyview SPV is now developing approximately [redacted] ESS projects in Connecticut. The ESS projects would be located at sites where Skyview SPV owns solar PV projects that CGB has financed under the Term Loan Facility. CGB has the opportunity to finance Skyview SPV's ESS projects and thereby contribute to the important state goal of energy storage deployment.

Figure 1 is an indicative structure that Skyview SPV seeks to use in monetizing ESS projects.

Fig.1



Amendment to Term Loan Facility documentation

An amendment to the Term Loan Facility is required to allow for financing Skyview SPV's ESS projects. A term sheet (Appendix 1 [not included here]) details the structure of the amended Term Loan Facility. Specifically regarding the ESS financing, key terms are:

- $2.5M out of an amended total facility size of $10M carved out for financing ESS projects
- Two advances per ESS project: first to be repaid by the upfront incentive received under the Program (plus accrued interest at [redacted]- pricing identical to C-PACE advances during construction), second to be repaid over a 10-year term (coterminous with life of ESS project)

- Interest rate for second advance will be dependent on the credit profile of the ESS project off-taker and will be pegged to the interest rate for solar PV financing under the facility, with a discount o[redacted] to account for the shorter term length (10 years for ESS projects vs. 15-20 years for solar PV projects).

The debt service coverage ratio and advance rate terms of the facility will be unchanged at 1.30x and <75% respectively.

Skyview SPV intends to participate in the Energy Storage Solutions Program. This is an important diligence point for CGB because the Program itself will have parameters that enhance the 'bankability' of ESS projects. For example, to participate in the Program, the ESS project must, among other requirements:

- Use commercially available technology
- Use equipment that has 10-year warranties including manufacturer warranties on maintaining battery power capacity for 10 years
- Adhere to all applicable building, structural and local codes
- Have a design that is reviewed and approved by the electric distribution company during the interconnection application process.

CGB will conduct further diligence on ESS projects and reserves the right in the loan documentation to not finance any project that does not meet its diligence requirements, including but not limited to:

- CGB review and approval of the major contracts associated with the ESS projects (*)
- Use of 'tier 1' equipment in the construction of the projects
- CGB review and approval of operations and maintenance contracted program

(*) For example, the ESS Program allows for the direct payment of performance-based incentives partially or wholly to third-parties. Green Bank, as part of its security package, will arrange for a security interest in these payments similar to the security interest Green Bank obtains with respect to ZREC payments.

Ratepayer Payback

How much clean energy is being produced (i.e. kWh over the projects' lifetime) from the project versus the dollars of ratepayer funds at risk?

Under the amended Term Loan Facility, the portfolio of financed assets would consist of solar PV and ESS projects. The solar PV projects produce clean energy but the ESS projects do not but to maintain their federal tax benefits (ITC and accelerated depreciation) are expected to be recharged using solely energy from the solar PV systems and not the grid.

The total portfolio of solar PV projects is expected to produce 113,000,000 kWh of energy, over a 20-year period, and the amended Term Loan Facility is up to $10.0M. The kWh / $ ratepayer funds at risk is forecast to be 11.3.

Capital Extended

How much of the ratepayer and other capital that Green Bank manages is being expended on the project?

The amended Term Loan Facility will not exceed $10.0M in outstanding principal as of the end of the availability period, however due to principal repayments during the availability period, actual advances may exceed $10 million somewhat.

Strategic Selection

This transaction falls within the parameters of a strategic selection, subject to Board approval, for the reasons outlined below.

- **Special Capabilities** – Skyview, the parent company of Skyview SPV, has over a decade of experience in developing, owning, and operating commercial solar PV assets. Specifically, it has experience in the Connecticut market and, with its wholly owned development subsidiaries, is vertically integrated unlike its industry peers. The ESS industry is more nascent than solar, but Skyview's strategy to pair ESS with existing solar PV projects that it owns leverages its project experience.
- **Uniqueness** – While the Term Loan Facility is very similar to transactions previously entered into by CGB, it differs because (a) the majority of the Projects that will secure the Term Loan are already operational, (b) the Projects were not developed by CGB itself, and (c) the Term Loan Facility will be partly used to finance ESS projects, which is a first for CGB;
- **Strategic Importance** – The Term Loan Facility represents a continuation of a business relationship with a counterparty that CGB has successfully and smoothly transacted with in the past and is likely to transact with in future. For example, CGB continues to develop commercial solar PPA projects with underserved off-takers and Skyview has a track record of purchasing such projects from CGB and has expressed an interest in doing so in future. Further, by providing the Term Loan Facility to Skyview that includes ESS financing, CGB is setting a precedent and defining a process for future similar transactions that can provide a source of investment income to support the long-term sustainability of the organization;
- **Urgency and Timeliness** – CGB seeks to deploy capital in mission-driven transactions with appropriate levels of risk and return. This transaction meets this criteria and Skyview has expressed the desire to close quickly as it ramps up development of ESS projects; and
- **Multiphase Project** - Successful amendment of the Term Loan Facility would represent a follow-on transaction from the existing facility which has been successful to date (financing 35 solar PPA projects so far) and branches out into a new technology (ESS).

Recommendation

In conclusion, staff requests that the Board to approve an amendment to the Term Loan Facility as a strategic selection to allow for the opportunity to finance Skyview SPV's energy storage solutions projects.

Resolutions

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

WHEREAS, the Green Bank Board of Directors (the "Board") approved at its meeting held on March 25, 2020 a senior secured loan facility ("Original Term Loan") transaction with a Skyview Ventures special purpose vehicle ("Skyview") in an amount not to exceed $2.3M as a Strategic Selection and Award pursuant to the Green Bank Operating Procedures Section XII given the special capabilities, uniqueness, strategic importance, urgency and timeliness, and multi-phase characteristics of the Original Term Loan transaction. The Original Term Loan was first expanded to $3.5M, and then to $7M (the (Existing Term Loan"), as approved by the Board at its meetings on April 24 and October 23, 2020, respectively;

WHEREAS, as of November 2021, approximately 70% of the Existing Term Loan commitment has been advanced to finance PPA projects;

WHEREAS, in light of the financial incentives available (starting 2022) for the deployment of energy storage solutions ("ESS") projects, Skyview is developing a pipeline of ESS projects in CT; and

WHEREAS, given the rate of utilization of the Existing Term Loan by Skyview for Skyview PPA projects, and the opportunity to develop ESS projects, following diligence of Green Bank staff, Green Bank staff proposes increasing the Existing Term Loan size and amending its terms to allow for ESS project financing, and requests Board approval.

WHEREAS, the Green Bank Deployment Committee recommended that the Board approve of the staff's request to amend and restate the Board's existing approval of the Existing Term Loan transaction as described in the Project Qualification Memo submitted by the staff to the Deployment Committee and dated November 12, 2021 (the "Deployment Committee Memorandum")

NOW, therefore be it:

RESOLVED, that the Board approves staff's request to amend and restate the Board's existing approval of the Existing Term Loan transaction as described in the "Deployment Committee Memorandum and consistent with the memorandum to the Board dated December 10, 2021 (the "Memorandum") to include ESS projects to be qualified for future advances within the increased limit of $10,000,000 on terms and conditions substantially consistent with those described in the Memorandum as a Strategic Selection and Award pursuant to the Green Bank Operating Procedures Section XII given the special capabilities, uniqueness, strategic importance, urgency and timeliness, and multi-phase characteristics of the Existing Term Loan transaction.

Submitted by: Louise Della Pesca, Consultant, Clean Energy Finance and Bert Hunter, EVP & CIO

Residential Solar Investment Program (RSIP)

2012 – 2022 Program Impact Evaluation and Future Recommendations

DRAFT

slipstream

Project Manager: Dan Streit

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1.0 EXECUTIVE SUMMARY

The Connecticut Green Bank (Green Bank) implemented the Residential Solar Investment Program (RSIP) from 2012 until the program achieved its statutory objective of facilitating the deployment of 350 MW-DC of residential solar generating capacity in Connecticut in 2022. This evaluation assesses RSIP's effectiveness in using ratepayer funds (as program incentives paid to residential customers) to accelerate residential solar adoption and offers recommendations for how the Green Bank may support the ongoing orderly and sustainable development of the state's residential solar market.

To evaluate the success of RSIP, we consider metrics that demonstrate the impact of the program on energy production in Connecticut, on the state's economy and environment, and on Connecticut residential electric customers, with a particular focus on low and moderate income (LMI) households. We also compare performance metrics for RSIP and for the Connecticut residential solar market to residential solar programs and markets in other states in the Northeast and to national averages.

1.1 RESULTS

1.1.1 Deployed Generating Capacity

Based on a review of robust data for all projects funded through the program, the evaluation confirms that the Green Bank successfully implemented RSIP, deploying 350 MW-DC of residential solar generating capacity in the state. The evaluation finds that the Green Bank also achieved at least two additional key measures of success (described below) by effectively adapting and innovating the RSIP structure and implementation strategy during the program.

Figure 1 reflects the Green Bank's effective use of RSIP to mature and transform Connecticut's residential solar market, as Connecticut achieved the highest rate of residential PV capacity deployment in the Northeast, at a rate that was nearly twice the national average.

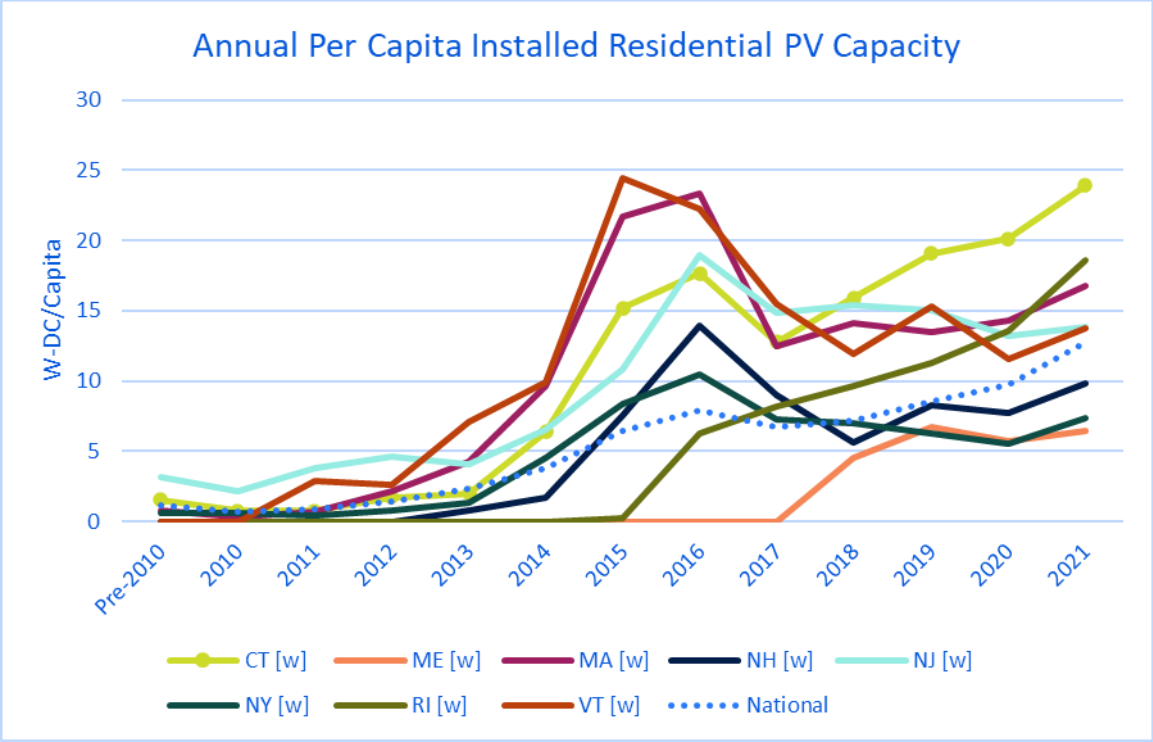


Figure 1 Annual Per Capita Installed Residential PV Capacity

1.1.2 Cost-Effective Program Implementation

The Green Bank used a declining incentive step structure to decrease incentive levels over the lifetime of the program and leveraged private investment. The strategy involved timing the reductions in incentive levels with market development and declines in the installed cost of residential solar. This resulted in RSIP leveraging $8.15 in private investment for every publicly funded program incentive dollar. When compared with other states in the Northeast, the evaluation found that RSIP cost-effectively achieved its residential solar generating capacity goal; the overall incentive cost for RSIP per installed watt and per MWh of solar energy generated through the program was similar to, or less than parallel metrics for other states.

1.1.3 Equitable Program Participation

The Green Bank's program offerings and partnerships resulted in Connecticut LMI households installing solar at a rate 10 percentage points higher than the national average. While LMI households experience higher rates of energy burden than more affluent households, they also face greater barriers in accessing the benefits of residential solar energy. Nationally, due to these barriers, only 31.9 percent of residential solar arrays have been installed in census tracts where the median income is less than the area median income (AMI), while 56.7 percent were installed by households living in census tracts for which the median income was 120 percent or more of the AMI. In contrast to national trends, the Green Bank used the enhanced LMI Performance Based Incentive (LMI PBI) offering, as well as program implementation partnerships, such as the Solar for All program and Solarize campaigns, to increase participation by LMI households and by households living in low and moderate income census

tracts. As a result of these efforts, 43.4 percent of residential solar installations in Connecticut took place in LMI census tracts.

1.2 RECOMMENDATIONS

When the Connecticut Assembly tasked the Green Bank with developing and implementing RSIP, it also directed the Green Bank to facilitate the orderly and sustainable development of the Connecticut residential solar industry. As RSIP expired, residential solar program support has shifted to the Residential Renewable Energy Solutions (RRES) tariffed solar structure. RRES is offered through the state's electric utilities and the Green Bank does not have an explicit role in implementing RRES.

1.2.1 Market Monitoring

Interviews, conducted for this evaluation, with Connecticut stakeholders, including representatives from the electric utilities, solar developers, and program partners revealed that the development and multi-year implementation of RSIP by the Green Bank played an essential role in supporting the growth of the state's solar industry. The Green Bank remains committed to supporting the orderly and sustainable development of the industry post-RSIP. This evaluation recommends that the Green Bank monitor compliance filings by the state's electric utilities to track the rate of residential solar adoption in the state. In parallel, we encourage the Green Bank to leverage insights gained from its invaluable RSIP project dataset to guide its future support of Connecticut's residential solar market and its facilitation of the development of other clean energy markets in the state in the future. We also encourage the Green Bank to maintain its role as a trusted convener of residential solar industry stakeholders and leverage that role to investigate and resolve any challenges that may emerge to the ongoing orderly and sustainable development of the industry.

1.2.2 Low-Moderate Income Market Support

This evaluation finds that Connecticut has a robust solar industry and that the pace of residential solar installations remains strong in the new RRES structure. However, we also find that the rate of solar deployment in LMI communities may decrease significantly post-RSIP. We recommend that the Green Bank pursue new strategies, partnerships, and engagement mechanisms to support residential solar adoption in LMI communities.

1.2.3 Adjacent Industry Development

The evaluation recommends that the Green Bank maintain its role as a key convener and facilitator in Connecticut's solar industry post-RSIP. While Connecticut's residential solar industry has developed significantly during RSIP, adjacent and synergistic industries, such as solar + storage is less well-developed. We recommend that the Green Bank maintain its central role among residential solar developers and program partners by pursuing opportunities to support the development of intersecting early-stage industries.

2.0 PROJECT BACKGROUND

The Connecticut Green Bank (Green Bank) engaged Slipstream to evaluate the performance of the Green Bank's Residential Solar Investment Program (RSIP) from its inception in 2012 to the achievement in 2022 of its mandate to support the installation of 350 MW of residential solar capacity in Connecticut. In this report, we evaluate the Green Bank's success in achieving its legislatively mandated objective for RSIP, as well as related energy, environmental, and economic impacts of the program throughout the lifetime of the program.

Section 3 of the report describes the methodology used for the evaluation, then Sections 4 and 5 present our findings on RSIP's impact on the state and current conditions in the Connecticut solar market. To assess the relative effectiveness of RSIP in facilitating the development of the Connecticut solar market, Section 6 compares metrics for RSIP and for the Connecticut market to equivalent data points for other states in the region. To advise the Green Bank on how it may continue to support the orderly and sustainable development of the Connecticut solar industry, Section 7 offers three sets of recommendations by which the Green Bank could continue to pursue this objective.

Recognizing that the Green Bank deployed over $148 million of public funds (as incentives paid to residential customers) to implement RSIP, it is important to assess how cost-effectively these funds were spent to achieve the program objectives. To inform the cost-effectiveness evaluation of RSIP, this report evaluates the development of the Connecticut residential solar market. Our analysis reviews RSIP's internal performance metrics and compares RSIP, and the development of the Connecticut market, to parallel metrics for residential solar programs and markets in other states in the Northeast and nationally.

The Green Bank developed and implemented RSIP in pursuit of its statutory directive to support the "sustained, orderly development of a state-based solar industry"[1] in Connecticut. In 2022, the Green Bank achieved RSIP's 350 MW capacity objective and the state transitioned from offering RSIP to support residential solar installations to utilizing the Residential Renewable Energy Solutions (RRES) offering, a tariffed PV structure, for this purpose. Through RRES, Eversource and United Illuminating customers may select either a "Buy-All" tariff or a "Netting" tariff. Customers who select the "Buy All" tariff may sell solar electricity to the utility at a rate that exceeds the current retail rate for a 20 year term. Customers who select the "Netting" tariff enter into a net metering agreement with the utility, and may also be able to receive certain "adders." Eversource customers may receive payment for RECs produced, while United Illuminating customers may qualify for a "Low-Income Adder" or for a "Distressed Municipality Adder."

To smooth the transition from RSIP to RRES, with the support of PURA in October of 2020, the Green Bank offered an extended RSIP incentive structure (RSIP-E), which the Green Bank made available for projects seeking approval after RSIP had reached the 350 MW statutory

[1] PA 11-80: https://www.cga.ct.gov/2011/ACT/Pa/pdf/2011PA-00080-R00SB-01243-PA.pdf, "An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut's Energy Future."

threshold and during COVID, but prior to the full implementation of RRES. The Green Bank leveraged an alternative source of financing (i.e. ability to aggregate and sell RECs into the Class I RPS) to fund RSIP-E incentives.

While no longer implementing RSIP, the Green Bank remains committed to supporting the orderly and sustainable development of the market. This report includes recommendations for how the Green Bank may most effectively continue to support residential solar installations in Connecticut without the benefit of RSIP.

3.0 METHODOLOGY

Slipstream completed five tasks to evaluate the performance of RSIP and to provide recommendations to the Green Bank:

1. Program Context Definition. We completed a detailed review of relevant program and institutional documents and data. In this task, we reviewed all components of the Green Bank Evaluation Framework[2]; past published analyses of RSIP's performance and/or potential (e.g., assessment of total addressable market for residential solar in Connecticut[3]); and past published reports on RSIP's achievements of key metrics (e.g., bi-annual reports to the Connecticut Assembly[4].) The background information collected under this task informed all sections of this report.
2. Program Data Analysis. The Green Bank provided comprehensive data for all projects that were funded through RSIP and RSIP-E. The dataset includes 46,651 records and 205 data fields and reflects all 46,226 projects completed through December 2022. Included in the dataset were records for 425 projects that were approved for RSIP or RSIP-E, but which were not completed. In addition to project-level data, Slipstream analyzed detailed information about incentive levels offered for each step in RSIP's declining incentive block structure[5]; program participation by residents who live in LMI and Vulnerable Communities; and factors used over time to estimate the non-energy impacts of the program. Impact factors included:
    a. Emissions avoided due to increased deployment of residential PV production
    b. Job years created by investments in residential solar projects
    c. Tax revenue generated by investments in residential solar projects.
    d. Energy cost savings realized by low and moderate income (LMI) households who participated in RSIP.

[2] Connecticut Green Bank. "Evaluation Framework: Assessing, Monitoring, and Reporting of Program Impacts and Processes." 2016.
[3] Geostellar. "The Addressable Solar Market in Connecticut." 2013.
[4] Connecticut Green Bank. "Progress Report on the Residential Solar Investment Program." 2020.
[5] Certain tables and figures in this report distinguish between projects funded by RSIP and projects funded through RSIP-E. Tables and figures that do not provide separate data for RSIP-E group both project sub-sets in the analyzed data.

The results of this analysis are described in Section 4 of this evaluation and were used in Section 6 to compare the Connecticut market to other states in the region.

3. Regional Analysis. Slipstream identified and analyzed data available on residential solar installations and residential solar programs in the Northeast. States reviewed included Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. Slipstream's search started with a detailed review of entries for residential solar programs in each state in the Database of State Incentives for Renewables & Efficiency (DSIRE)[6], from which we established an inventory of potentially relevant programs. For each program, we pursued primary data, program reports, and regulatory or legislative filings that offered data on program impacts and performance metrics. To supplement findings in DSIRE, we searched for relevant programs on the websites of electric utilities in states in the region, as well as the websites of state energy offices and public utilities commissions. In addition to internet research, we conducted limited and targeted outreach to utility and government representatives to request relevant data and program information. The findings from this task are described in Section 6.
4. Stakeholder Interviews. Slipstream conducted remote interviews with key external stakeholders in the Connecticut residential solar market. From the interviews, we documented views on the impacts of RSIP and the Green Bank on the market, and solicited input on the most effective ways for the Green Bank to support the residential solar market post-RSIP. We interviewed representatives from Eversource, United Illuminating, the Connecticut Solar and Storage Association, and SmartPower. Information from the stakeholder interviews informed Sections 5 and 7 of this report.
5. Data Analysis. Slipstream analyzed RSIP data and data on residential solar adoption in other states in the Northeast. We calculated the annual and cumulative impacts of RSIP on multiple metrics describing energy production, energy costs, emissions reductions, economic benefits, distribution of socioeconomic benefits, and program cost-effectiveness. For metrics for which there was sufficient data to analyze markets and program performance in other states, Slipstream calculated relevant metrics for those states and assessed the relative impact of RSIP in comparison to programs in other states. The results of this task are described in sections 4, 5, and 6 of this report.

4.0 RSIP IMPACTS: 2012 - 2022

Slipstream's evaluation confirmed that the Green Bank successfully implemented RSIP to facilitate the deployment of 350 MW-DC of residential solar capacity in Connecticut. We also confirmed that the Green Bank used the RSIP-E funding mechanism to supplement the PV capacity produced under RSIP to enable deployment of an additional 26.88 MW-DC of residential solar capacity, for combined capacity of 376.90[7] MW-DC. Table 1 indicates the

[6] www.dsireuse.org
[7] The actual installed capacity through RSIP was 350.02 MW-DC.

number of projects completed each year from 2012 through 2022, as well as the generating capacity that those projects produced and

Table 2 displays annual production and incentive payment by the type of REC associated with the project.

