



Board of Directors

Meeting Date

March 17, 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)	Laura Hoydick Mayor of Stratford

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



March 10, 2023

Dear Connecticut Green Bank Board of Directors:

We have a regular meeting of the Board of Directors scheduled for **Friday, March 17, from 9:00-11:00 a.m.**

Please take note that this will be an online meeting.

For the agenda, we have the following:

- **Consent Agenda** – we have several items on the consent agenda, including a few items requiring resolutions, including:

- Meeting Minutes for January 20, 2023
- Under \$500,000 and No More in Aggregate than \$1,000,000 staff transaction approvals

In addition to the items requiring resolution, there are also several documents provided within the materials that are report-outs, including:

- Under \$100,000 and No More in Aggregate than \$500,000 staff restructure transactions
- FY23 Q2 Financial Report – Abridged and Comprehensive
- FY23 Q2 IPC Report

- **Investment Updates and Recommendations** – a number of different transactions, including:

- Extension request for Capital for Change co-investment with Amalgamated Bank
- Extension request for Capital for Change LIME Facility
- *Investment modification request for FuelCell Energy Groton Subbase Project*
- *Investment approval request for FuelCell Energy Master Refinancing Facility*
- Investment modification request for PosiGen Lien Credit Facility

- **Other Business** – and lastly, for all of those interested in how clean energy policy since 2010 has progressed, a presentation by the Public Utilities Regulatory Authority (PURA) on their 2022 Clean & Renewable Energy Report. Additional other business will also be included as well.

Please note, those items *underlined and italicized* above, are materials coming by the close of business on Tuesday, March 14, 2023.

Have a great weekend.

Sincerely,

A handwritten signature in black ink, featuring a stylized 'B' and 'G' followed by a horizontal line.

Bryan Garcia
President and CEO



AGENDA

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

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

Dial (872) 240-3311
Access Code: 305-888-661

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
4. Investment Updates and Recommendations – 60 minutes
 - a. Investment Modification Request (extension) – C4C (Co-Investment w/Amalgamated Bank)
 - b. Investment Modification Request (extension) – C4C (LIME Facility)
 - c. Investment Modification Request – FuelCell Energy Groton Project (Co-Investment w/Liberty Bank & Amalgamated Bank)
 - d. Investment Approval Request – FuelCell Energy – Master Refinancing Facility (Co-Investment w/Investec Bank and other bank participants)
 - e. Investment Modification Request – PosiGen – 1st & 2nd Lien Credit Facility (Co-Investment w/other bank participants)
5. Other Business – 50 minutes
 - a. PURA Presentation – 2022 Clean & Renewable Energy Report
 - b. Other Business
6. Adjourn

Join the meeting online at
<https://meet.goto.com/305888661>
Or call in using your telephone:
Dial (872) 240-3311

Access Code: 305-888-661

***Next Regular Meeting: Friday, April 21, 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, March 17, 2023
9:00 a.m.– 11:00 a.m.

Dial (872) 240-3311
Access Code: 305-888-661

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

Resolution #1

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

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.

4. Investment Updates and Recommendations – 60 minutes

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

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 effect the above-mentioned legal instrument.

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

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 effect the above-mentioned legal instrument.

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

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 effect the above-mentioned New Credit Facility and participation.

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

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 effect the above-mentioned term loan and participation.

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

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.

5. Other Business – 50 minutes

- a. PURA Presentation – 2022 Clean & Renewable Energy Report
- b. Other Business

6. Adjourn

Join the meeting online at
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Or call in using your telephone:
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Access Code: 305-888-661

***Next Regular Meeting: Friday, April 21, 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.



Board of Directors Meeting

March 17, 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 and #2



1. **Meeting Minutes** – approve meeting minutes of January 20, 2023
2. **Under \$500,000 and No More than \$1,000,000** – staff approved transaction consistent with Comprehensive Plan and Budget
 - **Under \$100,000 and No More than \$500,000** – staff approved restructured transactions
 - **FY23 Q2 Financial Reports** – abridged and comprehensive
 - **FY23 Q2 IPC Report** – progress to targets

Board of Directors

Agenda Item #4c

Investment Updates and Recommendations

FuelCell Energy

Modification of Groton Term Facility

FCE Groton Project

Project Update



- **Project**: 7.4 MW FuelCell Energy (“FCE”) plant located on U.S. Navy Submarine Base in New London/Groton, CT. Project **operating** at reduced output of 6 MW, expected to operate at full 7.4MW capacity within the year
- **Objective**: Energy resiliency for the Submarine Base (follow on development of microgrid – DEEP grant funding)
- **Project Cost**: [REDACTED]
- **Project Cashflows**: 20-year PPA with CMEEC and Class I RECs
- **Tax Equity**: with East West Bank, [REDACTED]
- **Senior Loan**: \$12M Amalgamated and Liberty Bank (assuming 7.4MW capacity; initial advance based on 6 MW capacity).
- **Green Bank Exposure**: up to \$10M Term Loan (\$8M (firm) + up to \$2M to cover potential shortfall from Senior Lender). Loan subordinated to Senior Loan, fully amortizing across 20-year Term (with cash sweep – effectively a 15-year term)

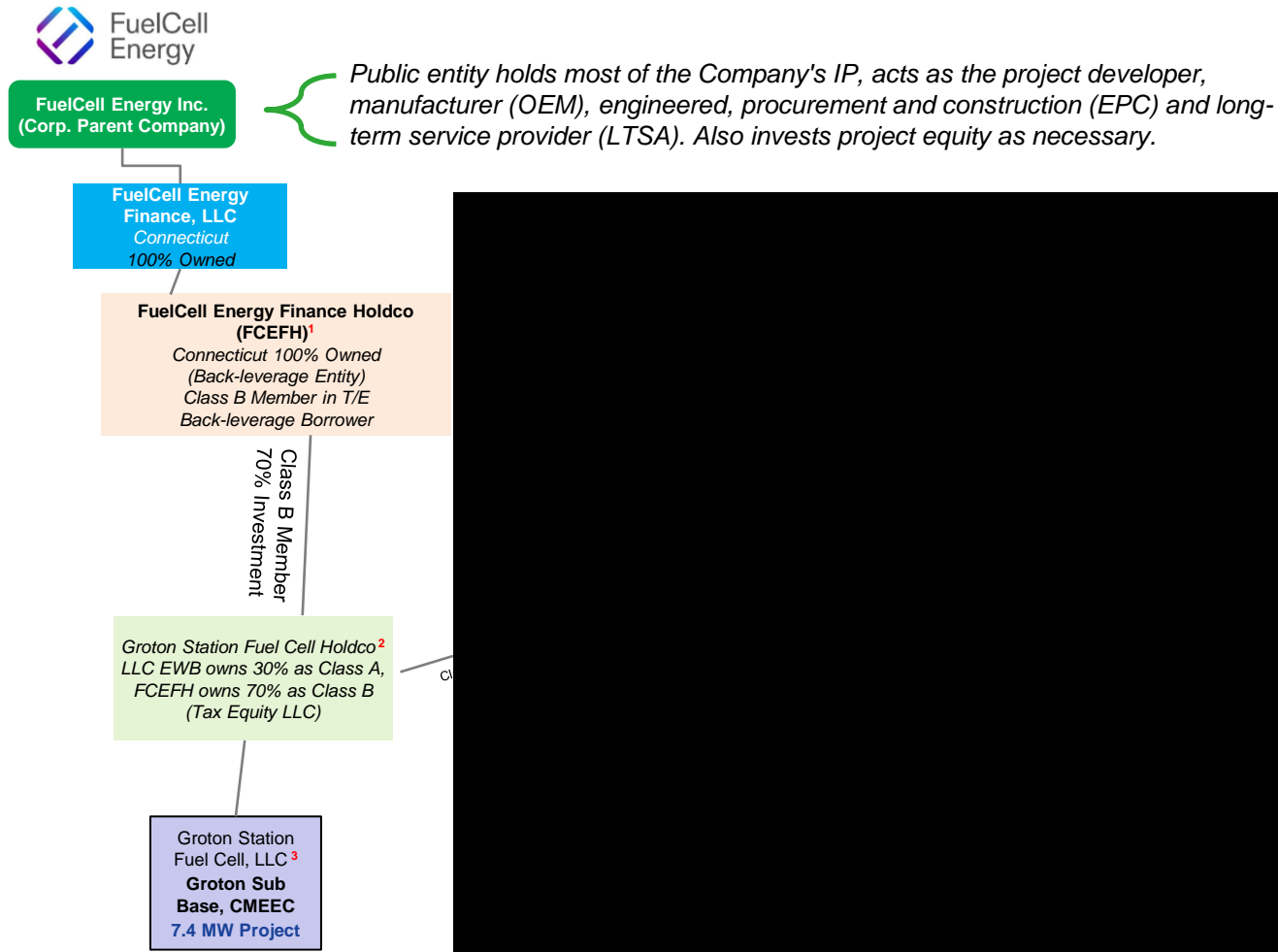
FCE Groton Project

Term Financing Summary



	Previously Approved Structured				Proposed Changes			
	Amount	Term (Yrs)	Rate	Interest Only	Amount	Term (Yrs)	Rate	Interest Only
Green Bank (Subordinated)	\$ 8,000,000	20	8%	7 Years	\$ 8,000,000	20***	8.00%	7 Years
Green Bank (Subordinated) - Additional Advance	\$ -				\$ 2,000,000 **	20***	8.00%	7 Years

FCE Groton Project Structure Diagram



FCE Groton Project

Risk Mitigation (CGB)



- Construction completed
- Second priority security interest on all assets of FuelCell Energy Finance Holdco, including pledge of the Class B Units owned by the Borrower in the Tax Equity partnership (and all revenues and distributions, other economic rights, and governance rights related thereto)
- Overall Debt Service Coverage Ratio [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- 20-year Term (effectively 15-year term with 50% cash flow seep after debt service)
- Significant equity [REDACTED]
- 20-year O&M agreement with FCE to maintain Project, with required performance levels dictated in the PPA;
- Investment-grade Off-taker (CMEEC) – rated AA- by Fitch;
- No natural gas/fuel risk

Resolution #5



- **RESOLVED**, that the Green Bank Board of Directors (the “Board”) hereby approves the 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; and
- **RESOLVED**, that the President of the Green Bank and any other duly authorized officer is authorized to take appropriate actions to provide 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 effect the above-mentioned Term Loan.

Board of Directors

Agenda Item #4d

Investment Updates and Recommendations

FuelCell Energy

Master Refinancing Facility

FCE Master Refinance

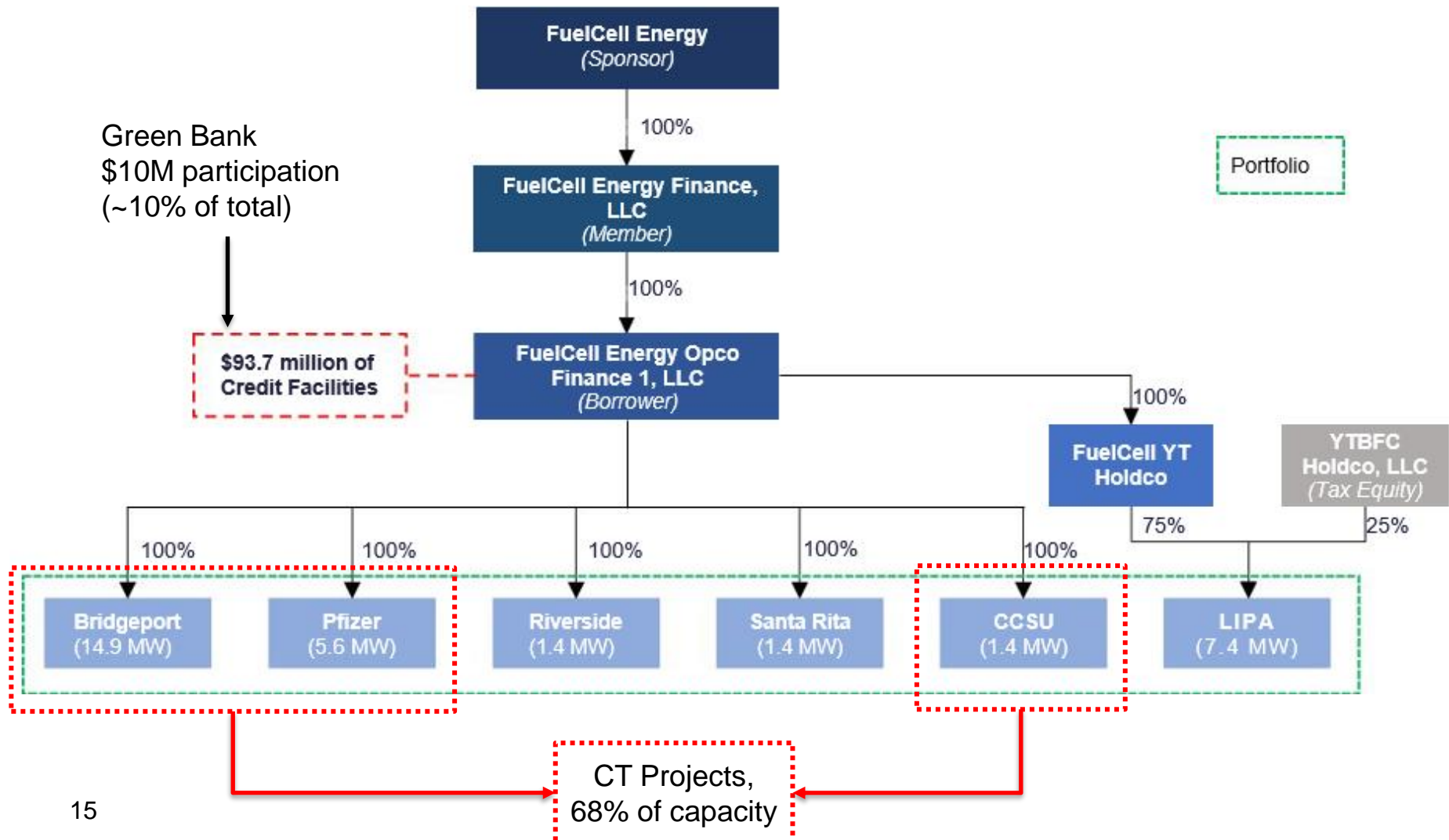
Summary



- FuelCell Energy, Inc. (“FCE”) engaged Investec Inc. to structure, arrange and syndicate **\$93.7** million of senior secured credit facilities (“Credit Facilities”)
- Credit Facilities to recapitalize a 32.3 MW portfolio of six critical, baseload generation fuel cell power plants (“Projects”) in **operation**. Half of the Projects (3) and 68% of capacity are in CT and all fuel cells are manufactured at FCE’s Torrington, CT facility.
- Proposed \$10M participation from Green Bank -- \$2M of increased Green Bank exposure vs \$8M of outstanding Green Bank debt in Bridgeport project (to be paid off through recapitalization).
- Green Bank’s financial support is ~**10%** of Credit Facility with
 - **68% of nameplate capacity of the Projects in Connecticut**
 - **All fuel cells manufactured in CT.**
- Projects have fully contracted PPAs with > 95% (by capacity) to investment grade offtakers, such as Connecticut Light and Power Company (A/A3), Pfizer Corporation (A+/A1) and the City of Riverside CA (Aa3).

FCE Master Refinance

Transaction Organizational Chart



FCE Master Refinance



Portfolio Overview

	Bridgeport	LIPA SWMC	Pfizer	Riverside	Santa Rita	CCSU
COD	2014	2021	2016	2016	2016	2012
Output	Power	Power	Power & Steam	Power & Hot Water	Power & Thermal Energy	Power
Capacity	14.9 MW	7.4 MW	5.6 MW	1.4 MW	1.4 MW	1.4 MW
Module Replacement	7-year modules installed in 2022	7-year modules installed in 2021	7-year modules installed in 2022	7-year module installed in 2022	7-year module installed in 2022	7-year module to be installed in March 2023
Fuel Input	Natural Gas	Natural Gas	Natural Gas	Biogas	Natural Gas	Natural Gas or Biogas
Fuel Exposure	Pass Through ⁴	Hedged ⁵	Pass Through	Pass Through	Pass Through	Pass Through
Offtaker	Connecticut Light and Power Company	Long Island Lighting Company	Pfizer Inc.	City of Riverside	Alameda County	Central Connecticut State University
Offtaker Rating	A/A3	A2	A+/A1	Aa3	Aaa	N/A ⁶
Offtaker Description	Regulated electric utility that serves approximately 1.27 million residential, commercial, and industrial customers across Connecticut	Non-profit municipal electric utility that services over 1.1 million residential and commercial customers across Long Island, NY and Queens, NY	Multinational pharmaceutical and biotechnology corporation that develops, manufactures, distributes, and sells bio-pharmaceutical products globally	City in California located approximately 60 miles east of downtown Los Angeles with a population of 326,000 and a rapidly growing tax base and economy	County in the San Francisco Bay Area with a population of over 1.6 million and a large diverse economic base and a growing tax base	Oldest publicly funded university in Connecticut with an estimated endowment of \$100 million ⁷ and on average 9,600 enrolled students at any given time
Current PPA Term	15 years	18 years	20 years	20 years	20 years	5 years
PPA Base Rate (\$/kWh)						
PPA Expiration	December 2028	December 2039	October 2036	September 2036	December 2036	May 2027

FCE Master Refinance

Summary Terms and Conditions



Use of Proceeds:	
Credit Facilities:	
Interest Rate:	
Front-end Fee	
Target Closing Date:	
Maturity Date:	
Debt Sizing Parameters:	
Interest Rate	
Minimum Equity:	
Reserves:	
Lenders' Legal	

Resolution #6



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 effect the above-mentioned term loan and participation.

Board of Directors

Agenda Item #4a

Investment Updates and Recommendations

Capital for Change – Investment Modification

Co-Investment with Amalgamated Bank

C4C and Amalgamated Bank

Modification Request



Approved Oct 2022

Amalgamated, Green Bank & C4C need more time to finish documentation

Resolution #3



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 effect the above-mentioned legal instrument.

Board of Directors

Agenda Item #4b

Investment Updates and Recommendations

Capital for Change – Investment Modification

LIME Facility

Capital For Change

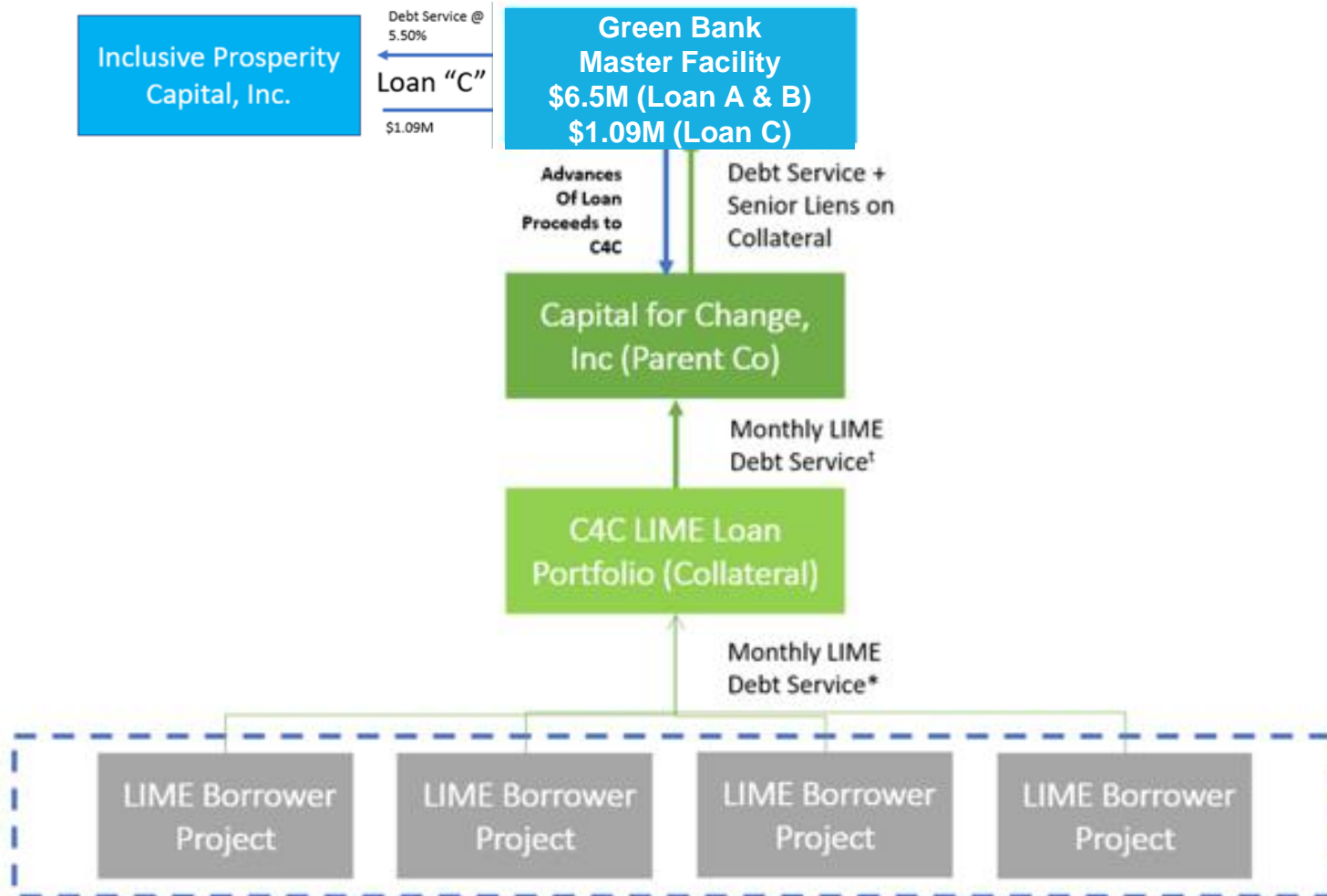
LIME Program Extension



- Capital for Change (“C4C”) and Green Bank had a previous facility (“Original Facility”) dating back to 2015 and amended in 2016 that provided C4C with \$3.5M worth of capital.
- At the October 25, 2019 meeting of the Board, the Board approved \$3.0 M (total of \$6.5 M) of additional capital for LIME.
- C4C has a pipeline of transactions for the LIME facility, but the availability period expires in March 2023.
- C4C has requested and Green Bank staff supports an extension of the availability period to March 31, 2024 with identical terms and conditions.
- IPC approved (3/16/23) its participation in the “C” Loan (designed specifically for IPC (\$1.09M via participation interest).
- Board Approval needed for the extension.

Capital For Change

LIME Program Extension



Capital For Change

LIME Program Extension



Project Name	Balance Outstanding*

*** All current**

Resolution #4



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 effect the above-mentioned legal instrument.

Board of Directors

Agenda Item #4e

Investment Updates and Recommendations

PosiGen – Investment Modification

1st and 2nd Lien Credit Facility

PosiGen Senior Facility

New First Lien Lender (proposed)



- **1st Lien Facility – EXIT: Forbright Bank <> ENTER: Brookfield**
 - Purpose is to refinance & increase 1st Lien Facility
 - Existing Forbright \$140M Commitment to increase with Brookfield to \$200M
 - Lower / fixed interest rate being made available
 - 2nd Lien (Green Bank) and Participants (approved by Board in December) NO MATERIAL CHANGES (but will require amended documentation)
 - Schedule below (from December approval) summarizes the facility

	Pre-Accordion Approved	Post-Accordion Approved
Timing		
<u>Borrowing Base</u>		
First Lien Advance		
Second Lien Advance		
First Lien Amount	\$140,000,000	\$200,000,000
Second Lien Amount	\$11,206,048	\$16,008,640
Green Bank Max Exposure	\$4,500,000	\$9,302,592

Resolution #7



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.

Board of Directors
Agenda Item #5a
Other Business
PURA Presentation
2022 Clean & Renewable Energy Report

Board of Directors

Agenda Item #5b

Other Business

2023 Legislative Session



2023 Legislative Session opened on January 4th and closes on June 7th

Long Session – Initially tracking 121 pieces of legislation. Legislation of note:

HB 6851: AN ACT IMPLEMENTING RECOMMENDATIONS OF THE HYDROGEN TASK FORCE

Hydrogen Task Force Legislative Recommendations. Proposed and supported by the Green Bank

SB 961AN ACT CONCERNING CARBON-FREE SCHOOL REQUIREMENTS FOR NEW SCHOOL CONSTRUCTION AND ESTABLISHING OTHER SCHOOL CONSTRUCTION AND PUBLIC HEALTH REQUIREMENTS FOR SCHOOL DISTRICTS

CT Council on Climate & Jobs legislation. The Green Bank to lead initiative per language

HB 6764 AN ACT CONCERNING SOLAR INCENTIVES AND SHARED CLEAN ENERGY FACILITIES.

E&T Chairs Bill – NRES Expansion, Uniform Solar Tax, Carport working group/carveout

SB 7AN ACT STRENGTHENING PROTECTIONS FOR CONNECTICUT'S CONSUMERS OF ENERGY.