Table 1. Annual Capacity and Funding

		Installed Capacity (MW-DC)		Incentive Funds Issued	
Calendar Year	**Completed Installations**	**RSIP**	**RSIP-E**	**RSIP**	**RSIP-E**
2012	242	1.63	0.00	$2,784,788	$-
2013	1,037	7.33	0.00	$11,145,112	$1,569 [8]
2014	1,475	10.46	0.15	$12,405,920	$156,518
2015	8,159	60.62	1.15	$39,648,831	$650,559
2016	7,062	55.52	0.24	$23,107,805	$113,090
2017	4,160	32.45	0.01	$10,364,723	$9,697
2018	5,411	44.28	0.01	$13,106,951	$1,748
2019	7,137	60.63	0.25	$16,760,039	$91,293
2020	6,437	54.11	0.79	$13,582,222	$254,726
2021	4,480	22.96	18.59	$5,804,000	$4,887,034
2022	626	0.02	5.69	$4,146	$1,417,714
Total	**46,226**	**350.02**	**26.88**	**$148,714,535**	**$7,583,947**

Table 2 Annual Production and Incentive Payments by SHREC Phase

		Installed Capacity (MW-DC)			Incentive Funds Issued		
CY	**Count**	**Pre-SHREC**	**SHREC**	**SHREC-E**	**Pre-SHREC**	**SHREC**	**SHREC-E**
2012	242	1.63	-	-	$2,784,788.40	$	$
2013	1,037	7.33	-	-	$11,146,680.57	$	$
2014	1,475	10.50	-	0.12	$12,439,468.20	$	$122,969.70
2015	8,159	23.45	38.17	0.15	$22,694,368.58	$17,501,889.87	$103,131.56
2016	7,062	7.14	48.62	0.01	$6,552,836.14	$16,661,046.46	$7,012.00
2017	4,160	-	32.45	0.01	$	$10,364,722.52	$9,696.75
2018	5,411	-	44.28	0.01	$	$13,106,951.29	$1,747.70
2019	7,137	0.06	60.63	0.18	$21,822.69	$16,760,038.98	$69,469.92

2020	6,437	0.07	54.11	0.72	$21,522.22	$13,582,221.72	$233,203.41
2021	4,480	0.88	22.96	17.70	$209,236.92	$5,803,999.68	$4,677,796.94
2022	6,26	1.70	0.02	3.99	$429,715.44	$4,145.91	$987,998.73
Total	**46,226**	**52.77**	**301.24**	**22.89**	**$56,300,439.16**	**$93,785,016.43**	**$6,213,026.71**

The expected useful life (EUL) of photovoltaic (PV) systems is commonly estimated to be 20-30 years. In previous reports[9], the Green Bank calculated anticipated impacts of the projects supported by RSIP to be realized during a 25-year equipment lifetime. We find that assuming a 25-year project lifetime aligns with industry best practices[10,11,12]. Table 3 shows the estimated annual amount of electricity generated by projects completed in each year of RSIP. If 430,000 MWh of electricity is produced a year from residential solar PV through projects supported by the RSIP, and Connecticut's net energy load in 2021 is 28,300 GWh,[13] then the RSIP has helped reduce load by 1.5%. The table also shows the annual emissions avoidance benefits enabled by the additional residential solar generating capacity of RSIP projects funded in that year. If 230,000 tCO2 are being avoided as a result of the RSIP, and in 2018 Connecticut emitted 42.2 MMTCO2e,[14] then the RSIP has helped avoid GHG emissions by 0.5%. Slipstream calculated emissions avoidance by using the current and historical emissions reduction factors published through the U.S. EPA's industry-accepted AVERT framework.

Table 3. Estimated Annual Generation and Emissions Avoidance

CY	Annual MWh generated	tCO_2	Lbs. PM 2.5	Lbs. Nox	Lbs. SO_2
2012	1,862	1,038	93	1,283	1,696
2013	8,352	4,779	419	7,173	9,246
2014	12,086	6,658	607	9,548	11,560
2015	70,340	40,430	3,531	49,023	49,123
2016	63,509	35,700	3,136	36,543	26,085
2017	36,975	19,921	1,706	17,106	11,190
2018	50,433	27,876	2,373	26,957	23,208
2019	69,326	36,053	2,047	14,606	7,573
2020	62,521	31,688	1,751	10,733	2,636
2021	47,317	23,982	1,325	8,123	1,995
2022	6,501	3,295	182	1,116	274
Total	**429,221**	**231,419**	**17,169**	**182,210**	**144,586**

Figure 2 applies an assumed 25-year system life to show the annual energy generation and cumulative GHG emissions reduction benefits resulting from RSIP projects throughout the

[9] Connecticut Green Bank. "Progress Report on the Residential Solar Investment Program." 2020.
[10] NREL. "Energy Analysis | Useful Life." Viewed December, 2022. (https://www.nrel.gov/analysis/tech-footprint.html.)
[11] U.S. Department of Energy. "Federal Energy Management Program | Optimizing Solar Photovoltaic Performance for Longevity." Viewed December, 2022. (https://www.energy.gov/eere/femp/optimizing-solar-photovoltaic-performance-longevity).
[12] Huang, S. "Solar Energy Technologies Office Photovoltaics End-of-Life Action Plan." U.S. Department of Energy Office of Energy Efficiency & Renewable Energy. 2022. (https://www.energy.gov/sites/default/files/2022-03/Solar-Energy-Technologies-Office-PV-End-of-Life-Action-Plan.pdf).
[13] "2022 Clean & Renewable Energy Report" by PURA (February 6, 2023)
[14] 2018 Connecticut Greenhouse Gas Emissions Inventory" by DEEP (2021)

lifetimes of all funded projects (from 2012 – 2047). Figure 3 shows the parallel impacts of the RSIP on reductions in PM 2.5, NOx, and SO_2 emissions.

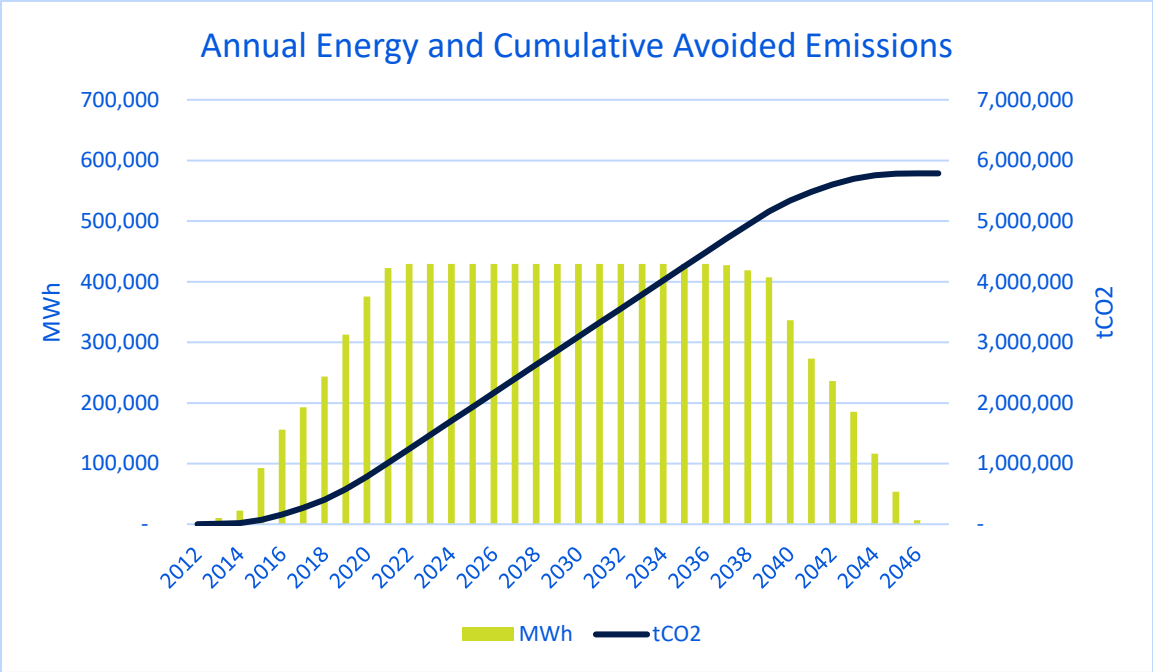


Figure 2. Estimated Energy Generation and Avoided GHG Emissions: 2012 - 2047

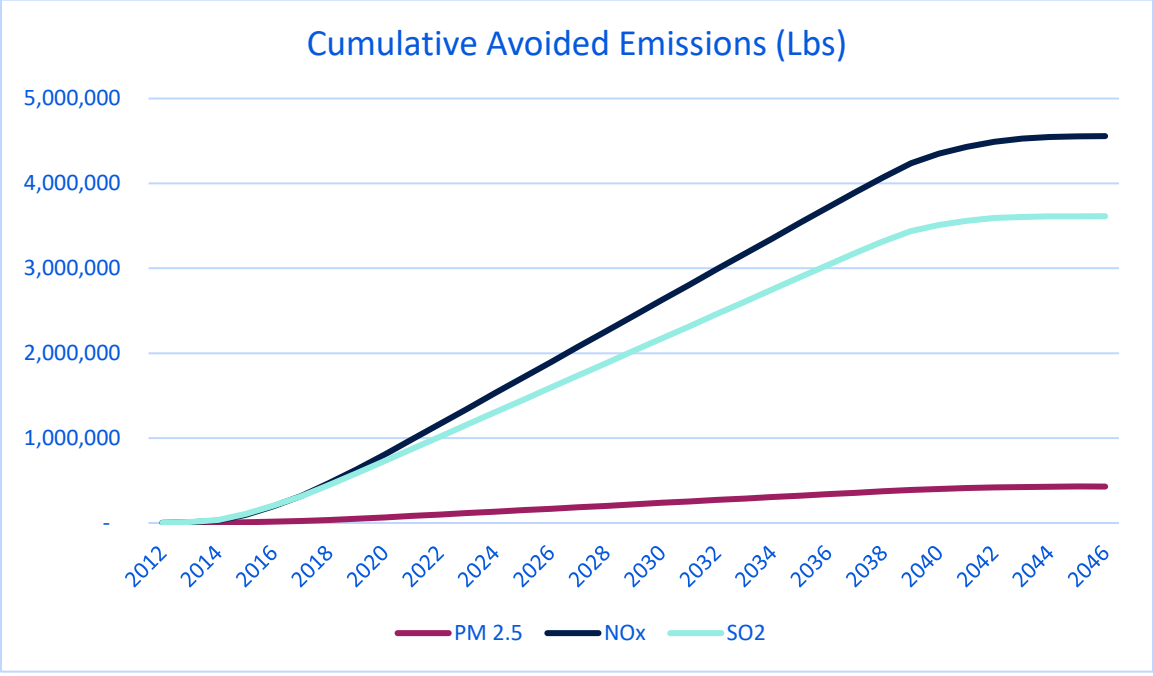


Figure 3. Estimated Avoided Particulate Emissions: 2012 - 2047

In addition to generating energy and environmental benefits, projects funded through RSIP created economic value for the State of Connecticut. From 2012 – 2022, RSIP issued total incentives of $148,714,535 and the Green Bank issued additional incentives of $7,583,947 through RSIP-E. The RSIP incentives achieved a leverage ratio[15] of 8.15 to catalyze total investment of $1,429,942,769 in Connecticut's economy. The combination of public and private investment created positive economic ripples in the State's economy, including job creation and generation of state tax revenue. The Green Bank previously engaged outside expertise to investigate the number of job years created[16] and the amount of state tax revenue generated, for each $1,000,000 of total investment in residential solar projects[17]. The Green Bank updated these analyses periodically during the lifetime of RSIP to reflect changes in the state's residential solar industry and in its tax structure. Slipstream applied the job year creation and tax revenue generation factors developed by third parties, that were effective as of the completion date of each project to estimate the annual and cumulative economic impacts of RSIP.

Slipstream's analysis showed that RSIP projects created 6,494 direct job years[18], 9,239 indirect and induced job years[19], and $44,967,956 in state tax revenue. Table 4 describes RSIP's annual and cumulative economic impacts.

Table 4. RSIP Economic Impacts

				Job Years		
CY	RSIP Amount	Installed Cost	Leverage Ratio	Direct	Indirect and Induced	Tax Revenue
2012	$2,784,788	$8,401,052	2.0	49.6	79.3	$295,021
2013	$11,146,681	$32,735,501	1.9	193.1	309.0	$1,149,576
2014	$12,562,438	$45,184,351	2.6	266.6	426.5	$1,586,743
2015	$40,299,390	$270,845,102	5.7	1596.8	2554.2	$9,511,295
2016	$23,220,895	$221,104,968	8.5	1050.8	1531.1	$7,764,565
2017	$10,374,419	$112,023,431	9.8	440.0	573.2	$3,243,617
2018	$13,108,699	$156,510,605	10.9	613.0	797.1	$4,531,735
2019	$16,851,332	$216,971,831	11.9	849.7	1104.6	$6,282,378
2020	$13,836,947	$194,542,509	13.1	761.8	990.4	$5,632,941

[15] The leverage ratio is calculated as the total private investment in funded projects divided by the total RSIP incentive amount.
[16] Navigant Consulting Inc., Connecticut Department of Economic and Community Development, and Connecticut Green Bank. June 2016. "Clean Energy Jobs In Connecticut."
[17] Navigant Consulting, Inc. and Connecticut Green Bank. January 19, 2018. "Tax Revenue Calculator Final Report."
[18] Direct Job-Years are the "total number of installer, electrician, and PM [Project Manager]/engineering jobs created for 1 year." [Navigant Consulting Inc., Connecticut Department of Economic and Community Development, and Connecticut Green Bank. June 2016. "Clean Energy Jobs in Connecticut."]
[19] Indirect jobs years are created by, "the response as supplying industries increase output in order to accommodate the initial change in final demand. These indirect beneficiaries will then spend money for supplies and services, which results in another round of indirect spending." Induced jobs are, "generated by the spending of households who benefit from the additional wages and business income they earn through direct and indirect activity." [Navigant Consulting Inc., Connecticut Department of Economic and Community Development, and Connecticut Green Bank. June 2016. "Clean Energy Jobs in Connecticut."]

2021	$10,691,034	$149,506,466	13.0	585.5	761.1	$4,328,931
2022	$1,421,860	$22,143,236	14.6	86.7	112.7	$641,153
Total	**$156,298,482**	**$1,429,969,053**	**8.15**	**6,494**	**9,239**	**$44,967,956**

5.0 CONNECTICUT RESIDENTIAL SOLAR MARKET

Slipstream's evaluation assessed the effect of RSIP on the development of Connecticut's solar market since 2012, as well as current market conditions in the state. To evaluate how RSIP supported the market, we reviewed changes in RSIP incentive rates and concurrent changes in the cost of installed residential solar over time. This analysis showed how the program progressed, starting from a high initial cost for RSIP incentives and low generation capacity, and ending with low incentive rates leveraging large amounts of private capital to support new projects.

5.1 THE GREEN BANK'S ROLE IN THE MARKET

Program incentives for residential solar installations may serve two primary purposes. First, a financial incentive can sufficiently reduce a resident's project costs and/or ongoing financing or electricity costs, making installation of a PV system more cost-effective for that resident. Two measures of cost-effectiveness are length of payback period, and positive cash flow. In the former, program incentives may shorten the payback period over which the financial value of the electricity generated by the system repays the customer's up-front costs. For PV systems installed in conjunction with a PPA, or those financed with a loan or lease, cash-flow analysis is a more applicable measure of cost-effectiveness. A second purpose of a financial incentive is to motivate a customer to take action to install PV, even if poor cost-effectiveness of a project would not otherwise be an obstacle to the customer's participation.

The Green Bank offered three types of RSIP incentives, which improved project cost-effectiveness for customers and served to motivate customers to install PV arrays at their homes. The Expected Performance Based Buydown (EPBB) offered a one-time up-front payment to customers based on the generating capacity of their system and benefited customers who purchased their systems. The Performance Based Incentive (PBI) provided ongoing payments on a quarterly basis for 6 years to customers based on the amount of electricity produced by their array. The PBI served customers who hosted third-party owned projects. The Low and Moderate Income Performance Based Incentive (LMI PBI) offered a higher PBI incentive level for income-qualified customers.

Nationally, the installed cost of residential photovoltaic systems has decreased significantly during RSIP's lifetime. NREL states that the installed cost of residential solar arrays decreased 42 percent from 2012 to 2020[20]. At RSIP's inception, unsubsidized residential PV systems were

[20] 2020 is the most recent year for which NREL published data on the installed cost of residential solar arrays. [NREL. "Solar Market Research & Analysis | Solar Installed System Cost Analysis." Viewed November, 2022. https://www.nrel.gov/solar/market-research-analysis/solar-installed-system-cost.html]

unlikely to offer opportunities to customers for either positive cash flow or for reasonably attractive returns on investment. As the installed cost of residential solar decreased and electricity rates increased, the Green Bank used the incentive step structure to progressively reduce the amount of the RSIP incentive so that RSIP funding filled the gap between the market rate cost of solar and the lower project cost, at which solar is a financially attractive energy source for customers. When establishing incentives steps, the Green Bank timed reductions so as to maintain levels that would incentivize adoption, while reducing levels so as to optimize cost effectiveness and minimize levels of program free ridership. Figure 4, Figure 5, and Figure 6 show the reductions in RSIP incentive levels by step along with the decreasing installed cost of solar. The relationship between the rapid decline in costs during the early years of the program followed by slower rates of change in the later years of the program aligns with parallel changes in the EPBB and PBI incentive levels. Reductions in the LMI PBI incentives lagged reductions in installed cost and in the EPBB and PBI levels. The Green Bank's decision to maintain higher LMI PBI incentives for a longer period of time was an effective response to the Green Bank's recognition that LMI communities and vulnerable communities were underserved in RSIP's early years. As described below, the Green Bank's strategy to increase participation in RSIP by LMI communities resulted in rates of solar adoption in LMI communities in Connecticut that exceeded regional and national averages.

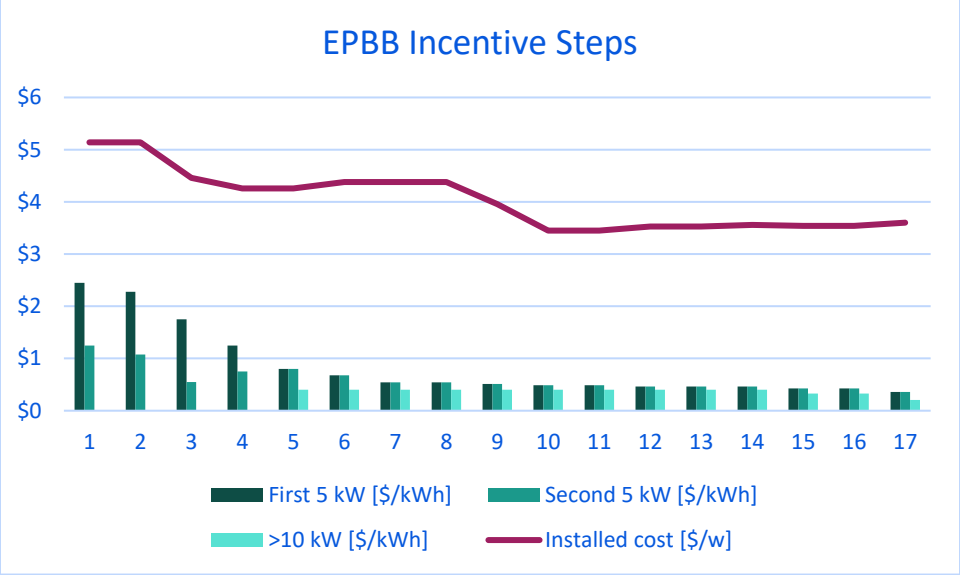


Figure 4. EPBB Steps and Changes in Installed Cost

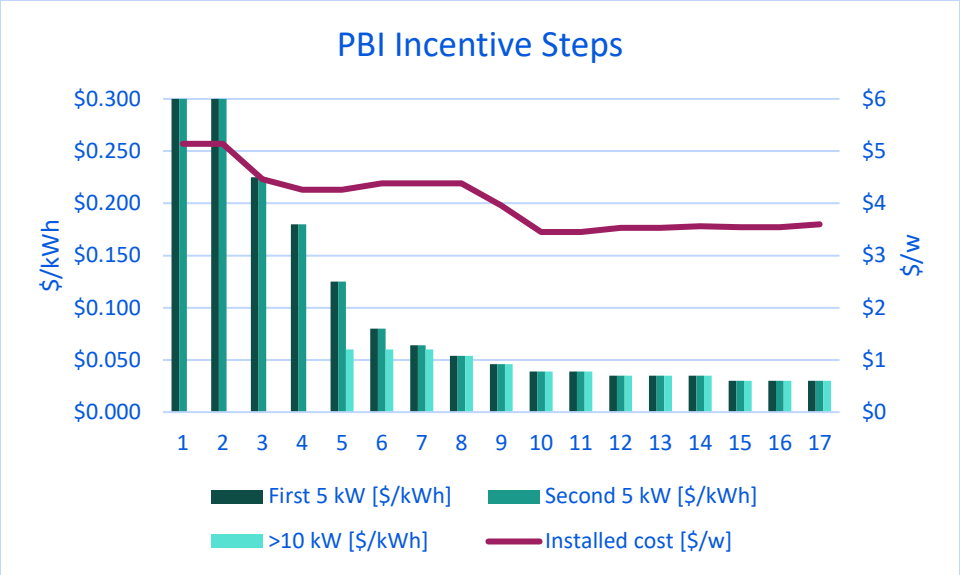


Figure 5. PBI Steps and Changes in Installed Cost

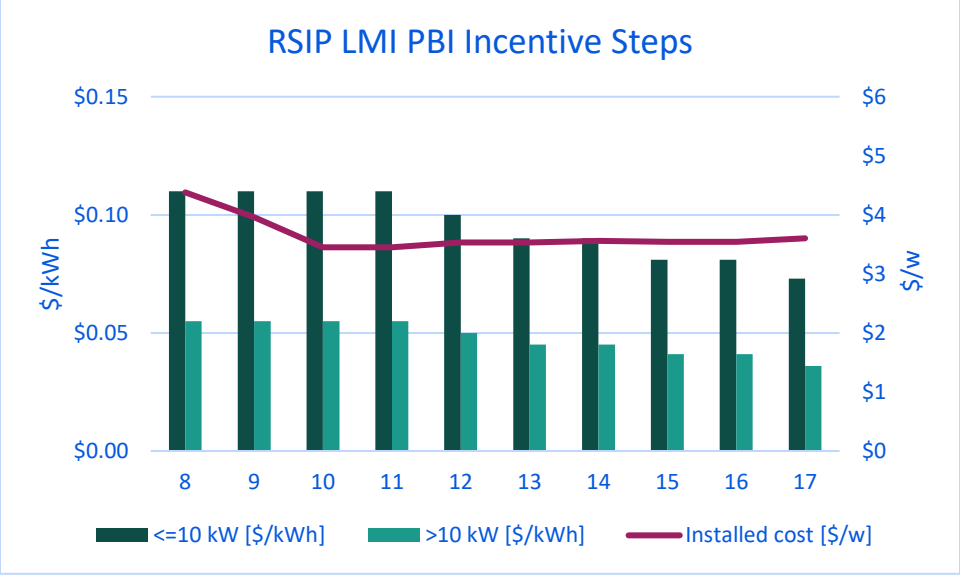


Figure 6. LMI PBI Steps and Changes in Installed Cost

Table 5 shows the average installed cost and incentive amount for each year of the program, as well as the ZREC[21] equivalent cost. Figure 7 compares the annual weighted average costs of

[21] Separately from RSIP, Connecticut customers were able to engage in 15-year ZREC contracts with the state's electric utilities. A ZREC is equivalent to 1 MWh of electricity generated by a solar project owner. (Connecticut Green Bank. October, 2019. "What You Need to Know about Solar for Your Facility." https://portal.ct.gov/-/media/DEEP/p2/institution/WhatYouNeedtoKnowAboutSolarFAQshandoutpdf.pdf)

LRECs, as well as small, medium, and large ZRECs with the ZREC equivalent cost of RSIP incentives.

Table 5. RSIP Leverage and ZREC Cost

CY	Installed Cost ($/W)	Incentive ($/W)	Leverage Ratio	ZREC Equivalent ($/MWh)
2012	$5.14	$1.70	2.02	$99.72
2013	$4.46	$1.52	1.94	$88.97
2014	$4.26	$1.18	2.60	$69.29
2015	$4.38	$0.65	5.72	$38.19
2016	$3.96	$0.42	8.52	$24.38
2017	$3.45	$0.32	9.80	$18.71
2018	$3.53	$0.30	10.94	$17.33
2019	$3.56	$0.28	11.87	$16.20
2020	$3.54	$0.25	13.06	$14.75
2021	$3.60	$0.26	12.98	$15.06
2022	$3.88	$0.25	14.57	$14.58

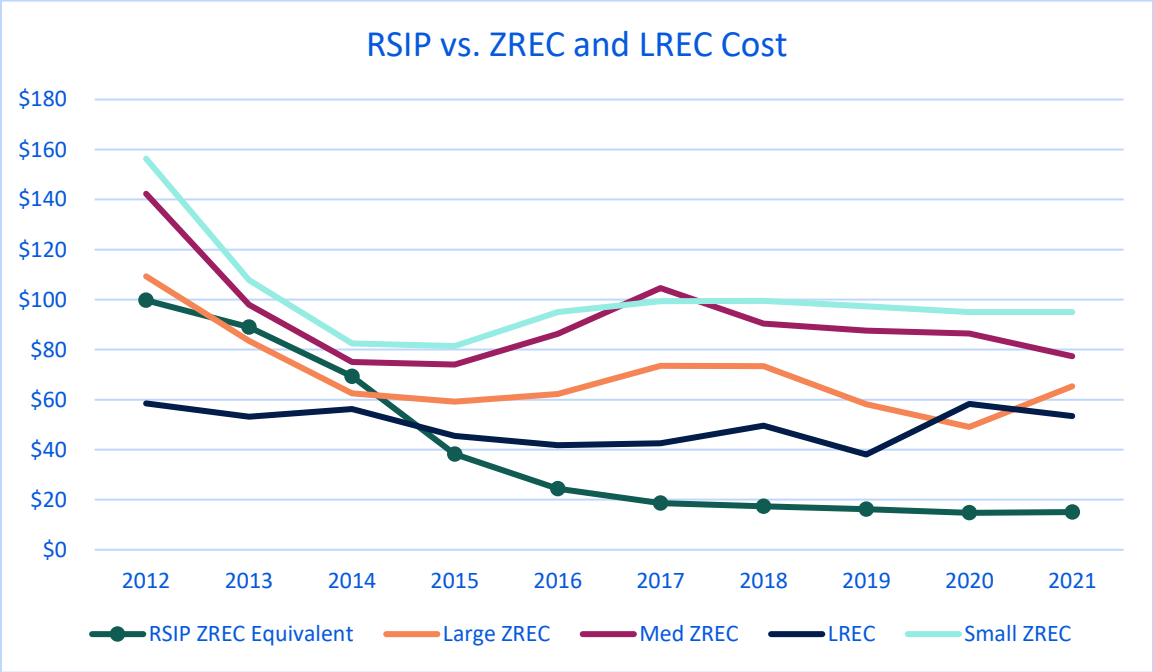


Figure 7 Comparative costs of LREC, ZREC, and RSIP incentives

This evaluation applied the amount of the RSIP incentive and the estimated electricity to be produced over a 15 year period by each RSIP project to determine the equivalent cost of ZRECs as an alternative financing incentive for the project.

As shown in the table, the Green Bank reduced incentive levels more rapidly than the rate of decrease in installed cost. While reducing incentive costs ahead of the market, the Green Bank continued to support the orderly and sustainable development of the Connecticut residential solar market, as shown by the accelerating rate of RSIP participation over time.

Interviews with key stakeholders in the Connecticut residential solar market revealed consistent themes in the Green Bank's role in establishing and growing the state's solar industry. Several key observations emerged from the stakeholder interviews:

- In the early development of the Connecticut solar market, the Green Bank (and its predecessor) were essential conveners of diverse stakeholders, including electric utilities, solar developers, ratepayers, and community-based organizations. The Green Bank led conversations among representatives of these stakeholders that produced common objectives and shared understandings. Throughout its implementation of RSIP, the Green Bank maintained its role as an independent third-party convener and earned the trust of all stakeholders.
- Prior to the launch of RSIP, there was not a coherent residential solar market in Connecticut. RSIP was essential in developing a functional market for the state.
- As a program and as a financing tool, RSIP operated smoothly. The Green Bank anticipated challenges to RSIP before the challenges created problems for the market and the Green Bank innovated to find solutions. The availability and predictability of RSIP incentives enabled the orderly and sustainable development of the state's solar industry.
- Solar developers and installers trust the Green Bank and, based on this trust, companies have chosen to invest in growing their businesses in the state.
- During its operational life, RSIP supported the creation of a self-sustaining market.
- The Green Bank was essential in adapting RSIP to create ways for low-and-moderate income households and communities to access affordable solar power.

5.2 ADDITIONAL MARKET INFLUENCES

The research confirmed that residential solar projects are installed in the context of a complex market in Connecticut. As of the release of this report, Connecticut residents, solar installers, and electric utilities continue to pivot the market from RSIP to the RRES tariffed solar structure. However, the transition from RSIP to RRES is one of multiple influences on the market.

Current influences on the market beyond the control of the Green Bank and the electric utilities include:

Inflation. Rapidly increasing prices and potential consumer expectations of ongoing cost increases may affect cost-effectiveness of projects for customers, as well as customer decisions on if/when to install PV arrays at their residences.

Interest Rates. Rising borrowing costs for customers may affect customer willingness to use a loan to fund the first costs of a solar project. High interest rates have also contributed to slower residential real estate markets, which customers may view as potentially negatively affecting the equity in their homes. Home equity can be an important input that enables customers to finance high-cost home improvements, such as the purchase of a PV system. Reduced home equity could contribute to lesser ability and/or willingness for homeowners to finance solar projects.

Supply Chain. Lack of product availability due to disruptions in manufacturing and distribution supply chains, along with labor shortages, may force delayed installations for customers.

Federal Funding. The Inflation Reduction Act (IRA) and Infrastructure Investment and Jobs Act (IIJA) increased federal funding for an array of climate change mitigation, renewable energy, and energy efficiency projects and programs. Increased federal funding may attract additional actors to renewable energy markets and may contribute to technological and/or market delivery innovations that could influence the Connecticut residential solar market. Also, federal funding like the Greenhouse Gas Reduction Fund within IRA, specifically for zero emission technologies and low-income and disadvantaged communities (i.e., Sec. 134(a)(1)) could help Connecticut restore its LMI deployment success in LMI communities, which achieved high rates of solar adoption during RSIP, but have lost ground under RRES.

Tax Credits. Recent legislation returned the amount of the federal Investment Tax Credit to 30% and signaled continuation at this rate through at least 2032. Federal tax credits are a key source of residential solar financing for many homeowners. Increasing and stabilizing the tax credit may accelerate residential solar installations and support market stability due to the elimination of year-end deadlines to access specified tax credit levels.

Assessing the relative magnitude of the influence exerted by each of these factors on the residential solar market and the comparative importance of the past RSIP framework and the current RRES tariff on the industry is outside of the scope of this analysis. While the Green Bank may be unable to influence the preceding market factors, Slipstream recommends that the Green Bank consider potential short-term and long-term impacts of these influences on the trajectory of the residential solar industry and that the Green Bank discern its intended future role in the market in the context of these factors.

5.3 RESIDENTIAL SOLAR ADOPTION IN LOW AND MODERATE INCOME COMMUNITIES

In 2020, the median income for households throughout the country that installed solar was 158 percent of the median income of the county in which the home was located.[22] Conversely, in the United States, as of 2020, only 30 percent of solar adopter households had income that was

[22] Barbose, G. Forrester, S. O'Shaughnessy, E. Dargouth, N. "Residential Solar-Adopter Income and Demographic Trends: 2022 Update." Lawrence Berkeley National Laboratory. March, 2022.

less than the applicable area median income and only 20 percent of solar adopters had incomes that were less than 80 percent of the area median income.[23]

The Green Bank recognized that, while on-site solar power may be effective in reducing energy burden among low-and-moderate income (LMI) households, financial barriers may deter or prevent households in this market segment from accessing the benefits of solar energy. The Green Bank implemented multiple strategies in RSIP to improve access to solar for LMI households. These initiatives included:

- Introduction of the LMI Performance Based Incentive (LMI PBI), which offered a higher PBI rate for residential customers whose documented[24] household income was less than the applicable Area Median Income (AMI).
- Development and implementation of the Solar for All[25] program, in which the Green Bank provided subordinate capital and program support that enabled PosiGen (a solar developer) to use inclusive underwriting standards when offering lease financing for solar installations for LMI households. The program support also enabled targeted and coordinated market engagement of LMI communities, where market-rate solar developers may be less likely to market their services.
- Support for community-based Solarize[26] campaigns increased participation across income segments. However, the Solarize campaigns have been especially effective in engaging residents in LMI communities.
- Instituted data collection and analysis practices that allowed the Green Bank to track and report on its progress in catalyzing participation by LMI households and by residents in LMI communities.

Through the Solar for All program and the Solarize campaigns, the Green Bank also developed ongoing relationships with community-based organizations (CBOs) that serve LMI communities.

Figure 8[27] shows residential solar adoption in Connecticut by the AMI band of the census tract in which each project is located and by year of installation[28]. The line on the chart shows the

[23] Ibid.
[24] Residential customers demonstrated income-eligibility for the LMI PBI by either providing copies of relevant tax forms or documenting participation in certain other income-qualified programs, such as the Low Income Home Energy Assistance Program (LIHEAP) or the Supplemental Nutrition Assistance Program (SNAP).
[25] More information about Solar for All can be found at: https://www.ctgreenbank.com/strategy-impact/societal-impact/successful-legacy-programs/solar-for-all/
[26] SmartPower implemented Solarize campaigns that leveraged RSIP. Information about Solarize Connecticut can be found at: https://www.smartpower.org/solarize-connecticut.html
[27] The project-level data provided by the Green Bank included data points that characterized the census tract in which the property is located, including the AMI band, classification as a Vulnerable Community, Distressed Community, and/or EJ Community, as well as the majority race in the census tract. Data reported in this evaluation is based on census tract data provided by the Green Bank. Slipstream did not separately confirm the census tract characteristics indicated for each project.
[28] Data adapted from the Lawrence Berkeley National Laboratory's *Residential Solar-Adopted Income and Demographic Trends*." Viewed November, 2022 data set. (https://emp.lbl.gov/projects/solar-demographics-trends-and-analysis/)

national average for that year for the percentage of all new installations for residences in census tracts with median income less than the applicable AMI. Figure 8 suggests that the Green Bank's design and implementation of RSIP contributed to higher participation in RSIP by households located in LMI census tracts than would have been expected based on national averages. As shown in the figure, solar adoption in LMI census tracts tracked or slightly lagged the national average through 2014. In 2015, the Green Bank introduced the LMI PBI program and launched the Solar for All initiative and the rate of adoption in LMI census tracts quickly increased. The rate of participation in LMI census track has remained above the national average since the introduction of these program elements.

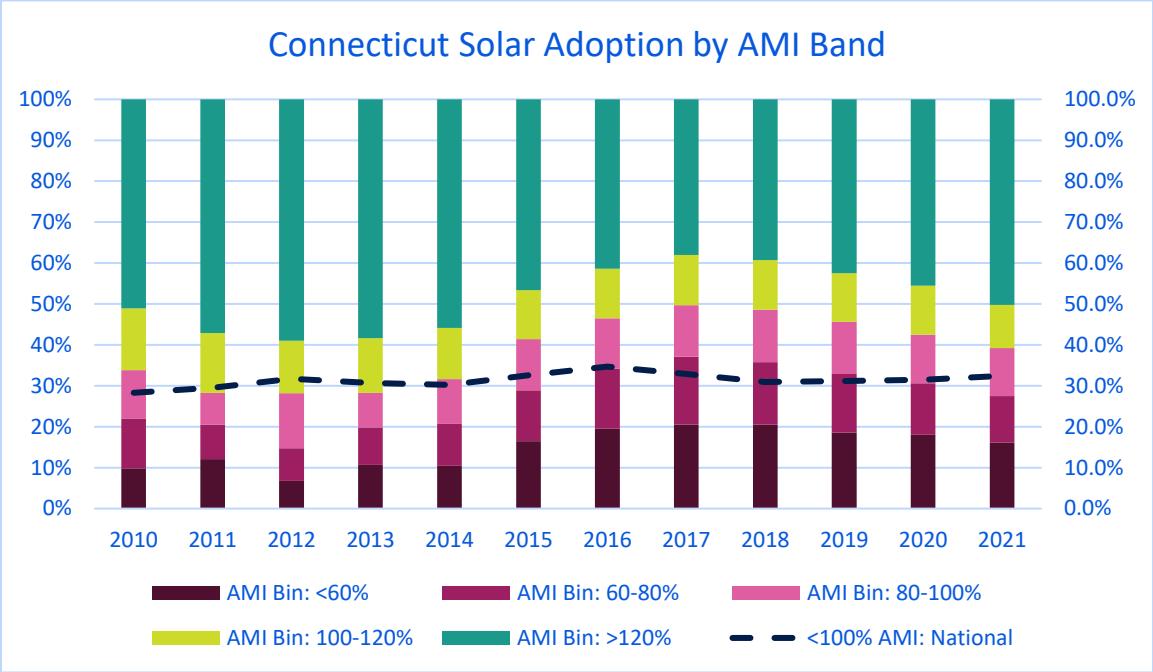


Figure 8. Connecticut Solar Adoption by AMI Band

RSIP was designed to increase adoption of residential solar in single family owner-occupied homes. Homeownership rates in Connecticut vary based on a household's income, with homeownership rates generally higher among households with higher incomes. Due to differences in homeownership rates based on income, potential for RSIP participation also varies by income level. Table 6 compares RSIP participation by the AMI band in which the residence is located to homeownership rates for the same income levels.

Table 6. RSIP Participation vs. Owner-Occupancy Rate

AMI Band	RSIP Projects		Percent of all owner-occupied homes in band	Difference (RSIP rate vs. owner occupied rate)
	Number	Percentage		
<60%	4,120	8.91%	7.19%	1.73%
60-80%	6,268	13.56%	12.60%	0.96%
80-100%	8,707	18.84%	16.85%	1.98%
100-120%	10,931	23.65%	23.65%	0.00%

>120%	16,189	35.02%	39.71%	-4.69%
Unknown	12	0.0%	0.0%	0.0%

The data show that the rate of participation in RSIP by households in census tracts with median income that is less than the area median exceeds the distribution of owner-occupied homes in the same areas. In turn, the rate of participation in RSIP by households living in the most affluent census tracts deviates most greatly of any of the income bands and is substantially lower than the corresponding distribution of all owner-occupied homes. Thus, Green Bank effectively implemented RSIP to make residential solar accessible for LMI households, as demonstrated by the fact that homeowners in lower AMI bands participated in RSIP at a rate exceeding the homeownershp rate within their respective AMI band.

The Green Bank recognized that socioeconomic and societal factors other than income may also contribute to differences between communities and households in their ability to access the benefits of residential solar installations. To measure RSIP's effectiveness in reaching potentially underserved communities, the Green Bank collects six data points about the socioeconomic characteristics of the census tract and community where each project is completed. [Note: A census tract or community may meet the requirements of more than one community designation. Projects are included in the counts of all community designations for which the site address qualifies.]

- Census tract median income as a percentage of the area median income
- Majority race within the census tract
- Designation of the location as a "Distressed Community"[29]
- Designation of the location as an "Environmental Justice Community"[30]
- Designation of the location as a "Vulnerable Community"[31]

[29] The Connecticut Department of Economic and Community Development identifies "Distressed Communities as directed by C.G.S. Section 32-0p, "based on "high unemployment and poverty, aging housing stock and low or declining rates of growth in job creation, population, and per capita income."
[30] Environmental Justice Communities are, "A) a United States census block group, as determined in accordance with the most recent United States census, for which thirty per cent or more of the population consists of low income persons who are not institutionalized and have an income below two hundred per cent of the federal poverty level; or (B) a distressed municipality, as defined in subsection (b) of section 32-9p;"
[31] Public Act 20-5 of the Connecticut General Assembly defines "Vulnerable Communities" as populations that may be disproportionately impacted by the effects of climate change, including, but not limited to, low and moderate income communities, environmental justice communities pursuant to section 22a-20a, communities eligible for community reinvestment pursuant to section 36a-30 and the Community Reinvestment Act of 1977, 12 USC 2901 et seq., as amended from time to time, populations with increased risk and limited means to adapt to the effects of climate change, or as further defined by the Department of Energy and Environmental Protection (DEEP) in consultation with community representatives".

- Designation of the location as a "Justice 40 Community"[32]

Figure 9 shows that higher shares of owner-occupied residences in Majority Black and Majority Hispanic census tracts participated in RSIP than participated in Majority White census tracts.

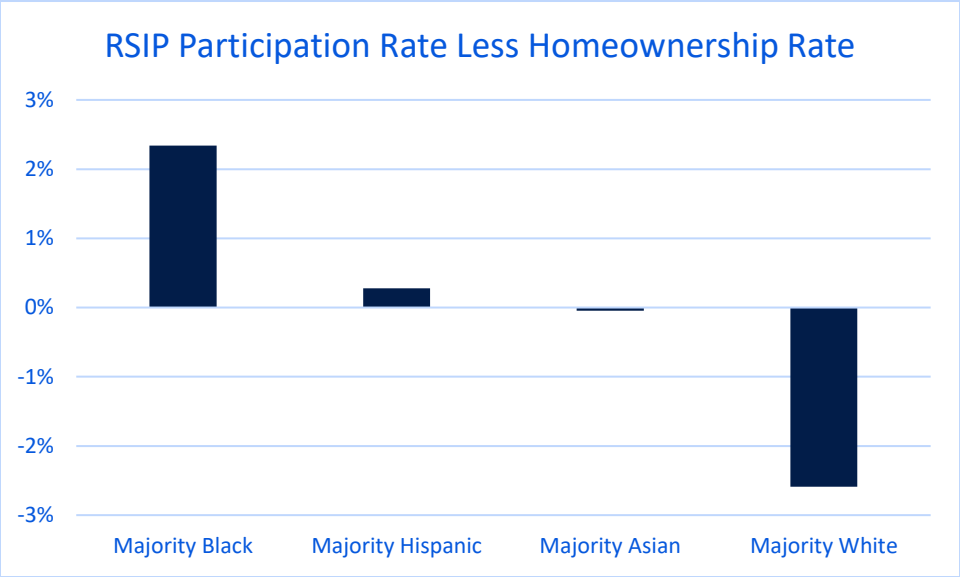


Figure 9 Rates of owner-occupied housing unit participation in RSIP, by majority race.

Figure 10 shows the increasing rate of RSIP participation in Majority Black and Majority Hispanic census tracts from 2012 – 2022. Figure 11 and Figure 12 show increasing rates of RSIP participation over time by residents in designated Vulnerable communities, Justice 40 communities, Community Reinvestment Act (CRA) eligible areas, Distressed communities, Environmental Justice (EJ) Communities, and census tracts in which the median income is less than the area median income. Table 7 shows the share of RSIP projects that benefited households who lived within each of these community designations[33].

[32] Justice 40 Communities are "Disadvantaged Communities" identified by the U.S. Department of Energy by levels of fossil fuel dependence, energy burden, environmental and climate hazards, and socio-economic vulnerabilities in that tract. (Source: Department of Energy *General Guidance for Justice40 Implementation.)*

[33] A census tract or community may meet the qualifications for more than one designation.