*E&T Bi-Partisan Omnibus bill for 2023. Utility recovery restrictions, EDC Executive cap, study on PURA/DEEP.
Take Back the Grid Part II!*

Next steps in process:

Green Liberty Note Update

Original Approval



- Response to an open RFP for Capital Solutions established June 27, 2020:
 - Democratization of investing - use of Regulation Crowdfunding⁽¹⁾ (“RegCF”) to leverage capital from retail investors
 - Up to \$2 million of “mini-bond” instrument with bond offering prices below \$1,000 (min \$100)
 - Up to \$250,000 quarterly for up to 2 years
 - Backed by Green Bank’s Small Business Energy Advantage (“SBEA”) loan revenues
 - Issued through taxable subsidiary
- Strategic benefits:
 - Build upon success of Green Liberty Bonds
 - Improve access to green investment opportunities for retail investors
 - Enhance Green Bank brand by being one of the few issuers of short-term, green-certified bonds
 - Establish access to an untapped source of liquidity

(1) <https://www.sec.gov/smallbusiness/exemptofferings/regcrowdfunding>

Green Liberty Notes

Five Successful Issuances



Issuance	Date of Launch	Amount Raised	GLNs Interest Rate	SBEA Tranche Interest Rate
1	December 14 th , 2021	\$190,400	1%	3.26% ¹
2	April 13 th , 2022	\$114,335	1.5%	2.36% (3/17/22)
3	July 7 th , 2022	\$250,000 (SOLD OUT)	2.5%	4.88% (6/14/22)
4	September 29 th , 2022	\$250,000 (SOLD OUT)	3.5%	4.88% (6/14/22)
5	January 9 th , 2023	\$250,000 (SOLD OUT)	4.75%	6.39% (12/22/22)

(1) Average Interest rate of the portfolio at the time of issuance

Green Liberty Notes

Total Investments



Total Investment \$1,054,735

Total Investors	291
Total Investments	420
CT Investments	>250
Investments ≤\$1,000	>250

Three consecutive **SOLD OUT** issuances

- The latest issuance reached \$250,000 in just 5 days
- Over halfway to the \$2,000,000 total approved by the board

Repayment/Reinvestment

- First Round investors were given the option to automatically reinvest in the 5th round
- 59 of the 113 first round investors reinvested
- Successfully repaid investors who chose not to reinvest. Continue efforts to improve investor experience

Green Liberty Notes

Total Investments



The Washington Post
Democracy Dies in Darkness

Climate Environment Weather Climate Solutions Climate Lab Green Living

CLIMATE COACH

A new kind of bond is enlisting Americans in the fight against climate change

Like war bonds during WWI and WWII, Green Liberty Bonds are easy to buy and divvied up in small amounts.



Advice by [Michael J. Coren](#)
Climate Advice Columnist

Editorial Disclosure



[Credit Cards](#) [Banks](#) [Brokers](#) [Crypto](#) [Mortgage](#)

The Ascent > Knowledge > Brokerages

Invest in This Bond and Help Save the World. Here's How

by [Maurie Backman](#) | Published on March 3, 2023

Board of Directors

Agenda Item #6

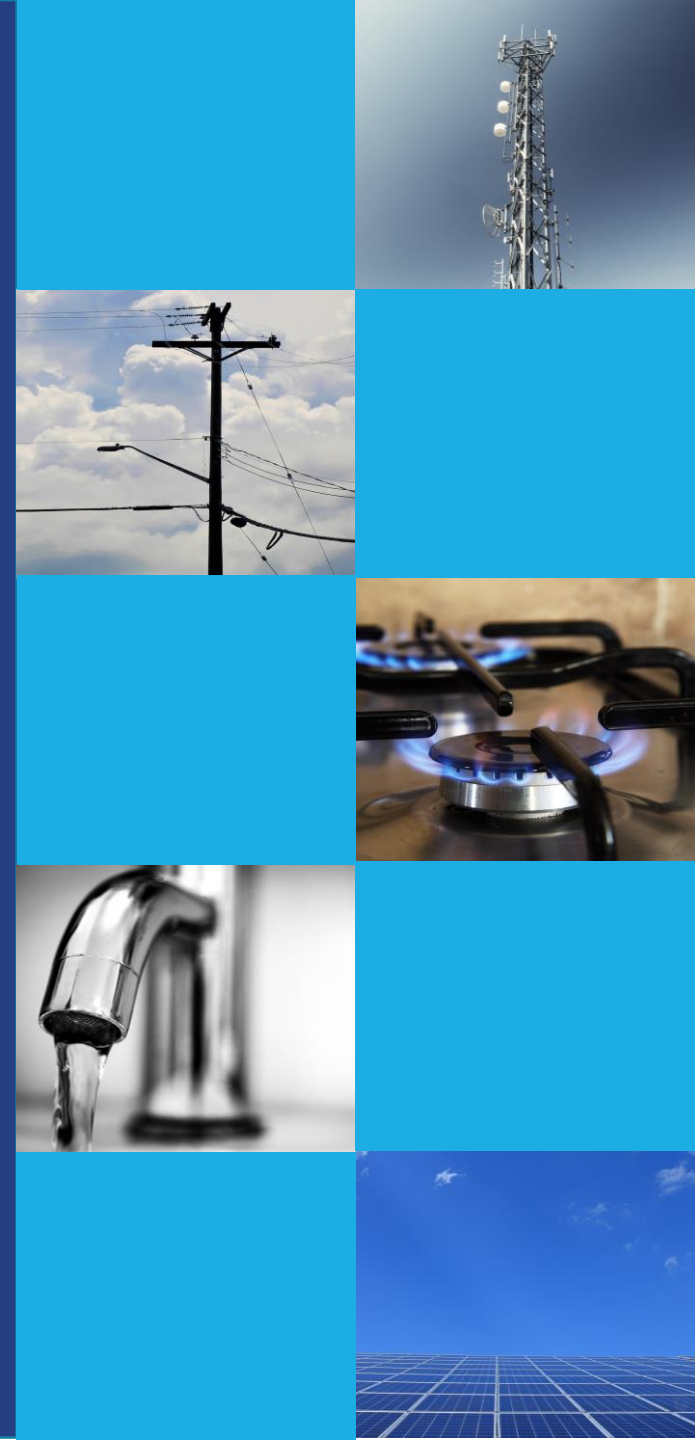
Adjourn

2022 Clean and Renewable Report

PURA Docket No. 22-08-01

Report Date: February 22, 2023

Presentation Date: March 17, 2023

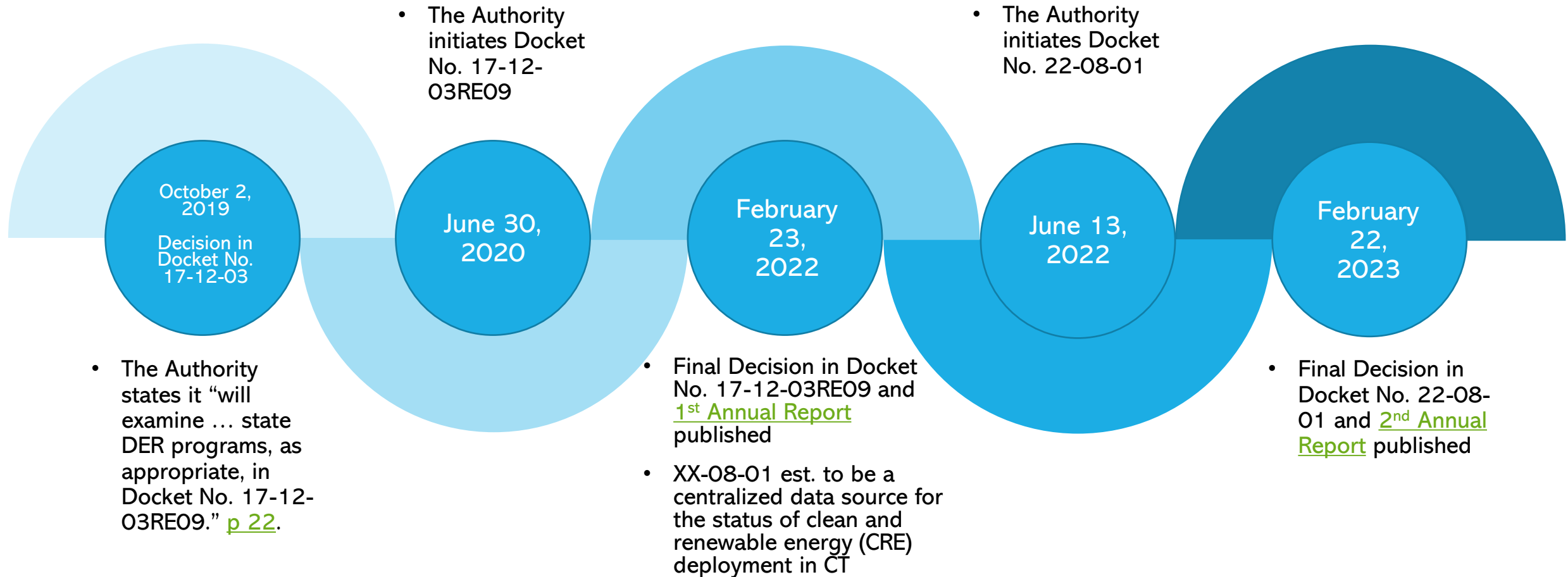


Agenda

- Docket Overview
- Purpose of the Report
- Program & Topic Overviews
 - State Programs and Procurements
 - Combined Deployment Data
 - Residential Solar Programs
 - Non-Residential Solar Programs
 - Shared Clean Energy Facilities Program
 - Energy Storage Solutions Program
 - Electric Vehicle Charging Program
 - DEEP Procurements
 - In-State Generation Data
- Future Reports and Docket Proceedings

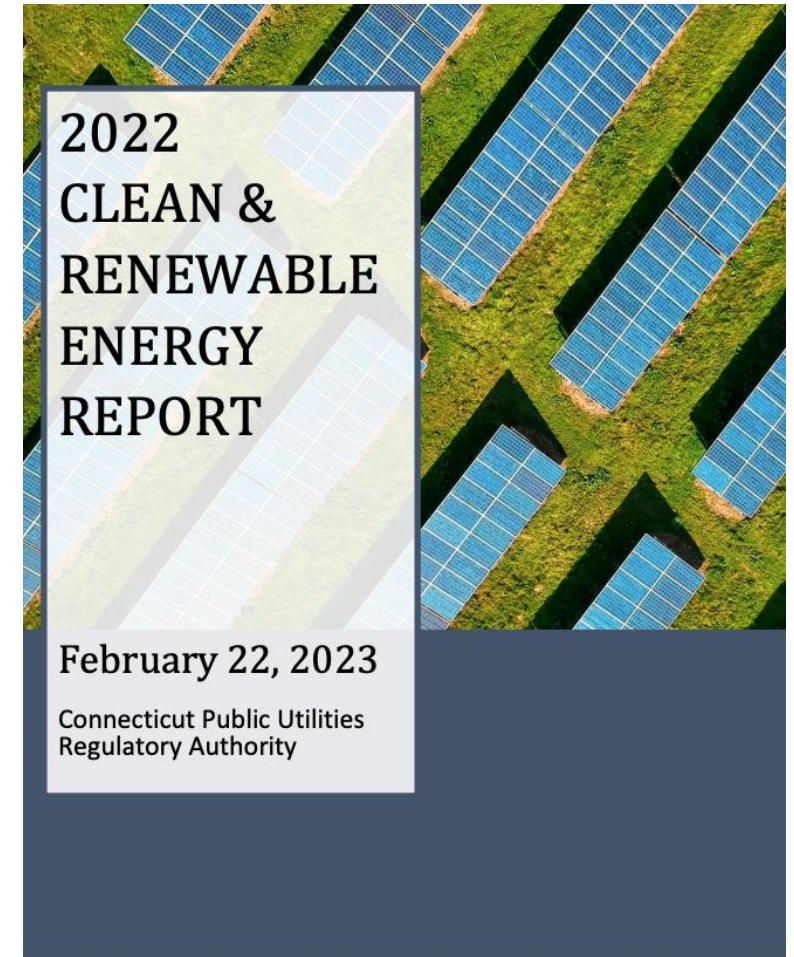


Docket Overview

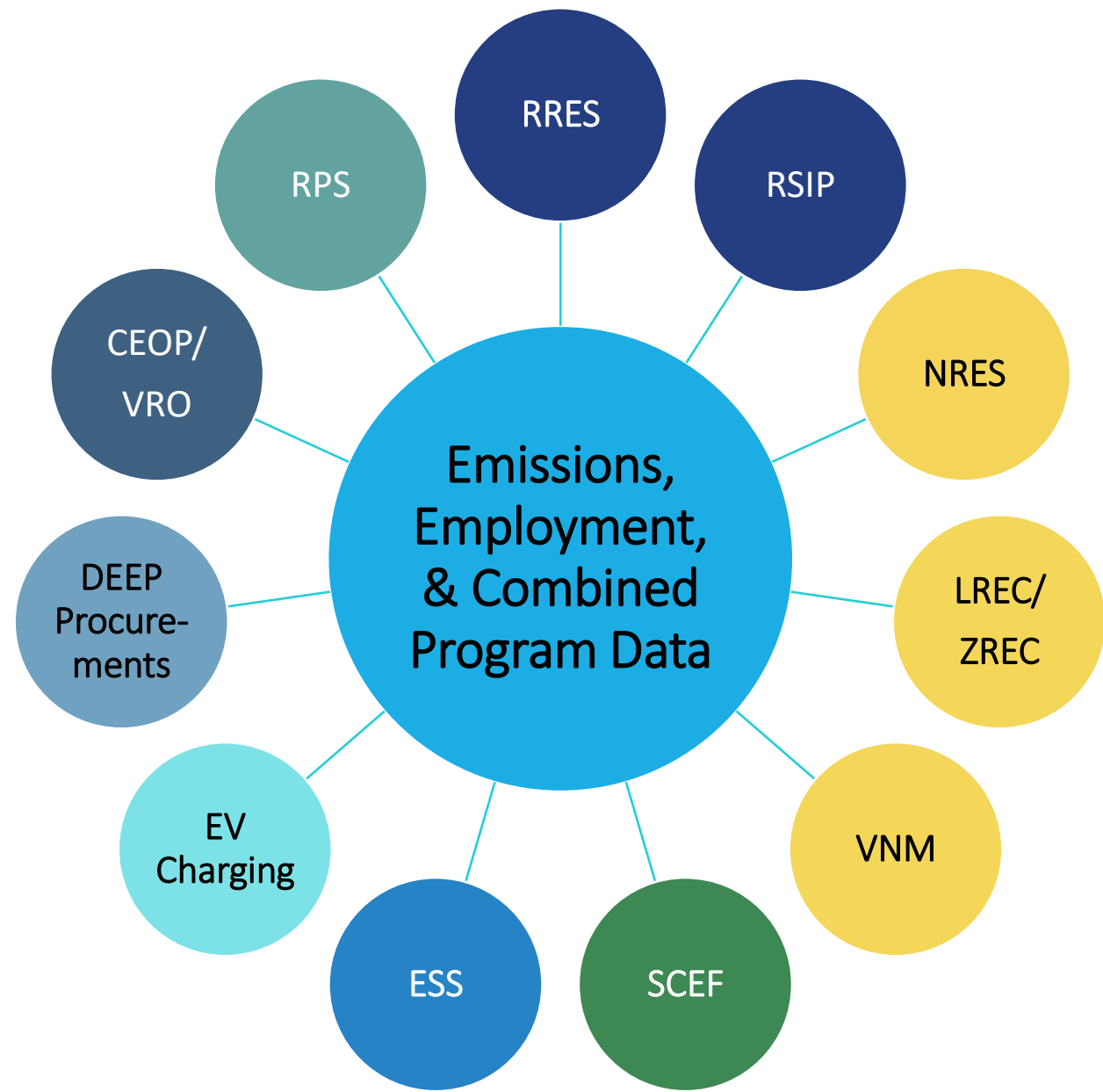


Purpose of the Report

- Detail the status of the State's clean and renewable energy programs
 - Centralized document for tracking key performance metrics, including deployment levels
- Provide insight to stakeholders on the progress towards achieving the State's statutory program and broader decarbonization goals
 - Data used in the report is publicly accessible via Docket No. 22-08-01
- Act as a framework for future annual reports



2022 Report

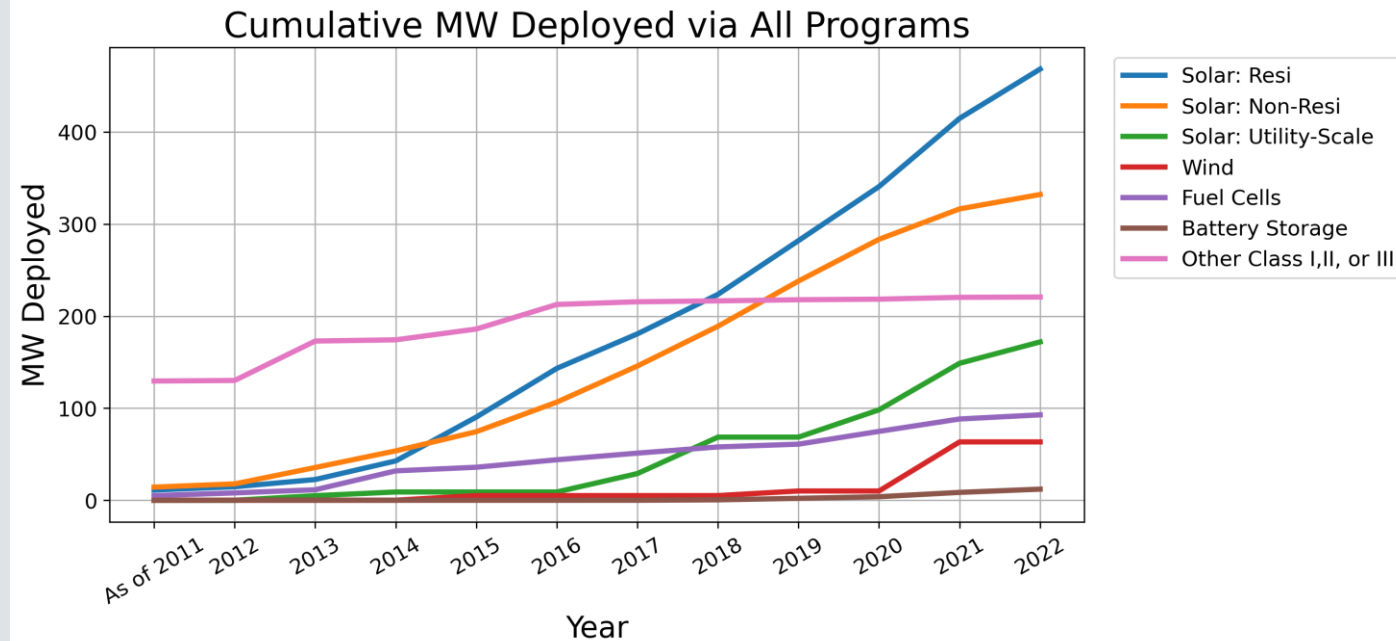


State Programs & Procurements



Major Takeaways

- Continued, steady energy deployment since mid-2010s
- 2021 and 2022 were the most successful years in CT to date in terms of residential solar deployment
- Areas for improvement
 - Achieving 40% deployment in underserved locations
 - Bringing shared clean energy facilities online (we'll know more this year)
 - Understanding how these programs fit into broader climate policies and RPS



RRES Program Summary

- **Residential Renewable Energy Solutions**
 - Replaced legacy net metering + Residential Solar Investment Program
- Began January 1, 2022; run for six (6) years
 - Administered by Eversource and UI
- Additional details:
 - Wind / solar / fuel cell projects up to 25 kW-AC
 - Twenty (20) year term
 - Two tariff offerings: (1) Netting and (2) Buy-All
 - [Public Act 21-48](#) enabled affordable housing eligibility
 - Target of 40% deployment in low-income and economically distressed municipalities; incentive adders and other measures to address



Residential Renewable Energy Program Objectives



1. Maintain at least Connecticut's annual historical deployment of residential solar (i.e., approximately 50-60 MW per year);

2. Achieve a 100% zero carbon electric grid by 2040, including by promoting additional deployment as needed;

3. Balance participant costs and benefits with non-participant costs and benefits and electric system costs and benefits;

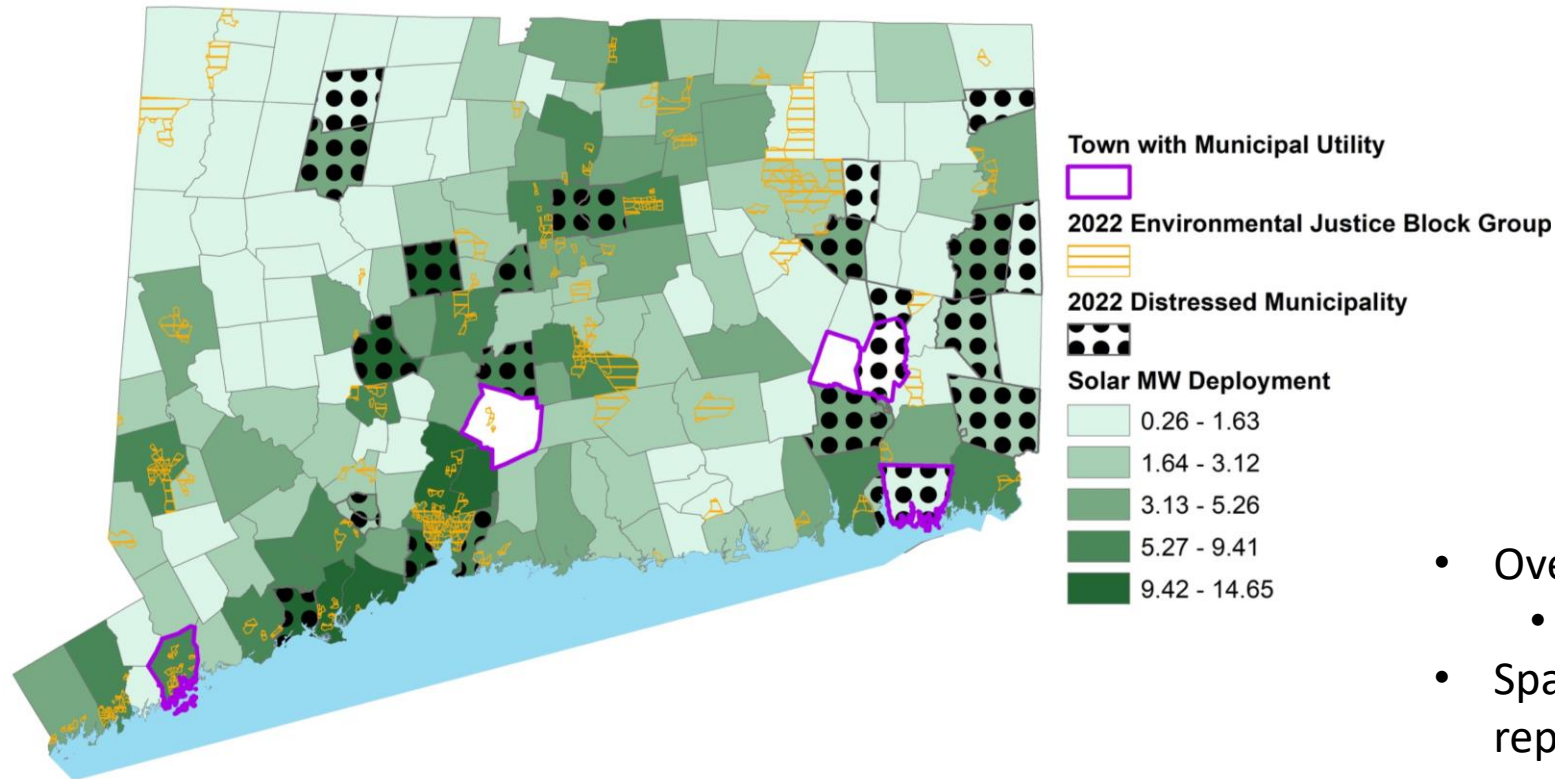
4. Ensure program accessibility for customers;

5. Encourage increased inclusivity overall, as well as program participation by low and moderate-income (LMI) customers and customers in environmental justice communities.



Residential Solar Deployment

MW of Total Installed Residential Solar Capacity by Town



Year	Deployment
2017	40.80
2018	45.10
2019	64.96
2020	68.75
2021	85.80
Nov. 2022	84.43

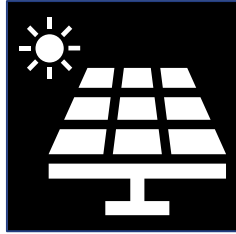
- Overall deployment is exceeding goals
 - ~85 MW annually in 2021 and 2022
- Spatially, distressed municipalities are fairly well represented
 - However, not at 40%, per program goal
 - Per capita plot also included in the report

NRES Program Summary

- **Non-Residential Renewable Energy Solutions**
 - Replaced LREC/ZREC Program + (w/ caveats) legacy Virtual Net Metering
- Began February 1, 2022; run for six (6) years
 - Administered by Eversource and UI
 - One (1) solicitation in 2022; Two (2) each year after
- Additional details:
 - Wind / solar / fuel cell projects up to 5 MW-AC
 - 110 MW annual statutory cap
 - Twenty (20) year term
 - Two tariff offerings: (1) Netting and (2) Buy-All
 - Four (4) project size categories; three (3) of four (4) are subject to competition
 - Allows for oversizing on rooftops; otherwise limited to on-site load



Non-Residential Renewable Energy Program Objectives



1. Foster the sustained, orderly development of the state's Class I renewable energy industry;

2. Deploy full megawatt capacity allowable under statute, to the extent possible (see Conn. Gen. Stat. § 16-244z(c)(1)(A));

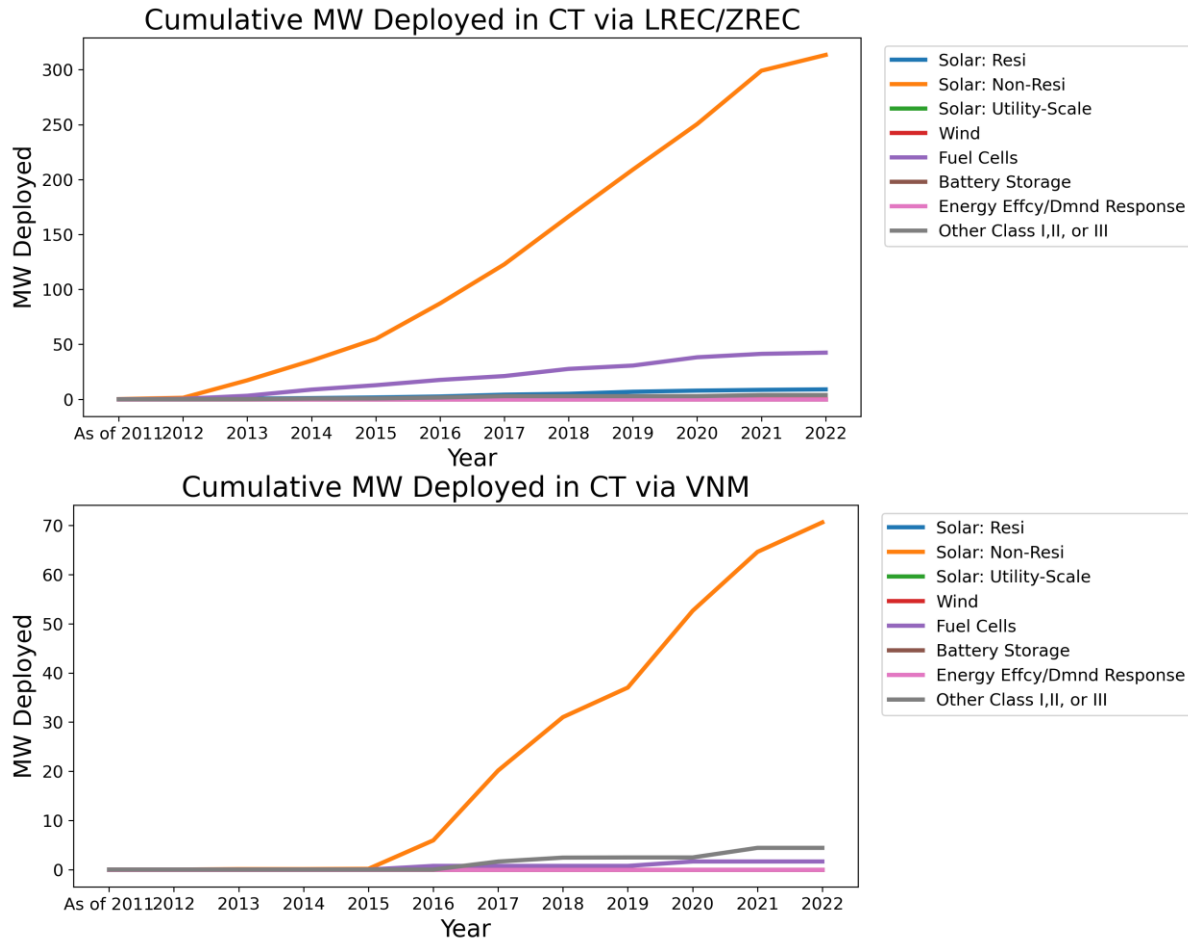
3. Ensure least-cost outcomes through the annual solicitation process;

4. Enable program accessibility for customers through simplified program and tariff designs; and

5. Encourage increased inclusivity overall, as well as program participation by customers in underserved and environmental justice communities.