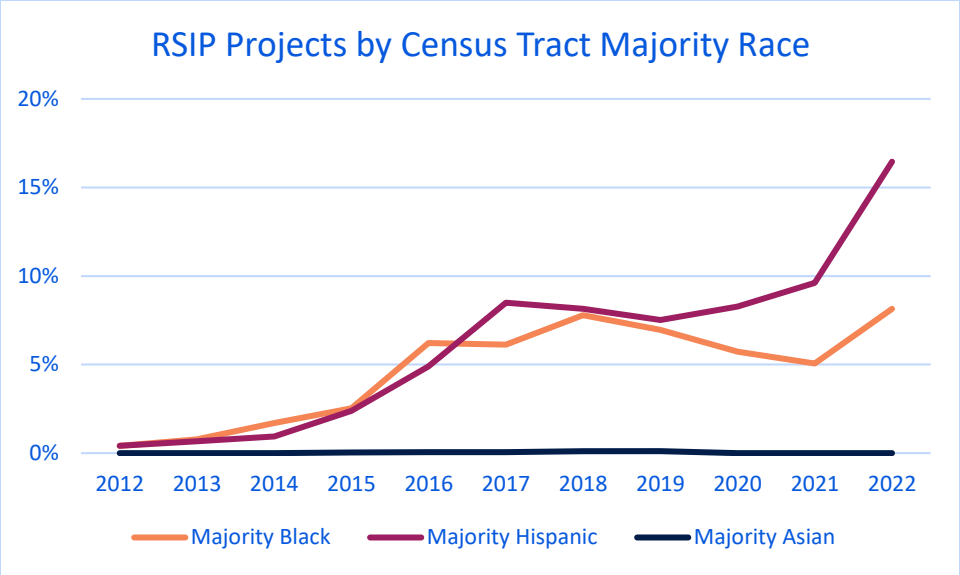


Figure 10 Change in RSIP Participation by Census Tract Race

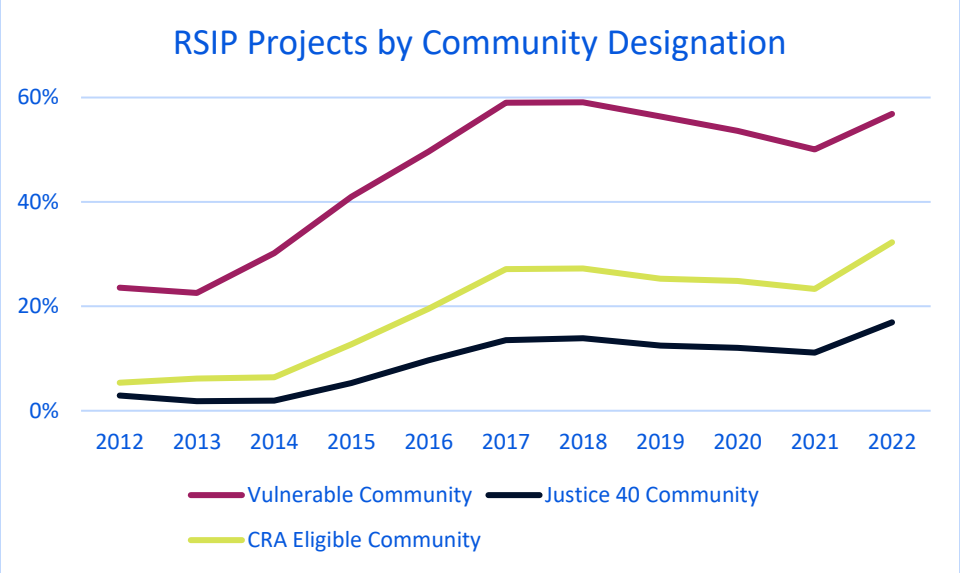


Figure 11 Change in RSIP Participation by Community Designation - Part 1

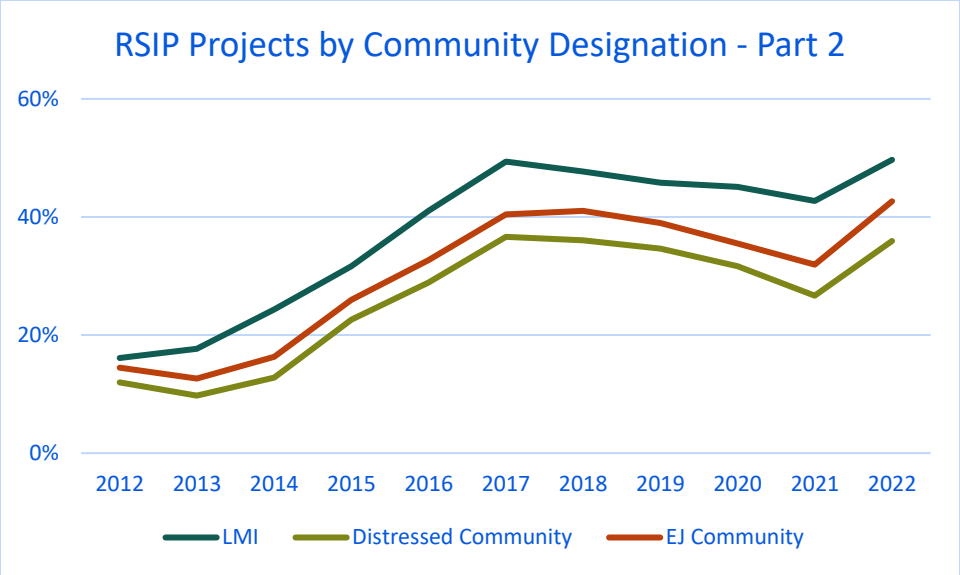


Figure 12 Change in RSIP Participation by Community Designation - Part 2

Table 7. Detailed RSIP Participation in Community Categories

CY	Majority Black	Majority Hispanic	Majority Asian	LMI	Distressed Community	EJ Community	Vulnerable Community	Justice 40 Community	Meet at least one Criteria
2012	0.4%	0.4%	0.0%	16.1%	12.0%	14.5%	23.6%	2.9%	23.6%
2013	0.8%	0.7%	0.0%	17.6%	9.7%	12.6%	22.6%	1.8%	22.9%
2014	1.7%	0.9%	0.0%	24.3%	12.8%	16.3%	30.2%	2.0%	30.6%
2015	2.5%	2.4%	0.0%	31.6%	22.6%	26.0%	41.0%	5.3%	41.4%
2016	6.2%	4.9%	0.1%	41.0%	28.9%	32.7%	49.6%	9.7%	50.6%
2017	6.1%	8.5%	0.0%	49.4%	36.6%	40.5%	59.0%	13.5%	59.8%
2018	7.8%	8.2%	0.1%	47.7%	36.0%	41.0%	59.1%	13.9%	60.2%
2019	7.0%	7.5%	0.1%	45.8%	34.6%	39.0%	56.4%	12.5%	57.2%
2020	5.7%	8.3%	0.0%	45.1%	31.7%	35.5%	53.6%	12.0%	54.4%
2021	5.1%	9.6%	0.0%	42.7%	26.7%	31.9%	50.0%	11.1%	50.6%
2022	8.1%	16.5%	0.0%	49.7%	35.9%	42.7%	56.9%	16.9%	57.7%
Total	**5.4%**	**6.4%**	**0.0%**	**41.3%**	**29.4%**	**33.5%**	**50.4%**	**10.3%**	**51.1%**

In 2014, the Green Bank recognized that Connecticut residents with low and moderate incomes, as well as residents who lived in vulnerable communities faced increased barriers to installing PV arrays on their homes and that additional support may be necessary to ensure equitable levels of participation by Connecticut residents. To support equitable participation in RSIP, in 2015, the Green Bank launched the enhanced LMI PBI offering, engaged residents in vulnerable communities through collaboration with Posigen, and leveraged Solarize campaigns to reduce barriers to participation by LMI residents and residents in vulnerable communities. With the exception of census tracts that are majority Asian or for which there is not a majority race, from 2012 through 2022, RSIP participation by residents in each of the tracked community categories increased.

As shown in Table 8, rates of cumulative participation by residents in all identified categories of communities increased significantly following the program adaptations that the Green Bank introduced in 2015.

Table 8. Change in Participation in Categorized Communities

Census Tract Category	2012 - 2014 Participation Rate	2015 - 2022 Participation Rate	Increase in Participation Rate
Majority Black	1.2%	5.7%	+359%
Majority Hispanic	0.8%	6.8%	+746%
Majority Asian	0.0%	0.1%	N/A
LMI	21.1%	42.6%	+102%
Distressed Community	11.6%	30.6%	+164%
CRA Eligible Community	6.2%	22.3%	+256%
EJ Community	14.8%	34.7%	+135%
Vulnerable Community	26.7%	51.9%	+94%
Justice 40 Community	2.0%	10.8%	+442%
At least one designation	**27.1%**	**52.7%**	**+95%**

The most direct means through which an on-site residential solar installation benefits a household is by reducing energy expenses through generation of electricity that offsets consumption or is sold to the electric utility (both at the same $/kWh rate). RSIP funded projects that customers financed through leases, power purchase agreements, loans, and cash payments. Customer cost savings are the difference between the value of the generated electricity (realized either through reduced purchases of electricity or by selling the energy) and the customer's periodic financing expenses.

The Green Bank sought to adapt RSIP so that it could most effectively reduce energy burden for LMI households. Figure 13 shows the annual cost reduction realized by RSIP customers in census tracts with median income below 100 percent of AMI, and for participants who received the LMI PBI incentive (introduced by Green Bank in 2015). Figure 13 shows the combined impacts of the reduced energy costs offset by the financing costs of leases or power purchase agreements. It does not account for costs of payments on loans used to finance customer-owned solar arrays..[Note: The left axis applies to the vertical bars, which show energy cost savings for each customer group. The right axis applies to the lines, which show for each customer group, the percentage of household electricity use that would be offset by the project.]

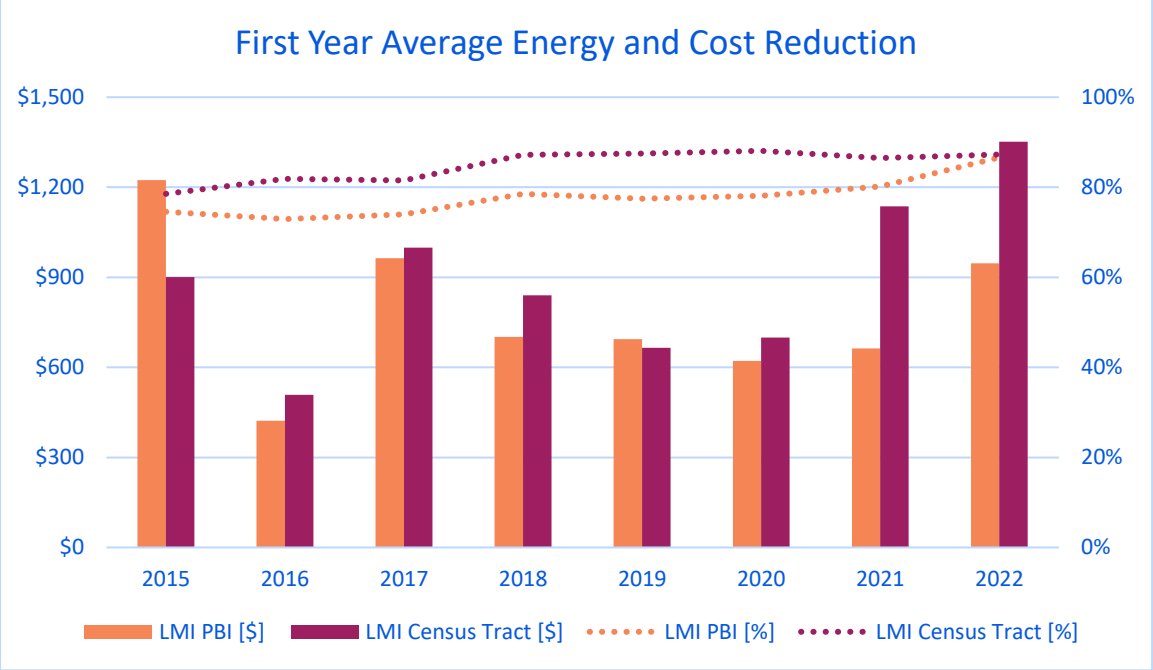


Figure 13. LMI Energy Cost Savings

6.0 COMPARATIVE EFFECTIVENESS OF RSIP

According to the U.S. National Renewable Energy Lab (NREL), the average installed cost of a 22-panel residential PV array fell from $7.53/watt in 2010 to $2.71/watt in 2022[34]. The Federal Investment Tax Credit; state and utility-based incentive programs; the rapid development of PV technology; and the maturation of the solar industry, among other factors, all contributed to cost reductions and increased solar adoption nationally.

An analysis of over 400 residential solar incentive structures[35] found significant variation among the estimated impact and cost-effectiveness of various incentive types. In the context of an evolving solar market, multiple potential program frameworks, and a mandate to be an effective steward of public funds, the Green Bank is interested in understanding the relative cost-effectiveness and impact of RSIP compared to other states in the region and to national averages. This section compares the results produced by RSIP to several national metrics. Acknowledging that residential solar markets, energy costs, and insolation may vary regionally, this section also provides a detailed comparison of solar deployment in Connecticut with the results achieved by other states in the region.

6.1 NATIONAL COMPARISON

Both electricity costs and the local installed cost of solar may influence rates of solar deployment. Figure 14 compares Connecticut to national averages for these key influences on rates of solar installations and Figure 15 compares the growth of solar installations in Connecticut to national averages.

[34] NREL. “Solar Market Research & Analysis | Solar Installed System Cost Analysis.” Viewed November, 2022. https://www.nrel.gov/solar/market-research-analysis/solar-installed-system-cost.html
[35] Matisoff, D. Johnson, E. “The comparative effectiveness of residential solar incentives.” Energy Policy 108 (2017) 44-54.

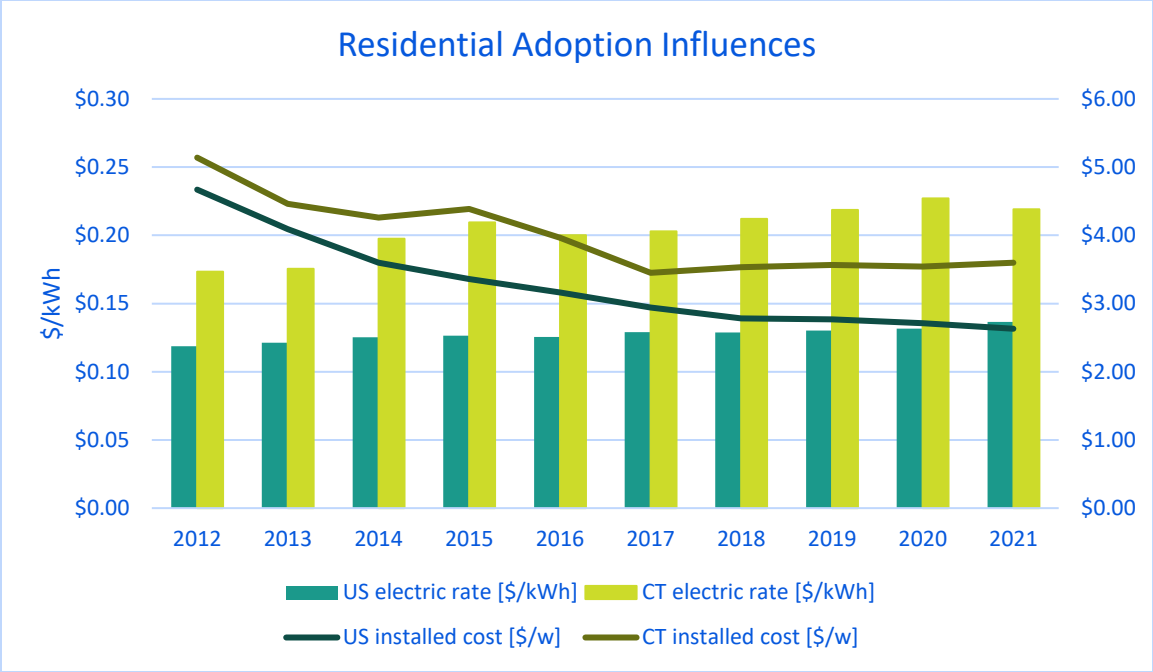


Figure 14. Changes in Electricity Prices and Installed Cost of Solar

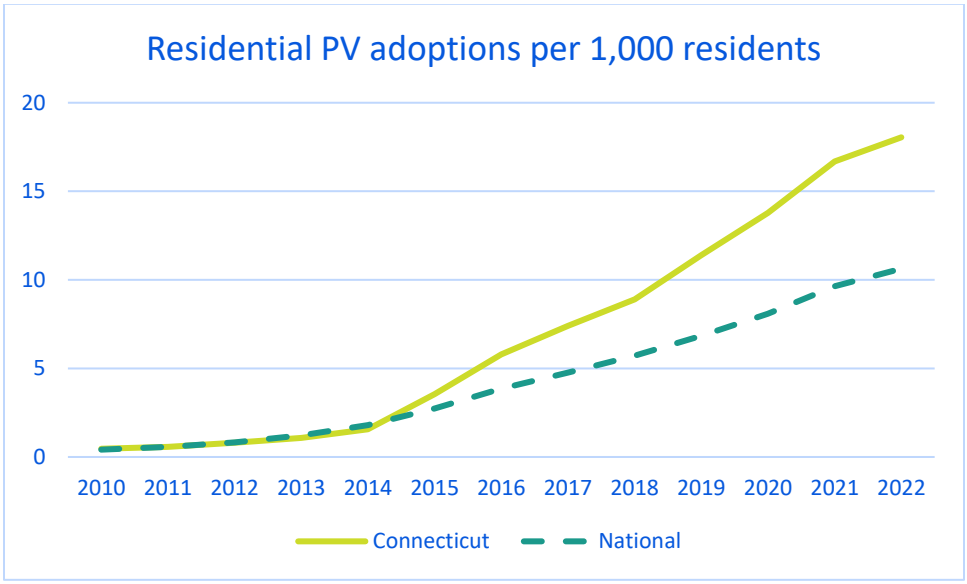


Figure 15. Trends in Rate of Residential Solar Adoption

As described above, nationally, solar adoption has skewed greatly toward higher income households. The Green Bank designed and adapted RSIP to increase access and participation by LMI households. Table 9 compares rates of solar adoption by AMI band in Connecticut to national averages.

Table 9. Residential Solar Adoption by AMI Band

Census tract AMI Band	Connecticut	National Average
Less than 60%	17.8%	12.0%
60% - 80%	13.4%	9.1%
80% - 100%	12.2%	10.8%
100% - 120%	12.0%	11.3%
Greater than 120%	44.6%	56.7%

6.2 REGIONAL COMPARISON

Slipstream compared RSIP to strategies that other states in the region have implemented to support residential solar adoption. We investigated the following:

1. State-level program and market context
2. Total residential solar adoption
3. Residential solar adoption in LMI communities
4. Cost of emissions reductions
5. Cost-effectiveness of state and utility-based incentives

Each state in the region has taken a different approach to supporting residential solar installations. Additionally, during the past 20 years, states and electric utilities have implemented new programs, terminated programs, and revised rules and structures for other programs. Program changes and differences in program sponsors contribute to diverse residential solar markets in the Northeast and to challenges in obtaining comprehensive and consistent data on program participation throughout the region. In addition to programs sponsored by states and investor-owned electric utilities (IOUs), some municipal utilities and municipal governments have also sponsored residential solar programs.

For this analysis, Slipstream focused on data for statewide residential solar programs, as well as for programs and tariffs offered by IOUs in the region. The analysis excluded Federal, state, and local tax credits and tax exemptions, as well as programs offered by municipal utilities and electric cooperatives. While we attempted to obtain data for all state and IOU-sponsored programs in the region, we recommend that the data used to analyze programs outside of Connecticut not be viewed as comprehensive data that describes all residential solar installations in each state. Table 10 identifies the programs what were considered for the comparison:

Table 10. Residential Solar Programs Reviewed

State	Program(s)	Program Years
Connecticut	RSIP + net metering	2012 – 2022
Maine	Net Energy Billing	2009 – 2022
Massachusetts	Solar Massachusetts Renewable Target (SMART)	2018 – 2022
New Hampshire	Renewable Energy Fund (REF)	2011 – 2022

New Jersey	• SREC Registration Program (SRP) • Transitional Incentive (TI) • Administratively Determined Incentive (ADI)	• 2000 – 2022 • 2016 – 2022 • 2020 - 2022
New York	NY-SUN	2000 – 2022
Rhode Island	• Renewable Energy Fund (REF) • Renewable Energy Growth Program (REG)	• 2014 – 2021 • 2015 - 2022
Vermont	Net metering	2017 - 2022

Programs may be categorized by the type of incentive structure that they offer. Table 11 compares the types of residential solar programs that were reviewed, according to the following definitions:

- *Capacity based buy downs* pay an incentive to customers, typically at the time of installation. The incentive amount is based on the rated capacity (kW-DC or kW-AC) of the system.
- *Performance based incentives (PBIs)* offer ongoing payments to customers. The amount of the payment depends on actual electricity generated. The incentive rate may be fixed for the lifetime of the PBI payments, or it may be adjustable.
- *Solar Renewable Energy Credit (SREC)* programs are a sub-type of PBI in which customers have the ability to sell the environmental attributes of each MWh of electricity that their solar installation generates. SREC programs may establish an SREC purchase price or may allow customers to sell the SREC at a floating market rate.
- *Tariffed solar programs* are a third type of PBI, which allows customers to sell all electricity produced by their solar panels at a designated advantageous (greater than or equal to the retail rate) purchase price.

To help fund RSIP, the Green Bank developed a Solar Home Renewable Energy Credit (SHREC) instrument. The Green Bank retained ownership of the environmental attributes of the energy generated by RSIP projects. It then aggregated the environmental attributes of groups of RSIP projects to create renewable energy credits, which it sold to Connecticut's electric utilities through long-term contracts. Revenue generated from these sales was used to recover previously sunk costs in the RSIP, as well as future RSIP projects. Table 11 does not list SHRECs as a separate program type because the SHREC is not the incentive provided to the end-user.

Table 11. Categorization of Northeast Solar Programs

State	Buy Down	PBI	SREC	Tariffed Solar
Connecticut	RSIP EPBB	• RSIP PBI • RSIP LMI PBI		[Post-RSIP]
Maine	*No incentives offered*			
Massachusetts		SMART		
New Hampshire	REF			
New Jersey			• SRP	

			• TI • ADI	
New York	NY-SUN			
Rhode Island	REF			REG
Vermont	*No incentives offered*			

The diverse strategies implemented by Northeast states and differences in demographic factors and homeownership rates, among other factors, have contributed to different levels and patterns of solar adoptions in each state. Figure 16 shows the growth in the residential PV adoption rate as a share of estimated owner-occupied households, while Figure 17 compares the increases in average residential PV capacity (W-DC) per residential electric customer and Figure 18 shows the estimated percentage of all residential sales that were generated by residential PV. These charts build on the findings shown in

Figure 2. Estimated Energy Generation and Avoided GHG Emissions: 2012 - 2047 (see Executive Summary), which showed that, in each year since 2017, the rate of residential PV capacity growth (W-DC/capita) in Connecticut has exceeded the national average, as well as the comparable rates for all states in the Northeast.