Non-Residential Solar Deployment



- Predecessor programs showed steady deployment through 2022; slight decrease in rate likely due to pandemic & supply chain delays
- Successor NRES Program executed agreements filling most of the statutorily available capacity
- May be able to better fill the (expanded) capacity, and do so competitively, through statewide solicitations

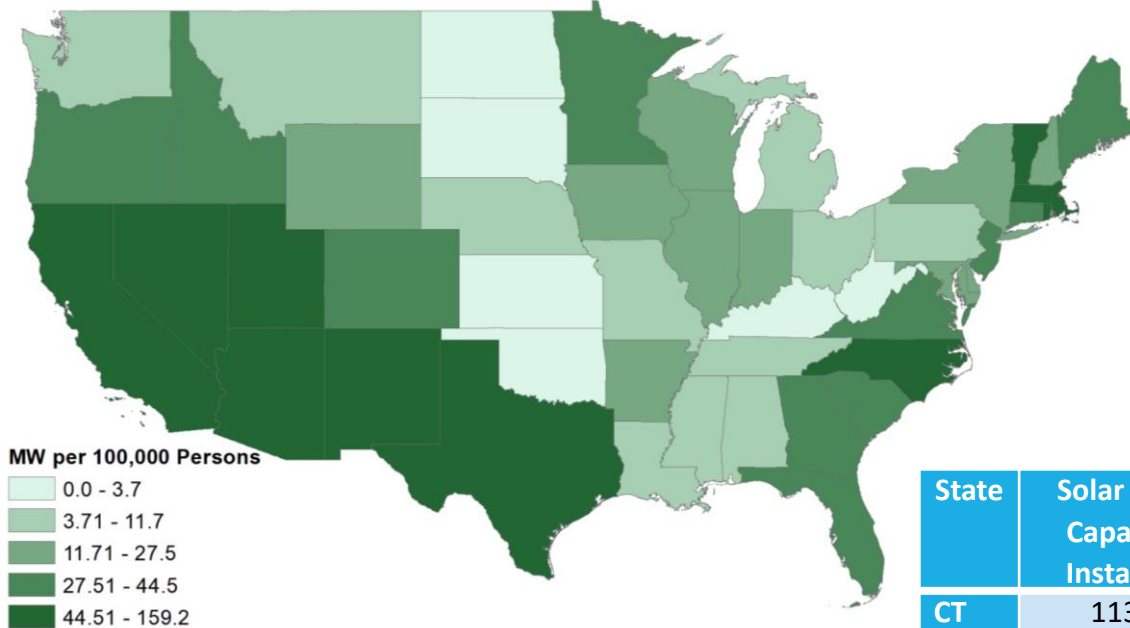
	Size Categories	Total Executed Agreements	Available MW	MW of Executed Agreements
Eversource	Small Zero Emission	69	10	9.95
	Medium Zero Emission	28	12	12.77
	Large Zero Emission	10	18	17.21
	Low Emission	7	8	6.19
UI	Small Zero Emission	16	2.5	2.41
	Medium Zero Emission	10	3	4.23
	Large Zero Emission	1	4.5	2.00
	Low Emission	0	2	0.00
Total		141	60	53.65

Data in Table from the Final Decision in Docket No. 22-08-03, dated November 9, 2022, pp.5,8.



US Solar Deployment

MW of Solar Capacity per Capita Installed by State



- CT historical and forward-looking solar deployment is comparable to other states in the region
- CT is notably more consistent than most states
- Notably, the growth data may not perfectly encapsulate the recently expanded statutory caps for solar in CT

State	Solar MW Capacity Installed	Solar MW Capacity Deployed as of 2022 Q2 per 100,000 Persons (Rank)	Solar MW Capacity Deployed Between 2018-2022 Q3 per 100,000 Persons (Rank)	5-Yr. Projected Growth (MW per 100,000 Persons) (Rank)
CT	1137	31.53 (6 th)	20.41 (6 th)	28.04 (6 th)
ME	559	40.74 (5 th)	41.33 (2 nd)	130.08 (1 st)
MA	3986	57.07 (2 nd)	26.41 (4 th)	26.72 (8 th)
NH	184	13.25 (8 th)	8.59 (8 th)	45.43 (3 rd)
NJ	4097	44.21 (4 th)	20.45 (5 th)	25.39 (9 th)
NY	3804	19.18 (7 th)	13.97 (7 th)	41.91 (4 th)
PA	955	7.37 (9 th)	4.91 (9 th)	31.61 (5 th)
RI	600	54.76 (3 rd)	51.05 (1 st)	57.96 (2 nd)
VT	407	63.05 (1 st)	28.44 (3 rd)	27.42 (7 th)

^[i] “Solar MW Capacity Installed” data is also from SEIA and is current through Q2 2022.

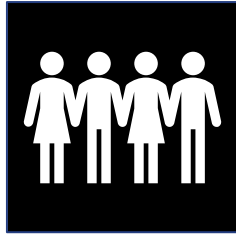
^[ii] Population data is from the [US Census Bureau](#) and is the estimated population by state as of July 2021.

^[iii] Data on deployment since 2018 from [CAE-80](#).

^[iv] Projected solar capacity growth is from [Solar Energy Industries Association \(SEIA\)](#) and may not reflect actual capacity growth over the next 5 years.



Shared Clean Energy Facilities (SCEF) Program Objectives



Annually and cost-effectively procure up to 50 megawatts of SCEFs, as defined in Conn. Gen. Stat. § 16-244z;

Lower or eliminate barriers to entry for Subscriber Organizations, if and when possible;

Provide savings to specific categories of customers, particularly customers with low- to moderate-income (LMI), low-income service organizations, and customers who reside in environmental justice communities.

SCEF Program

SCEF Pilot Program

In a Final Decision dated November 8, 2017, PURA approved DEEP's selection of three solar projects for a two-year SCEF Pilot Program with the EDCs.

- 2.0 MW facility by CHIP Fund 5
- 1.62 MW facility by Clean Energy – **only project in service**
- 1.6 MW facility by US Solar Corporation

SCEF Program

SCEF is a six (6) year program. Eversource and UI issued the Year 1 request for proposal (RFP) on April 30, 2020 to solicit bids for projects that will result in on-bill credits to qualified customers. The Year 2 RFP was issued on April 30, 2021, and the year 3 RFP was issued on January 21, 2022.

The Program allocated 25 MW of new clean power generation per year for the first three program years and 50 MW per year for the subsequent three program years, for a total of 225 MW over the program's 6 years of procurement. The MW allocation is split 80/20 between Eversource and UI.

Eversource Year 3 SCEF Solicitation Summary

Total MW Selected	59.97
Total In-Service MWs	
Unallocated MWs	0.027
Total Projected 20-Year Payments to Subscriber Organizations	\$ 226,005,040.29
Total Projected 20-Year Payments to Subscribers	\$ 60,411,378.50

UI Year 3 SCEF Solicitation Summary

Total MW Selected	11.875
Total In-Service MWs	-
Allocated, but Unused MW	-
Unallocated MW	3.125
Total Projected 20-Year Payments to Subscriber Organizations	\$ 186,533,891.88
Total Projected 20-Year Payments to Subscribers	\$ 34,880,537.00

 Data from Eversource compliance filing in Docket No. 21-08-04, dated August 24, 2022.

 Data from UI compliance filing in Docket No. 21-08-04, dated July 8, 2022.

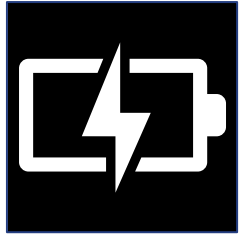


ESS Program Summary

- **Energy Storage Solutions**
- Began February 1, 2022; run for nine (9) years
 - Administered by Green Bank, Eversource, and UI
- Key details
 - Enabled by [Public Act 21-53](#)
 - Goal of deploying 580 MW
 - Active Dispatch: performance-based incentive
 - Passive Dispatch: upfront incentive
- Additional details:
 - Residential Cap: \$7,500
 - C+I Cap: 50% of project cost; project sizing caps of 2MW or 150% of load
 - [Program data platform](#)



Energy Storage Solutions Program Objectives



**Seven (7)
stakeholder-vetted
objectives,
including:**

1) Ensuring cost-effectiveness for all ratepayers;

2) Fostering the sustained development of the storage industry;

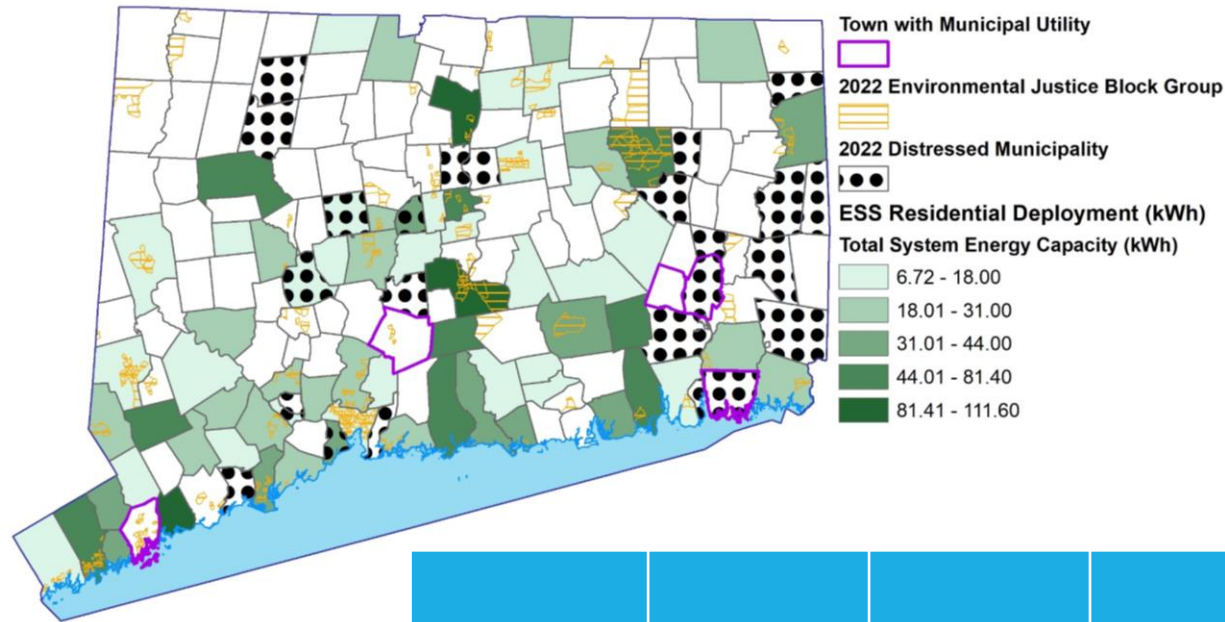
3) Focus on providing storage solutions to vulnerable communities;

4) Improving customer resilience to grid outages.



Battery Storage Deployment

Total Approved Residential Battery Storage Capacity by Town

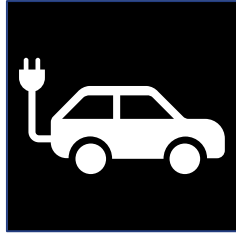


- C&I portion of the program has been very popular
- Residential has been slower, but expect growth due to program awareness and allowance of active dispatch-only projects
- Applications received for projects in underserved communities is low to-date, but PURA is monitoring progress for potential program updates

Customer Type	Applications Submitted (kW)	Applications Approved (kW)	Application Complete (kW)	Total (kW)	Program Goals (2022-2024) (kW)	Percent of Capacity Approved Relative to 2024 Goal	Percent of Capacity Submitted or Approved Relative to 2024 Goal
Residential	768	185	0	953	50,000	0.37%	1.91%
C&I	60,111	2,626	0	62,737	50,000	5.25%	125.47%



Electric Vehicle Charging Program Objectives



Enable Connecticut's commitment to the ten state Memorandum of Understanding (MOU) by deploying approximately 125,000-150,000 EVs in Connecticut by 2025;

Facilitate the seamless integration of ZEV-related technologies to realize the electric system and environmental benefits, among others, of ZEVs;

Deploy and integrate ZEVs into Connecticut's electric grid to meet the objectives of the Authority's Framework for an Equitable Modern Grid;

Achieve an equitable transition to wide-scale EV deployment across all communities in Connecticut.



EV Charging Program – Targets and Commercial

- Incentives were devised to reach the **program targets** as seen in the top Table on the right
- For commercial port participants, **deployment** in the program's first year **exceeded expectations**, reaching 100% and 93% of the three-year program cycle goal in the DCFC and MUDs program areas, respectively.

	Number of Ports (Statewide)			
Program Area	2022-2024	2025-2027	2028-2030	Total
Residential Single-Family (L2)	15,000	17,500	17,500	50,000
Multi-Unit Dwellings (L2)	1,213	To be revisited	To be revisited	To be revisited
DCFC	137	172	172	550
Destination Charging (L 2)	789	1,654	1,654	4,868
Workplace & LD Fleets (L2)	2,314	2,521	2,521	7,356

PROGRAM AREA	UTILITY	2022-2024 PORT DEPLOYMENT GOAL	ACTUAL PORTS APPROVED	PERCENT OF 2022-2024 PORT GOAL
Multi-Unit Dwellings (Level 2)	Eversource	970	972	100%
	UI	243	154	63%
	Total	1,213	1,126	93%
DCFC	Eversource	110	110	100%
	UI	27	26	100%
	Total	137	136	100%
Destination (Level 2)	Eversource	631	615	97%
	UI	158	46	29%
	Total	789	661	84%
Workplace & Light-Duty Fleets (Level 2)	Eversource	1,851	518	28%
	UI	463	54	12%
	Total	2,314	572	25%



EV Charging Program - Residential

- The EV Charging Program received and **approved 1,557** residential applications for a combination of Level 2 charger, wiring upgrade, and managed charging enrollment rebates.
- This compares to the program **goal of 15,000 statewide** level 2 chargers by the end of 2024

Residential Single-Family EVSE, Wiring & Enrollment
Incentive Data (as of November 30, 2022)

CATEGORY	UTILITY	PARTICIPANTS
New Level 2 Charger Only Incentive	Eversource	897
	UI	16
	Total	913
Wiring Upgrade Only Incentive	Eversource	N/A
	UI	29
	Total	29
Wiring Upgrade and New Level 2 Charger Incentives	Eversource	N/A
	UI	94
	Total	94
Existing Equipment Enrollment Incentive	Eversource	40
	UI	6
	Total	46
Vehicle Telematics Enrollment Incentive	Eversource	442
	UI	25
	Total	467
Advanced Metering Infrastructure (AMI) Enrollment Incentive	Eversource	N/A
	UI	8
	Total	8
STATEWIDE TOTAL		1,557

Residential Single-Family Managed
Charging Participation Data
(as of September 22, 2022)

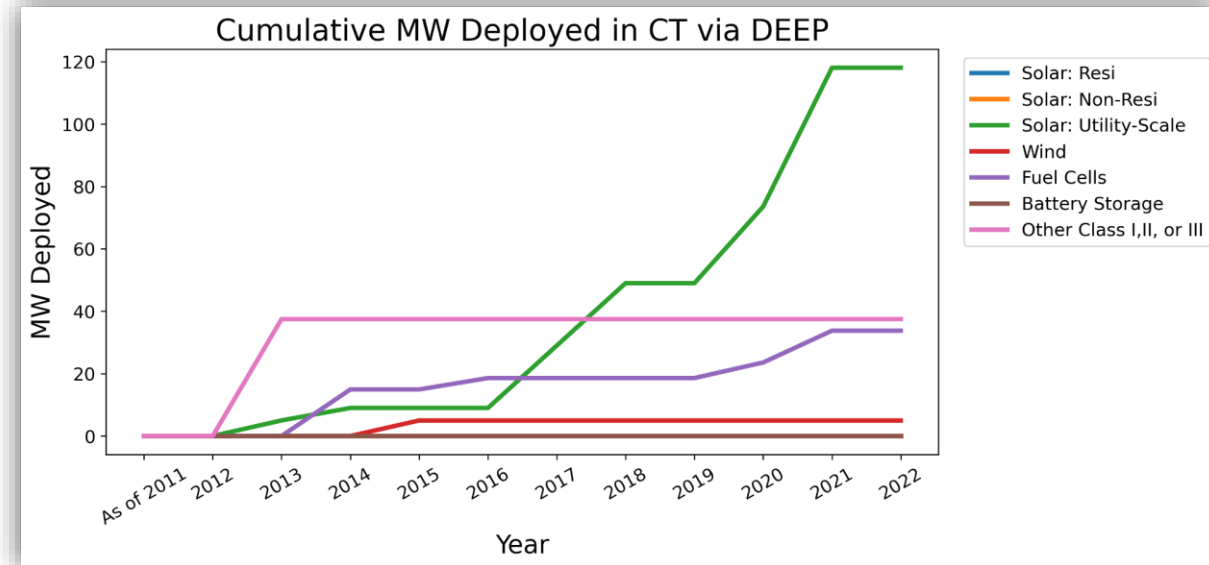
CATEGORY	UTILITY	ENROLLED
Networked Level 2 Charger	Eversource	505
	UI	90
	Total	595
Vehicle Telematics	Eversource	196
	UI	40
	Total	236
Advanced Metering Infrastructure (AMI)	Eversource	N/A
	UI	7
	Total	7
Total		838

ⁱⁱⁱ Eversource's reported Residential Single-Family incentives did not clarify whether their Level 2 Charger incentive number reported incentives provided for only Level 2 chargers or if it also included incentives awarded for applications for both Level 2 charger and wiring upgrade rebates. UI provided a more detailed breakdown in their reported totals..



DEEP Procurements

- DEEP has run ten (10) procurements since 2011 resulting in a total of 17,590 projects in-service for a total deployment of **1,639.99 MW**
- Per the Integrated Resources Plan (IRP), DEEP has the authority to procure about **95% of the total load** of both EDCs from renewable carbon sources
- In 2022, DEEP published a Procurement Plan Update to the 2020 IRP, noting that since publication 1.2%, or **170 MWs**, of solar and land-based wind energy projects, have been terminated. Additionally, DEEP notes that 10 other renewable energy project schedules and status remain in flux

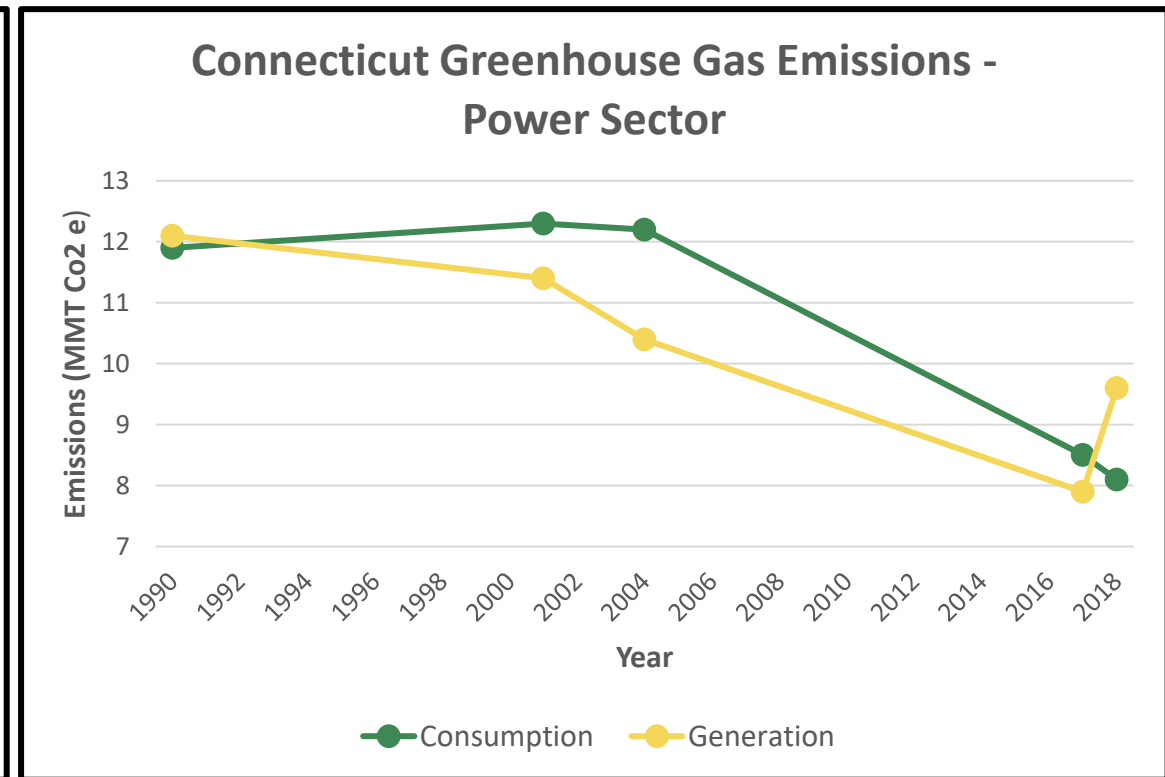
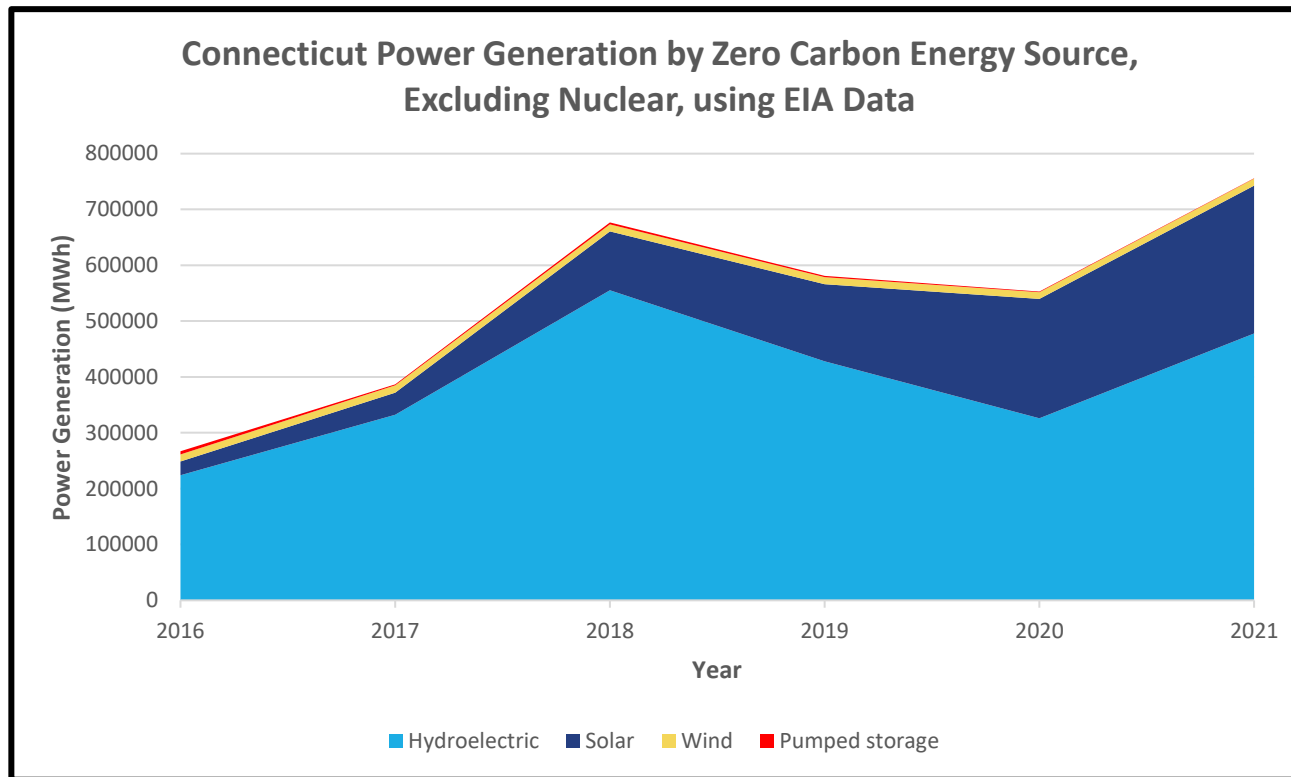