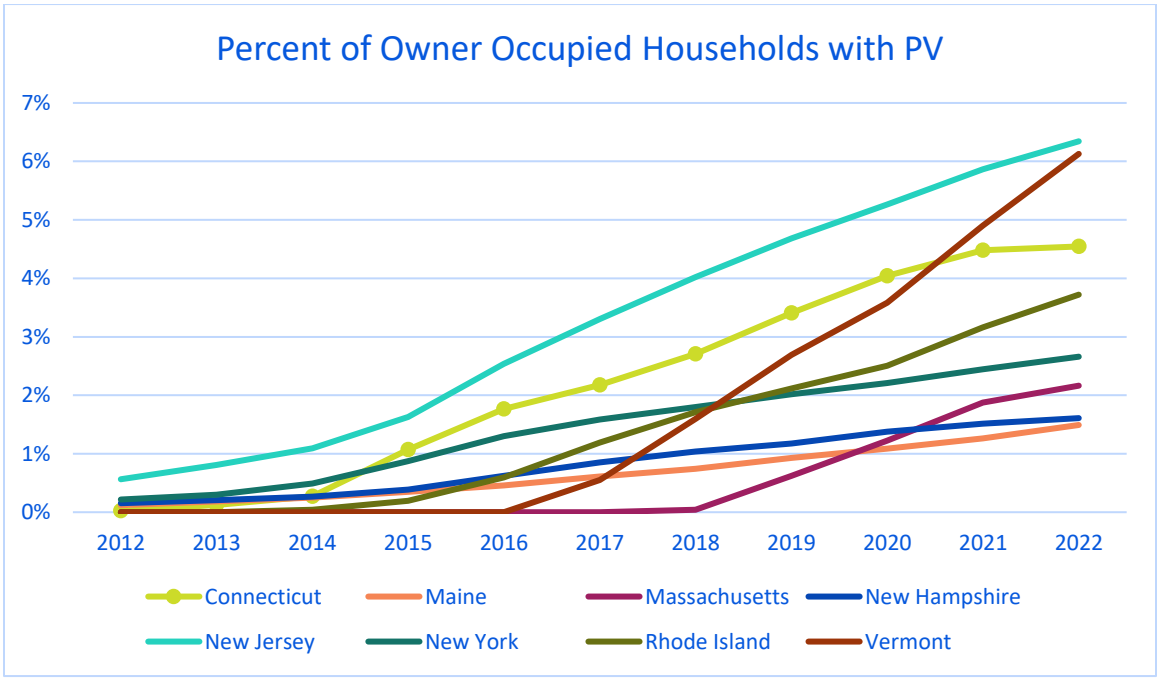


Figure 16. Comparative Rates of Solar Adoption in the Northeast

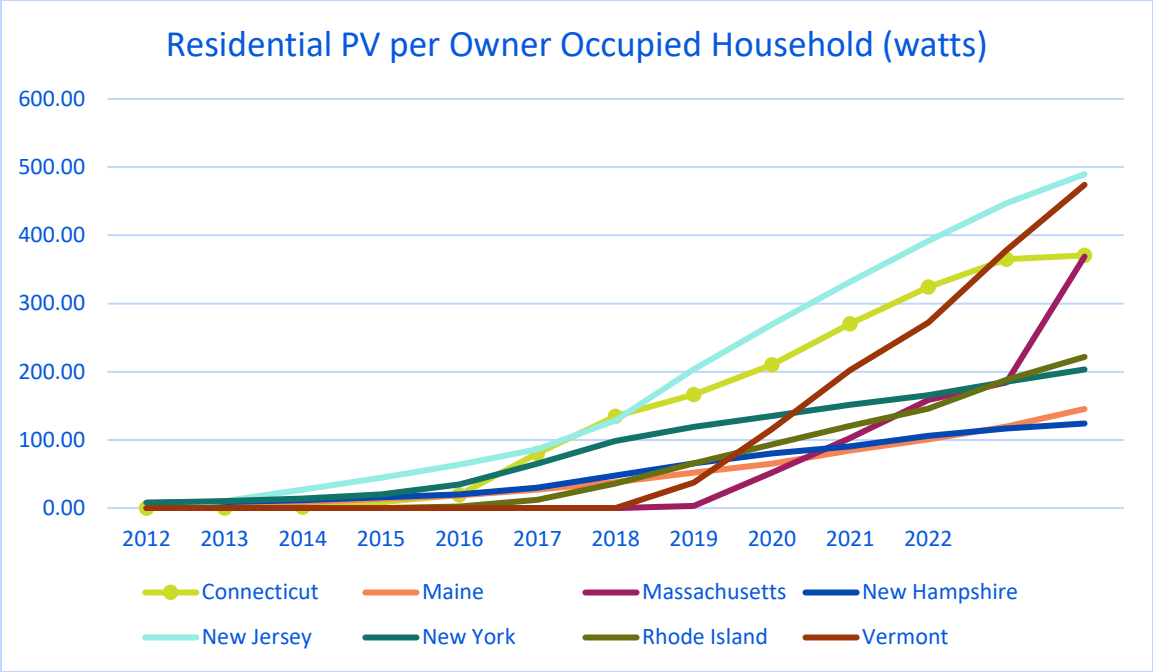


Figure 17. Residential PV Capacity per Owner-Occupied Household

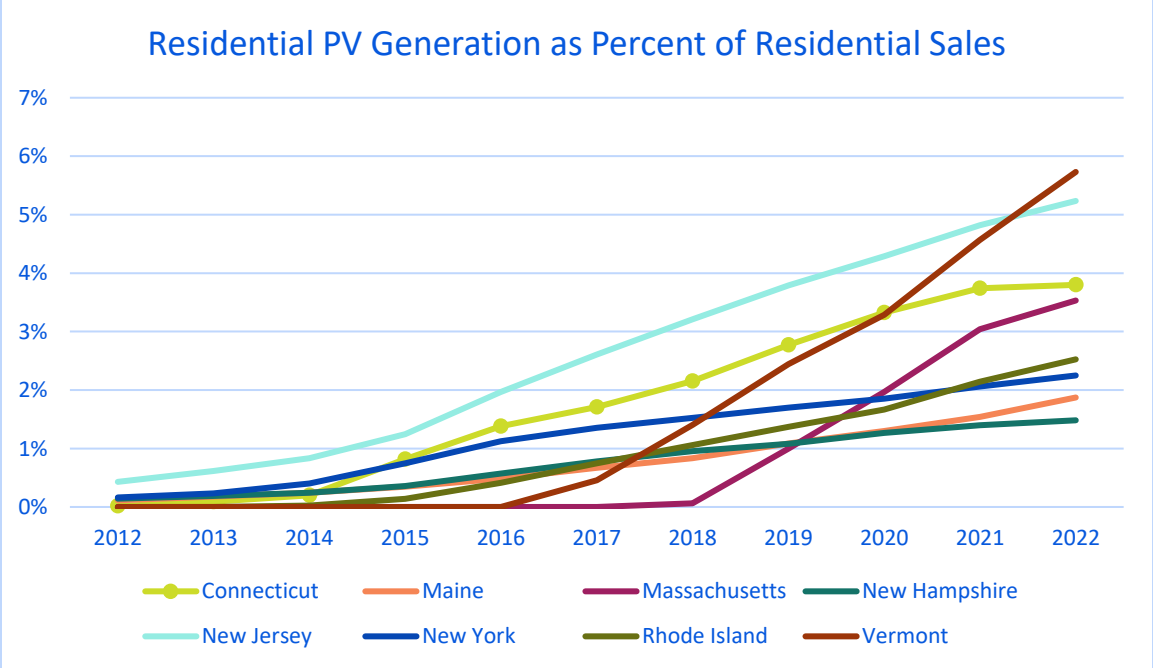


Figure 18. Residential PV Generation vs. Total Residential Electric Sales

6.3 PROGRAM COST EFFECTIVENESS

Differences in the categories of programs used in the region create challenges in comparing incentive costs and program cost-effectiveness. Differences between programs funded by taxpayers, ratepayers, and public-private partnerships present additional obstacles to conducting meaningful comparisons.

While we acknowledge the challenge of comparing the impact and cost-effectiveness of different program types, we sought to analyze common metrics across multiple states in order to offer a meaningful cost-benefit assessment of RSIP in comparison to parallel approaches in other states in the region. We applied national or regional averages to address informational gaps. All assumptions and calculation methodologies are described in Appendix 1.

To compare the cost of one-time capacity-based incentives with the costs of programs offering periodic incentive payments over multiple years (such as PBI, SREC, and tariffed solar programs), we converted all incentive rates to the amount of the incentive paid per REC[36] generated by the installed project. All states in the region have established renewable portfolio standards (or equivalent frameworks), under which utilities must procure and retire renewable energy credits (RECs) that are equal to a given percentage of the utility's total electricity sales. While not all states have solar carve outs within their RPS and not all programs generate RECs for utilities, an SREC offers a common production-based factor through which we may compare diverse structures.

Most tariffed solar, REC, and PBI programs establish the period during which the customer will receive the incentive. After the expiration of this period, customers no longer receive performance-based credits; most revert to a default electric rate; or are no longer eligible to sell the RECs that their system produces. For programs that define a maximum participation term, we calculated total RECs that the installed generating capacity would be expected to produce within that period of time. If a program does not set an endpoint for eligibility to receive incentives, we assume that the system will continue to produce qualifying electricity throughout a standard 25-year useful equipment life.

After calculating the total incentive cost for each program, we normalized the total cost based on the amount of generating capacity that the incentive payments funded (Figure 19) and by the amount of the incentive paid per REC generated by participating projects (Figure 20).

[36] In this context, "REC" is used to mean one megawatt hour (MWh) of electricity generated by a residential solar installation.

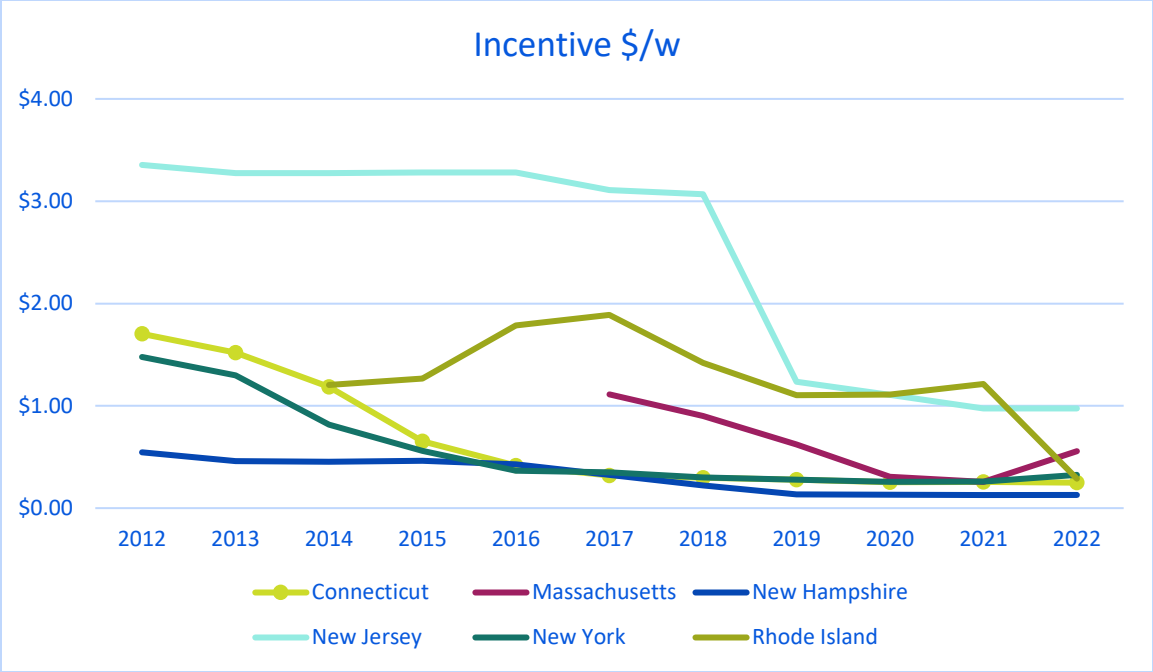
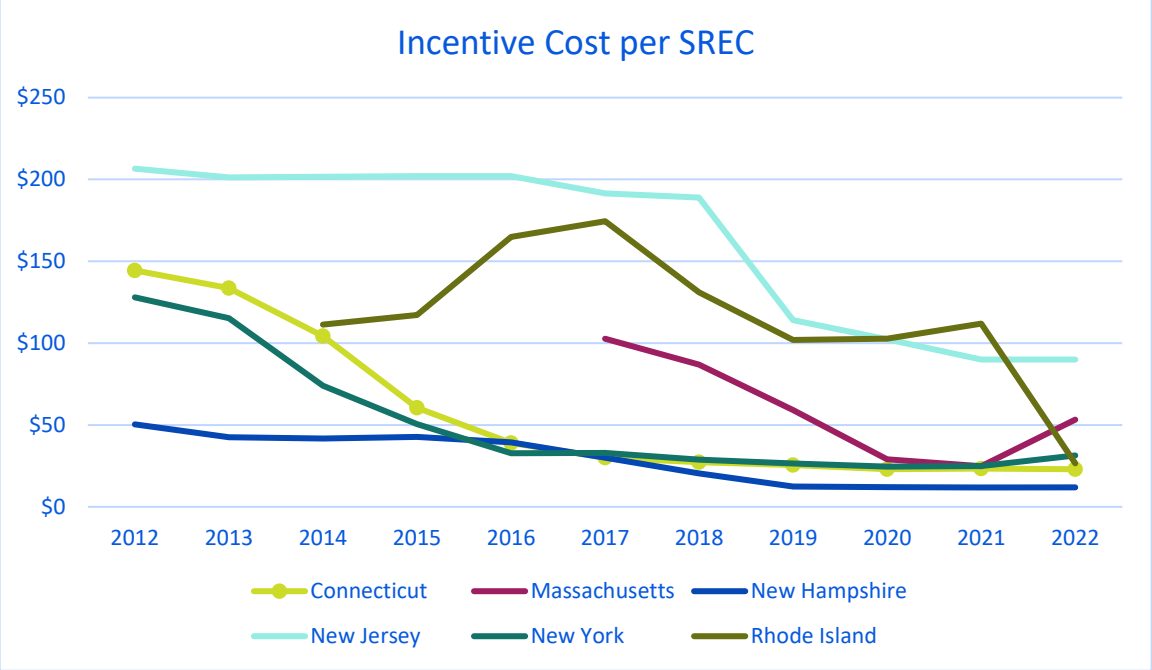


Figure 19. Trends in Comparative Incentive Cost ($/w)



[37]

Figure 20. Trends in Comparative Incentive Cost per SREC

Figure 21 shows that the Green Bank successfully and cost-efficiently used RSIP to support the development of the Connecticut residential solar market. As shown in the figure, by 2017,

[37] SREC costs shown assume that customers may sell SRECs for 10 years following installation.

Connecticut had achieved the highest annual per capita addition of residential PV capacity, while applying one of the lowest incentive rates in the region.

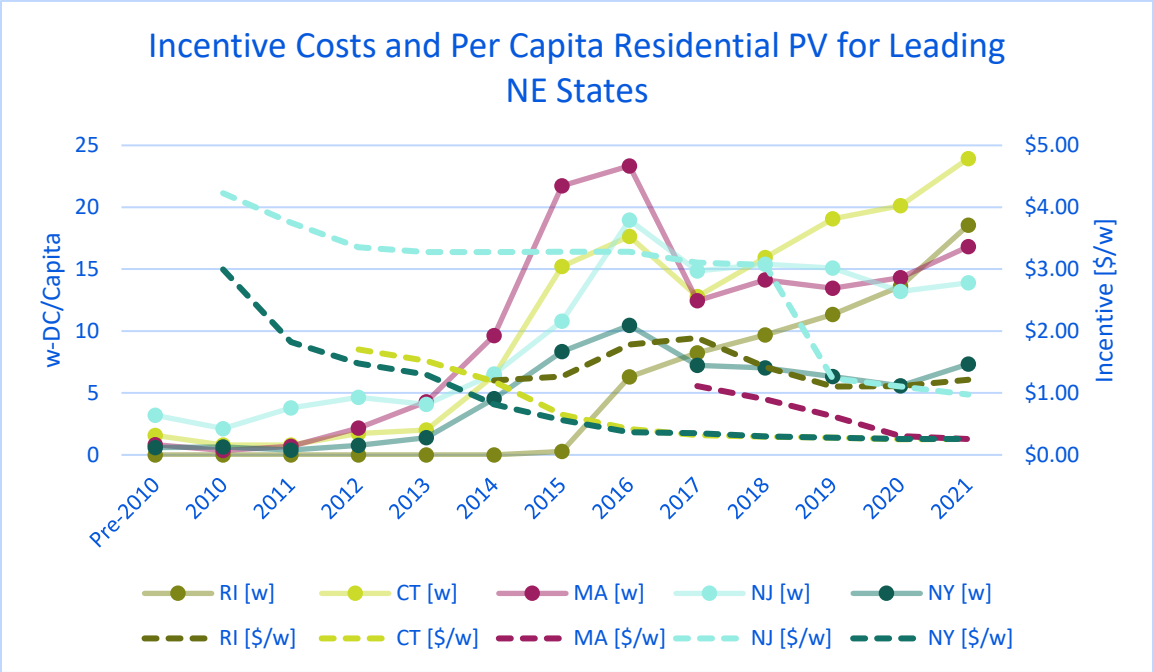


Figure 21 Comparative capacity growth and Incentive Rates

6.4 LEVERAGE

Many solar programs are designed to create incentives and/or fill cost-effectiveness gaps in order to facilitate private investment in residential solar installations. The most direct way of evaluating effectiveness in facilitating entry of private investment is to compare the amount of the program incentive to the private funds invested in projects.

Calculating the leverage ratio that a program achieves requires information about both the total installed cost of the project and the cost of the incentive that the program paid to the customer. Data was available to calculate incentive costs for all of the programs that were reviewed. Project cost information was also available for programs in Massachusetts, New Hampshire, New York, and Rhode Island. For states that did not publish project cost data, we used data published by NREL on the average installed cost per watt for residential solar arrays for the applicable year[38].

Figure 22 shows that annual leverage ratios generally increased for all programs from 2012 – 2022. Falling installation and equipment costs and maturation of the solar industry allowed for progressively reducing incentive levels over time. While several states observed moderate

[38] NREL. “Solar Market Research & Analysis | Solar Installed System Cost Analysis.” Viewed November, 2022. https://www.nrel.gov/solar/market-research-analysis/solar-installed-system-cost.html

decreases in leverage ratios for some years, RSIP's leverage ratio increased in each year of the program and, with Massachusetts, achieved the highest leverage ratio of any state in the region in 2021.

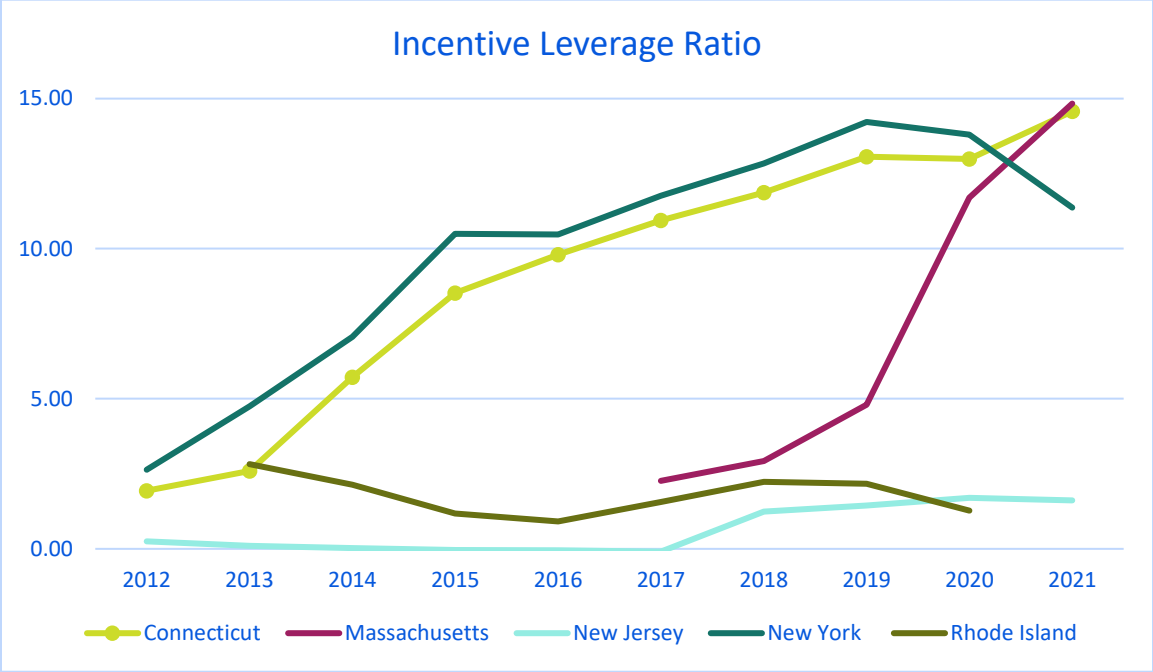


Figure 22. Trends in Comparative Incentive Leverage Ratios

Figure 23 shows that RSIP's cumulative leverage ratio of 8.15 was the second highest of all states that were evaluated. While New Hampshire achieved greater leverage than Connecticut, RSIP has supported a statewide rate of solar adoption per owner-occupied home (4.55%) that is nearly three times the parallel rate achieved by New Hampshire (1.61%). The figure does not include values for Maine and Vermont because no programs were identified for these states that provided direct incentives for residential solar installations.

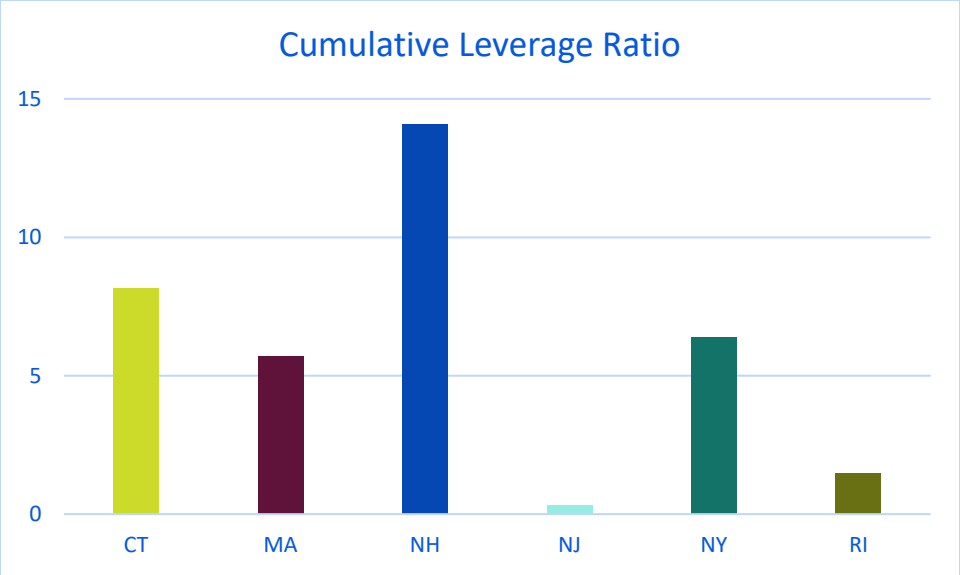


Figure 23. Comparative Cumulative Leverage Ratios

A residential solar program may create a spillover effect if the market effects created by the program lead to non-participants installing solar. A complete spillover analysis is outside the scope of this evaluation; however, insights on potential spillover effects may be extracted from information on the comparative cost of installed residential solar in each state. National data shows that residential PV capacity has increased as the installed cost of solar has decreased. Therefore, if a program stimulates that state's solar market, causing the installed cost of solar to decrease, that decrease may prompt additional residential installations that occur outside of the program. Figure 24 shows changes over time in the installed cost of solar in each state, as well as the national average installed cost.

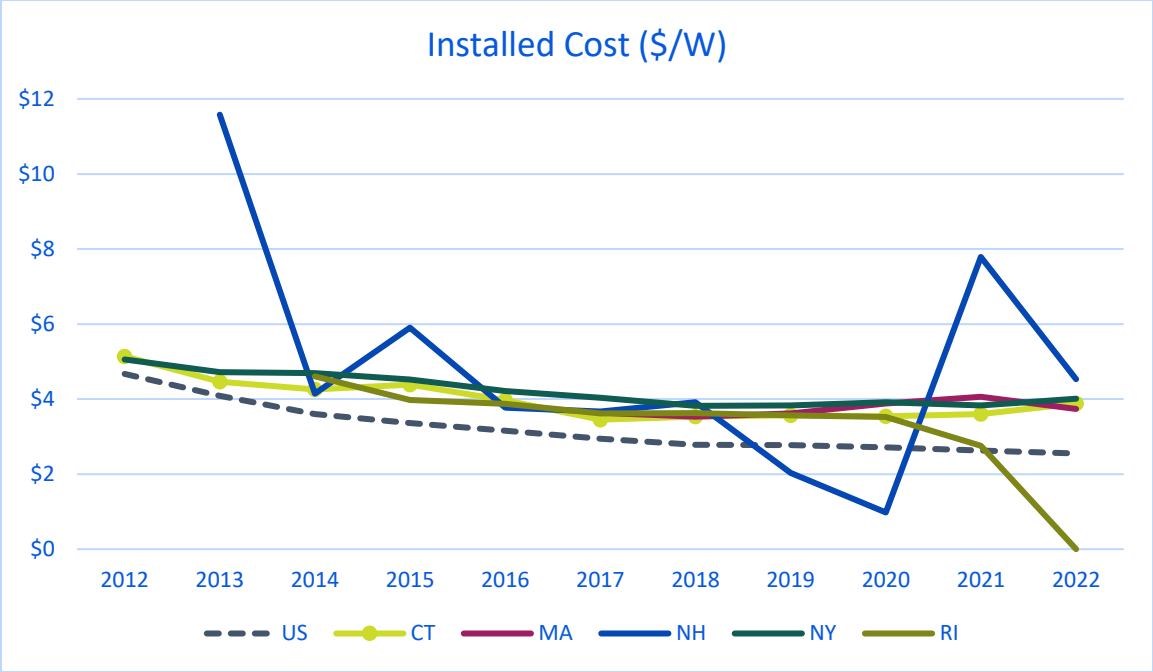


Figure 24. Comparative Trends in Installed Cost ($/W). No state-specific data available for ME, NJ, or VT.

6.5 LMI PARTICIPATION

As discussed above, the Green Bank recognized that LMI households and households living in high-burden areas may face greater challenges in accessing the benefits of solar energy and created the LMI PBI incentive, as well as the Solar for All initiative to increase participation by LMI and households with high energy burdens. The barriers to solar adoption by LMI households have been identified as an obstacle nationally, and some states have deployed targeted strategies to address these barriers. In the Northeast these states include Massachusetts, Rhode Island, and New York, in addition to Connecticut. However, since LMI households may install a solar array through a non-LMI program, or outside of a utility or state supported program, LMI program participation may not provide a comprehensive view of LMI adoption.

For the four states that offer dedicated LMI programs, Figure 25 shows the share of total participation in each state's residential solar program that was in the state's LMI sub-program. The 3.67 percent of RSIP participants who have benefited from the enhanced LMI PBI incentive is similar to participation rates in Massachusetts and Rhode Island.

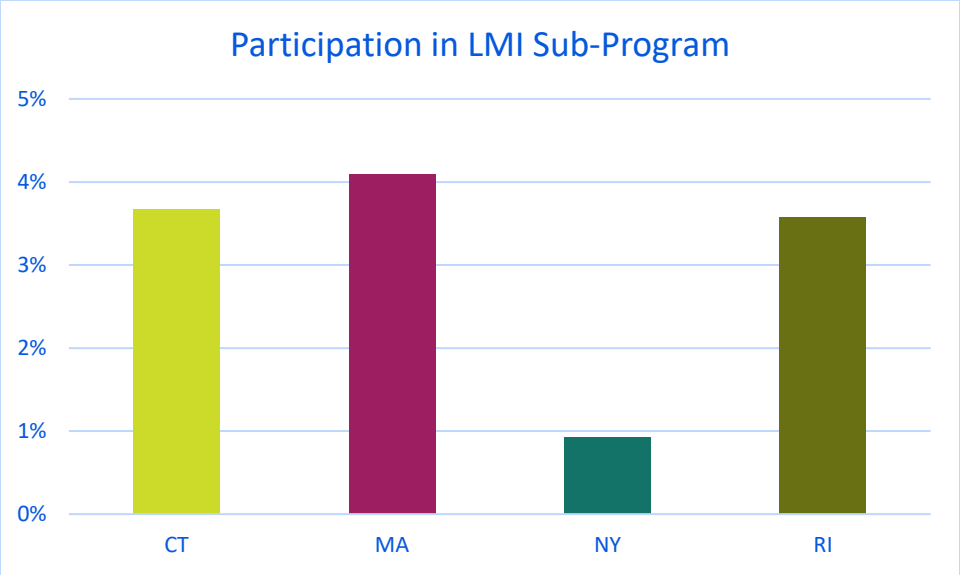


Figure 25. Comparative LMI Program Participation

In Tracking the Sun: Pricing and Design Trends for Distributed Photovoltaic Systems in the United States, Lawrence Berkeley National Lab (LBL) collected data from electric utilities, public utilities commissions, and state energy offices across the country about the locations of interconnected solar installations[39]. LBL's Solar Demographics Trends and Analysis research group used this data to map the location of each installation to a census tract and then cross-referenced the locations with median income characteristics of the tract collected through census data. Slipstream used the LBL dataset to assess levels of LMI solar adoption for each state in the region.

Figure 26 shows the share of each state's solar adoption that took place in census tracts with median incomes that are in each AMI band.

[39] LBL estimates that the *Tracking the Sun* dataset includes 77% of total installations in the U.S. through 2021.

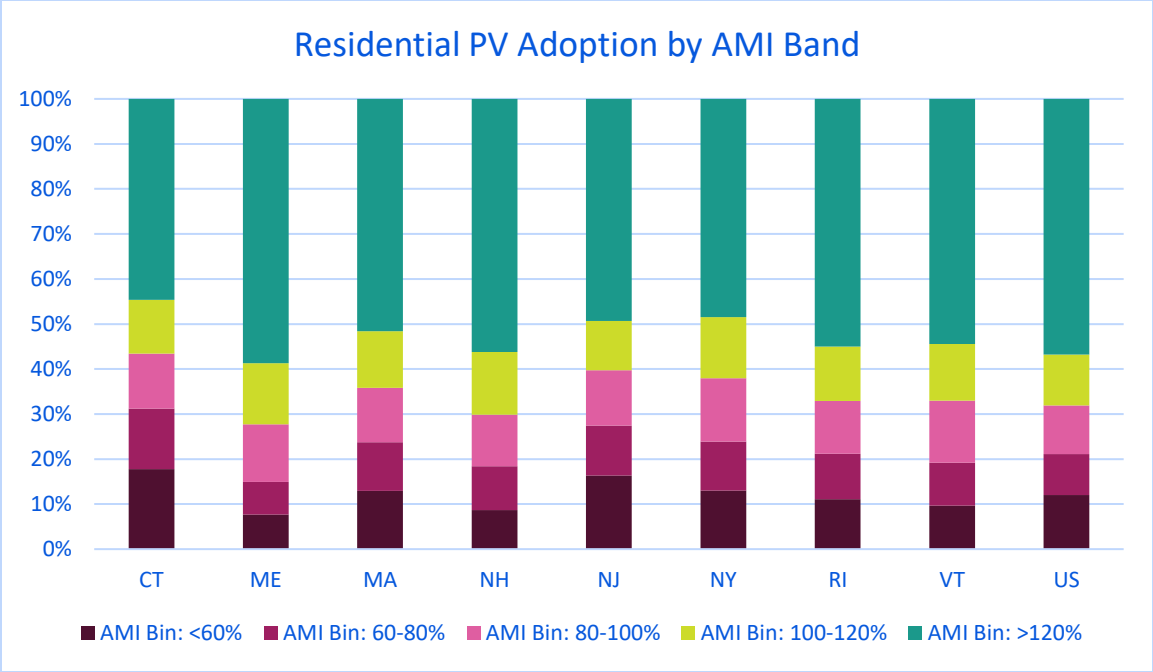


Figure 26. Comparative PV Adoption by AMI Band

The chart shows that the portion of installations taking place in the most affluent areas is lower in Connecticut than in any other state in the region. Additionally, Connecticut had a higher rate of solar adoption in low-income (< 80% AMI) census tracts than any other state in the region.

6.6 ENVIRONMENTAL IMPACT

States may enact residential solar programs to achieve environmental objectives, as well as to support residents in reducing energy costs. Shifting generation from fossil fuel powered facilities to distributed renewable resources reduces greenhouse gas (GHG) emissions, including CO_2, as well as particulate emissions, including PM2.5, NOx, and SO_2, that can cause and aggravate health conditions, such as asthma. Table 12 translates the reduced annual electricity generation needed, due to program-supported residential solar installations, to corresponding reductions in GHG and particulate emissions.

Table 12. Annual Emissions Avoidance by State

	Annual emissions avoidance			
	Mt CO_2e	**Lbs. PM2.5**	**Lbs. NOx**	**Lbs. SO_2**
Connecticut	130,327	63,409	36,888	9,096
Maine	24,883	12,248	7,285	1,743
Massachusetts	162,032	66,905	29,561	10,895
New Hampshire	17,804	9,284	5,876	1,257
New Jersey	562,156	628,207	904,630	80,012
New York	224,839	115,897	73,234	15,932

Rhode Island	25,546	12,809	7,864	1,804
Vermont	50,790	24,388	14,189	3,570

Figure 27[40] shows changes over time in the cost per unit of reduced CO_2 emissions.

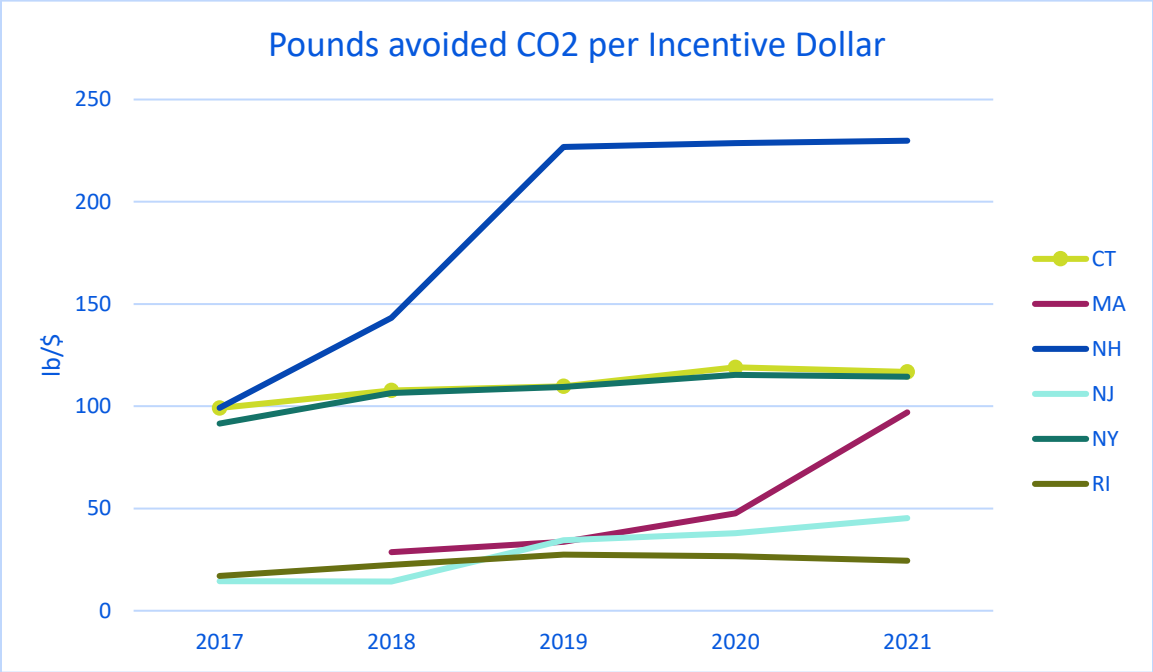


Figure 27. Trend in Comparative Cost of GHG Emissions Reductions

As a part of the ISO New England (ISO-NE) wholesale energy market, marginal emissions in Connecticut are roughly equivalent to that of the neighboring states which are also members of

[40] The figure assumes that installed projects will have a 25-year useful life and that the full incentive cost of lifetime emissions reductions is paid at the time the project is installed.

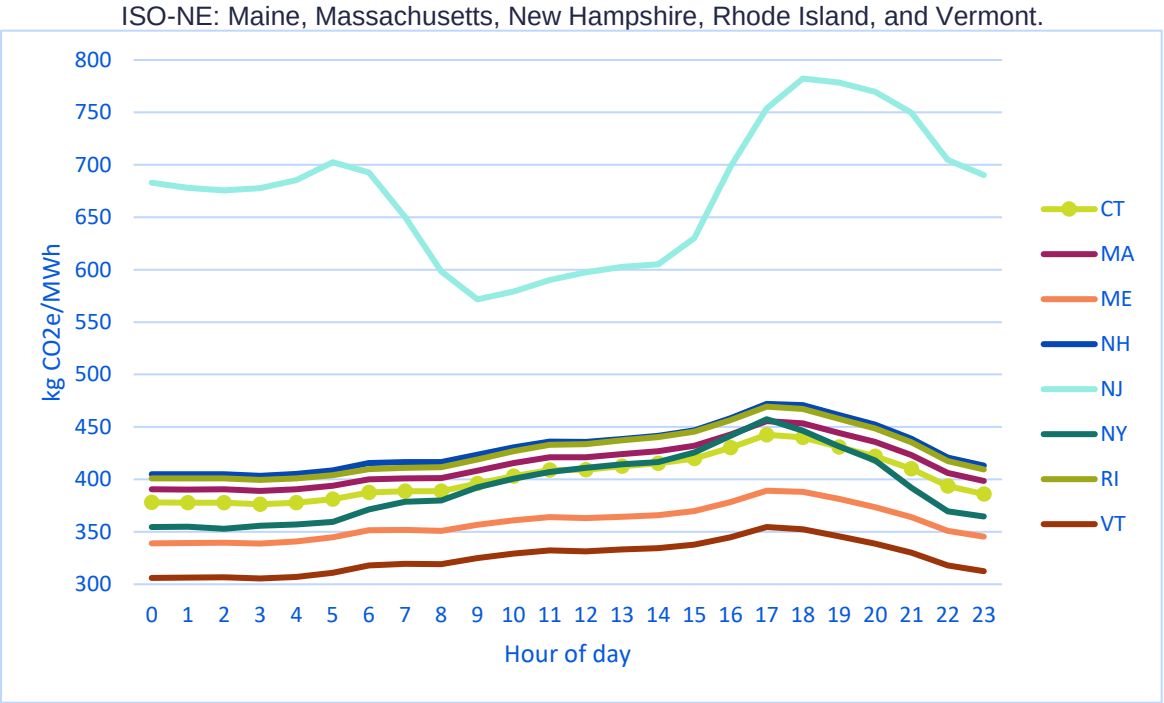


Figure 28[41] shows the modeled 2022 annual average of hourly long-run marginal emissions rates (LRMER, in kg CO_2e/MWh) for all ISO-NE states as well as New York and New Jersey. LRMER is the emissions rate of the change in generation (increase or decrease) that would result from a marginal change in electric load, calculated using a model that allows for structural changes (such as new or retired capacity, changes in transmission constraints, etc). Because rooftop solar PV is a permanent capacity change which results in time-varying generation and is small relative to other generation sources, LRMER is a useful metric to quantify the effect of PV on emissions rates.

[41] Source: Gagnon, Pieter; Frazier, Will; Cole, Wesley; Schwarz, Marty; Hale, Elaine (2021): Cambium data for 2021 Standard Scenarios. National Renewable Energy Laboratory. https://cambium.nrel.gov/

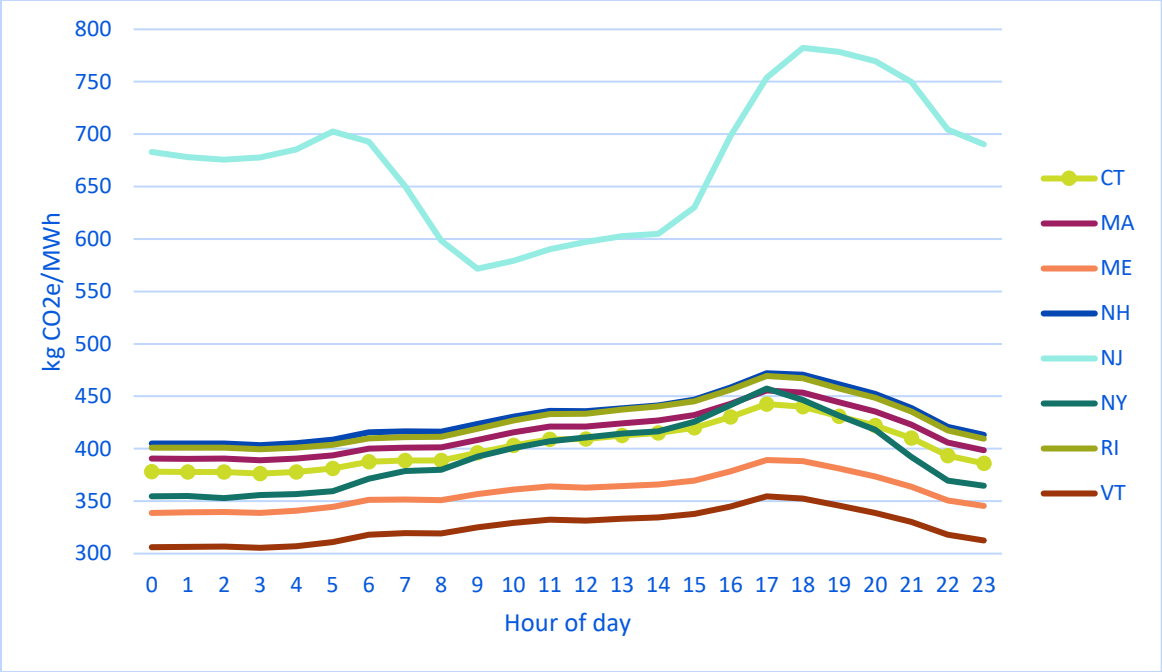


Figure 28. Long Run Emissions Rates for Northeast States

The LRMER profile for New York is similar to ISO-NE because, although New York is its own ISO (NYISO), it is similar in size to ISO-NE, and ISO-NE is its most significant interchange. By contrast, New Jersey is part of the PJM ISO, which is the largest ISO in the U.S., with roughly 10 times the capacity of either ISO-NE or NYISO.

Thus, while a comparison between New York or the ISO-NE states would be similar in terms of emissions impact per kW of solar installed, a comparison to New Jersey is instructive.

To compare the emissions impact per dollar invested, we used AVERT emissions factors from 2017 through 2021 (earlier data does not include an avoided emissions rate for distributed solar PV). NJ is in the Mid-Atlantic region with an average avoided CO_2 rate of 1607 lb/MWh across the five years; all other states are in the New England region with an average avoided CO_2 rate of 1135 lb/MWh. The emissions rates were then combined with the solar PV capacity and generation data available for each neighboring state, along with the total program dollars for those states with incentive programs active in the analysis years. The data is summarized in **Error! Reference source not found.**.

The total solar PV capacity and generation are for the five years of analysis (2017 – 2021), while lifetime emissions reductions assume a lifetime of 25 years for each solar array. Because avoided CO_2 rates are expected to decline over time, this will tend to over-estimate the total reduction. Total incentive dollars includes all program times, and for states with a REC or SREC program, includes the lifetime of the REC (typically 15 years). Figure 29 shows a graphical comparison of the effectiveness and per capita emissions reduction impact of program dollars in reducing CO_2 emissions for those states with solar incentive programs.

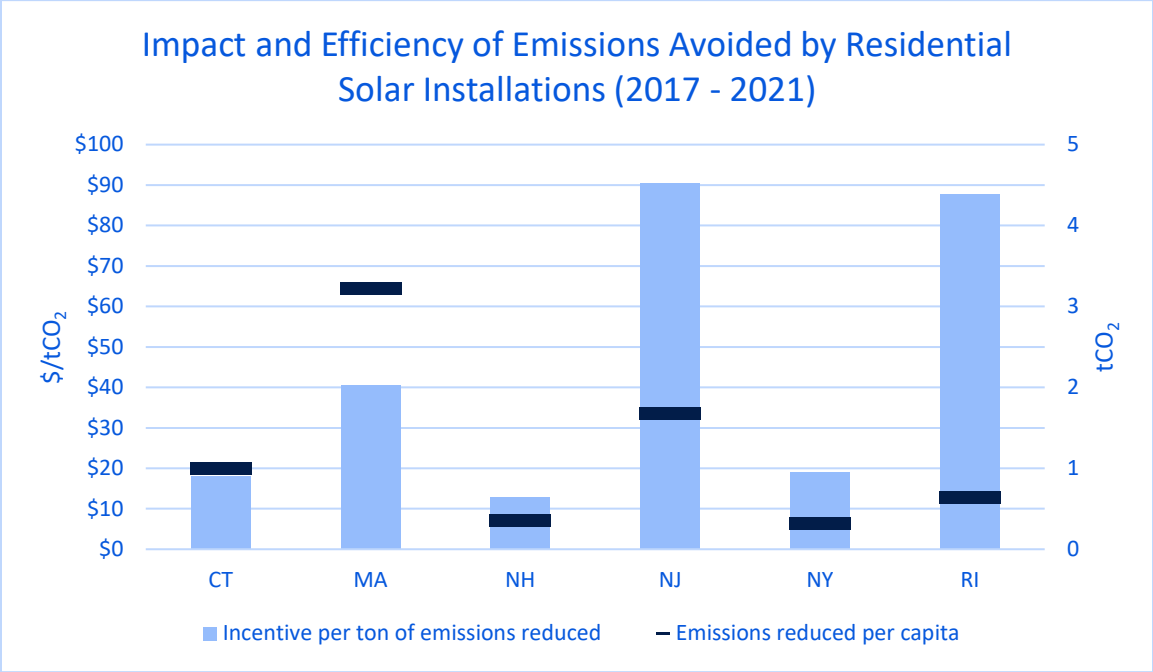


Figure 29. Comparative Average Emissions Reduction Cost

7.0 RECOMMENDATIONS

In 2022, the Green Bank achieved its statutory requirement for RSIP of deploying 350 MW of residential solar generation capacity. The Green Bank used supplementary financing to fund the deployment of an additional 26.88 MW of capacity through the RSIP-E incentive blocks. RSIP-E served as an effective bridge between the achievement of the 350 MW RSIP objective and the launch of the RRES tariffed solar offering in early 2022. Data on installed residential solar in Connecticut, in combination with feedback from stakeholders who were interviewed for this evaluation confirms that the Green Bank also achieved its parallel mandate of supporting the "orderly and sustainable development" of the Connecticut residential solar industry.

The Green Bank remains committed to supporting the orderly and sustainable development of the Connecticut residential solar industry, but is no longer able to implement RSIP to support the industry. The Green Bank is working internally and with stakeholders, including the Connecticut Public Utilities Regulatory Authority (PURA), to discern how it can most effectively support the industry post-RSIP and in the context of the RRES tariffed solar framework.

RSIP program data, comparisons between the Connecticut market and other residential solar markets in the region, stakeholder feedback, and lessons learned from other states that have transitioned from incentive programs to tariffed solar structures can all offer guidance to the Green Bank in determining how to support the market moving forward. The following sections describe the current status of the transition to tariffed solar in Connecticut; market segments

that may benefit from ongoing Green Bank support; and recommendations for how the Green Bank can continue to support sustainable and orderly development of the Connecticut solar industry.

7.1 TRANSITION TO RRES

In 2020, the last full year in which RSIP was active, RSIP supported the deployment of 54.9 MW of residential solar generating capacity. The Green Bank has determined that ongoing orderly and sustainable development of the market would be represented by the addition of 50MW – 60 MW of residential solar generation per year without RSIP. Multiple stakeholders confirmed that this target range of deployment would demonstrate orderly and sustainable development of the market.

Per the design of RSIP's declining incentive block structure, at RSIP's conclusion the incentive rates of $0.358/WPTC (for systems <10 kW) and $0.207/WPTC (for systems 10KW – 20KW) had fallen over 92 percent from the rates offered for the RSIP Step 1 incentive in 2012. Reduced incentives, in combination with dramatically reduced installed costs and a robust private market led to some projects being cost-effective for residents, even in the absence of RSIP support. Anecdotal feedback from stakeholders confirmed that reductions in incentives were effective in enabling a smooth transition at the conclusion of RSIP. Stakeholders offered further anecdotal support by noting that, as RSIP reached the 350 MW threshold, more customers were able to install solar without applying for an incentive.

In early 2022, Eversource and United Illuminating (UI) launched tariffs in compliance with the Residential Renewable Energy Solutions (RRES) Program. Under the RRES authorization, both utilities are required to file periodic reports[42] with the Connecticut Public Utilities Regulatory Authority (PURA), which indicate the number of RRES participants and the capacity installed under each utility's tariff.

Interviews with representatives from Connecticut's electric utilities and reviews of compliance filings indicate that the utilities approved over 75 MW-DC of residential capacity in 2022 and it is likely that the actual capacity installed will meet or exceed the Green Bank's capacity objective for orderly and sustainable development of the market. These initial levels of participation in the RRES tariff suggest that the Green Bank effectively implemented RSIP's declining incentive structure so that the sunsetting of the program did not create significant disruptions in annual production. Initial filings also suggest that total production in Connecticut's residential solar market remains robust post-RSIP. We recommend that the Green Bank regularly review the RRES regulatory filings and monitor participation rates and the rate at which new generation is added.