In-State Generation Data



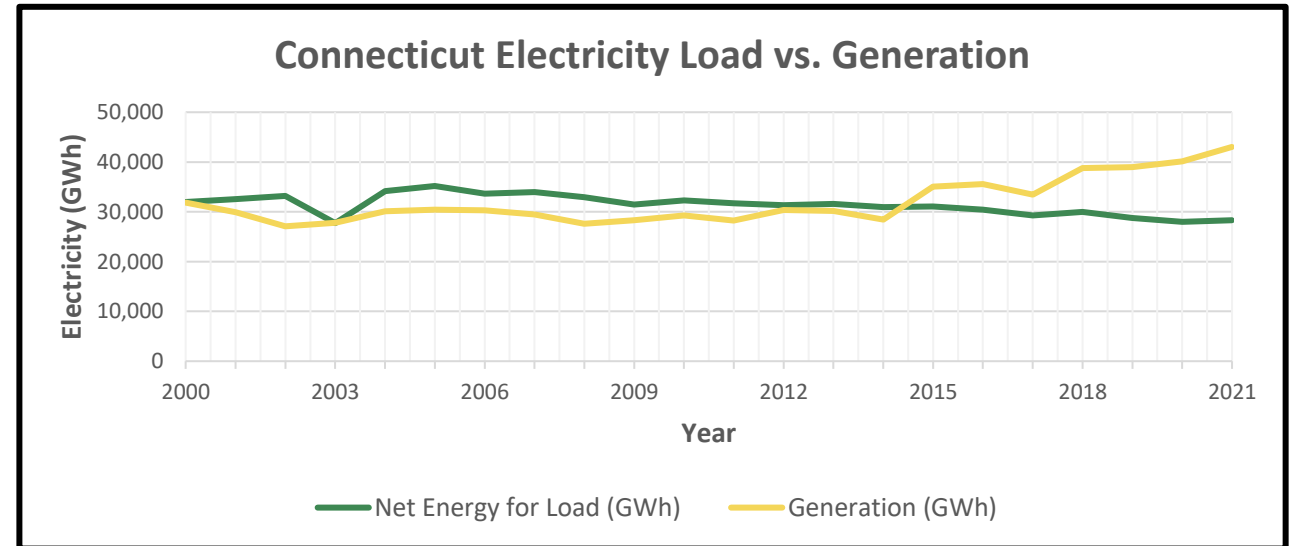
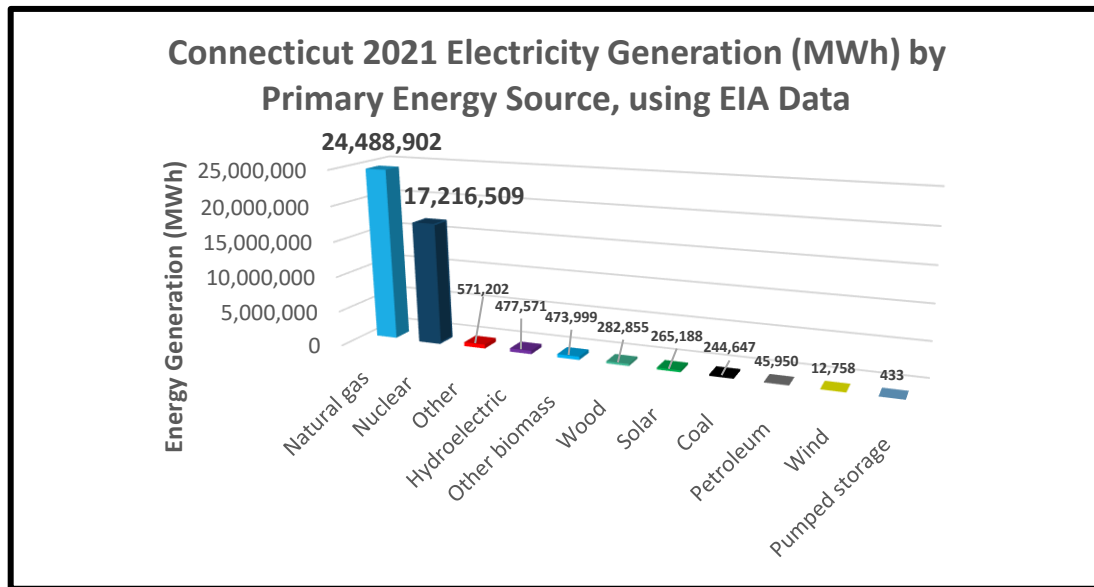
In-State Generation Data

- CT is increasing its zero carbon generation, and is decreasing power sector emissions



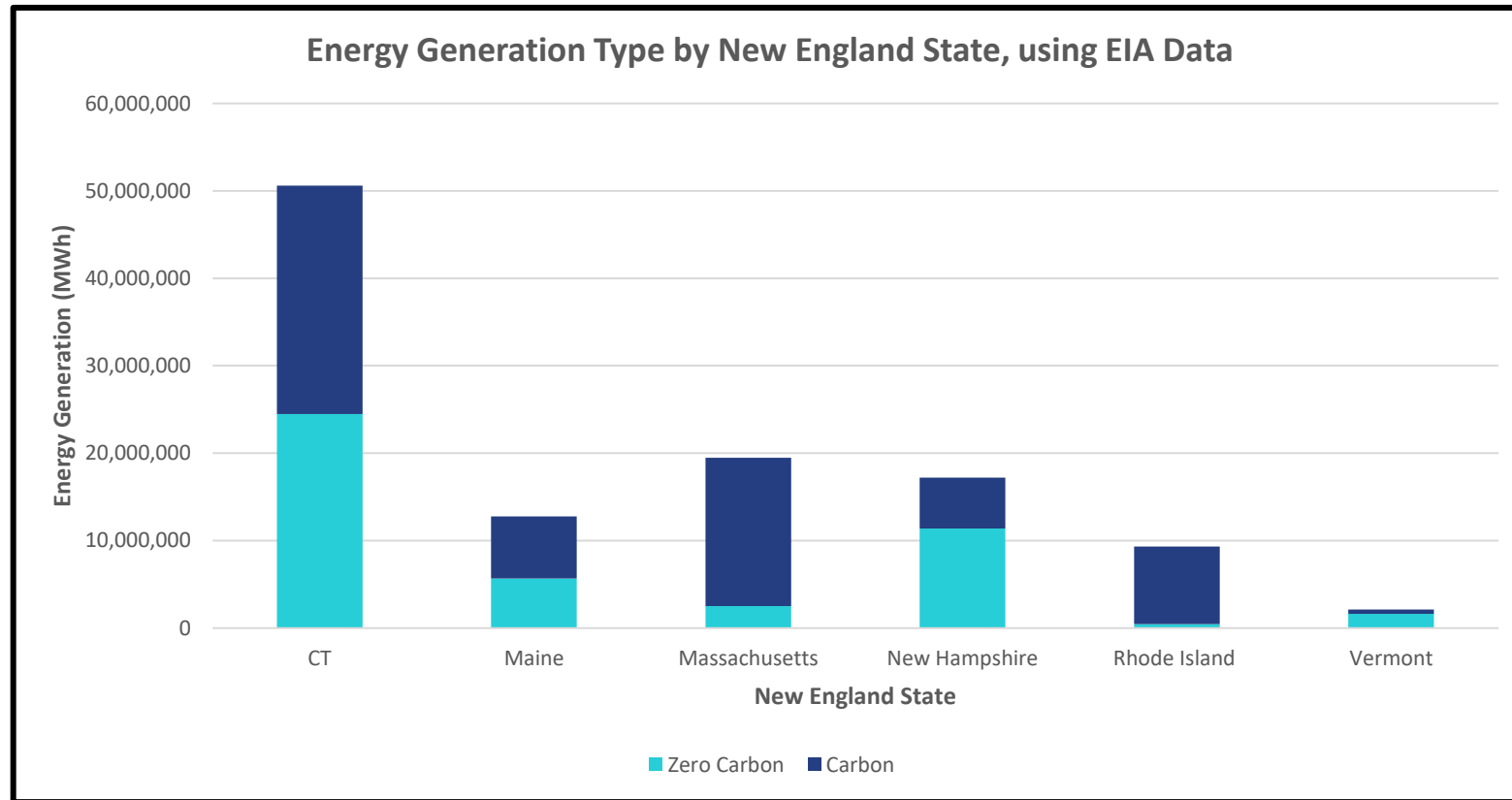
In-State Generation Data

- However, CT is still reliant on natural gas, and expected to become a larger exporter in the coming years



In-State Generation Data

- CT produces a large amount of electricity relative to other NE states



Other Resources & Future Reports

- **Other Resources**

- Employment Data
- Links to relevant documents
 - DEEP Integrated Resources Plan
 - DOE Electric Vehicle Charging Station Locations Tool
 - CGB Connecticut Clean Energy Industry Report
 - Etc.
- More detail and data on each program

- **Future Reports / Efforts**

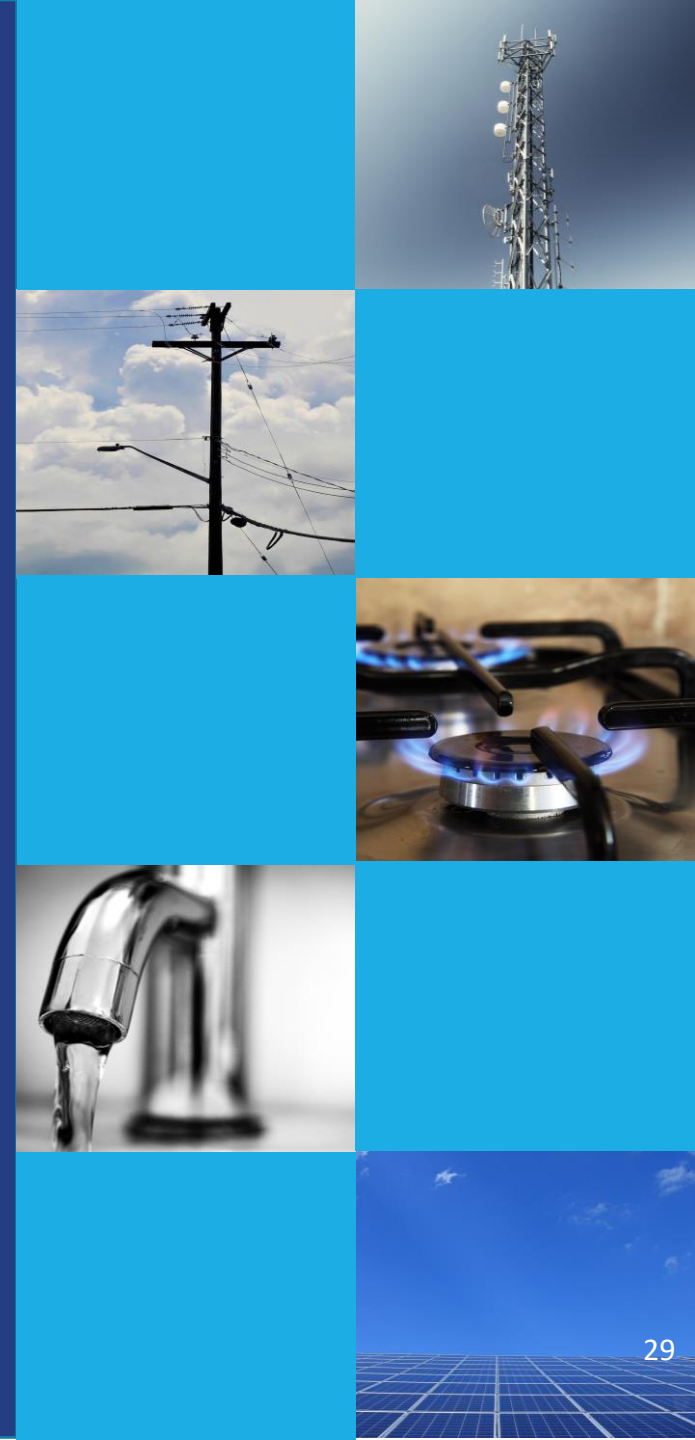
- Cost-Benefit Analysis
- Emissions reduction data
- Working towards data platforms on multiple fronts



Thank You

PURA 2022 Annual Report

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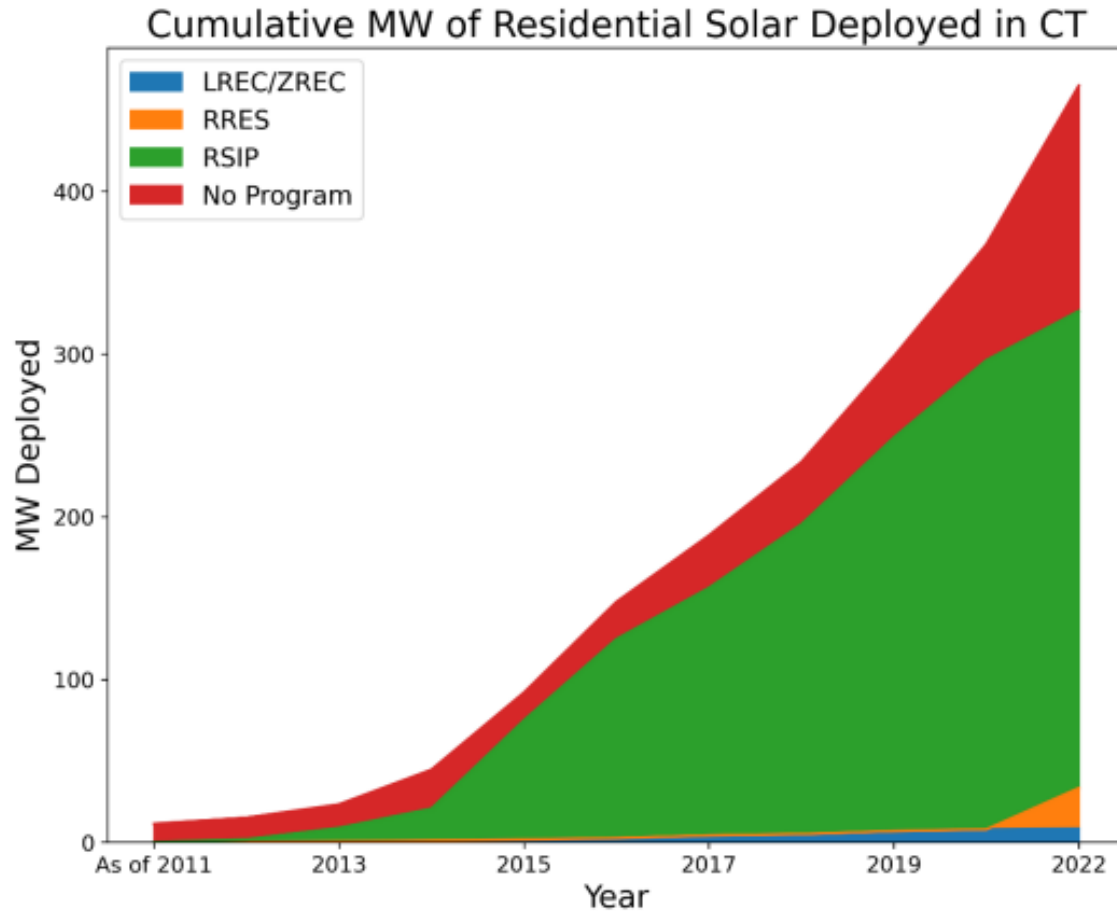
Docket # Title

▼ [20-08-03RE01](#)

- ▼ [PURA Consideration of Civil Penalty and Enforcement Action Against the Electric Distribution Companies After Storm Isaias Investigation \[20-08-03RE01\]](#)
- ▼ [DRN \[20-08-03RE01\] CL&P & UI / Review Performance \[GBC\] Staff: Capozzi / <L> Tisler / Lupoli](#)
- [TS External \[20-08-03RE01\] \[GBC\] Last Revised: 07/09/2021](#)
- [Brief_06/21/2021 03:19:49 PM \(Office Of Consumer Counsel\) \[20-08-03RE01\]](#)
- [Brief_06/21/2021 03:40:12 PM \(Keegan Werlin Llp\) \[20-08-03RE01\]](#)
- [Brief_06/21/2021 03:41:10 PM \(Eversource\) \[20-08-03RE01\]](#)
- [Brief_06/21/2021 03:50:21 PM \(Ct Department Of Energy & Environmental Protection\) \[20-08-03RE01\]](#)
- [Brief_06/21/2021 11:21:59 AM \(Office Of The Attorney General\) \[20-08-03RE01\]](#)
- [Compliance Filings_07/21/2021 \[20-08-03RE01\] Order.No.6: 7 / Uil / UI Proposed Methodology for Implementation of Customer Bill Credits](#)
- [Compliance Filings_07/30/2021 \[20-08-03RE01\] Order.No.1 / Eversource / Compliance Order No. 1](#)
- [Compliance Filings_08/18/2021 \[20-08-03RE01\] Order.No.Order No. 1 / Eversource Energy / Compliance Filing](#)
- [Compliance Filings_08/18/2021 \[20-08-03RE01\] Order.No.Order No. 2 / Eversource Energy / Compliance Filing](#)
- [Compliance Filings_09/02/2021 \[20-08-03RE01\] Order.No.7 / Uil Holdings Corporation / UI submits response to penalty](#)
- [Corres_08/11/2021 \[20-08-03RE01\] \(Uil\) - UI Notification of Storm Performance Related Bill Credits Issuance to Customers](#)
- [Corres_09/01/2021 \[20-08-03RE01\] \(PURA\) - PURA Correspondence](#)
- [Corres_12/21/2021 \[20-08-03RE01\] \(Couch White, Llp\) - Representative Removal](#)
- [Final Decision_07/14/2021 \[20-08-03RE01\]](#)



Residential Solar Deployment



Year	Deployment
2017	40.80
2018	45.10
2019	64.96
2020	68.75
2021	85.80
Nov. 2022	84.43

- Overall deployment is exceeding goals
 - ~85 MW annually in 2021 and 2022



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

Friday, January 20, 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 January 20, 2023.

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

Board Members Present: Binu Chandy, Dominick Grant, John Harrity, Adrienne Houël, Matthew Ranelli, Lonnie Reed, Sarah Sanders, Brenda Watson, Victoria Hackett

Board Members Absent: Thomas Flynn, Laura Hoydick, Joanna Wozniak-Brown

Staff Attending: David Beech, Larry Campana, Sergio Carrillo, Shawne Cartelli, Louise Della Pesca, James Desantos, Mackey Dykes, Brian Farnen, Bryan Garcia, Sara Harari, Bert Hunter, Alysse Lembo-Buzzeli, Cheryl Lumpkin, Jane Murphy, Ariel Schneider, Eric Shrago, Marianna Trief, Ed Kranich,

Others present: Vijay Gopalakrishnan, Satyen Moray

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 6 to follow item 3 and asked for a motion to approve.

Upon a motion made by Binu Chandy and seconded by Matthew Ranelli, 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 December 16, 2022

Subject to Changes and Deletions

Resolution #1

Motion to approve the meeting minutes of the Board of Directors for December 16, 2022.

b. Energy Storage Solutions

Resolution #2

WHEREAS, in its June 24, 2022 meeting the Connecticut Green Bank Board of Directors (Board) approved the implementation of an Upfront Incentive Project Approval procedures ("Procedures") for non-residential projects under the Energy Storage Solutions Program (Program) with an estimated upfront incentive payment greater than \$500,000 and procedures for less than \$500,000;

WHEREAS, as part of the approved Procedures, Green Bank staff shall present Program projects via the consent agenda utilizing a standard form Tear Sheet process described in the memorandum to the Board dated June 24, 2022;

WHEREAS, in its December 9, 2022 meeting the Board approved updated Procedures to better align with the Program process;

WHEREAS, in its July 22, 2022 meeting the Board approved that upfront incentive payments of 13 non-residential projects totaling \$16,513,170 and an aggregate capacity of 33.8 MW;

WHEREAS, the Program administrators, which include the Green Bank and our utility partners, reassessed the annual peak demand of 4 projects that had previously received Board approval of their estimated upfront incentives;

WHEREAS, the reviewed amount of these upfront incentives represents a reduction in the amount of \$1,233,060; which is expected to have a positive impact in the Program Ratepayer Impact Measure (RIM);

WHEREAS, Green Bank Staff reviewed funding requests for projects with incentives below \$500,000, and approved them via Project Approval Forms for a total amount of \$1,869,906 and intends to issue Reservation of Fund letters upon Board authorization.

NOW, therefore be it:

RESOLVED, that the Board hereby approves the reassessed upfront incentives sought by 4 non-residential projects totaling \$9,587,980 from their original \$10,821,040;

RESOLVED, that the Board hereby approves the estimated upfront incentives sought by 1 non-residential projects above \$500,000 totaling \$598,917 consistent with the approved Procedures;

RESOLVED, that the Board hereby approves the estimated upfront incentives sought by 6 non-residential projects individually under \$500,000, totaling \$1,869,906 consistent with the approved Procedures; and

RESOLVED, that the proper Green Bank officers are authorized and empowered to do

Subject to Changes and Deletions

all other acts and execute and deliver any and all documents and regulatory filings as they shall deem necessary and desirable to affect the above-mentioned incentives consistent with the Procedures.

Upon a motion made by John Harrity and seconded by Matthew Ranelli, the Board of Directors voted to approve the Consent Agenda which includes Resolutions 1 – 2. None opposed or abstained. Motion approved unanimously.

4. Committee Updates and Recommendations

a. Audit, Compliance, and Governance Committee

i. Proposed Revisions of Accounting and Internal Control Procedures

- Jane Murphy summarized the proposed changes to the Internal Control Procedures which includes adjusting the titles within the procedures to be generic and changes to the approval processes to remove redundancies and increase temporary flexibility for approvals when certain staff are out of the office and unavailable. She stated the auditors were allowed to review the changes and only substantive update is for the approval recommendations, which the auditors agreed that the delegations should be made in-writing and that the designee be a Senior member of the Accounting team. This is reflected to be either the Controller or Associate Director, which have been included in the proposed changes as presented.

Resolution #3

WHEREAS, all Accounting internal control procedures of the Green Bank are being updated to revise the written delegation of authority process and replace specific position titles with generic position titles, with the goal of having the procedures remain up to date if staff titles change;

NOW, therefore be it:

RESOLVED, that the Board of Directors hereby approve the proposed revisions to the Internal Accounting Controls and Procedures as presented herein.

Upon a motion made by Adrienne Houël and seconded by John Harrity, the Board of Directors voted to approve Resolution 3. None opposed or abstained. Motion approved unanimously.

b. Budget, Operations, and Compensation Committee

i. Proposed Revisions to FY23 Targets and Budget including “Dream Big” Option

- Eric Shrago summarized the proposed changes to the FY23 targets starting with the Incentive Program Targets. The number of projects is decreasing but the capital investment and MW of deployed energy are both increasing. This is affected by a change to when Incentive projects are considered closed and therefore included in the targets based on previous experience and influence over projects. The increase in the capital invested and MW deployed is due to some large commercial battery storage projects anticipated to be approved.

- Eric Shrago reviewed the Financing Programs Target which are not expects to change but clarified the amount of Green Bank capital invested and how it is different from total capital

Subject to Changes and Deletions

deployed. He then summarized the changes to the Budget Revenues and Expenses.

- Eric Shrago summarized the “Dream Big” growth scenario expected due to the passage of the Inflation Reduction Act, starting with five key areas of product, policy, promotion, people, and places. As a result of the research done, the proposed changes to the budget for 5 additional staff focused on bringing in projects, an additional \$50,000 for additional marketing assets, and \$50,000 for holding Green Bank events to get into the community more such as pop-ups and office hours in areas of high interest and need.
- Eric Shrago reviewed the IPC PSA Amendments for clarity as IPC does not require an RFP because they spun out of the Green Bank initially and have a long-term contract.
 - Victoria Hackett asked for clarification regarding promotional events and materials that the Green Bank is coordinating with DEEP to communicate with one voice and be comprehensive. Eric Shrago responded absolutely in agreement.

Resolution #4

WHEREAS, per Section 5.2.2 of the Bylaws of the Connecticut Green Bank, the Budget, Operations, and Compensation Committee of Board of Directors recommends that the board approve (1) the revised FY2023 Targets and Budget, (2) the addition of the Dream Bigger Strategy and budget, and (3) extend the professional services agreements (PSAs) with Inclusive Prosperity Capital for fiscal year 2023 with the amounts of each PSA not to exceed the applicable approved budget line item;

NOW, therefore be it:

RESOLVED, that the Board of Directors approves the: (1) the revised FY2023 Targets and Budget, (2) the addition of the Dream Bigger Strategy and budget, and (3) the extension of the professional services agreements (PSAs) with Inclusive Prosperity Capital for fiscal year 2023 with the amounts of each PSA not to exceed the applicable approved budget line item.

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

c. Other Recommendations

i. Proposed Revisions to the FY23 Comprehensive Plan

- Bryan Garcia summarized the proposed revisions to the Comprehensive Plan including non-substantive edits and substantive edits which includes the executive summary, updates, targets and budget revisions, the removal of the waste and recycling primer from FY to FY24, and the inclusion of battery recycling under research and project development.

Resolution #5

WHEREAS, on June 24, 2022, the Board of Directors (“Board”) of the Connecticut Green Bank (“Green Bank”) approved of the annual budgets, targets, and investments for FY 2023.

WHEREAS, on July 22, 2022, the Board of the Green Bank reviewed and approved the Comprehensive Plan as presented.

Subject to Changes and Deletions

WHEREAS, on January 20, 2023 the Board of the Green Bank reviewed and approved the revised FY 2023 Targets and Budget, including the addition of the Dream Bigger Strategy and budget.

WHEREAS, per Connecticut General Statutes 16-1245n, the Green Bank must (a) develop a comprehensive plan to foster the growth, development and commercialization of clean energy sources, related enterprises and stimulate demand clean energy and deployment of clean energy sources that serve end use customers in this state, and (b) develop a comprehensive plan to foster the growth, development, commercialization and, where applicable, preservation of environmental infrastructure and related enterprises.

NOW, therefore be it:

RESOLVED, that Board has reviewed and approved the revised Comprehensive Plan presented to the Board on January 20, 2023.

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

5. Investment Updates and Recommendations **a. PosiGen – Final Documentation**

- Bert Hunter summarized the history of the PosiGen transaction and the changes due to the previous Resolution not in strict alignment with the final agreed structure. He explained the details of the structure for clarity.

Resolution #6

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 (“Board”) previously authorized and later amended the 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 the company’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 repayment performance is satisfactory;

WHEREAS, the passage of the federal Inflation Reduction Act of 2022 (the “IRA”) creates a variety of new tax credit value streams that are available in early 2023 but likely to be delayed in terms of monetizable cash flow as explained in the memorandum to the Board dated December 9, 2022 (the “Board Memo”);

WHEREAS, PosiGen is currently documenting a new tax equity facility that will incorporate that additional value from IRA and has applied under the Capital Solutions Open RFP program for a revolving loan facility (the “Facility”) to bridge this value to be derived from

Subject to Changes and Deletions

the IRA provisions being included in the Internal Revenue Code, as further explained in the Board Memo;

WHEREAS, Staff has advised the Board that legal counsel has recommended modification of the resolutions in respect of the Facility explained in the December Board Memo to be in conformity with the final documentation for the Facility, and staff agrees with legal counsel and recommends the Board amend and restate the resolutions passed in December 2022 in respect of the Facility; and

NOW, therefore be it:

RESOLVED, that the Green Bank Board of Directors (the "Board") amends and restates the resolutions passed during a meeting of the Board held December 16, 2022 as follows:

RESOLVED, that the Green Bank may advance up to \$6 million in an uncommitted, discretionary financing associated with tax equity cash flows to be remitted as capital contributions by a member of the affiliated SPV directly to the SPV, under a revolving loan facility as further explained in the Board Memo; and

RESOLVED, that the Green Bank may make the advances to the existing Borrower for distribution to the SPV, to be repaid through the Managing Member of the SPV to a blocked cash collateral account under the irrevocable control of Green Bank, as further explained in the Board Memo; and

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

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

b. Cargill Falls – C-PACE Investment Modification

- Mariana Trief highlighted an update to Cargills Falls from over the holiday season which required some weed removal. She then summarized the project background and a real estate update, which includes that residential occupancy is at 100% and reviewed details for both residential and commercial leases. There was a lead concern in a unit and so it and other units have been tested and are awaiting results. The abatement plan for the first unit was completed and approved by the Northeast District Department of Health (NDDH). The owner is taking a more comprehensive plan for testing, abatement, and remediation, if necessary, of other units. For the hydroelectric plant, there are delays due to difficulties in locating contractors, getting equipment, and obtaining equipment breakdown insurance. One hydro turbine is being tested this week, but the delays have negatively impacted the operating revenue of the property.

- Mariana Trief reviewed the proposed payment modification due to those issues in operating revenue. The project has been funded by the Green Bank with 2 C-PACE benefit assessment liens. The proposal is to have 80% of the payments associated with the First Lien for 2023 and 2024 be added to the Second Benefit Assessment Lien as well as extend the term of the Second Benefit Assessment Lien to 15 years to give more flexibility to allow the hydro plant to commence operations and to allow for cash flows to address the lead concerns.

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- Bert Hunter added additional information as to the history of the project in relation to the involvement by the Haynes Company. He stated if the project is allowed to go into default, there will be much greater financial risk and exposure than this modification.
 - John Harrity asked if this is expected to be the last modification request, as there have been so many previously. Bert Hunter responded that he hopes it is the last one but acknowledged the frustrations from new issues popping up.
 - Matthew Ranelli expressed concerns over the continuous issues despite praising the potential of the project and asked how urgent it is to act on the Resolution. He asked for more information as to the true extent of the lead exposure and its source. As well in relation to the SIR, he asked if any of the REC terms have been lost and what the cash flow position currently is. Bert Hunter responded that the lead exposure cannot be discussed further due to litigation issues, but for the timeline concerns, the payments will go into default without more support. As for the idea to threaten foreclosure in order to force a sale to a more capitalized owner, the property needs to be stabilized with everything with the hydroelectric facility working first before it would be attractive enough to a potential buyer. To attempt to do so now would be putting it in a worst case presentation. Marianna Trief answered that some ZRECs have been lost but she hopes it is the last time this will happen and reiterated that payment is due at the end of the month and without modification the project will go into default.
 - Matthew Ranelli asked what the payment due at the end of the month is and if there is any discretionary money available to get more time before extending the deadline. He also asked if there is something the Green Bank should obtain now in terms of a signable right in order to have more leverage to push a sale in the future if still necessary. Bert Hunter answered with a proposed deferral of the first lien payment until the Board Meeting in June, which is just before the July payment is due. When the payment is deferred the lien has to be refiled, which can be done, but he reiterated that the Green Bank is entitled to all residual cash flows. Victoria Hackett agreed with the deferral to June as proposed by Matthew Ranelli.
 - Lonnie Reed asked if the deferral would cause a negative impact in any way and Bert Hunter responded no. It would require some additional paperwork but that is primarily it and is feasible.

Resolution #7

WHEREAS, pursuant to Conn. Gen. Stat. 16a-40g, the Connecticut Green Bank (“Green Bank”) has established a commercial sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy (“C-PACE”);

WHEREAS, the Board of Directors (“Board”) of the Green Bank previously approved a construction and term financing, secured by a C-PACE benefit assessment lien, not-to-exceed amount of \$8,100,000 (the “Current Lien”) to Historic Cargill Falls Mill, LLC (“HCFM”), the property owner of 52 and 58 Pomfret Street, Putnam, Connecticut, to finance the construction of specified clean energy measures (the “Project”) in line with the State’s Comprehensive Energy Strategy and the Green Bank’s Strategic Plan;

WHEREAS, the Project includes numerous energy conservation measures that align with the goals and priorities of the Green Bank’s multifamily housing program;

WHEREAS, Green Bank staff now seeks approval to amend the Current Lien to HCFM to provide non-cash funding (the “Financing Amendment”) for the Project, to account for an

Subject to Changes and Deletions

extension of time to repay principal and interest for the Project as explained in the memorandum in respect of this matter submitted to the Board on January 17, 2023 (the "Board Memo").

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to defer the first lien payment due January 2023 and Staff is directed to return to the Board in June 2023 with an update and any additional request for modification if necessary; and

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

Upon a motion made by Matthew Ranelli and seconded by Victoria Hackett, the Board of Directors voted to approve Resolution 7 as amended. None opposed or abstained. Motion approved unanimously.

c. EV Carbon Credit Pilot Program Authorization

- Eric Shrago summarized the EV Carbon Credit program history, methodology, initial filing, and status of the credits. He reviewed the proposed process to sell the credits which includes quantity verification, market consultation, review and approval from Green Bank Officers, the Head of Finance, and the Head of Operations, and then the transaction will be memorialized with the plan to repeat the transactions on an annual basis. The forecast of revenue is currently low but the forecast shows the potential to be a significant revenue stream as the Green Bank expands into environmental infrastructure.

Resolution #8

WHEREAS, CGS Sec. 16-245n (as amended by Public Act 21-115) empowers the Connecticut Green Bank to leverage the carbon offset markets to monetize environmental attributes that accelerate the deployment of clean energy;

WHEREAS, the Green Bank has led the creation of a methodology with the Verified Carbon Standard to monetize electric vehicle charging activity and is the leader of a consortium that has earned credits under this methodology;

NOW, therefore be it:

RESOLVED, the Board of Directors of the Connecticut Green Bank direct staff to sell the credits aggregated as part of this project using the aforementioned process and to update the Board as to this process by 2025.

Upon a motion made by John Harrity and seconded by Dominick Grant, the Board of Directors voted to approve Resolution 8. Motion approved. Victoria Hackett abstained

Dominick Grant, Victoria Hackett, and Matthew Ranelli left the meeting at 11:03 am.

6. Financing Programs Updates and Recommendations
a. C-PACE SIR Policy Revision

- Mackey Dykes summarized the proposed changes to the SIR Policy of electrification C-PACE projects to not require a SIR of 1 or higher. This would require a statutory change then program guidelines change. The SIR is a calculation to determine if the savings over the life of the equipment is greater than the total investment costs.

- Alysse Lembo-Buzzelli and Vijay Gopalakrishnan explained the reasoning for the proposed change and the details of it more thoroughly. Some of the issues with the SIR is that several HVAC projects do not have a SIR of greater than 1 despite the fact that those projects align with Connecticut's decarbonization goals and strategies. Energize CT uses a different approach, Incremental Cost, to determine incentive eligibility and the presence of two different calculations can lead to confusion and uncertainty for contractors. Alysse Lembo-Buzzelli summarized some recent projects in which the SIR calculation caused financing reductions for property owners.

- Alysse Lembo-Buzzelli reviewed the proposed revision which is to continue to require the calculation but remove the necessity for the SIR to be greater than 1 for technologies identified as high-efficiency electrification technologies with no fossil fuels. The energy audit, underwriting requirements, and other programmatic requirements will continue as normal, and it is also proposed to require the borrower to review the SIR calculation and sign a document stating they understand they are financing a project with a SIR of less than 1. She reviewed the Benefits and Challenges that would come with the acceptance of the proposed changes.

- Mackey Dykes commented that in the range of all C-PACE programs across the country, Connecticut seems to be on the conservative side in that it requires it, despite the fact that the PACE Alliance actually discourages including a SIR calculation. He stated he thinks the calculation is beneficial but, in some cases like for those proposed, can inhibit projects with positive impacts.

- John Harrity stated he supports the change. He recognizes the cost is large but if people are willing to agree then it should be encouraged in order to reduce carbon emissions.
- Matthew Ranelli agrees with John about the goal but stated his concerns and desire for more information. He also stated he believes the optics are low and concerns of how it could reflect with those buyers later and in terms of getting lender consent. He stated the number of electrification programs may be low now but is likely to increase in the future and become a greater focus for the program. He asked if there are other options available to explore that would not change the total C-PACE program.
- Victoria Hackett asked for clarity regarding the current approach compared to the proposed change, as she did not understand the reason to include the total cost in the SIR. Mackey Dykes agreed her interpretation was correct. Victoria Hackett proposed adopting the same incremental cost model that Energize CT uses. She then asked what energy savings are being considered in the SIR calculation. Alysse Lembo-Buzzelli responded that the incremental cost conversation was the first version of a proposed change but was moved away from as it didn't quite line up with how the SIR is calculated and other requirements. Mackey Dykes added the incremental cost calculation was weakening the SIR calculation more than the proposed change presented and explained why. He added details about what information is used as the baseline for the calculation and that using an incremental cost version would allow more fossil fuel equipment to get through than was

Subject to Changes and Deletions

desirable. Victoria Hackett responded that she suggested adopting more standard approaches, but recognizes the other issues that may cause, as well as more thorough discussions about how electrification cost-effectiveness testing. However, she believes the SIR not being required for electrification projects may make defending the integrity of the program more difficult. Mackey Dykes clarified more about the reasoning and intent for the proposed change.

- Matthew Ranelli agreed with Victoria Hackett and proposed another idea to make the change work in a way that addresses their concerns.
- Sarah Sanders asked about the other reasons a customer may want to go forward despite a low SIR calculation. Mackey Dykes responded typically there is a definitive need for the equipment to be replaced due to aging and malfunction. Since those replacement decisions are made very infrequently, its crucial to have the tools to be able to best assist getting the most efficient equipment installed since it has to be replaced one way or another.
- Adrienne Houël asked if there is a minimum SIR calculation that will be required. She also asked how many cases are currently being considered especially since the inflationary period currently happening which affects the interest rates being included in the calculation.
- The group agreed to discuss the idea and changes more thoroughly at a special meeting between the Audit, Compliance, and Governance Committee and the Deployment Committee.

Resolution #9

Staff recommends that the Green Bank Board (the “Board”) authorize staff to pursue a statutory change of the SIR policy to make financing certain electrification energy efficiency projects more accessible through C-PACE in accordance with this memorandum and welcomes all feedback.

Upon a motion made by Victoria Hackett and seconded by Matthew Ranelli, the Board of Directors voted to discuss Resolution #9 further at a special joint meeting of the Audit, Compliance, and Governance Committee and the Deployment Committee at a future date. None opposed or abstained. Motion passed unanimously.

b. Commercial Solar Program – Modification

- Mackey Dykes summarized the Commercial Solar program as it is today and the proposed modification request to add a new financing option for Non C-PACE secured financing for entities that are unable to access C-PACE secured financing such as condominium associations, municipalities, and more. The key issue being faced was security but the changes to the solar policy of Connecticut finally allowed the Green Bank to serve this section of the market. He explained how the security for these types of projects would be attained by utilizing the Utility Companies as a counterparty. Mackey Dykes explained the program outline and approval structure for projects included.

- Matthew Ranelli praised the proposed idea overall. He asked if with the NRES buy-all tariff, if it would be possible to know the tax-exempt status of the systems before proceeding. Mackey Dykes responded yes it would as it is a key issue for all the solar buy-all projects and the Green Bank is working with the industry to address it.
- John Harrity stated it is important to be as aggressive as possible in helping Connecticut residents to be able to change to lower carbon technologies and stated

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his support for this expansion into the market.

Resolution #10

WHEREAS, the Connecticut Green Bank (“Green Bank”) Board of Directors (the “Board”) passed resolutions at its March 25, 2020 meeting to approve funding, in a total not-to-exceed amount of \$30 million in new money, subject to budget constraints, for the continued development by Green Bank, and financing of development by 3rd parties, of commercial-scale solar PV projects, to be utilized for the following purposes pursuant to market conditions and opportunities:

1. Development capital;
2. Construction financing;
3. Financing one or more 3rd-party ownership platforms, in the form of sponsor equity and/or debt; and
4. Sell solar PPA projects developed by Holdings to third parties.

WHEREAS, the Green Bank is uniquely positioned to continue developing a commercial solar project pipeline through local contractors in response to continued demand;

WHEREAS, the market for commercial solar financing continues to evolve, as public policy changes create opportunities for financing innovation;

WHEREAS, there is still demonstrated need for flexible capital to continue expanding access to financing for commercial-scale customers looking to access solar, while both bolstering project returns for investors and enhancing project savings profiles for customers, including for property owned non-profit and commercial solar PV systems where it is not possible to place a Commercial Property Assessed Clean Energy benefit assessment lien as security, subject to appropriate credit assessment by Green Bank staff of the third party owner as explained in a memorandum submitted to the Green Bank Board of Directors (the “Board”) dated January 13, 2023 (the “Board Memo”); and

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

NOW, therefore be it:

RESOLVED, that the Board approves financing of third party owned commercial solar PV systems where it is not possible to place a Commercial Property Assessed Clean Energy benefit assessment lien as security, subject to appropriate credit assessment of the third party owner as explained in the Board Memo;

RESOLVED, that the President of Green Bank; and any other duly authorized officer of Green Bank, is authorized to execute and deliver, any contract or other legal instrument necessary to continue to develop and finance commercial projects 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.

Subject to Changes and Deletions

Upon a motion made by John Harrity and seconded by Matthew Ranelli, the Board of Directors voted to approve Resolution 10. None opposed or abstained. Motion approved unanimously.

7. Incentive Programs Updates and Recommendations

a. ESS Update of Final Decision in the Year 1 Review

- Sergio Carrillo summarized various points within the Year-2 Final Decision including updated incentive levels due to battery discharge rate variance, LMI and Underserved community upfront incentive changes due to low adoption in those market segments, changes to the upfront incentive cap, and changes to the active dispatch only program participation requirements. He also reviewed updates to the vacated commercial project capacity to increase program participation and RRES Annual Review updates. Overall, Sergio Carrillo stated the changes reflecting positively and the staff of the Green Bank are pleased with the outcomes.

8. Environmental Infrastructure Programs Updates and Recommendations

- Bryan Garcia reviewed the updates to the Environmental Infrastructure program including finding the Director of the program, the wrap-up of primers for water and environmental markets with the expectation to finalize by Earth Day 2023, and the continuation to learn from and support Bridgeport Regional Energy Partnership for community engagement. Adrienne Houël added that it's been exciting work and there is more to do. She discussed some recent progress to the outreach plan.

9. Other Business

a. Hydrogen Power Study Task Force Update

- Sara Harari summarized the process and history of the Hydrogen Task Force and the report developed through its efforts. She reviewed some of the outreach efforts and locations where some of the meetings took place in order to learn more and develop the report which was delivered on January 15, 2023 and includes recommendations for actions to be taken by Legislature, State Agencies, UConn, and other industry participants.

- John Harrity expressed his concern with hydrogen energies in relation to its connection to natural gas and hopes this will be a step towards improving the technology or at least sustaining natural gas longer, as he expressed the desire to lower the dependence on natural gas. Bryan Garcia responded that looking at transportation, storage, and infrastructure of hydrogen energy was deemed an important element as part of the process and that many perspectives are included in the report and acknowledged those issues are not easy to solve, but there is much that was examined and included.

- Bryan Garcia summarized a Concept Paper that was submitted to the DOE through their Grid Innovation Program in collaboration with Hawai'i and Puerto Rico in relation to the Infrastructure, Investment, and Jobs Act. As well, a website was developed to receive public comments on the report out.

- Sarah Sanders asked about gas heating pollution within the home and potential changes to the stance on supporting gas heating within homes to be discussed at a future meeting.

Subject to Changes and Deletions

10. Adjourn

Upon a motion made by John Harrity and seconded by Adrienne Houël, the Board of Directors Meeting adjourned at 11:28 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: March 17, 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, 1 project was evaluated and approved for funding in an aggregate amount of approximately \$71,173. 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.

6 Business Park Road: A C-PACE Project in Old Saybrook, CT

Address	6 Business Park Road, Old Saybrook, CT 06475			
Owner	Mill Meadow Development LLC			
Proposed Assessment	\$71,173			
Term (years)	5			
Term Remaining (months)	Pending construction completion			
Annual Interest Rate	4.50%			
Annual C-PACE Assessment	\$16,081			
Savings-to-Investment Ratio	1.01			
Average DSCR	[REDACTED]			
Lien-to-Value	[REDACTED]			
Loan-to-Value	[REDACTED]			
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year	60.3	-	60.3
	Over EUL ¹	905	-	905
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year	\$5,405.73	-	\$5,405.73
	Over EUL	\$81,085.99	-	\$81,085.99
Objective Function	12.7 kBTU / ratepayer dollar at risk			
Location	Old Saybrook			
Type of Building	Office			
Year of Build	1992			
Building Size (sf)	30,636 sf			
Year Acquired by Owner	1992			
As-Is Appraised Value²	\$3,034,550			
Mortgage Lender Consent	[REDACTED]			
Proposed Project Description	2 new 25 ton HVAC units to replace 30 year old units			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Staff Approval			
Energy Contractor	[REDACTED]			

[REDACTED]
 [REDACTED]

Resolution

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

WHEREAS, Green Bank staff seeks Board review and approval of the funding requests listed in the Memo to the Board dated October 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.



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: 3/17/2023

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.

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



Memo

To: Board of Directors of the Connecticut Green Bank

From: Bryan Garcia (President and CEO)

Cc: Jane Murphy (EVP of Finance and Administration), Eric Shrago (VP of Operations), and Dan Smith (Associate Director of Financial Reporting)

Date: February 17, 2023

Re: Q2 of FY23 Financial Package (Abridged)

Overview

Following on the recommendation of the Chair¹ of and discussions with the Audit, Compliance, and Governance Committee ("ACG Committee")² and Board of Directors,³ we are providing our second abridged quarterly financial package for the Connecticut Green Bank ("Green Bank") for the purposes of helping members of the board communicate four key messages consistent with its Comprehensive Plan – (1) making an impact,⁴ (2) mobilizing private investment,⁵ (3) achieving sustainability,⁶ and (4) monitoring state budget allocation. Each of these areas is elaborated on further below with an explanation of what transpired at a "high level" within that area in each respective quarter.

Making an Impact – Board Member Dashboards

Given a primary goal of the Green Bank is to continuously deliver benefits to our communities, and need to communicate that impact to our stakeholders, we have created dashboards for each member of the board that shows the organization's impact to your community or is most relevant to your appointer. For example, Dr. Joanna Wozniak-Brown, Board Member of the Green Bank, has a "State of Connecticut" page given her position as Climate & Infrastructure Policy Development Coordinator at the Office of Policy and Management:

"The Green Bank has enabled \$2,312,418,618 of investment in clean energy in CT helping 67,927 families and businesses reduce the burden of energy costs while creating 26,508 job years in our communities and avoiding 10,516,489 tons of CO2 emissions causing global climate change."⁷

¹ Tom Flynn

² May 17, 2022 ACG Committee meeting – [click here](#)

³ June 24, 2022 BOD meeting – [click here](#)

⁴ Goal 2 – to strengthen Connecticut's communities, especially vulnerable communities, by making the benefits of the green economy inclusive and accessible to all individuals, families, and businesses.

⁵ Goal 1 – to leverage limited public resources to scale-up and mobilize private capital investment in the green economy of Connecticut.

⁶ Goal 3 – to pursue investment strategies that advance market transformation in green investing while supporting the organization's pursuit of financial sustainability.

⁷ As of February 21, 2023

Given our goal to ensure that “no less than 40 percent of investment and benefits are directed to vulnerable communities by 2025,” you will see that we also include those breakdowns.

We welcome your feedback on how these dashboards can be improved. Please forward any suggestions to Eric Shrago at eric.shrago@ctgreenbank.com

Mobilizing Private Investment – Balance Sheet

Given a primary goal of the Green Bank is to invest public funds wisely to mobilize multiples of private capital investment, the strength of the balance sheet (e.g., total assets, net position) is important to attracting private partners.

As noted in the Q1 of FY23 report, the cash repayment of SHREC ABS 1 bonds has strengthened our financial position (i.e., reduction of liabilities by reducing interest expense and increase in net position). The reduction in total assets in Q1 from \$242.3 million to \$240.6 million (i.e., reduction of \$1.7 million) has improved in Q2 from \$240.6 million to \$242.4 million (i.e., increase of \$1.8 million). In addition to that, there was a reduction in current assets cash (i.e., by \$3.2 million) and increase in noncurrent assets of program loans (i.e., by \$3.0 million) bringing total program loans to \$100.0 million. Year to date in FY23, public revenues were invested in 97 loans closed totaling \$4.3 million. We have a significant pipeline of projects and expect public revenues to support loan volume by the end of FY23.

Achieving Sustainability – Organizational P&L

Given a primary goal of the Green Bank is to pursue organizational sustainability, the realization of revenues (i.e., specifically earned revenues) and management of operating expenses (i.e., specifically personnel-related operating expenses) is important.

The key observation from Q2 of FY23 is that earned revenues (i.e., \$11.4 million) continue to exceed personnel related operating expenses (i.e., \$5.4 million) – over 60% margin – and were about \$1.0 million above total operating expenses (i.e., \$10.4 million) – over a 3% gain. These are continuing trends as the Green Bank makes steady progress towards organizational sustainability as planned in FY18.⁸

Monitoring State Budget Allocation

And lastly, to track the impact of the long-term structural budget deficit issues with respect to pension and healthcare liabilities, the Green Bank tracks the State of Connecticut Comptroller Employer SERS Rate (i.e., 67.4%) to a hypothetical market rate (i.e., 35.0%) to discern the amount the Green Bank overpays for such benefits causing increased pressure on organizational sustainability.

The key observation from Q2 of FY23 is that the Green Bank paid the State of Connecticut \$1.3 million more than it would have paid in a competitive environment for pension and healthcare benefits for its employees. This additional payment slows down progress of the Green Bank towards organizational sustainability.

Conclusion

For those interested in further details beyond the “Abridged” version of the Q2 of FY23 financial package, see the “Comprehensive” version attached.

⁸ December 15, 2017 BOD meeting – [click here](#)



Connecticut Green Bank

December 2022 Quarterly Financial Package
(Abridged)

Connecticut Green Bank
December 2022 Financial Package

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Connecticut Green Bank

Making an Impact

Board Member Dashboard

So that you can best articulate our ongoing impact to the Green Bank's stakeholders, we have created the below linked dashboards that show the organization's impact to your community or is most relevant to your appointer.

<https://www.ctgreenbank.com/boardimpact/>

CONNECTICUT GREEN BANK

Welcome to the Connecticut Green Bank KPI (Key Performance Indicator)
This dashboard shows our impact in various geographical areas.

Click to Navigate to a Page

Home
State of CT
Council of Governments (COG)
Adrienne Farrar Houel - Bridgeport
Binu Chandy - State of CT
Brenda Watson - Bloomfield
Brenda Watson - House District 1
Dominick Grant - Middlefield
Joanna Wozniak-Brown - State of CT
John Harrity - East Hartland
Laura Hoydick - Stratford
Laura Hoydick - House District 86
Lonnie Reed - Branford
Matt Ranelli - New Haven
Matt Ranelli - Senate District 11
Sarah Sanders - State of CT
Tom Flynn - Fairfield
Tom Flynn - Senate District 21
Vickie Hackett - State of CT

HOME SOLUTIONS

BUILDING SOLUTIONS

INVESTMENT SOLUTIONS

CONTRACTOR SOLUTIONS

Microsoft Power BI

1 of 19

63%

When you access the site, you will see the different dashboards on the righthand side. Please click on the one you wish to view. The dashboards default to our performance and impact since inception but you may filter them by calendar or fiscal year in the top right. The top has a summary statement of the performance and impact for that geographic area. The bottom tables are further cross sections of this performance for vulnerable communities, Community Reinvestment Act Eligible Projects, and projects in Distressed Communities.