7.1.1 Market Monitoring

[42] See compliance filings under order number nine of PURA docket 21-08-02

During its implementation of RSIP, the Green Bank developed a robust dataset, including over 200 unique data points for all 46,226 completed projects, as well data from customer applications that did not result in an installation. The dataset reflects how RSIP's financial value proposition to customers developed over time and characteristics of the customers who participated in the program. The Green Bank can leverage insights from the RSIP project data set to both provide baseline information against which it may compare data that it will collect on future RRES participation and residential solar adoption in Connecticut.The Green Bank can use the RSIP dataset to inform its strategy for how it will support the orderly and sustained development of Connecticut's residential solar market in the future.

One of the Green Bank's central roles is to facilitate financing for emerging clean energy industries and markets in Connecticut. While each clean energy market is unique, there may be common characteristics in what interventions are effective in supporting the growth of early-stage residential clean energy markets, such as the solar + storage market that is discussed in more detail below. The Green Bank can leverage insights from its RSIP dataset to guide its strategy for facilitating the growth of other clean energy industries in the state.

7.1.2 Trusted Convener

The Green Bank has been recognized nationally as an innovator and RSIP's success has also received recognition. As described in Section 5.1, interviews with stakeholders confirmed that the Green Bank is viewed by solar installers, industry representatives, and the electric utilities as a trusted convener of parties with diverse interests. This function contributed to the success of RSIP. Post-RSIP, Industry stakeholders continue to look to the Green Bank as a leader in supporting the residential solar industry. We recommend that the Green Bank maintain its partnerships with residential solar developers, community organizations, and the electric utilities and that it seek out opportunities to convene these stakeholders to address emerging challenges to the industry.

7.2 SUPPORT FOR LMI ADOPTION

While initial indicators show that the rate of residential solar adoption post-RSIP remains strong, participation in RRES may not occur equitably across income strata and demographic groupings. While the RRES tariffs offered by both utilities include enhanced rates available to customers who meet certain income-eligibility or environmental justice community standards, initial data and insights from stakeholders suggests that there have been low rates of participation in the LMI-focused tariffs.

Interviews highlighted that residential solar projects are "sold, not bought." This statement asserted that most installations result from an effective sales engagement by a solar developer with a homeowner, rather than as a result of a homeowner proactively reaching out to a contractor to initiate a project. Solar developers are typically private businesses which must earn a profit to remain solvent. In addition to having fewer financial resources than more affluent customers, LMI households and residents in EJ communities may face additional barriers to residential solar, such as older homes that require pre-installation repairs, along with other

barriers. Recognizing that LMI communities may present more barriers to developing projects and less potential revenue, solar developers may be expected to engage less in these communities and more on affluent communities that offer greater potential profits.

The Green Bank used the Solar for All program and Solarize campaigns to facilitate intentional market development in LMI communities. The impact of these strategies is demonstrated in Figure 26 above, which shows higher rates of participation in LMI census tracts in Connecticut than in other states in the region. While RRES offers enhanced terms for LMI customers, RRES is a utility tariff offering, while RSIP was a market development and transformation program. As a market development program, RSIP supported engagement between stakeholders and guided the growth of the industry. RRES offers attractive financial terms to customers who adopt solar, but is not structured to facilitate stakeholder engagement or promote participation by underserved market segments.

The Green Bank has developed relationships with CBOs that serve LMI communities and has successfully deployed program features to increase participation by LMI households. We recommend that the Green Bank continue to develop its relationships with CBOs and works with them to monitor participation in LMI communities that the CBOs serve. To support market development in LMI areas, the Green Bank may facilitate additional Solarize campaigns to support participation in LMI communities.

Since the completion of RSIP limits the financial resources available to the Green Bank to support solar development in LMI communities, the Green Bank may need to pursue alternative financing mechanisms for this work. Funds available to states through the Federal Inflation Reduction Act (IRA) may offer resources that the Green Bank could use to support solar adoption in LMI communities. For example, the Rhode Island Office of Energy Resources and the Rhode Island Commerce Corporation's Renewable Energy Fund recently released an "Affordable Solar Access Pathways RFP." The program developed from this RFP will leverage the higher Investment Tax Credits for EJ Focus Areas that the IRA enabled to support intentional market development in EJ communities, which may have greater numbers of LMI households.

The Green Bank developed key partnerships with SmartPower and PosiGen, among other organizations, which were instrumental in supporting RSIP participation by LMI households and by residents in vulnerable communities. Both SmartPower and PosiGen have created innovative business models that contributed to their effectiveness in reaching LMI communities. The Green Bank may support ongoing solar adoption in vulnerable communities by seeking out additional innovative organizations that are well-positioned to work in vulnerable communities and using funding through the Green Bank Capital Solutions program to catalyze the growth and success of these organizations.

In addition to supporting market development in LMI communities, the Green Bank may consider how to provide credit enhancements to address gaps left by the primary financing mechanisms used in the solar industry. Stakeholder interviews indicated that there are well

established solar loans and leases that provide attractive financing options for customers with strong credit and sufficient income. However, the same stakeholders noted that customers with lower income levels and/or poor credit may not be able to access these industry-standard financing options. To increase access to solar for LMI households, the Green Bank may follow on the success of the credit enhancement that it created to offer the Solar for All program and assess options to create another credit enhancement tool that would minimize default risk for private firms that finance residential solar in LMI communities. Offering a credit enhancement could greatly reduce or eliminate, financing decline rates in LMI communities. Since lack of financing typically leads to a lost sales opportunity for a developer, developers may avoid working in areas where they anticipate customers are less likely to be approved for financing. A credit enhancement could both enable more LMI households to finance solar installations and encourage more developers to work in LMI communities.

7.3 SOLAR + STORAGE ADJACENCY

When RSIP was introduced, participants in the program were early adopters of PV technology, while customers who participated at the conclusion of the program may have been early majority adopters who installed solar on their homes in a more well-developed market. As described above, the Green Bank's role as a convener and facilitator of diverse industry stakeholders helped to establish the Green Bank as a valued and trusted resource for the Connecticut solar industry. The electric utilities do not have a parallel market development role related to the RRES tariff as the Green Bank established for RSIP. We recommend that the Green Bank maintain its role as a trusted partner in the industry as focus evolves from residential solar to growing "Solar Plus" industries.

As the solar industry members with which the Green Bank has developed partnerships through RSIP evolve their businesses to offer battery storage, EV charging, and other electrification technologies alongside residential solar installations, the Green Bank may use funding that is available to grow battery storage and electrification industries to apply the market development expertise it applied to residential solar to ensure the orderly and sustainable development of that market, while simultaneously supporting the growth of adjacent and complementary "solar plus" industries in Connecticut. Maintaining the role of trusted partner and facilitator will enable the Green Bank to both better monitor the residential solar market and build on RSIP's success to increase adoption of related technologies.

The Green Bank currently supports the SEEDS 3 project, which is investigating opportunities to support adoption of battery storage and electrification technologies by households who have already installed residential solar. We recommend that the Green Bank use the findings from the SEEDS 3 research, as well as new funding available through the IRA and other sources to leverage its standing in the Connecticut solar industry to advance adoption of adjacent residential clean energy technologies. In particular, given the variety of incentives available, lack of clarity around who and what qualifies, and ability to combine incentives, we see an important role for the Green Bank in working with homeowners to combine and maximize incentives across federal, state, and utility offerings. Because rules for many of the IRA incentives are still

in active development by the IRS, it will be important to begin planning soon to prepare for late 2023 when more clarity is expected.

8.0 CONCLUSION

This evaluation find that the Green Bank successfully achieved its legislative objective of using RSIP to facilitate the addition of 350 MW-DC of residential solar electricity generating capacity in Connecticut. The Green Bank surpassed the 350 MW goal by cost-effectively managing the RSIP declining incentive step structure so that the funding offered customers and solar developers incentives to install new capacity while reducing rebate levels as market-based project costs fell. This strategy maintained the value of RSIP incentives to customers and solar developers while avoiding free ridership or poor cost-effectiveness that could result from offering overly generous incentive rates.

In addition to adding generating capacity, RSIP leveraged $8.15 of private investment for every incentive dollar, fostered the creation of 15,733 direct, indirect, and induced job years, and created economic activity that generated nearly $45 million in state tax revenue. The renewable energy generated by RSIP-funded solar arrays will result in an estimated annual avoidance of 231,419 tons of carbon dioxide, 17,169 lbs of PM 2.5, 182,210 lbs of NOx, and 144,586 lbs of SO_2 each year for the next 25 years.

The Green Bank demonstrated leadership in the Northeast and nationally in using program innovations, like the LMI PBI and Solar for All, to address higher barriers to residential solar adoption faced by households in LMI communities. Throughout its work, the Green Bank established itself as an essential convener and facilitator of stakeholders in Connecticut's residential solar industry.

Post-RSIP, we find that the Green Bank successfully implemented RSIP to grow the state's residential solar industry in an orderly and sustainable fashion. Success is demonstrated by the continued growth of the market during the first year of RRES. We recommend that the Green Bank maintain its role as a trusted industry partner and identify new resources that it may apply to grow adjacent and synergistic markets and to ensure continued high rates of adoption among LMI communities.

APPENDIX 1. SUPPLEMENT TO METHODOLOGY

Incentive Cost Calculations

To compare RSIP's cost-effectiveness with residential solar programs offered in other states, this evaluation calculated the current and expected future cost of three categories of financial incentives. While net-metering tariffs offer customers a higher rate for solar electricity than the utility's wholesale costs, this evaluation did not calculate a financial value to customers for participating in net-metering tariffs.

1. Installation incentives are paid to the customer at the time of the installation. Our calculations used the face value of the incentive at the time it was issued.
2. Performance based incentives are paid to the customer over a specified period of time as a higher credit rate for solar energy production or as an ongoing "adder" for solar energy. The cost of performance based incentives is calculated as the difference between the standard residential electricity rate and the higher rate or adder value paid to the customer for solar energy produced. The analysis uses current or documented historical (where available) electricity rates and does not assume a given escalation factor. The incremental rate is applied to the expected annual energy produced by the system and extended over the number of years allowed by the applicable tariff or agreement.
3. Solar Renewable Energy Credits (SRECs) may be sold by a customer based on the solar energy produced by the customer's residential solar array. The number of SRECs generated was calculated based on total estimated electricity produced by the installed capacity during the time period allowed by the state's SREC regulations. The cost of the SRECs was calculated based on the average market price for SRECs in the applicable state for each year of a program. If a state specified the price at which a customer may sell SRECs the calculation applied the specified price.

ZREC Equivalency

A ZREC is a 15-year agreement between a customer and either Eversource or United Illuminating under which the utility will purchase renewable energy produced by a customer's solar array.

Program Data Availability

Residential solar program participation data availability varied significantly among the eight states in the region. Table 13 summarizes the information that was reviewed for each state.

Table 13. Data Availability by State

	CT	MA	ME	NH	NJ	NY	RI	VT
Years	2012-2022	2018-2022	2009-2022	2009-2022	2009-2022	2000-2022	2014-2022	2017-2022
# Projects	X	X	X	X	X	X	X	X
Capacity	X	X	X	X	X	X	X	X
Incentive cost	X	X	N/A	X	Partial	X	X	N/A
Installation cost	X	X		X		X	Partial	
Electricity Production	X					X		
LMI Participation	X	X				X	Partial	
Project-level data?	X	X			X	X		X

Production data was used for the analysis for all programs for which this data is available. To include programs that do not publish production data, we estimated production based on the capacity (kW-DC) of the installed solar arrays. We used the average annual production efficiency rate[43] found in programs for which production data is available, in combination with the generating capacity data for those programs lacking production data to estimate annual production for these programs.

[43] The average production efficiency rate for programs with published production data was 1,082.50 kWh/kW/Year.

TOWN OF STRATFORD

Stratford Town Hall, 2725 Main Street, Stratford, CT 06615
Phone: 203-385-4001 • Fax: 203-385-4108
www.townofstratford.com

OFFICE OF
THE MAYOR

March 30, 2023

Lonnie Reed, Chairwoman
Connecticut Green Bank

Bryan Garcia
President & CEO, Connecticut Green Bank
75 Charter Oak Avenue
Hartford, CT 06106

Dear Lonnie and Bryan,

It is with deep regret that I am tendering my resignation as a member of the Connecticut Green Bank board. Like you, I love all things green and have thoroughly enjoyed helping Connecticut become more sustainable. Unfortunately, the duties of the mayor of Stratford are numerous and timing often conflicts with the Green Bank's meeting and activities. Due to these conflicts, I am resigning immediately.

If I can be of assistance with a project, sounding board or resource, I would be honored to serve in a limited capacity.

I wish you both well, and I hope to see you in the near future.

Sincerely,

Laura

Laura R. Hoydick
Mayor
Town of Stratford

Cc: Connecticut Republican House Leader, Vincent Candelora

Technical Assistance (TA) Scope of Work (SOW):
Community Coalition for Bridgeport, Connecticut

As of: March 8, 2023

This Scope of Work document provides a high-level outline of technical assistance to be delivered under the Communities LEAP program. Any changes to the scope will be discussed and agreed upon between the LEAP Community Coalition and the TA Provider Network.

Project Overview:

The Bridgeport Regional Energy Partnership (BREP) is an informal coalition of approximately 35 civic, cultural, economic, financial, and governmental institutions that are either situated in or have influence over Bridgeport. BREP is led by the four organizations[1] that applied to DOE's Communities LEAP Pilot and were selected as one of 24 LEAP communities in the summer of 2022. At more than 148,000 residents, Bridgeport is the most populous city in Connecticut and is among the most socioeconomically diverse, with nearly 8 in 10 residents identifying as either Black or Hispanic/Latinx.[2] Nearly 68% of households earn a low income[3] and households in Bridgeport earning at or below 30% of the area median income spend an average of 22% of household income on home energy bills (see Figure 1).[4] Households spending 6% or more of annual income on energy costs are considered energy burdened[5][6]. In their application, BREP identified several specific problem areas, including:

- the burning of fossil fuels for energy in the community,
- the siting of waste collection sites in low-income neighborhoods,
- the lack of community input in current decision-making processes,
- the lack of accountability for large institutions and developers to deliver benefits to the city's residents and small businesses,
- high energy costs paid by many of the city's residents, and
- the long-standing impacts of unemployment and divestment from the city.

[1] The four organizations steering BREP include: (1) Greater Bridgeport Community Enterprises, (2) Connecticut Green Bank, (3) Bridgeport Regional Business Council, and (4) Operation Fuel. BREP is not a legal entity but rather an informal coalition of Bridgeport stakeholders.

[2] US Census Bureau, American Community Survey 2021 5-Year Estimates (2017 to 2021) -- Table DP05: https://data.census.gov/table?q=dp05&g=0100000US_1600000US0908000&tid=ACSDP5Y2021.DP05

[3] US Department of Housing and Urban Development, Comprehensive Housing Affordability Strategy 5-Year Estimates (2015 to 2019): https://www.huduser.gov/PORTAL/datasets/cp.html

[4] Ma, Ookie, Krystal Laymon, Megan Day, Ricardo Oliveira, Jon Weers, and Aaron Vimont. 2019. Low-Income Energy Affordability Data (LEAD) Tool Methodology. Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-74249. https://www.nrel.gov/docs/fy19osti/74249.pdf.

[5] American Council for an Energy-Efficient Economy. 2019. "Understanding Energy Affordability." https://www.aceee.org/sites/default/files/energy-affordability.pdf.

[6] Sears, Justine, and Leslie Badger. 2020. "Mapping Household Energy & Transportation Affordability in Connecticut." veic. https://www.ctgreenbank.com/wp-content/uploads/2020/11/Mapping-Household-Energy-and-Transportation-Affordability-Report-Oct-2020.pdf.

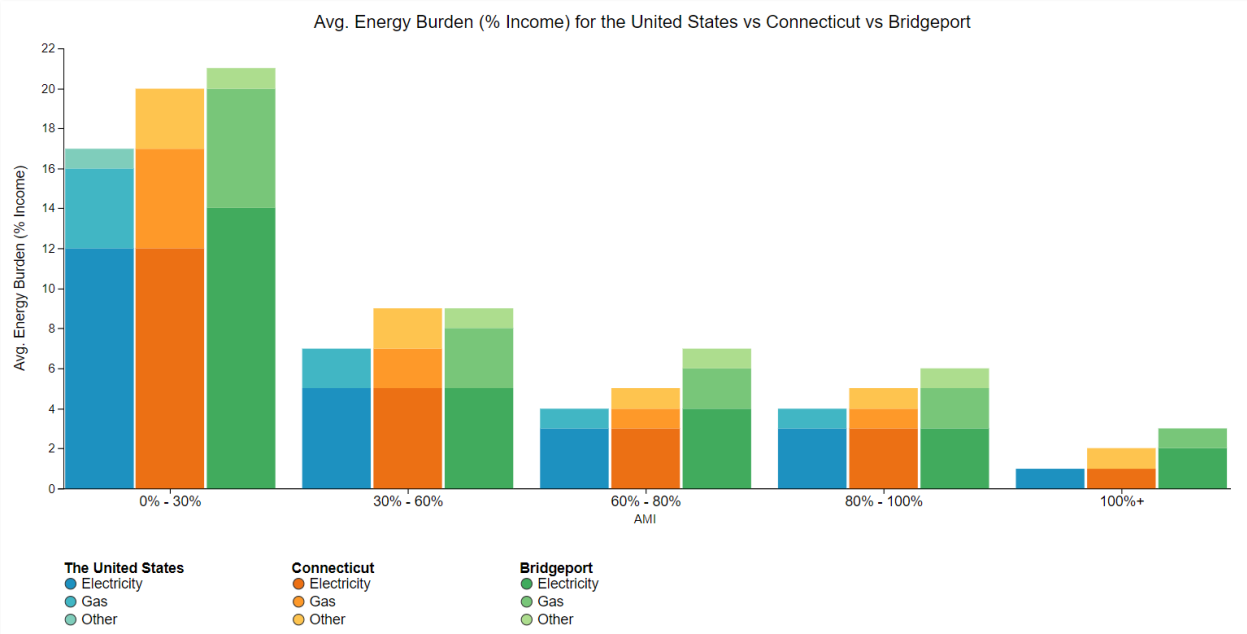


Figure 1 Average Energy Burden by Percent Area Median Income (Source: LEAD Tool 2022)

BREP's mission is to reduce the energy burden of Bridgeport families, create local jobs, and offer workforce development opportunities so residents can actively participate in the clean energy economy. BREP is working to accomplish this by promoting government and private investment in safe and environmentally responsible projects.

Through the scoping process with NREL, BREP has identified three goals to guide the TA efforts. The priority goals are:

1. Develop a model Community Benefits Agreement (CBA) and a comprehensive Community Engagement Plan that incorporates Justice 40 principles to (1) ensure that the intended benefits reach those in need, (2) maximize information flow to community stakeholders, and (3) address the real concerns of those most impacted by any new clean energy development. Reducing environmental injustice through early community outreach and buy-in is BREP's highest priority.
2. Develop a clean energy strategy and implementation plan to lessen the energy burden on Bridgeport families and small businesses. Plans for reducing energy burden will consider policies, incentives, and partnerships that could play a role in reducing community energy burden.
3. Establish a clear set of development principles and criteria for clean energy planning and project development that:
    - incentivize public and private investments to maximize the benefits to underserved residents in terms of training and job opportunities,
    - foster small- and minority-owned business development, and
    - contribute to improvements in health outcomes and environmental protection.

Technical Assistance Goals & Objectives

Technical assistance (TA) provided under Communities LEAP aims to inform a foundation for future, locally led efforts to resolve the long-term problems identified by BREP. All of the

activities outlined in this Scope of Work are designed to inform foundational building blocks that the community will use to develop its own clean energy strategy. The seven activities fall within three over-arching objectives:

1. community outreach and engagement support,
2. baselining the community's assets, and
3. building capacity within the community through sharing education, tools, and data.

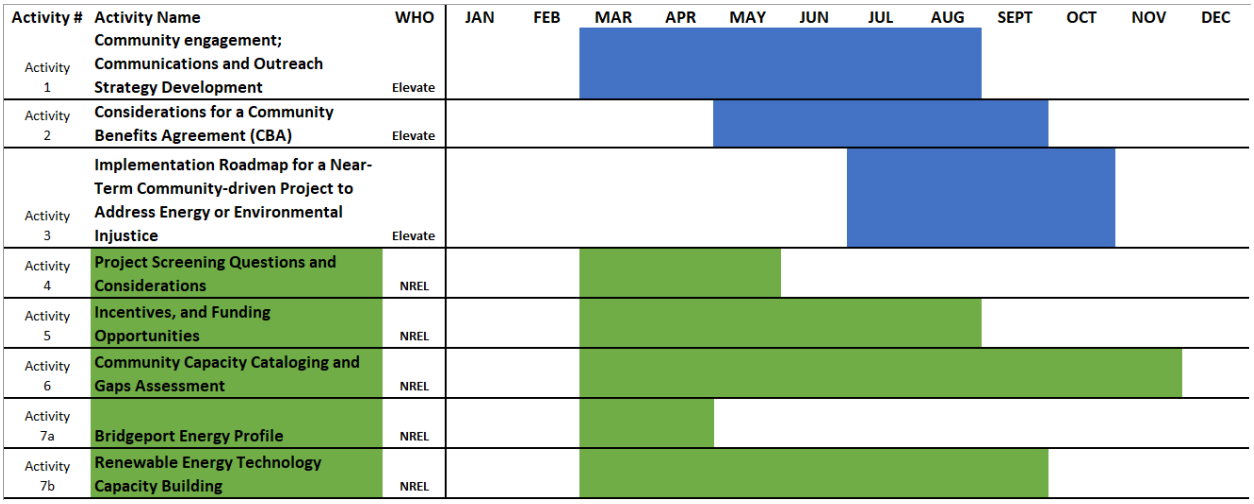


Figure 2: Timeline of activities – Elevate activities in blue, NREL activities in green.

Technical Assistance Deliverables Overview

The following table briefly describes the specific technical assistance deliverables for each activity that the Communities LEAP TA Provider Network plans to prepare and facilitate for BREP, including the timeline and the organization responsible for the largest section of each deliverable.