As this is our launch of these dashboards, we welcome your feedback on how they can be improved.

Please forward me your feedback and suggestions at eric.shrago@ctgreenbank.com.

CGB-Primary Government Mobilizing Private Investment Balance Sheet

		CGB-Primary Government As of 12/31/2022	CGB-Primary Government As of 06/30/2022	CGB-Primary Government YTD \$ Change
Assets				
Current Assets				
Cash and Cash Equivalents (1)	{a}	47,017,036	50,243,875	(3,226,839)
Due From Component Units (SL2/SL3/CSS)	{b}	51,943,792	47,802,865	4,140,927
Other Current Assets	{c}	10,316,471	12,816,164	(2,499,693)
Total Current Assets		109,277,299	110,862,904	(1,585,605)
Noncurrent Assets				
Program Loans/Notes Receivable and Other Investments	{d}	100,036,608	98,385,642	1,650,966
Capital Assets, net	{e}	15,698,098	16,028,071	(329,973)
Restricted Assets (1)	{f}	17,377,509	17,002,056	375,453
Total Noncurrent Assets		133,112,215	131,415,769	1,696,446
Total Assets		242,389,514	242,278,673	110,841
Liabilities				
Current Liabilities				
	{g}	14,591,316	11,539,504	3,051,812
Noncurrent Liabilities				
Bonds Payable-SHREC ABS 1	{h}	20,627,892	31,615,390	(10,987,498)
Bonds Payable-Green Liberty Bonds	{i}	37,163,000	39,985,000	(2,822,000)
Total RSIP Bonds Payable		57,790,892	71,600,390	(13,809,498)
Bonds Payable-CREBs	{j}	9,272,525	9,966,229	(693,704)
Lease Liability	{k}	2,313,242	2,527,386	(214,144)
Pension & OPEB Liabilities	{l}	41,789,937	41,789,937	0
Total Noncurrent Liabilities		111,166,596	125,883,942	(14,717,346)
Total Liabilities		125,757,912	137,423,446	(11,665,534)
Deferred Inflows of Resources				
	{m}	3,506,823	3,506,823	0
Total Net Position		113,124,779	101,348,404	11,776,375

(1) The \$47.0M unrestricted balance at 12/31/2022 was mostly due to the issuance of two series of Special Capital Reserve Fund (SCRF) backed Green Liberty Bonds in FY21. The purpose of these issuances was to refinance expenditures of the Green Bank related to its Residential Solar Incentive Program (RSIP) per CGS 16-245ff. As of 12/31/22, unfunded and committed Solar PV incentives related to the RSIP program totaled approximately \$30.4M, to be paid to third parties over the next six fiscal years using the proceeds from these two bond issuances. Additionally, \$8.2M of RGGI funds are committed to Class 1 Renewable projects under the Regional Greenhouse Gas Initiative and not yet spent as of 12/31/22.

	Actual	Adj for RSIP/RGGI Commitments	Total
Cash - Unrestricted	\$ 47,017,036	\$ (38,600,000)	\$ 8,417,036
Cash - Restricted	17,377,509	38,600,000	55,977,509
Total Cash	\$ 64,394,545	\$ -	\$ 64,394,545

* Additionally, Pursuant to CGS 16-245n(h), the State cannot impair the Green Bank's rights or obligations contained in contracts it has with third parties unless the State otherwise makes the third party whole pursuant to the Green Bank's unique non-impairment clause. As such, please contact the Green Bank before any material funding reductions or sweeps to ensure this non-impairment clause is not triggered. This could impact the Green Bank's or the State's credit and bond rating, if applicable.

Appendix

- {a} Cash and Cash Equivalents includes all unrestricted cash accounts for the CT Green Bank and all entities included within the Primary Government for financial reporting purposes.
- {b} Due from Component Units represents the balance due to CGB's primary government through intercompany receivable accounts, the bulk of which relates to investment made in the CTSL2 and CTSL3 programs via CEFIA Solar Services Inc.
- {c} Other Current Assets are made up of Accounts Receivable, Utility Remittance Receivable, Interest Receivable, Other Receivables and Prepaid Expenses
- {d} Program Loans/Notes Receivable and Other Investments include the principal balances of all outstanding Program Loans, SBEA Notes, Solar Lease 1 Notes as well as some additional smaller investments made.
- {e} Capital Assets, net represent the cost of all capital assets that are owned by entities of the Primary Government, including Solar PV systems, furniture and equipment, leasehold improvements and computer hardware.
- {f} Restricted Assets includes all restricted cash accounts such as loan loss reserves, Special Capital Reserve Funds (SCRFs) related to the bonds outstanding and other contractually restricted cash accounts
- {g} Current Liabilities includes accounts payable and accrued expenses (including accrued incentives), accrued interest, and custodial liabilities
- {h} SHREC ABS 1 Bonds Payable represent the outstanding principal remaining on \$38.6M in bonds issued in March 2019. These bonds were collateralized by revenue from sales of SHRECs for two tranches of approx. 14,000 residential Solar PV systems to two CT utilities. These mature in 2033.
- {i} Green Liberty bonds represent the outstanding principal remaining on the \$16.8M Series 2020 and \$24.8M Series 2021 Green Liberty Bonds, collateralized by revenues from sales of SHRECs related to Tranche 3 (Series 2020) and Tranche 4 (Series 2021). These mature in 2037.
- {j} Bonds Payable- CREBs are two separate Clean Energy Renewable Energy bonds issued in February 2017 for just under \$3.0M (Meriden Hydro project) and December 2017 for \$9.1M (CSCUs project). These mature in 2038.
- {k} Lease liability represents the amount owed on the two leases of office space (Hartford & Stamford). The amount is determined per GASB 87, which included a present value of payments expected to be made during the lease term at the onset of the lease (both of which include 10.5 year terms beginning in Fiscal year 2021).
- {l} Pension and OPEB Liabilities represent the actuarially determined Pension and OPEB liabilities allocated to the CT Green Bank out of the SERS retirement plans. This number is uncontrollable by the Green Bank, with the amount to be booked provided by the actuarial valuation on an annual basis.
- {m} Deferred inflows of resources are a governmental accounting function which represents an acquisition of net position that applies to future periods and will not be recognized until that time. Amounts included here are functions of the Pension and OPEB actuarial valuations and are updated on an annual basis.

**CGB-Primary Government
Achieving Sustainability
Organizational P&L**

Consolidated 7/1/2022 Through 12/31/2022					
		Actual	Budget	Variance	Prior Year Actual Variance
Total Revenues					
Public Revenues	{a}	16,750,044	16,740,001	10,043	18,470,854 (1,720,810)
Earned Revenues	{b}	11,409,362	10,393,832	1,015,530	10,382,396 1,026,966
Total Revenues		28,159,406	27,133,833	1,025,573	28,853,250 (693,844)
Total Operating Expenses					
Personnel Related Operating Expenses	{c}	5,413,005	6,352,737	(939,732)	4,918,672 494,333
Non-Personnel Related Operating Expenses	{d}	5,020,275	6,570,970	(1,550,695)	4,532,918 487,357
Total Operating Expenses		10,433,280	12,923,707	(2,490,427)	9,451,590 981,690
Margin (\$) - All Revenues		17,726,126	14,210,126		19,401,660
Margin (%) - All Revenues		62.9%	52.4%		67.2%
 Margin (\$) - Pre Public Revenues		 976,082	 (2,529,875)		 930,806
Margin (%) - Pre Public Revenues		3.5%	-9.3%		3.2%
 Total Non-Operating Expenses					
Program Incentives and Grants	{e}	3,731,575	4,099,958	(368,383)	8,655,804 (4,924,229)
Non-Operating Expenses	{f}	2,218,175	2,896,908	(678,733)	2,772,090 (553,915)
Total Non-Operating Expenses		5,949,750	6,996,866	(1,047,116)	11,427,894 (5,478,144)
Total Expenses		16,383,030	19,920,573	(3,537,543)	20,879,484 (4,496,454)
Net Margin (\$) - All Revenues (*)		11,776,376	7,213,260	4,563,116	7,973,766 3,802,610
Net Margin (%) - All Revenues		41.8%	26.6%		27.6%

* Net Margin represents the Operating Results of the Green Bank before impact of State Pension and OPEB allocation of costs based on the annual actuarial valuation performed of the benefit plans. As such, the benefit/expense related to these actuarial determined amounts are not included in this presentation. See Detailed Quarterly and Annual ACFR for more details on these amounts.

Appendix

- {a} Public Revenues include system benefit charges from electric ratepayers and RGGI allowance proceeds.
- {b} Earned Revenues include interest income, REC sales, PPA income and other revenues earned by the Primary Government.
- {c} Personnel Related Operating Expenses include Salaries, benefits and payroll taxes.
- {d} Non-Personnel Related Operating Expenses include all other operating expenses not related to personnel, including O&M, tech support costs, IPC human capital, marketing, consulting, rent, insurance, IT and other office expenses.
- {e} Program Incentives and Grants are included in Non-Operating Expenses, and relate mostly to PBI & EPBB incentives paid out.
- {f} Non-Operating Expenses include Interest expense (mostly on bonds), loan loss reserve expense, and Interest Rate Buydowns using ARRA funds.

Connecticut Green Bank
Monitoring State Benefit Allocation
December 31, 2022

	FYTD 12/31/22 Actual	FYE 6/30/22 Actual	FYE 6/30/21 Actual	FYE 6/30/20 Actual	FYE 6/30/19 Actual	FYE 6/30/18 Actual
Compensation:	\$ 2,867,229	\$ 4,813,293	\$ 4,476,214	\$ 3,931,596	\$ 4,204,855	\$ 5,154,021
Employee Benefits:						
State Retirement Plan Contributions	\$ 1,961,015	\$ 3,317,054	\$ 2,903,780	\$ 2,411,864	\$ 2,869,823	\$ 3,013,747
Medical Dental Rx Premiums	375,330	610,627	625,480	553,908	545,779	678,633
Total Employee Benefits	2,336,345	3,927,681	3,529,260	2,965,772	3,415,602	3,692,380
Total Compensation and Benefits	\$ 5,203,574	\$ 8,740,974	\$ 8,005,474	\$ 6,897,368	\$ 7,620,457	\$ 8,846,401
* Retirement Plan Contributions as a % of Salary	68.39%	68.91%	64.87%	61.35%	68.25%	58.47%
Medical Dental Rx Premiums as a % of Salary	13.09%	12.69%	13.97%	14.09%	12.98%	13.17%
Total Benefits and Taxes as a % of Salary	81.48%	81.60%	78.84%	75.43%	81.23%	71.64%
*** State of CT Comptroller Employer SERS Rate	67.40%	65.90%	64.14%	59.99%	64.30%	56.58%

* Retirement Plan Contributions include Pension & OPEB, included Employer contributions to the Tier IV Defined Contribution for associated employees in that plan.

** OPEB began in the year ended 6/30/18.

*** State of CT Comptroller Employer SERS Rate provided via the annual "Fringe Benefit Recover Rate" memo issued 7/1 of each year by the State Comptroller.

Total Benefits Cost @ Hypothetical Benefits Rate	35%	1,003,530	1,684,653	1,566,675	1,376,059	1,471,699	1,803,907
Actual Total Compensation and Benefits		5,203,574	8,740,974	8,005,474	6,897,368	7,620,457	8,846,401
Less Total Compensation and Benefits @ Hypothetical Rate		(3,870,759)	(6,497,946)	(6,042,889)	(5,307,655)	(5,676,554)	(6,957,928)
Incremental HR cost due to State Benefits Charge		1,332,814	2,243,028	1,962,585	1,589,713	1,943,903	1,888,473



Connecticut Green Bank

December 2022 Quarterly Financial Package
(Comprehensive)

Connecticut Green Bank
December 2022 Financial Package
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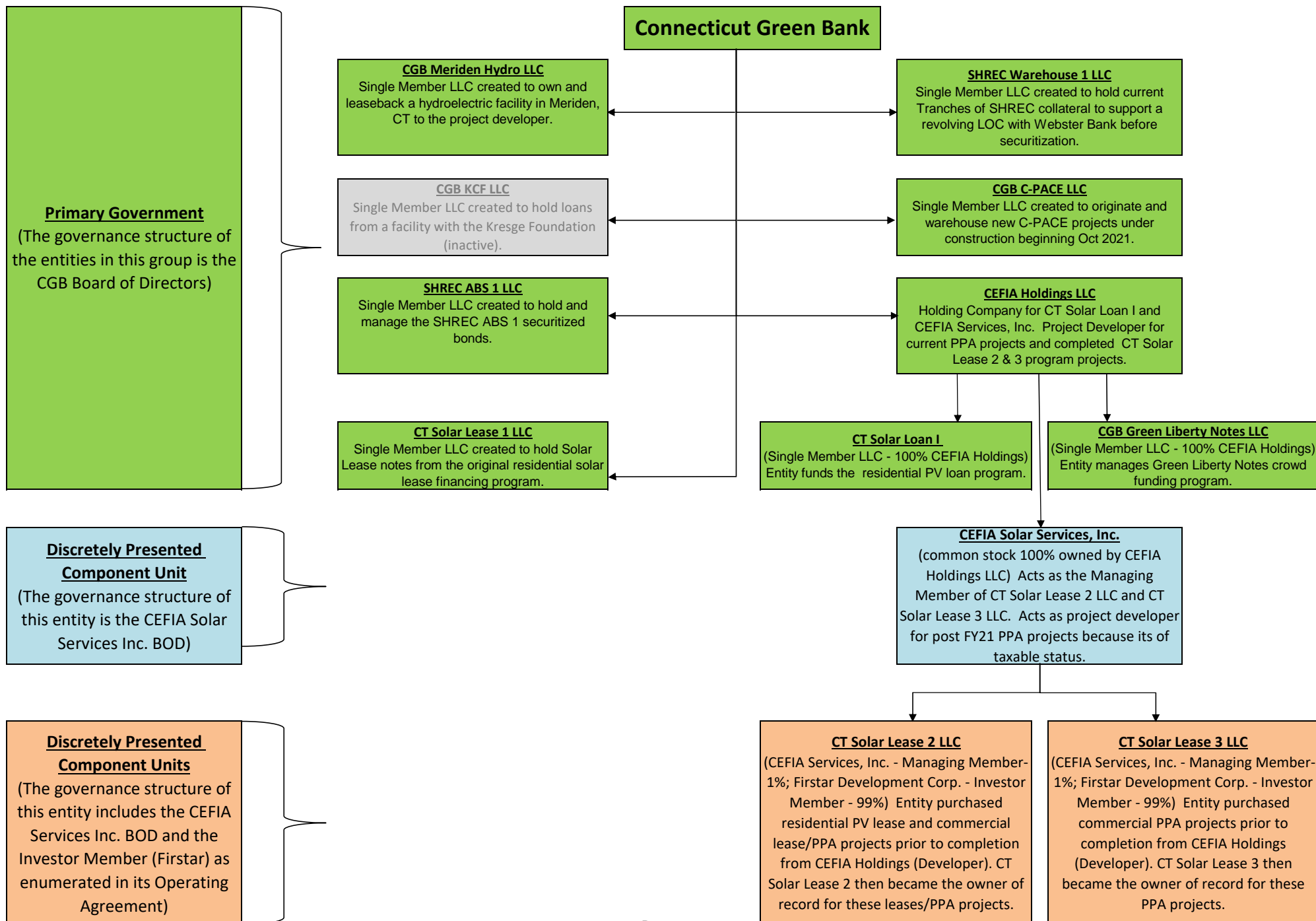
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The Connecticut Green Bank and its Component Units (as of 12/31/2022)

See the Annual Comprehensive Financial Report of the Connecticut Green Bank for more details.



Connecticut Green Bank
Executive Summary
December 2022

Overview

This financial package contains financial information for the Connecticut Green Bank (CGB) for Fiscal Year ending June 30, 2023 through December 31, 2022 with comparisons to June 30, 2022 for balance sheet, comparisons to the same period ended December 31, 2021 for the statement of revenue and expenditures, and versus Budget for the Statement of Revenue and Expenditures. Schedules of comp and benefits, unfunded commitments, loan guarantees, and program loans, notes and loan loss reserves are also presented. See Consolidated Balance Sheet, Consolidated Statement of Revenues and Expenditures and Consolidated Statement of Cash Flows for more details on the entities that make up the Primary Government for purposes of this Reporting.

Balance Sheet - Primary Government

- ✓ CGB's current assets decreased by \$17.4M compared to June 2022, which is mostly due to a function of timing of reporting current portions of loans/notes receivable (done for ACFR purposes annually at fiscal year end). Taking out the \$11.7M decrease in current assets related to this, the remaining current assets decreased \$5.7M in the first two quarters of FY23. This is due mostly to cash and cash equivalents decreasing \$3.2M. The cash decrease is mostly due to an approx. \$14.5M repayment of the long term debt in the period being offset by income of \$11.8M. Noncurrent assets increased \$17.5M compared to June 30, 2022, due in part to the aforementioned reclassification of \$11.7M done for fiscal year end, as well as a \$4.1M increase in due from component units due to funds transferred to SL2 and CSS during the period. As of December 31, 2022, 83.5% of accounts receivable is aged 30 days or lower, with only 1.1% of accounts receivable aged 90+ days - showing no significant collectability issues on accounts receivable. Utility Remittance receivables are all aged under 30 days, and Other Receivables represent disbursements made for development of projects and don't have specific aging/invoice due dates at any given time.
- ✓ Liabilities have decreased \$11.7M compared to June 30, 2022, mostly attributable to approx. \$14.5M of payments made on Long-Term debt in the first two quarters of FY23.
- ✓ Net Position for the Primary Government has increased \$11.8M due to the fiscal year's income as seen on Statement of Revenues and Expenditures below.

Statement of Revenues and Expenditures vs. Prior Year - Primary Government

Change in Net Position for the first two quarters of FY23 was approximately \$11.8M of Income.

- ✓ Operating Revenues decreased \$1.3M from the same period of the prior year and Operating expenses decreased \$4.3M from the same period of the prior year, resulting in Operating income increasing \$3.0M from the same period of the prior year. The revenue decrease is mostly due to the \$1.7M decrease in RGGI auction proceeds compared to the same two quarters of the prior year, due the December auction hitting a calendar year ratepayer relief threshold built into Section 22a-174-31(j)(3) of the Regulations of Connecticut State Agencies in 2022 limiting the amount of RGGI proceeds received by the Green Bank by \$2M lower for that auction.
- ✓ Offsetting the RGGI Auction Proceeds, operating revenues had an increase of \$0.6M in REC sales revenue compared to the same two quarters of the prior year.
- ✓ Operating Expenses had decreases of \$5.5M in grants and incentive payments (due to substantially lower PBI and EPBB incentives paid in FY23 due to adjustments made to actual as well as systems in the RSIP program being fully paid their PBIs), partially offset by increases of \$0.7M in G&A expenses and \$0.4M of program administration expenses compared to the same period of the prior year.
- ✓ Nonoperating Revenues (expenses) showed a decrease in expenses of \$0.8M compared to the same period of the prior year mostly due to interest income increasing \$0.6M from the same two quarters of the prior fiscal year and interest expense decreasing approx. \$0.2M compared to the same period of the prior year.

Statement of Revenues and Expenditures vs. Budget - Primary Government

Fiscal Year to Date Net Revenues Over Expenses of \$11.8M was \$4.6M better than budget (which has been adjusted for the FY23 recast budget approved by the Board on January 20, 2023).

- ✓ Revenues were \$1.0M higher than budget mostly due to \$0.6M higher interest income than budget.
- ✓ Operating Expenses were \$2.5M below budget mostly due to \$1.5M lower program development and administration expenses, \$0.9M lower compensation and benefits. See breakout of budget to actual for financing programs, incentive programs and environmental infrastructure programs for more details.
- ✓ EPBB/PBI incentives paid out were approx. \$0.4M lower than the recast budget for the fiscal year due to PBIs falling \$0.3M lower than budget for the period.
- ✓ Non-operating expenses were approximately \$0.7M under budget, driven mostly by ARRA Interest Rate Buydowns being paid below budget year to date by \$0.4M.

Unfunded Commitments

CGB has a total of \$91.9M in unfunded commitments at December 31, 2022, an increase of \$10.6M from June 30, 2022. The increase is seen mostly in an decreased commitment to the multifamily/LMI solar PV/EE group and the CPACE group due to several large projects being approved at Board Meetings in October and December 2022 without being funded yet.

CGB-Primary Government Balance Sheet

	CGB-Primary Government 12/31/2022	CGB-Primary Government 6/30/2022	CGB-Primary Government \$ Change
Assets			
Current Assets			
Cash and Cash Equivalents	47,017,036	50,243,875	(3,226,839)
Accounts Receivable	1,543,524	4,072,651	(2,529,127)
Utility Remittance Receivable	2,065,643	2,041,786	23,857
Interest Receivable	1,419,560	1,167,400	252,160
Other Receivables	4,286,490	4,398,795	(112,305)
Prepaid Expenses and Other Assets	1,001,254	1,135,532	(134,278)
Current Portion of Solar Lease Notes	0	1,016,267	(1,016,267)
Current Portion of SBEA Promissory Notes	0	1,129,900	(1,129,900)
Current Portion of Program Loans, Net of Reserves	0	9,547,825	(9,547,825)
Total Current Assets	57,333,507	74,754,031	(17,420,524)
Noncurrent Assets			
Restricted Assets	17,377,509	17,002,056	375,453
Investments	912,217	912,218	(1)
Program Loans, net of reserves	93,081,394	82,287,432	10,793,962
Solar Lease I Promissory Notes, net of reserves	2,502,144	1,987,394	514,750
Renewable Energy Certificates	229,019	229,019	0
SBEA Promissory Notes, net of reserves	3,311,734	1,275,487	2,036,247
Due From Component Units	51,943,792	47,802,865	4,140,927
Investment in Component Units	100	100	0
Capital Assets, net	15,698,098	16,028,071	(329,973)
Total Noncurrent Assets	185,056,007	167,524,642	17,531,365
Total Assets	242,389,514	242,278,673	110,841
Deferred Outflows of Resources			
Deferred Amount for Pensions	6,439,478	6,439,478	0
Deferred Amount for OPEB	5,172,871	5,172,871	0
Total Deferred Outflows of Resources	\$ 11,612,349	\$ 11,612,349	\$ 0
Liabilities			
Current Liabilities			
Accounts Payable	814,745	592,637	222,108
Accrued Payroll and Related Liabilities	1,296,862	1,296,862	0
Accrued Expenses	8,735,078	7,838,819	896,259
Notes Payable- Green Liberty Notes	804,735	304,735	500,000
Current Maturities of Long-Term Debt	214,143	15,450,938	(15,236,795)
Custodial Liability	1,212,186	1,386,450	(174,264)
Deferred Revenue	110,140	0	110,140
Total Current Liabilities	13,187,889	26,870,441	(13,682,552)
Noncurrent Liabilities			
Due to Component Units	1,403,427	120,000	1,283,427
Bonds Payable-SHREC ABS 1	20,627,892	19,894,301	733,591
Bonds Payable-CREBs	9,272,525	9,272,525	0
Bonds Payable-Green Liberty Bonds	37,163,000	37,163,000	0
Lease Liability, less current maturities	2,313,242	2,313,242	0
Pension Liability	21,273,373	21,273,373	0
OPEB Liability	20,516,564	20,516,564	0
Total Noncurrent Liabilities	112,570,023	110,553,005	2,017,018
Total Liabilities	125,757,912	137,423,446	(11,665,534)
Deferred Inflows of Resources			
Deferred Pension Inflow Liability	5,424,891	5,424,891	0
Deferred OPEB Inflow Liability	9,694,281	9,694,281	0
Total Deferred Inflows of Resources	15,119,172	15,119,172	0
Net Position			
Net Investment in Capital Assets	15,698,097	16,028,071	(329,974)
Restricted-Energy Programs	17,377,508	17,002,056	375,452
Unrestricted Net Position	80,049,174	68,318,277	11,730,897
Total Net Position	113,124,779	101,348,404	11,776,375

CGB-Primary Government Statement of Revenues and Expenditures

	CGB-Primary Government Fiscal YTD 12/31/2022	CGB-Primary Government Fiscal YTD 12/31/2021	CGB-Primary Government \$ Change
Change in Net Position			
Operating Income (Loss)			
Operating Revenues			
Utility Remittances	13,039,756	12,999,805	39,951
Interest Income-Promissory Notes	3,266,935	3,293,699	(26,764)
RGGI Auction Proceeds	3,710,289	5,471,049	(1,760,760)
Energy System Sales	335,622	451,093	(115,471)
REC Sales	6,793,320	6,182,917	610,403
Other Income	437,751	477,445	(39,694)
Total Operating Revenues	27,583,673	28,876,008	(1,292,335)
Operating Expenses			
Cost of Goods Sold-Energy Systems	335,623	451,092	(115,469)
Provision for Loan Losses	854,441	684,732	169,709
Grants and Incentive Payments	3,894,420	9,358,612	(5,464,192)
Program Administration Expenses	7,490,894	7,071,139	419,755
General and Administrative Expenses	2,720,778	2,023,592	697,186
Total Operating Expenses	15,296,156	19,589,167	(4,293,011)
Operating Income (Loss)	12,287,517	9,286,841	3,000,676
Nonoperating Revenue (Expenses)			
Interest Income-Short Term Cash Deposits	591,372	22,456	568,916
Interest Income-Component Units	35,887	35,018	869
Interest Expense-ST Debt	(5,833)	(1,048)	(4,785)
Interest Expense-LT Debt	(1,126,553)	(1,356,308)	229,755
Debt Issuance Costs	(5,000)	(11,000)	6,000
Net chance in fair value of investments	(1,014)	(2,193)	1,179
Total Nonoperating Revenue (Expenses)	(511,141)	(1,313,075)	801,934
Change in Net Position	11,776,376	7,973,766	3,802,610

**CT Green Bank Primary Government
Budget to Actual Financial Analysis
December 2022**

	CGB Primary Government 07/01/2022 Through 12/31/2022			Incentive Programs 07/01/2022 Through 12/31/2022			Financing Programs 07/01/2022 Through 12/31/2022			Environmental Infrastructure 07/01/2022 Through 12/31/2022		
	Actual	Budget	Variance	Actual	Budget	Variance	Actual	Budget	Variance	Actual	Budget	Variance
Revenue												
Operating Income												
Utility Customer Assessments	13,039,756	13,029,713	10,044	0	0	0	13,039,756	13,029,713	10,044	0	0	0
RGGI Auction Proceeds-Renewables	3,710,288	3,710,288	0	0	0	0	3,710,288	3,710,288	0	0	0	0
CPACE Closing Fees	18,785	61,500	(42,716)	0	0	0	18,785	61,500	(42,716)	0	0	0
REC Sales	6,550,189	6,582,959	(32,770)	6,550,189	6,582,959	(32,770)	0	0	0	0	0	0
Sales of Energy Systems	335,623	0	335,623	0	0	0	335,623	0	335,623	0	0	0
Grant Income-Federal Programs	1,309	20,000	(18,691)	0	0	0	1,309	20,000	(18,691)	0	0	0
PPA Income	261,193	250,924	10,269	0	0	0	261,193	250,924	10,269	0	0	0
LREC/ZREC Income	243,131	161,016	82,115	0	0	0	243,131	161,016	82,115	0	0	0
Total Operating Income	24,160,274	23,816,400	343,874	6,550,189	6,582,959	(32,770)	17,610,085	17,233,441	376,644	0	0	0
Interest Income	3,535,042	3,181,380	353,663	129,723	28,500	101,223	3,405,319	3,152,880	252,440	0	0	0
Interest Income, Capitalized	299,323	24,000	275,322	0	0	0	299,323	24,000	275,322	0	0	0
Other Income	156,464	112,053	44,412	14,787	0	14,787	141,677	112,053	29,625	0	0	0
Total Revenue	\$ 28,151,103	\$ 27,133,833	\$ 1,017,271	\$ 6,694,699	\$ 6,611,459	\$ 83,240	\$ 21,456,404	\$ 20,522,374	\$ 934,031	\$ 0	\$ 0	\$ 0
Operating Expenses												
Compensation and Benefits	5,413,005	6,352,737	(939,733)	1,506,870	1,808,859	(301,988)	3,777,389	4,211,716	(434,327)	128,745	332,163	(203,418)
Program Development & Administration	1,452,687	2,993,419	(1,540,731)	1,024,496	1,904,511	(880,016)	337,027	888,907	(551,881)	91,165	200,000	(108,835)
Cost of Sales Energy Systems	335,623	0	335,623	0	0	0	335,623	0	335,623	0	0	0
Lease Origination Services	1,380	2,000	(620)	0	0	0	1,380	2,000	(620)	0	0	0
Marketing Expense	642,646	698,253	(55,607)	262,881	231,516	31,365	379,765	466,737	(86,972)	0	0	0
E M & V	317,012	481,500	(164,488)	270,927	391,500	(120,573)	46,085	90,000	(43,914)	0	0	0
Research and Development	332,074	100,000	232,073	(6,450)	0	(6,450)	338,523	50,000	288,523	0	50,000	(50,000)
Consulting and Professional Fees	655,173	883,450	(228,276)	143,725	290,050	(146,325)	469,449	593,400	(123,952)	42,000	0	42,000
Rent and Location Related Expenses	511,003	519,215	(8,212)	71,566	75,947	(4,381)	433,159	429,366	3,794	6,278	13,902	(7,625)
Office, Computer & Other Expenses	772,677	893,133	(120,456)	352,072	256,602	95,470	413,060	616,651	(203,591)	7,545	19,880	(12,334)
Total Operating Expenses	10,433,280	12,923,707	(2,490,427)	3,626,087	4,958,985	(1,332,898)	6,531,460	7,348,777	(817,317)	275,733	615,945	(340,212)
Program Incentives and Grants	\$ 3,731,575	\$ 4,099,958	\$ (368,383)	\$ 3,630,925	\$ 3,979,958	\$ (349,033)	\$ 100,650	\$ 120,000	\$ (19,350)	\$ 0	\$ 0	\$ 0
Operating Income/(Loss)	\$ 13,986,248	\$ 10,110,167	\$ 3,876,081	\$ (562,314)	\$ (2,327,484)	\$ 1,765,170	\$ 14,824,294	\$ 13,053,596	\$ 1,770,698	\$ (275,733)	\$ (615,945)	\$ 340,212
Non-Operating Expenses	\$ 2,218,175	\$ 2,896,908	\$ (678,733)	\$ 1,230,344	\$ 1,820,699	\$ (590,355)	\$ 987,831	\$ 1,076,210	\$ (88,378)	\$ 0	\$ 0	\$ 0
Net Revenues Over (Under) Expenses	\$ 11,776,376	\$ 7,213,259	\$ 4,563,117	\$ (1,792,658)	\$ (4,148,183)	\$ 2,355,525	\$ 13,844,766	\$ 11,977,387	\$ 1,867,379	\$ (275,733)	\$ (615,945)	\$ 340,212

**Connecticut Green Bank
December 2022 Financial Package
Analysis of Compensation and Benefits**

	FY 2023 YTD		Budget Variance	FY 2022 YTD	Prior Year
	Actual	Budget		Actual	Variance
<u>Compensation:</u>					
Full Time Employees	\$ 2,793,982	\$ 3,286,673	\$ (492,692)	\$ 2,579,609	\$ 214,373
Interns	61,382	100,380	(38,998)	9,800	51,582
Temporary Employees	-	-	-	-	-
Overtime	11,866	-	11,866	10,795	1,070
Total Compensation	\$ 2,867,229	\$ 3,387,053	\$ (519,824)	\$ 2,600,204	\$ 267,025
<u>Employee Benefits:</u>					
State Retirement Plan Contributions	\$ 1,961,015			\$ 1,781,206	\$ 179,809
Medical Dental Rx Premiums	375,330			349,147	26,182
Payroll and Unemployment Taxes	192,766			174,242	18,523
Life, Disability & WC Premiums	16,665			13,872	2,793
Total Employee Benefits	2,545,775	2,965,684	(419,909)	2,318,468	227,307
Total Compensation and Benefits	\$ 5,413,005	\$ 6,352,738	\$ (939,733)	\$ 4,918,672	\$ 494,333
Benefits and Taxes as a % of Salary	88.79%	87.56%		89.16%	

Actual vs. Budget

Total Employee compensation and benefit costs were \$940k under budget. Full time employee costs are \$493k under budget mostly due to \$343k of open positions, \$95k in positive variances due to timing of budgeted COLA and merit increases being earlier than actual, and \$53k of timing difference and end times of employees joining and leaving the Green Bank compared to budget. Additionally, Interns were \$39k under budget due to only 5 sum being hired compared to 7 budgeted positions being available in the summer of 2022. Benefits and Taxes are approx. \$420k less than budget due to favorable employee compensation variances previously noted. Additionally, Actual benefits and taxes were 88.79%, slightly higher than a budgeted 8 compensation for the period to date.

Actual vs. Prior Year

Compensation costs increased \$267k and benefit costs increased \$227k, respectively over the same period of the prior year. The Compensation increase was due to the 5% Cost-of-Living Adjustment (COLA) each employee received effective 7/1/22, as well as the addition of seven new employees joining the Green Bank by two departing employees to date in FY23. The Benefit increase is mostly in-line with the increase in total compensation for the reasons previously noted. Benefit percentages decreased over the prior period from 89.2% to 88.8% of employee compensation. Additionally, actual contributions to the State retirement plan increased from 69.0% to 70.2% of full time employee compensation, year over year.

For detailed staffing, please refer to FY23 Budget.

**Connecticut Green Bank
December 2022 Financial Package
Historical Analysis of Compensation and Benefits**

	FYTD 12/31/22	FYE 6/30/22	FYE 6/30/21	FYE 6/30/20	FYE 6/30/19	FYE 6/30/18
	YTD Actual	Actual	Actual	Actual	Actual	Actual
Compensation:						
Full Time Employees	\$ 2,867,229	\$ 4,813,293	\$ 4,476,214	\$ 3,929,354	\$ 4,195,593	\$ 5,136,066
Temporary Employees	-	-	-	2,242	9,262	17,955
Total Compensation	\$ 2,867,229	\$ 4,813,293	\$ 4,476,214	\$ 3,931,596	\$ 4,204,855	\$ 5,154,021
Employee Benefits:						
State Retirement Plan Contributions	\$ 1,961,015	\$ 3,317,054	\$ 2,903,780	\$ 2,411,864	\$ 2,869,823	\$ 3,013,747
Medical Dental Rx Premiums	375,330	610,627	625,480	553,908	545,779	678,633
Payroll and Unemployment Taxes	192,766	353,405	305,032	269,295	306,091	347,070
Life, Disability & WC Premiums	16,665	28,223	23,840	27,567	46,944	102,225
Total Employee Benefits	2,545,775	4,309,308	3,858,132	3,262,634	3,768,636	4,141,675
Total Compensation and Benefits	\$ 5,413,005	\$ 9,122,602	\$ 8,334,346	\$ 7,194,230	\$ 7,973,491	\$ 9,295,696
Medical Dental Rx Premiums as a % of Salary	13.09%	12.69%	13.97%	14.09%	12.98%	13.17%
* Retirement Plan Contributions as a % of Salary	68.39%	68.91%	64.87%	61.35%	68.25%	58.47%
Total Benefits and Taxes as a % of Salary	88.79%	89.53%	86.19%	82.98%	89.63%	80.36%
*** State of CT Comptroller Employer SERS Rate	67.40%	65.90%	64.14%	59.99%	64.30%	56.58%
* Retirement Plan Contributions include Pension & OPEB, included Employer contributions to the Tier IV Defined Contribution for employees in that plan.						
** OPEB began in the year ended 6/30/18.						
*** State of CT Comptroller Employer SERS Rate provided via the annual "Fringe Benefit Recover Rate" memo issued 7/1 of each year by the State Comptroller.						
Total Benefits Cost @ Hypothetical Benefits Rate	35%	1,003,530	1,684,653	1,566,675	1,376,059	1,471,699
Actual Total Compensation and Benefits		5,413,005	9,122,602	8,334,346	7,194,230	9,295,696
Less Total Compensation and Benefits @ Hypothetical Rate		(3,870,759)	(6,497,946)	(6,042,889)	(5,307,655)	(6,957,928)
Incremental HR cost due to State Benefits Charge		1,542,245	2,624,656	2,291,457	1,886,575	2,296,937
						2,337,768

Analysis:

As noted above, the cost of benefits per employee has been in excess of 80% of salary for every year since FYE 6/30/18, with retirement plan contributions making up 58-69% of the cost of total benefits in each of these years. It is noted that the medical/dental/Rx costs have remained fairly consistent over the period presented above (approx. 12-14%). The main driver of the benefits rate is the State of CT Comptroller Employer SERS rate that is a tool the state uses to allocate expenses accross all SERS employees. The allocation is done only based on salary of the employees, regardless of the demographic information or tier level of the benefit plans that each employee is eligible for. The Green Bank has a fairly young staff, with 15 Tier 3 and 24 Tier IV employees of the total 47 full-time employees of the Green Bank at 12/31/22 (where Tier III and Tier IV are lower cost pension arrangements than Tier IIa and Tier II where the Green Bank only has 10 employees). This rate is a cost of doing business to the Green Bank as a quasi-public agency of the state, and management of the Green Bank has no control to manage this rate provided to us. Due to the demographics of our staff, we also believe the rate charged to the Green Bank based on its broad allocation to not be representative of the Tier of employees, where the Green Bank would likely pay a lower rate than what is being charged if employee demographic information as it relates to what Tier SERS plan they are enrolled in was used in the allocation. As further noted above, if we were to apply a standard 35% benefits rate to our salaries over the time period presented, we would save approx. **\$2 - 2.5M per year.**

Connecticut Green Bank
Summary of Unfunded Commitments
As of December 31, 2022

(In thousands)

	EPBB	PBI	PBI-Solar	CPACE	Non CPACE	All Projects		
	Balance	Balance	Lease 2	Loans	Loans	Balance	Balance	Increase /
	12/31/2022	12/31/2022	Balance	Balance	Balance	12/31/2022	6/30/2022	(Decrease)
Solar - SHREC Eligible	1,699	20,623	0	0	0	22,322	26,324	(4,002)
Solar - Not SHREC Eligible	5	62	0	0	0	67	1,368	(1,301)
CPACE	0	0	0	8,830	0	8,830	1,783	7,047
Multifamily/LMI Solar PV & EE	0	0	0	0	27,871	27,871	16,087	11,784
SBEA	0	0	0	0	17,692	17,692	17,480	212
Solar PPAs/IPC	0	0	0	0	9,802	9,802	12,989	(3,187)
Fuel Cells	0	0	0	0	5,000	5,000	5,000	0
Hydropower	0	0	0	0	330	330	330	0
Total Unfunded Commitments	\$ 1,704	\$ 20,685	\$ 0	\$ 8,830	\$ 60,695	\$ 91,914	\$ 81,361	\$ 10,553

**Connecticut Green Bank
Summary of Loan Guarantees
As of December 31, 2022**

Guarantor	Issuer	Beneficiary	Relationship of guarantor to Issuer	Type of obligation guaranteed	Maximum amount of guaranty	Obligations guaranteed as of 12/31/2022	Obligations guaranteed as of 6/30/2022
CT Green Bank	Owners of multifamily dwellings in Connecticut	Housing Development Fund	Issuers participate in program administered by CGB and the Housing Development Fund to install energy upgrades in multifamily dwellings	Commercial and consumer loan products with various terms	\$ 5,000,000	\$ 3,475,269	\$ 3,448,384
CT Green Bank	New England Hydropower Company	Webster Bank	Issuer is the developer of hydropower project in Connecticut approved by the CGB Board of Directors.	Line of Credit	300,000	300,000	300,000
CEFIA Holdings LLC	CEFIA Solar Services Inc.	CHFA	Holdings is the sole shareholder of Services and an affiliate of CGB	Promissory Note for funds received from CHFA upon their issuance of Qualified Energy Conservation Bonds (QECBs) for State Sponsored Housing Projects (SSHP)	1,895,807	1,319,165	1,366,560
CT Green Bank	Canton Hydro, LLC	Provident Bank	Issuer is the developer of hydropower project in Connecticut approved by the CGB Board of Directors.	Unfunded guaranty not to exceed \$500,000, decreased to \$250,000 in December 2022.	500,000	250,000	500,000
					\$ 7,695,807	\$ 5,344,434	\$ 5,614,944

Connecticut Green Bank
Program Loans, Notes and Loan Loss Reserve Analysis
As of December 31, 2022

Legal Entity	Loan Program	Project	Loan Portfolio Balance 7/1/2022	FY23 YTD Investments	FY23 YTD Repayments	Loan Portfolio Balance As of December 31, 2022	Loan Loss Reserve Balance 7/1/2022	FY23 YTD Increase / Decrease to Reserve	Loan Loss Reserve Balance As of December 31, 2022	Reserve as a % of Portfolio Balance	Loan Portfolio Carrying Value As of December 31, 2022
CGB	CPACE Program	Various	\$ 52,649,614	\$ 374,222	\$ (3,580,420)	\$ 49,443,416	(5,264,961)	\$ (255,000)	\$ (5,519,961)	11.2%	\$ 43,923,455
CGB	Fuel Cell Projects	Fuel Cell Energy	3,715,899		(421,928)	3,293,972	(371,590)		(371,590)	11.3%	2,922,382
		FEC-Bridge Loan	1,800,000			1,800,000	(180,000)		(180,000)	10.0%	1,620,000
		FEC-Bridge Loan	3,000,000			3,000,000	(300,000)		(300,000)	10.0%	2,700,000
CGB	CHP Pilot	Bridgeport MicroGrid	403,910		(11,115)	392,795	(20,196)		(20,196)	5.1%	372,599
CGB	Anaerobic Digester	Quantum Biopower	1,253,925		(66,580)	1,187,345	(62,696)		(62,696)	5.3%	1,124,649
		Fort Hill Ag-Grid LLC	662,475		(27,165)	635,311	(33,124)		(33,124)	5.2%	602,187
CGB	Other Loans	Nu Power Thermal	427,000			427,000	(427,000)		(427,000)	100.0%	-
		Terrace Heights Condos	77,899		(17,079)	60,820	(7,790)		(7,790)	12.8%	53,030
CGB	Multifamily / Affordable Housing / Credit Challenged / LMI	Capital for Change	3,672,898		(100,297)	3,572,601	(367,290)		(367,290)	10.3%	3,205,311
		CEEFCo	2,656,000	400,000		3,056,000	(265,600)		(265,600)	8.7%	2,790,400
		Pre-Dev Loans	266,236		(15,391)	250,844	(53,247)		(53,247)	21.2%	197,597
		Posigen	10,849,941	3,718,503	(975,492)	13,592,952	(1,084,994)		(1,084,994)	8.0%	12,507,958
CGB	Energy Efficiency Financing	RENEW Energy Efficiency Bridgeport	108,675		(17,491)	91,184	(10,867)		(10,867)	11.9%	80,316
CGB	Alpha Program	Anchor Science	150,000			150,000	(75,000)		(75,000)	50.0%	75,000
CGB	Op Demo Program	New England Hydropower Co.	500,000			500,000	(499,999)		(499,999)	100.0%	1
CGB	Wind Financing	Wind Colebrook	1,474,232		(55,831)	1,418,402	(147,423)		(147,423)	10.4%	1,270,978
CGB	Hydro Projects	Canton Hydro	704,827			704,827	(35,241)		(35,241)	5.0%	669,586
CGB	Sunwealth Note	Sunwealth	846,941		(25,724)	821,217	(42,347)		(42,347)	5.2%	778,870
CGB	IPC Note Receivable	IPC	1,000,000		(150,000)	850,000	-		-	0.0%	850,000
CGB	Budderfly	Budderfly	5,014,583	90,377		5,104,960	(501,458)		(501,458)	9.8%	4,603,502
CGB	Budgeted LLR Adj (to be adjusted at fiscal year end)	Various	-	-	-	-	-	(747,592)	(747,592)	0.0%	(747,592)
CEFIA Holdings	Sunwealth Note	Sunwealth	761,915		(32,138)	729,776	(38,096)	(6,023)	(44,119)	6.0%	685,658
CEFIA Holdings	Skyview Notes	Skyview	6,197,860	1,345,900	(198,005)	7,345,755	(309,893)	125,024	(184,869)	2.5%	7,160,886
CEFIA Holdings	SBEA Loans	SBEA	54,147		(36,404)	17,743	-	-	-	0.0%	17,743
CEFIA Holdings	Inclusive Solar Manager	IPC	1,012,318	1,841,027	(11,908)	2,841,437	(20,246)	20,246	-	0.0%	2,841,437
CEFIA Holdings	Inclusive Solar Developer	IPC	445,169		(445,169)	-	(8,903)	8,903	-	0.0%	-
CT Solar Loan 1	Solar Loans	CT Solar Loan 1	865,378	-	(198,608)	666,770	(43,269)	-	(43,269)	6.5%	623,501
CT Solar Lease 1	Solar Lease Notes	CT Solar Lease 1	3,345,991	-	(501,518)	2,844,474	(342,330)	-	(342,330)	12.0%	2,502,144
CGB CPACE LLC	CPACE Program	Various	1,488,794	782,316	(101,427)	2,169,684	-	-	-	0.0%	2,169,684
CGB Green Liberty Notes LLC	SBEA Loans	SBEA	2,465,810	1,642,242	(561,431)	3,546,621	-	-	-	0.0%	3,546,621
Total:			\$ 107,872,438	\$ 10,194,587	\$ (7,551,120)	\$ 110,515,905	\$ (10,513,562)	\$ (854,441)	\$ (11,368,003)	10.3%	\$ 99,147,902
CGB:											
	CPACE Loans		\$ 52,649,614	\$ 374,222	\$ (3,580,420)	\$ 49,443,416	\$ (5,264,961)	\$ (255,000)	\$ (5,519,961)	11.2%	\$ 43,923,455
	Posigen		\$ 10,849,941	\$ 3,718,503	\$ (975,492)	\$ 13,592,952	\$ (1,084,994)	\$ -	\$ (1,084,994)	8.0%	\$ 12,507,958
	Sunwealth		\$ 846,941	\$ -	\$ (25,724)	\$ 821,217	\$ (42,347)	\$ -	\$ (42,347)	5.2%	\$ 778,870
	Program Loans		\$ 26,888,560	\$ 490,377	\$ (882,877)	\$ 26,496,061	\$ (3,358,522)	\$ (747,592)	\$ (4,106,114)	15.5%	\$ 22,389,947
	Total CGB:		\$ 91,235,056	\$ 4,583,101	\$ (5,464,512)	\$ 90,353,645	\$ (9,750,824)	\$ (1,002,592)	\$ (10,753,416)	11.9%	\$ 79,600,229
CEFIA Holdings			\$ 8,471,409	\$ 3,186,927	\$ (723,625)	\$ 10,934,711	\$ (377,138)	\$ 148,151	\$ (228,988)	2.1%	\$ 10,705,723
	CT Solar Loan 1		\$ 865,378	\$ -	\$ (198,608)	\$ 666,770	\$ (43,269)	\$ -	\$ (43,269)	6.5%	\$ 623,501
	CT Solar Lease 1		\$ 3,345,991	\$ -	\$ (501,518)	\$ 2,844,474	\$ (342,330)	\$ -	\$ (342,330)	12.0%	\$ 2,502,144
	CGB CPACE LLC		\$ 1,488,794	\$ 782,316	\$ (101,427)	\$ 2,169,684	\$ -	\$ -	\$ -	0.0%	\$ 2,169,684
	CGB Green Liberty Notes LLC		\$ 2,465,810	\$ 1,642,242	\$ (561,431)	\$ 3,546,621	\$ -	\$ -	\$ -	0.0%	\$ 3,546,621
											\$ 99,147,902

Connecticut Green Bank - Primary Government
Consolidated Balance Sheet
As of December 31, 2022

	Connecticut Green Bank As of 12/31/2022	GGB Meriden Hydro LLC As of 12/31/2022	GGB KCF LLC As of 12/31/2022	SHREC ABS 1 LLC As of 12/31/2022	SHREC Warehouse 1 LLC As of 12/31/2022	CT Solar Lease 1 LLC As of 12/31/2022	GGB C-PACE LLC As of 12/31/2022	CT Solar Loan 1 LLC As of 12/31/2022	CEFIA Holdings LLC As of 12/31/2022	GGB Green Liberty Notes LLC As of 12/31/2022	Eliminations As of 12/31/2022	GGB-Primary Government As of 12/31/2022
Assets												
Current Assets												
Cash and Cash Equivalents	39,474,540	33,523	-	2,535,532	171,235	-	219,454	1,831,792	782,296	1,968,664	-	47,017,036
Accounts Receivable	1,515,230	-	-	-	-	-	13,718	-	14,576	-	-	1,543,524
Utility Remittance Receivable	2,065,644	-	-	-	-	-	-	-	-	-	-	2,065,644
Interest Receivable	1,346,733	-	-	-	-	-	69,075	3,752	-	-	-	1,419,560
Other Receivables	31,908	-	-	-	-	82,364	-	95	4,172,122	-	-	4,286,490
Prepaid Expenses and Other Assets	228,178	37,847	-	17,333	-	-	-	-	717,897	-	-	1,001,255
Total Current Assets	44,662,232	71,370	-	2,552,865	171,235	82,364	302,247	1,835,639	5,686,891	1,968,664	-	57,333,507
Noncurrent Assets												
Restricted Assets												
Cash and Cash Equivalents	13,022,329	-	-	803,241	3,442,561	-	-	84,570	24,809	-	-	17,377,508
Investments	912,217	-	-	-	-	-	-	-	-	-	-	912,217
Program Loans, net of reserves	79,600,228	-	-	-	-	-	2,169,684	623,501	10,687,981	-	-	93,081,394
Solar Lease I Promissory Notes, net of reserves	-	-	-	-	-	2,502,144	-	-	-	-	-	2,502,144
Renewable Energy Certificates	229,019	-	-	-	-	-	-	-	-	-	-	229,019
SBEA Promissory Notes, net of reserves	-	-	-	-	-	-	-	-	17,094	3,294,639	-	3,311,734
Due From Component Units	71,961,524	-	-	25,663,204	3,784,455	-	-	-	8,959,126	-	(58,424,516)	51,943,793
Investment in Component Units	100,100	-	-	-	-	-	-	-	100	-	(100,100)	100
Capital Assets, net	11,960,460	3,737,638	-	-	-	-	-	-	-	-	-	15,698,097
Total Noncurrent Assets	177,785,877	3,737,638	-	26,466,445	7,227,015	2,502,144	2,169,684	708,071	19,689,110	3,294,639	(58,524,616)	185,056,007
Total Assets	222,448,109	3,809,008	-	29,019,310	7,398,250	2,584,508	2,471,931	2,543,710	25,376,001	5,263,303	(58,524,616)	242,389,514
Deferred Outflows of Resources												
Deferred Amount for Pensions	6,439,478	-	-	-	-	-	-	-	-	-	-	6,439,478
Deferred Amount for OPEB	5,172,871	-	-	-	-	-	-	-	-	-	-	5,172,871
Total Deferred Outflows of Resources	11,612,349	-	-	-	-	-	-	-	-	-	-	11,612,349
Liabilities												
Current Liabilities												
Accounts Payable	812,453	-	-	-	2,292	-	-	-	-	-	-	814,745
Accrued payroll and related liabilities	1,296,862	-	-	-	-	-	-	-	-	-	-	1,296,862
Accrued Expenses	8,561,779	-	-	47,623	-	-	-	131	118,599	6,945	-	8,735,077
Notes Payable-Green Liberty Notes	-	-	-	-	-	-	-	-	-	804,735	-	804,735
Current Maturities of Long-Term Debt	214,144	-	-	-	-	-	-	-	-	-	-	214,144
Custodial Liability	221,701	-	-	-	-	-	-	-	990,484	-	-	1,212,185
Deferred Revenue	110,140	-	-	-	-	-	-	-	-	-	-	110,140
Total Current Liabilities	11,217,078	-	-	47,623	2,292	-	-	131	1,109,083	811,680	-	13,187,888
Noncurrent Liabilities												
Due to Component Units	29,447,659	5,709,180	21,918	-	-	2,678,328	2,335,000	2,215,000	12,993,375	4,427,484	(58,424,516)	1,403,428
Long-term debt	48,748,767	-	-	20,627,892	-	-	-	-	-	-	-	69,376,659
Pension Liability	21,273,373	-	-	-	-	-	-	-	-	-	-	21,273,373
OPEB Liability	20,516,564	-	-	-	-	-	-	-	-	-	-	20,516,564
Total Noncurrent Liabilities	119,986,363	5,709,180	21,918	20,627,892	-	2,678,328	2,335,000	2,215,000	12,993,375	4,427,484	(58,424,516)	112,570,023
Total Liabilities	131,203,441	5,709,180	21,918	20,675,515	2,292	2,678,328	2,335,000	2,215,131	14,102,458	5,239,165	(58,424,516)	125,757,911
Deferred Inflows of Resources												
Deferred Pension Inflow Liability	5,424,891	-	-	-	-	-	-	-	-	-	-	5,424,891
Deferred OPEB Inflow Liability	9,694,281	-	-	-	-	-	-	-	-	-	-	9,694,281
Total Deferred Inflows of Resources	15,119,172	-	-	-	-	-	-	-	-	-	-	15,119,172
Net Position												
Net Investment in Capital Assets	11,960,460	3,737,638	-	-	-	-	-	-	-	-	-	15,698,097
Restricted-Energy Programs	13,022,329	-	-	803,241	3,442,561	-	-	84,570	24,809	-	-	17,377,508
Unrestricted Net Position	62,755,056	(5,637,810)	(21,918)	7,540,554	3,953,398	(93,820)	136,931	244,009	11,248,734	24,138	(100,100)	80,049,174
Total Net Position	87,737,845	(1,900,172)	(21,918)	8,343,795	7,395,958	(93,820)	136,931	328,579	11,273,543	24,138	(100,100)	113,124,780