Table 1: Deliverables Table

Activity Number and Name	Deliverable Number and Name	Deliverable Description	Due Date	Responsible Entity
1 Community engagement; Communications and Outreach Strategy Development	1.1 Communications and Outreach Strategy	Documentation describing the communications and outreach strategy. This will include a description of the selected communication tools and templates along with when, where and how each asset would best be leveraged in the outreach and engagement plan.	May 1, 2023	Elevate
1 Community engagement; Communications and Outreach Strategy Development	1.2 Community Engagement Summary Memos	A summary memo identifying the major themes, takeaways, and feedback from all outreach and engagement activities. It will also include an attendance list of all groups or individuals involved.	August 31, 2023	Elevate
2 Considerations for a Community	2.1 Compendium of Example CBAs	A compendium of example CBAs and reference materials. This file will contain language	September 15, 2023	Elevate

Benefits Agreement (CBA)		reflective of best practice from other CBA documents.		
2 Considerations for a Community Benefits Agreement (CBA)	2.2 Summary Memo of Desired Outcomes and Benefits	A summary memo detailing a list of desired outcomes and benefits for the CBA developed with BREP and informed by the stakeholder engagement activities.	September 30, 2023	Elevate
3 Implementation Roadmap for a Near-Term Community-driven Project to Address Energy or Environmental Injustice	3.1 Strategy and Implementation Roadmap	Document describing the strategy and implementation roadmap for establishing an impactful program. The document will include suggested funding sources and measures of success.	October 31, 2023	Elevate
4 Project Screening Questions and Considerations	4.1 Project Screening Questions Summary Memo	Document summarizing the community engagement activities related to this activity as well as the full set of screening questions developed by BREP. Included in this document will be an annotated bibliography of references that BREP can turn to in the future.	March 31, 2023	NREL
5 Review of Existing Policies, Incentives, and Funding Opportunities	5.1 Summary Document of Federal Policies, Incentives, and Funding Opportunities	A summary (either a shared document or a spreadsheet) of relevant and applicable Federal policies, incentives, and a list of monthly funding opportunities that will support BREP goals.	June 30, 2023	NREL, Subcontractor
6 Community Capacity Cataloging and Gaps Assessment	6.1 Summary of Community's Capabilities Gaps Analysis	The outputs of this activity will include a database of all the data and a memo summarizing the results of the community's capabilities gaps analysis.	September 30, 2023	NREL
7a Bridgeport Energy Profile	7a.1 Compendium of NREL and DOE Tool reports	This deliverable will compile the outputs of the SLOPE tool and other relevant DOE tools in a document. If requested, NREL may deliver a presentation of the results to BREP's core team. This would include a copy of the presentation slide deck.	March 30, 2023	NREL
7b Renewable Energy Technology Capacity Building	7b.1 Renewable Energy Webinars and Summary memo	Webinars and summary memo detailing the attendees, the event agendas and salient points that came up during the discussion.	September 30, 2023	NREL

Out of Scope

Action items out of the scope of this specific technical assistance effort include:

- support for implementation of any plans developed through this Pilot,
- development of a clean energy plan
- management of any additional funds obtained by BREP during this Pilot.

Notes on the Community Roles & Responsibilities within each Activity

BREP is referred to generally throughout these sections to indicate any number of participants from the larger BREP group.

Within each section there are numerous specific organizations listed in the bullets. Each of these organizations are part of BREP and will be managed by the core BREP leadership team. The participation of these organizations will not be tracked by NREL and BREP will not be accountable to NREL for ensuring they participate – they are included in this Scope of Work to be indicative of the type of participation BREP leadership plans to bring on each activity throughout this scope execution.

TA Activities & Deliverables:

Activity 1: Community engagement; Communications and Outreach Strategy Development

Description

Elevate Energy will leverage their experience in developing outreach strategies for engaging communities in energy equity initiatives and work with BREP to develop a communications and outreach strategy ("strategy"). The strategy will draw upon best practice for engaging residents, businesses, and other stakeholders in clean energy community development.

Elevate Energy will work with BREP to lead a series of community engagement activities to listen to the Bridgeport community stakeholders and understand the goals and priorities of each group. These activities will bring together stakeholder groups that have historically been involved[7] in the city's clean energy conversations as well as groups that have not been involved[8] but are important for the long-term success of any clean energy strategy and implementation going forward.

Elevate Energy will facilitate obtaining community feedback with the goals to:

1. understand hidden assets and community culture that can support clean energy projects and workforce development in Bridgeport
2. discover opportunities and known barriers to developing clean energy projects in the city
3. inventory organizational and institutional resources and assets that can be leveraged to develop and implement clean energy projects and workforce development programs
4. create effective communication tools for engaging Bridgeport stakeholders long-term and keeping stakeholders informed of progress and decisions long-term
5. organize stakeholder cohorts
6. Identify high potential opportunities to relieve energy cost burdens on Bridgeport residents by means of targeted energy projects

[7] City of Bridgeport government officials, project developers, regulators, financiers
[8] Bridgeport's Hispanic/Latinx community, religious institutions and groups, and small business owners

The community engagement will include three community and stakeholder meetings, multiple listening sessions (quantity to be determined in collaboration with BREP), and individual calls. Community/stakeholder meetings will be held in Bridgeport; calls and listening sessions may be in person or virtual.

As part of the strategy development, Elevate will help BREP identify tools and templates that are most appropriate for the Bridgeport community and the goals of this TA. BREP will be responsible for creating the specific assets for outreach and to conduct the outreach. Communities LEAP Pilot-specific outreach templates provided by DOE will be shared by NREL as they become available.

The goal of the identified tools and templates will allow the community to create community visibility and awareness, share stories, generate calls to action, communicate on progress and decisions, and make involvement accessible to all with the use of ADA compliant, bi-lingual materials.

Deliverables

Communications and Outreach Strategy: Elevate will provide documentation describing the communications and outreach strategy. This will include a description of the selected communication tools and templates along with when, where and how each asset can best be leveraged in the outreach and engagement plan.

Community Engagement Summary Memos: Elevate will produce a summary memo identifying the major themes, takeaways, and feedback from each outreach and engagement activity. The summary will include an attendance list of all groups or individuals involved.

Timeline

March – June 2023

Lead TA Provider

Elevate Energy

Community Role & Responsibilities

BREP members will support this activity by reaching out to stakeholder groups to invite them to participate in the engagement activities and arranging in-person logistics. BREP will be responsible for reviewing the communications and outreach strategy to ensure that it will meet the community's needs for ongoing outreach. Specific BREP members and activities may include:

- Greater Bridgeport Community Enterprises (GBCE) will train and supervise a Community Engagement Coordinator. The coordinator will leverage the strategy prepared by Elevate in this activity to support Elevate throughout the TA and continue stakeholder engagement and outreach activities after this TA has ended. GBCE will reach out to Sustainable CT, the CT Coalition for Climate & Jobs, and the Alliance 4 Community Empowerment to get involved in this activity.

- The Bridgeport Regional Business Council (BRBC) will assist team in preparing materials and participating in outreach activities. BRBC will assist in stakeholder outreach and communications efforts.
- CT Green Bank (CGB) will help review and revise materials.
- The City of Bridgeport (CoB) will assist with development of community organization mapping and advise from an equity and sustainability perspective.
- PT Partners and CT Green Bank will work with Elevate Energy to develop the Communications and Outreach Strategy.

Activity 2: Considerations for a Community Benefits Agreement (CBA)

Description

Elevate Energy will use their expertise developing CBAs for clean energy development within environmental justice communities to guide BREP in developing a set of benefits that they would like to see from clean energy developers.

Elevate will support BREP in identifying community benefits by providing reference materials and examples of other CBAs. The community will discuss benefits during the community engagement described in Activity 1.

The list of benefits will be selected to provide certain outcomes to the community of Bridgeport, for example: local-hire guarantees, funding for public health programs to combat pollution, in-city workforce training and development programs, or siting and environmental design standards to reduce visual and sound nuisances.

Deliverables

Compendium of Example CBAs: The compendium of example CBAs and reference materials will be delivered as a pdf document. This compendium will contain language reflective of best practice from other CBA documents.

Summary Memo of Desired Outcomes and Benefits: A summary memo detailing a list of desired outcomes and benefits for the CBA developed with BREP and informed by the stakeholder engagement activities.

Timeline

May – September 2023

Lead TA Provider

Elevate Energy

Community Role & Responsibilities

BREP will provide feedback and insights on the benefits to be included in the CBA and work with Elevate to elicit feedback on this topic from the broader Bridgeport community. Specific BREP members and activities may include:

- GBCE will bring in CT Climate & Jobs to provide input on this activity and will work with representatives from the city (Joe Gresko and Chad Schroeder) and the BRBC to present on the initiative to City Council.

- BRBC will help develop the list of benefits for the CBA, and work to educate the city and developers on the outputs of this activity and what the community has determined as its priorities.
- CoB will facilitate the convening of a group of city representatives to discuss and support development of this activity.

Activity 3: Implementation Roadmap for a Near-Term Community-driven Project to Address Energy or Environmental Injustice

Description

Elevate Energy shall produce a strategy and implementation roadmap ("roadmap") for one near-term project (e.g., residential energy efficiency, weatherization) identified through the community engagement efforts run by Elevate Energy. In addition to addressing energy or environmental injustice, one of BREP's goals with this short-term project is to begin to repair and build trust between marginalized segments of the community and those who have had more representation in the development of clean energy projects by working collaboratively with the community to develop this roadmap. The goal of this roadmap is to serve as an example of how the local residents, businesses, and other stakeholders can collaboratively develop and implement clean energy projects. Input from residents, businesses, and other stakeholders will begin with Activity 1's community engagement efforts facilitated by Elevate and will be continued by BREP after this TA. Success of this project may be shared broadly using the strategy developed in Activity 1.

This activity will not support or oversee any implementation or buildout that results from the preparation of this project.

Deliverables

Strategy and implementation roadmap: PDF document describing the strategy and implementation roadmap for establishing an impactful program. The document will include suggested funding sources and measures of success.

Timeline

July – October 2023

Lead TA Provider

Elevate Energy

Community Role & Responsibilities

BREP will assist Elevate Energy in collecting community opinions from residents and businessowners in Bridgeport beginning with the community engagement efforts from Activity 1 and continuing beyond the end of this TA. BREP will also spread awareness of this project through their networks to incentivize participation from the community. Specific BREP members and activities may include:

- BRBC will help identify a pilot project that best symbolizes their commitment to clean energy, environmental justice and positively impacts city residents. They will also assist in identifying strengths and weaknesses in our ability to deliver projects in an equitable manner

- CGB will assist in defining a project and developing baseline statistics.

After the TA effort to develop this roadmap has ended, the following BREP organizations plan to carry the effort forward as specified below:

- GBCE will support or run weatherization pilot (if weatherization is selected as project), which could include: outreach, partnership development, workforce training, and entrepreneurship.
- If a community project related to energy efficiency in residential or commercial buildings is selected, OF will engage with Home Comfort Practice.
- The CoB will administer or support the selected project and can connect with groups to pursue the project.

Activity 4: Project Screening Questions and Considerations

Description

Bridgeport feels like they have been burned in the past with energy projects that did not provide expected benefits to Bridgeport residents. To better prepare for future clean energy proposals, NREL will support BREP in identifying a set of screening questions and considerations with Bridgeport stakeholders. The screening questions may be used to identify large energy infrastructure, transportation, or energy efficiency projects that will deliver benefits to residents, workers, and business owners.

The screening questions will come both from Justice40 principles and from the information collected during the community engagement activities. Screening questions may also rely on and reference other project screening criteria or energy justice or environmental justice scorecards. Such reference materials may come from the Initiative for Energy Justice, White House Council on Environmental Quality, Joint Institute for Strategic Energy Analysis, and other state or local governments that have created materials that are examples of best practice.

NREL community leads will consult with technology experts across NREL to include questions and provide data that are technology specific including average levelized cost of energy for various energy technologies.

Questions may include:

- How does this project relate to the broad interests of the community?
- What kind of negative environmental or health impacts could the project create upon the surrounding residents and properties and how are the proponents planning to sequester or control their extent?
- Will the project hire local workers or locally owned businesses?
- Will the project lower residents' energy burden?
- How the project will improve local health outcomes and reduce existing environmental pollution (e.g., reduce ground level emissions through greater use of clean fuels)?
- What incentives will the project developer or development team provide to the community?

- What is the proposed versus the likely timeline for buildout and revenue operations of the project?
- Is the project proposing deployment of a proven, tested fuel or energy source or is it proposing a beta test of an unproven or lightly tested technology?
- What is the project's greenhouse gas footprint and are there opportunities for the developer to curb them?

Deliverables

Screening Questions Summary Memo: NREL will deliver a document summarizing the community engagement activities related to this activity as well as the full set of screening questions developed by BREP. Included in this document will be an annotated bibliography of references that BREP can turn to in the future.

Timeline

March -- May 2023

Lead TA Provider

NREL

Community Role & Responsibilities

BREP will provide consultation and feedback on the draft screening questions developed by the NREL TA coordinators. The community groups participating in the community engagement will share feedback that may go into the screening question's development. Specific BREP members and activities may include:

- The GBCE will assist with development of questions and solicit community feedback.
- OF will assist with development of questions.
- The BRBC will help define project screening questions that are both economically feasible and provide environmental benefits and positive health outcomes.
- The CGB will assist with definition of project screening questions.
- The CoB will assist in defining screening questions for future projects to include components of co-benefits and nature-based benefits. The City will also advise from an environmental justice lens and will engage their economic develop staff.

Activity 5: Review of Existing Policies, Incentives, and Funding Opportunities

Description

NREL will review opportunities in two pieces of recent legislation – the Bipartisan Infrastructure Law and the Inflation Reduction Act. This review will summarize policies, incentives, and funding opportunities that would support Bridgeport in achieving their renewable energy deployment, energy efficiency, energy burden reduction, pollution reduction, job creation, and Justice 40 goals. NREL will provide a review of IRA provisions concerning "energy communities", low-income communities, prevailing wages, and apprenticeships (also mentioned in CT PA 21-43).

Elements the team will look for include:

1. Policies and programs that would support renewable energy deployment in communities like Bridgeport, e.g., SCEF project guidelines.
2. Justice 40 programs that could affect Bridgeport
3. Incentives for EE/Weatherization, residential solar, community energy projects, green transportation especially as they pertain to landlord-owned properties

Deliverables
Summary Document of Federal Policies, Incentives, and Funding Opportunities: NREL will provide BREP with a summary (either a shared document or a spreadsheet) of relevant and applicable Federal policies, incentives, and a monthly funding opportunities report that will support BREP goals.

Timeline
March – August 2023

Lead TA Provider
NREL, Subcontractor

Community Role & Responsibilities
BREP will be responsible for guiding NREL towards topic areas and programs that they should focus on finding information on. BREP will coordinate with H2 Task Force/Connecticut Green Bank to include their insights from looking at state policies and incentives to this activity. Specific BREP members and activities may include:

- The GBCE will assist on a local level by coordinating with the city Energy Improvement District, the Board of Education, and Metro Council of Governments to review other policies and incentives.
- OF will review policies, incentives, and funding opportunities on the state level.
- The BRBC will help identify ways to expand incentives and encourage their use.
- The CGB will review policies, incentives, and funding opportunities on both a state and national level.

Activity 6: Community Capacity Cataloging and Gaps Assessment
Description
NREL will prepare a summary of relevant community capabilities in Bridgeport; current and planned renewable energy developments; and existing clean energy, energy justice, or community development plans. NREL will work with BREP to collect data characterizing Bridgeport's current workforce and training capacity that could engage in renewable energy training and jobs. Data will also be collected from the gas and electric utilities and through the community engagement activities described in Activity 1. NREL will develop a summary of existing gaps based on the data collected.

Community capabilities may include:
- Existing training institutions (programs, capacity)
- Local businesses with skills that could serve renewable energy projects
- Existing funding for training

Existing and planned clean energy projects

- Power generation
- Building energy efficiency
- Transportation

Clean energy plans and goals:

- Bridgeport Plan for Conservation and Development (2019)
- Hydrogen plans
- Offshore wind energy

Available workforce:

- Characterize underemployed workers (quantity, worker skill sets)

Deliverables

Summary of Community's Capabilities Gaps Analysis: The outputs of this activity will include a database of all the data and a memo summarizing the results of the gaps analysis.

Timeline

March – November 2023

Lead TA Provider

NREL

Community Role & Responsibilities

BREP consortium will be responsible for helping NREL to complete the cataloguing exercise based on their knowledge of Bridgeport. For example, BREP may provide to NREL a list of existing businesses in Bridgeport that specialize in energy efficiency. BREP will engage with Housatonic Community College, the University of Bridgeport, and other educational institutions, the Workforce Investment Board and Greater Bridgeport Community Enterprises. Specific BREP members and activities may include:

- GBCE will assist with this activity by facilitating community input and fleshing out lists of organizations and agencies that should be included to support this activity.
- OF will assist with this activity by conducting an analysis of their client population and helping to flesh out lists of organizations & agencies that should be included.
- CGB will assist with the development of databases and flesh out lists of organizations & agencies that should be included.
- CoB will assist in the development of the gap analysis.

Activity 7a: Bridgeport Energy Profile

Description

NREL will use its public tools (e.g., the State and Local Planning for Energy (SLOPE), Electric Vehicle Infrastructure – Projection (EVI-Pro) tool) and other DOE tools to analyze Bridgeport's existing energy generation infrastructure, transportation characteristics, and energy usage. This activity will help Bridgeport understand their status quo regarding current energy needs and how the community can meet future energy needs with renewable energy projects.

Deliverables

Compendium of NREL and DOE Tool reports: A document that compiles the outputs of the SLOPE tool and other relevant DOE tools.

Timeline
March – April 2023

Lead TA Provider
NREL

Community Role & Responsibilities
BREP will review the data shared by NREL and share this information internally with the members of its network and find ways to share this information with the public that it thinks is appropriate. BREP may refer to these data when applying for funds, incentives, projects, or developing plans with the City of Bridgeport, the State of Connecticut, or the federal government. Specific BREP members and activities may include:

- GBCE will engage the Board of Education to support this activity.
- OF will conduct an analysis of the energy needs of their Bridgeport clientele.
- BRBC will work with energy service providers and potential institutional users to get data and help create an optimal clean energy load profile.
- CGB will support data analysis.
- CoB will assist in developing the energy profile.

Activity 7b: Renewable Energy Technology Capacity Building

Description
NREL will facilitate one half-day hybrid webinar and 1-3 additional virtual webinars on relevant renewable energy technologies for the city of Bridgeport. The webinars will be delivered to BREP along with key stakeholders and decision makers across Bridgeport who will be invited by BREP in coordination with NREL. The team will plan to include solar, wind, and hydrogen fuel cells at a minimum, though other technologies may be presented at the request of BREP or proposed by NREL after conducting the energy profile.

The webinars will provide an overview of the technology, siting considerations, and job creation impacts. Presentations will also focus on connecting the community with NREL tools, websites, programs and community partners who could support them going forward. Wherever possible, the materials will draw from existing content that NREL has developed for similar purposes. Following the presentations, NREL will facilitate discussion with the audience on the benefits and drawbacks of these renewable energy technologies. Topics will be presented by researchers from NREL or other national laboratories, along with locally based experts, whenever possible.

Special care will be taken to shape these webinar discussions so they thoughtfully answer BREP's questions while avoiding overly technical details or explanations and set participants up to educate the broader community. The information shared here will help BREPs members make better informed decisions about clean energy technologies in the future.

Deliverables

Webinars and Summary Memo of Renewable Energy Webinars: NREL will deliver the webinars and a summary memo detailing the attendees, the event agendas and salient points that came up during the discussion.

Timeline
March – September 2023

Lead TA Provider
NREL

Community Role & Responsibilities
BREP will be responsible for reaching out to stakeholder groups to invite them to participate in the workshop or workshops and organizing the meeting logistics for all events. This may include highlighting and including local experts they are aware of. BREP will also generate consensus among their network as to the technologies of highest interest about which they would like more information.

- GBCE will suggest and review topics and promote attendance.
- OF will suggest and review topics and get the word out to clientele to encourage attendance.
- BRBC will suggest and review topics, help identify presenters, and support business community participation.
- CGB will suggest and review topics.
- CoB will coordinate meetings, present, advise on groups to connect with.

Roles and Responsibilities

Technical Assistance Provider Network

National Renewable Energy Laboratory (NREL) Responsibilities

- Overarching TA coordination
- Primary point of contact for Community Coalition from Bridgeport
- Scheduling regular coordination calls with all relevant stakeholders to discuss project updates
- Lead TA activities for deliverables 4 – 7b.

Elevate Energy Responsibilities

- Lead stakeholder engagement with BREP and Bridgeport stakeholders
- Draft provisional roadmap for one near-term project decided on by BREP and Bridgeport stakeholders, possibly addressing energy efficiency or weatherization
- Deliver communication and outreach tools and templates
- Prepare a model/template for drafting Community Benefits Agreements with developers

Community Coalition

Greater Bridgeport Community Enterprises will be responsible for leading BREP and coordinating contributions from various members.

Operation Fuel, the Bridgeport Regional Business Council, the Connecticut Green Bank, and the City of Bridgeport are four of the most active and committed members of BREP and will be instrumental in supporting each of the activities and enlisting support from additional BREP members.

In addition to the lead organizations mentioned above, the project management committee is composed of our three subcommittee co-chairs that include volunteers from not-for-profit organizations, the private sector, and local community residents.

Sub-committee groups include:

1. Energy Efficiency/Energy Burden
2. Enhance Manufacturing/Workforce Development
3. Energy Planning, Development & Resilience

Contacts and Roles:

Organization	Name, Title	Email	Project Role
NREL	Heidi Tinnesand	Heidi.Tinnesand@nrel.gov	NREL Community Lead
NREL	Ryan Shepard	Ryan.Shepard@nrel.gov	NREL Community Co-Lead
NREL	Megan Day	Megan.Day@nrel.gov	NREL Clean Energy Pathway Lead
Greater Bridgeport Community Enterprises	Adrienne Farrar Houel	houel@greenteabpt.com	Sub-committee lead
Operational Fuel	Brenda Watson	Brenda@operationfuel.org	Sub-committee lead
Bridgeport Regional Business Council	Jeff Leichtman	Jeff@globalisllc.com	Sub-committee lead
Connecticut Green Bank	Ashley Stewart	Ashley. Stewart@ctgreenbank.com	Sub-committee lead
City of Bridgeport	Chadwick Schroeder	Chadwick.schroeder@bridgeportct.gov	Sub-committee lead

Additional Notes:

Operation Fuel plans to apply for a UCONN EJ grant to complete GIS mapping of the Bridgeport area. This will be useful information that can be leveraged in several of the activities listed above but is not specifically part of this scope.

The City has applied to DEEP for a comprehensive climate vulnerability assessment to examine climate change threats and develop priority projects to address vulnerability, and is also pursuing a community-wide greenhouse gas inventory in line with ICLEI protocol (should be completed by May).

BREP will take the guidance provided by Elevate to develop a model CBA that will serve as a baseline for future agreements with developers proposing clean energy projects.

Appendix A: Confirmed BREP Members as of April 5, 2022

1. City of Bridgeport
2. Bridgeport City Council
3. Connecticut Metropolitan Council of Governments (COG)
4. Bridgeport Board of Education
5. Greater Bridgeport Transit
6. Water Pollution Control Authority (WPCA)
7. Bridgeport Regional Business Council (BRBC)
8. Connecticut Center for Advanced Technology
9. The WorkPlace, Inc.
10. University of Bridgeport
11. Housatonic Community College
12. FuelCell Energy
13. Operation Fuel
14. Avangrid
15. NuPower Inc.
16. Park City Wind (Avangrid)
17. Santa Energy
18. PosiGen
19. Yale New Haven Hospital
20. CT Green Bank
21. McBride Electric
22. MXFA Construction & Management
23. Win-Waste Innovations (Wheelabrator)
24. Habitat for Humanity
25. Greater Bridgeport Community Enterprises, Inc.
26. Mary & Eliza Freeman Center for history and Community
27. Bridgeport Economic Development Corporation (BEDCO)
28. Parent Teacher Leadership
29. East End NRZ
30. West End NRZ, PT Partners
31. Alliance for Community Empowerment
32. Connecticut Coalition for Environmental Justice
33. Bridgeport Energy Improvement District & Seaside Village resident
34. Goodwin / UB and Seaside Village resident
35. Community Leader and Past BOE Chairperson

CONNECTICUT GREEN BANK SM

75 Charter Oak Ave
Suite 1 - 103
Hartford, CT 06106

700 Canal Street, 5th Floor
Stamford, CT 06902