**Connecticut Green Bank
Consolidated Balance Sheet
As of December 31, 2022**

	CGB-Primary Government As of 12/31/2022	CT Solar Lease 2 LLC As of 12/31/2022	CT Solar Lease 3 LLC As of 12/31/2022	CEFIA Solar Services Inc. As of 12/31/2022	Eliminations As of 12/31/2022	Consolidated As of 12/31/2022	Consolidated As of 6/30/2022	Consolidated YOY Change
Assets								
Current Assets								
Cash and Cash Equivalents	47,017,036	1,613,214	2,806,201	744,930	-	52,181,380	55,746,173	(3,564,793)
Accounts Receivable	1,543,524	43,241	8,354	364	-	1,595,483	3,942,346	(2,346,863)
Utility Remittance Receivable	2,065,644	-	-	-	-	2,065,644	2,084,828	(19,184)
Current Portion of Lease Receivable	-	984,926	-	2,550	-	987,476	1,058,634	(71,158)
Interest Receivable	1,419,560	6,776	-	-	-	1,426,336	1,136,318	290,018
Other Receivables	4,286,490	811,921	331,836	1,272,886	-	6,703,133	5,408,693	1,294,440
Prepaid Expenses and Other Assets	1,001,255	232,657	7,861	-	-	1,241,773	1,086,258	155,516
Total Current Assets	57,333,507	3,692,735	3,154,252	2,020,730	-	66,201,225	70,463,250	(4,262,025)
Noncurrent Assets								
Restricted Assets								
Cash and Cash Equivalents	17,377,508	1,877,429	-	383,270	-	19,638,207	18,317,840	1,320,367
Investments	912,217	-	-	-	-	912,217	1,231,792	(319,575)
Program Loans, net of reserves	93,081,394	-	-	-	-	93,081,394	83,596,278	9,485,116
Solar Lease I Promissory Notes, net of reserves	2,502,144	-	-	-	-	2,502,144	3,495,820	(993,676)
Renewable Energy Certificates	229,019	-	-	-	-	229,019	348,716	(119,697)
SBEA Promissory Notes, net of reserves	3,311,734	-	-	-	-	3,311,734	2,102,940	1,208,794
Lease Receivable, less current portion	-	16,215,051	-	66,268	-	16,281,319	17,049,036	(767,717)
Due From Component Units	51,943,793	-	-	7,701,599	(59,645,391)	-	-	-
Investment in Component Units	100	-	-	31,264,299	(31,264,399)	-	-	-
Prepaid Warranty Management, less current portion	-	3,347,050	-	-	-	3,347,050	3,616,336	(269,286)
Fair Value - Interest Rate Swap	-	345,706	-	-	-	345,706	(461,191)	806,897
Capital Assets, net	15,698,097	48,539,892	9,671,173	396,025	169,884	74,475,072	77,972,514	(3,497,441)
Total Noncurrent Assets	185,056,007	70,325,128	9,671,173	39,811,461	(90,739,906)	214,123,862	207,270,082	6,853,781
Total Assets	242,389,514	74,017,863	12,825,425	41,832,191	(90,739,906)	280,325,087	277,733,331	2,591,756
Deferred Outflows of Resources								
Deferred Amount for Pensions	6,439,478	-	-	-	-	6,439,478	4,550,879	1,888,599
Deferred Amount for OPEB	5,172,871	-	-	-	-	5,172,871	5,238,343	(65,472)
Deferred Amount for Asset Retirement Obligations	-	1,763,892	468,230	-	-	2,232,122	2,402,686	(170,564)
Total Deferred Outflows of Resources	11,612,349	1,763,892	468,230	-	-	13,844,471	12,191,908	1,652,563
Liabilities								
Current Liabilities								
Accounts Payable	814,745	13,429	-	5,666	-	833,839	380,422	453,417
Accrued payroll and related liabilities	1,296,862	-	-	-	-	1,296,862	1,139,857	157,005
Accrued Expenses	8,735,077	273,146	23,209	43,948	-	9,075,381	6,733,191	2,342,189
Notes Payable-Green Liberty Notes	804,735	-	-	-	-	804,735	-	804,735
Current Maturities of Long-Term Debt	214,144	-	-	-	-	214,144	152,035	62,109
Custodial Liability	1,212,185	-	-	6,383	-	1,218,568	1,480,114	(261,546)
Deferred Revenue	110,140	(24,358)	10,488	-	-	96,269	13,413	82,856
Total Current Liabilities	13,187,888	262,216	33,697	55,996	-	13,539,797	9,899,032	3,640,765
Noncurrent Liabilities								
Due to Component Units	1,403,428	18,506,105	-	39,735,859	(59,645,391)	-	-	-
Asset Retirement Obligation	-	3,450,596	718,889	-	-	4,169,484	4,067,616	101,868
Long-term debt	69,376,659	9,069,013	-	1,319,165	-	79,764,836	104,428,122	(24,663,286)
Pension Liability	21,273,373	-	-	-	-	21,273,373	20,268,725	1,004,648
OPEB Liability	20,516,564	-	-	-	-	20,516,564	23,688,513	(3,171,949)
Total Noncurrent Liabilities	112,570,023	31,025,713	718,889	41,055,023	(59,645,391)	125,724,258	152,452,976	(26,728,719)
Total Liabilities	125,757,911	31,287,929	752,586	41,111,020	(59,645,391)	139,264,055	162,352,009	(23,087,954)
Deferred Inflows of Resources								
Deferred Pension Inflow Liability	5,424,891	-	-	-	-	5,424,891	5,071,624	353,267
Deferred OPEB Inflow Liability	9,694,281	-	-	-	-	9,694,281	7,227,544	2,466,737
Deferred Lease Inflow Liability	-	16,987,117	-	68,819	-	17,055,935	18,372,781	(1,316,845)
Total Deferred Inflows of Resources	15,119,172	16,987,117	-	68,819	-	32,175,107	30,671,949	1,503,159
Net Position								
Net Investment in Capital Assets	15,698,097	48,539,892	9,671,173	396,025	169,884	74,475,072	77,972,514	(3,497,441)
Restricted-Energy Programs	17,377,508	1,877,429	-	383,270	-	19,638,207	18,317,840	1,320,367
Unrestricted Net Position	80,049,174	(22,910,613)	2,869,896	(126,942)	(31,264,399)	28,617,116	610,928	28,006,188
Total Net Position	113,124,780	27,506,709	12,541,069	652,353	(31,094,515)	122,730,396	96,901,282	25,829,114

Connecticut Green Bank - Primary Government
Consolidated Statement of Revenues and Expenditures
For the Period July 1, 2022 to December 31, 2022

	Connecticut Green Bank	CGB Meriden Hydro LLC	SHREC ABS 1 LLC Warehouse 1 LLC	SHREC CT Solar Lease 1 LLC	CGB C-PACE LLC	CT Solar Loan I LLC	CEFIA Holdings LLC	CGB Green Liberty Notes LLC	Eliminations	CGB-Primary Government
	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022
Operating Income (Loss)										
Operating Revenues										
Utility Remittances	13,039,756	-	-	-	-	-	-	-	-	13,039,756
Interest Income-Promissory Notes	2,850,414	-	-	-	88,753	39,982	23,938	226,624	37,225	3,266,935
RGGI Auction Proceeds	3,710,288	-	-	-	-	-	-	-	-	3,710,288
REC Sales	2,876,107	-	2,362,813	1,554,399	-	-	-	-	-	6,793,319
Other Income	417,075	-	-	-	-	1,729	51	18,896	-	437,751
Total Operating Revenues	22,893,641	-	2,362,813	1,554,399	88,753	41,710	23,989	581,143	37,225	27,583,673
Operating Expenses										
Provision for Loan Losses	1,002,592	-	-	-	-	-	-	(148,151)	-	854,441
Grants and Incentive Payments	3,894,420	-	-	-	-	-	-	-	-	3,894,420
Program Administration Expenses	7,023,532	165,157	27,750	91,667	60,213	-	8,869	103,706	10,000	7,490,895
General and Administrative Expenses	2,694,601	-	-	12,743	-	789	1,759	9,716	1,170	2,720,778
Total Operating Expenses	14,615,145	165,157	27,750	104,409	60,213	789	10,628	300,894	11,170	15,296,156
Operating Income (Loss)	8,278,496	(165,157)	2,335,063	1,449,990	28,539	40,921	13,361	280,249	26,055	12,287,517
Nonoperating Revenue (Expenses)										
Interest Income-Short Term Cash Deposits	565,947	-	25,153	25	-	-	235	12	-	591,372
Interest Income-Component Units	35,887	-	-	-	-	-	-	-	-	35,887
Interest Expense-LT Debt	(457,836)	-	(668,716)	-	-	-	-	-	-	(1,126,553)
Debt Issuance Costs	(2,500)	-	-	-	-	-	-	(2,500)	-	(5,000)
Total Nonoperating Revenue (Expenses)	140,484	-	(643,564)	25	-	-	235	12	(8,334)	(511,141)
Change in Net Position	8,418,980	(165,157)	1,691,499	1,450,015	28,539	40,921	13,596	280,261	17,722	11,776,376

Connecticut Green Bank
Consolidated Statement of Revenues and Expenditures
For the Period July 1, 2022 to December 31, 2022

	CGB-Primary Government Fiscal YTD 12/31/2022	CT Solar Lease 2 LLC Fiscal YTD 12/31/2022	CT Solar Lease 3 LLC Fiscal YTD 12/31/2022	CEFIA Solar Services Inc. Fiscal YTD 12/31/2022	Eliminations Fiscal YTD 12/31/2022	Consolidated Fiscal YTD 12/31/2022	Consolidated Fiscal YTD 12/31/2021	Consolidated YOY Variance
Operating Income (Loss)								
Operating Revenues								
Utility Remittances	13,039,756	-	-	-	-	13,039,756	12,999,805	39,951
Interest Income-Promissory Notes	3,266,935	-	-	-	-	3,266,935	3,364,877	(97,942)
RGGI Auction Proceeds	3,710,288	-	-	-	-	3,710,288	16,359	3,693,929
Energy System Sales	335,623	-	-	992,456	-	1,328,079	5,471,049	(4,142,971)
REC Sales	6,793,319	299,465	190,144	8,789	-	7,291,717	451,092	6,840,625
Lease Income	-	747,459	-	4,131	-	751,590	6,605,805	(5,854,215)
Other Income	437,751	347,390	205,697	244,790	13,076	1,248,704	1,965,641	(716,938)
Total Operating Revenues	27,583,673	1,394,313	395,840	1,250,166	13,076	30,637,069	30,874,630	(237,561)
Operating Expenses								
Cost of Goods Sold-Energy Systems	335,623	-	-	992,456	-	1,328,079	451,092	876,987
Provision for Loan Losses	854,441	-	-	-	-	854,441	684,732	169,709
Grants and Incentive Payments	3,894,420	-	-	-	88,008	3,982,427	9,098,897	(5,116,470)
Program Administration Expenses	7,490,895	1,535,097	137,219	209,072	(169,884)	9,202,399	9,007,258	195,141
General and Administrative Expenses	2,720,778	97,657	11,250	4,920	(74,932)	2,759,673	2,130,959	628,714
Total Operating Expenses	15,296,156	1,632,754	148,469	1,206,448	(156,809)	18,127,019	21,372,937	(3,245,918)
Operating Income (Loss)	12,287,517	(238,441)	247,371	43,718	169,884	12,510,050	9,501,692	3,008,358
Nonoperating Revenue (Expenses)								
Interest Income-Short Term Cash Deposits	591,372	529	1,478	270	-	593,649	24,034	569,615
Interest Income-Component Units	35,887	-	-	26,455	(62,342)	-	-	-
Interest Expense-Component Units	-	(62,342)	-	-	62,342	-	-	-
Interest Expense-ST Debt	(5,834)	-	-	-	-	(5,834)	(1,048)	(4,786)
Interest Expense-LT Debt	(1,126,553)	(253,488)	-	(16,736)	-	(1,396,777)	(1,764,236)	367,459
Debt Issuance Costs	(5,000)	-	-	-	-	(5,000)	(11,000)	6,000
Distributions to Member	-	(257,167)	(45,603)	-	-	(302,770)	(302,770)	-
Realized Loss on Investments	-	-	-	-	-	-	(118,919)	118,919
Unrealized Gain on Interest Rate Swap	-	252,598	-	-	-	252,598	237,832	14,766
Net change in fair value of investments	(1,014)	(52,785)	-	-	-	(53,799)	-	(53,799)
Total Nonoperating Revenue (Expenses)	(511,141)	(372,656)	(44,124)	9,988	-	(917,932)	(1,936,107)	1,018,175
Change in Net Position	11,776,376	(611,096)	203,247	53,707	169,884	11,592,118	7,565,585	4,026,532

Connecticut Green Bank - Primary Government
Consolidated Statement of Cash Flows
For the Period July 1, 2022 to December 31, 2022

	Connecticut Green Bank	CGB Meriden Hydro LLC	CGB KCF LLC	SHREC ABS 1 LLC	SHREC Warehouse 1 LLC	CT Solar Lease 1 LLC	CGB C-PACE LLC	CT Solar Loan I LLC	CEFIA Holdings LLC	CGB Green Liberty Notes LLC	Eliminations	CGB-Primary Government
	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022	Fiscal YTD 12/31/2022
Operating Activities												
Change in Net Position	8,418,980	(165,157)	-	1,691,499	1,450,015	28,539	40,921	13,596	280,261	17,722	-	11,776,376
Adjustments to reconcile change in net position to net cash provided by (used in) operating activities												
Depreciation	258,936	76,020	-	-	-	-	-	-	-	-	-	334,956
Provision for Loan Losses	1,002,592	-	-	-	-	-	-	5,645	(148,151)	-	-	860,086
Changes in operating assets and liabilities:												
Accounts Receivable	2,520,856	-	-	-	-	-	8,271	-	-	-	-	2,529,127
Utility Remittance Receivable	(23,857)	-	-	-	-	-	-	-	-	-	-	(23,857)
Interest Receivables	(183,996)	-	-	-	-	-	(69,075)	911	-	-	-	(252,160)
Other Receivables	135,041	-	-	-	-	-	-	(95)	(49,514)	26,873	-	112,305
Due from Component Units	(5,449,793)	-	-	9,972,740	-	-	-	-	(1,200,000)	-	-	3,322,947
Prepaid Expenses and Other Assets	33,575	65,282	-	26,000	-	-	-	-	9,421	-	-	134,277
Accounts Payable and Accrued Expenses	1,068,903	(31,059)	-	(20,753)	(1,875)	-	-	(1,249)	98,565	5,834	-	1,118,365
Due to Component Units	(10,092,740)	-	-	-	-	(530,057)	600,000	(217,500)	2,656,423	1,403,428	-	(6,180,447)
Custodial Liability	(32,356)	-	-	-	-	-	-	-	(141,909)	-	-	(174,265)
Net cash provided by (used in) operating activities	(2,231,498)	(54,915)	-	11,669,486	1,448,140	(501,517)	580,118	(198,691)	1,505,096	1,453,855	-	13,670,074
Investing Activities												
Purchase of Capital Assets	(7,205)	-	-	-	-	-	-	-	-	-	-	(7,205)
Program Loan Disbursements	(4,583,101)	-	-	-	-	-	(782,316)	-	(3,188,573)	(1,502,536)	-	(10,056,527)
Return of Principal on Program Loans	5,464,512	-	-	-	-	501,517	101,427	192,963	723,625	561,431	-	7,545,475
Net cash provided by (used in) investing activities	874,206	-	-	-	-	501,517	(680,890)	192,963	(2,464,949)	(941,105)	-	(2,518,258)
Financing Activities												
Proceeds from Green Liberty Notes	-	-	-	-	-	-	-	-	-	500,000	-	500,000
Repayments of Debt	(3,515,705)	-	-	(10,987,498)	-	-	-	-	-	-	-	(14,503,203)
Net cash provided by (used in) investing activities	(3,515,705)	-	-	(10,987,498)	-	-	-	-	-	500,000	-	(14,003,203)
Net increase (decrease) in cash and cash equivalents	(4,872,997)	(54,915)	-	681,988	1,448,140	-	(100,772)	(5,729)	(959,852)	1,012,751	-	(2,851,387)
Cash and Cash Equivalents, Beginning of Period												
Unrestricted	43,664,058	88,438	-	1,577,523	276,176	-	320,226	1,620,256	1,741,285	955,913	-	50,243,875
Restricted	13,705,808	-	-	1,079,262	1,889,479	-	-	301,834	25,673	-	-	17,002,056
Cash and Cash Equivalents, Beginning of Period	57,369,866	88,438	-	2,656,785	2,165,655	-	320,226	1,922,091	1,766,958	955,913	-	67,245,931
Cash and Cash Equivalents, End of Period												
Unrestricted	39,474,540	33,523	-	2,535,532	171,235	-	219,454	1,831,792	782,296	1,968,664	-	47,017,036
Restricted	13,022,329	-	-	803,241	3,442,561	-	-	84,570	24,809	-	-	17,377,508
Cash and Cash Equivalents, End of Period	52,496,869	33,523	-	3,338,773	3,613,795	-	219,454	1,916,362	807,105	1,968,664	-	64,394,545

Connecticut Green Bank
Consolidated Statement of Cash Flows
For the Period July 1, 2022 to December 31, 2022

	CGB-Primary Government Fiscal YTD 12/31/2022	CT Solar Lease 2 LLC Fiscal YTD 12/31/2022	CT Solar Lease 3 LLC Fiscal YTD 12/31/2022	CEFIA Solar Services Inc. Fiscal YTD 12/31/2022	Eliminations Fiscal YTD 12/31/2022	Consolidated Fiscal YTD 12/31/2022
Operating Activities						
Change in Net Position	11,776,376	(611,096)	203,247	53,707	-	11,422,233
Adjustments to reconcile change in net position to net cash provided by (used in) operating activities						
Depreciation	334,956	1,294,548	229,343	7,623	-	1,866,470
Provision for Loan Losses	860,086	-	-	-	-	860,086
Loss on Fixed Asset Disposals/Solar Lease Buyouts	2,223	52,785	-	-	-	55,008
Changes in operating assets and liabilities:						
Accounts Receivable	2,529,127	50,789	33,004	1,685	-	2,614,605
Utility Remittance Receivable	(23,857)	-	-	-	-	(23,857)
Interest Receivable	(252,160)	(6,776)	-	-	-	(258,936)
Other Receivables	112,305	(75,311)	(11,512)	(520,071)	-	(494,588)
Due from Component Units	3,322,947	120,000	-	(26,455)	(3,416,493)	-
Prepaid Expenses and Other Assets	134,277	248,344	28,729	-	-	411,350
Accounts Payable and Accrued Expenses	1,118,365	(83,913)	82,105	(4,534)	-	1,112,023
Due to Component Units	(6,180,447)	1,562,937	225	1,200,792	3,416,493	-
Custodial Liability	(174,265)	-	-	-	-	(174,265)
Deferred Revenue	110,140	(24,358)	(13,642)	-	-	72,140
Net cash provided by (used in) operating activities	13,670,074	2,317,517	560,479	712,748	(0)	17,260,818
Investing Activities						
Purchase of Capital Assets	(7,205)	-	-	-	-	(7,205)
Proceeds from sale of Capital Assets/Solar Lease Buyouts	-	30,722	-	-	-	30,722
Program Loan Disbursements	(10,056,527)	-	-	-	-	(10,056,527)
Return of Principal on Program Loans	7,545,475	-	-	-	-	7,545,475
Net cash provided by (used in) investing activities	(2,518,258)	30,722	-	-	-	(2,487,536)
Financing Activities						
Proceeds from Green Liberty Notes	500,000	-	-	-	-	500,000
Repayments of Debt	(14,503,203)	(2,734,756)	-	(47,395)	-	(17,285,354)
Distributions to Investor Member	-	-	(90,957)	-	-	(90,957)
Net cash provided by (used in) investing activities	(14,003,203)	(2,734,756)	(90,957)	(47,395)	-	(16,876,312)
Net increase (decrease) in cash and cash equivalents	(2,851,387)	(386,517)	469,521	665,353	(0)	(2,103,029)
Cash and Cash Equivalents, Beginning of Period						
Unrestricted	50,243,875	455,596	2,336,679	379,846	-	53,415,997
Restricted	17,002,056	3,421,563	-	83,000	-	20,506,619
Cash and Cash Equivalents, Beginning of Period	67,245,931	3,877,160	2,336,679	462,846	-	73,922,617
Cash and Cash Equivalents, End of Period						
Unrestricted	47,017,036	1,613,214	2,806,201	744,930	-	52,181,380
Restricted	17,377,508	1,877,429	-	383,270	-	19,638,207
Cash and Cash Equivalents, End of Period	64,394,545	3,490,643	2,806,201	1,128,199	-	71,819,587

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Hartford, CT 06106
T 860.563.0015
InclusiveProsperityCapital.org



Memo

To: Connecticut Green Bank Senior Team

From: Inclusive Prosperity Capital Staff

Date: February 14, 2023

Re: IPC Quarterly Reporting – Q2 FY23 (October 1, 2022 – December 31, 2022)

Progress to targets for Fiscal Year 2023, as of 12/31/2022 ¹

Product	Number of Projects	Projects Target	% to goal	Total Financed Amount	Financed Target	% to goal	MW Installed	MW Target	% to goal
Smart-E Loan	633	960	65.9%	\$11,622,833	\$14,994,623	77.5%	0.1	0.2	38.5%
Multi-Family H&S	1	1	100%	\$17,730,072	\$0	n/a	n/a	n/a	n/a
Multi-Family Pre-Dev.	0	0	0%	\$0	\$0	0%	0.0	0.0	0%
Multi-Family Term	0	6	0%	\$0	\$1,380,000	0.0%	0.0	0.60	0.0%
Solar PPA	5	19	26.3%	\$1,505,726	\$13,710,000	11.0%	0.8	7.6	10.8%

PSA 5410 – Smart-E Loan

- Smart-E Volume had strong performance in the second quarter, seeing 330 loans close for \$5,970,847 (104 in October, 143 in November and 83 in December). The summer special offer ended October 31 and resulted in 261 closed loans and \$5,437,883 in funded dollars.

Even with the end of the special offer, we continued to see significant volume post offer through November.

- Continuing the first quarter trend, HVAC projects continue to be the majority of volume. The contractor engagement has yielded significant data that will be reviewed through the third quarter and coupled with the anticipated lender engagement during the quarter.

PSA 5411 – Multifamily

- **One Project Closed in Q2 of FY'23.** Antillean Manor, a demolition/new construction project supported by CHFA financing, closed on an Energize CT H&S Loan for site asbestos remediation that de-risked the project development and construction process, paving the way for CHFA's closing for \$17.7M in total project financing costs. IPC staff continue to shepherd a handful of prospective LIME financing opportunities that are currently at the evaluation/underwriting stage while working in close coordination with Green Bank staff for market engagement under the Affordable Multifamily Solar tariff program (additional detail below).
- **The ECT Health & Safety Revolving Loan Fund capital has been fully allocated** to two distressed co-ops; the first project, (Antillean Manor, described above) closed in Q2 of FY23. The second project is expected to close before the end of FY23
- **IPC has actively supported design/development of solar programs that will use the new solar tariff incentive.** Supporting the Green Bank, IPC staff have actively provided scenario modeling and participated in CTGB- and DEEP-led policy deliberations to inform PURA decision-making as part of PURA's affordable multifamily solar tariff rule-making docket. Once these are finalized, we will continue to collaborate with CTGB in revisiting program design for this sector, with an eye towards higher volume deployment that leverages the final form of the tariff offering.
- **We continued to provide support for long-term distressed projects, Seabury Co-op in New Haven and Success Village in Bridgeport,** that are being stabilized and preserved as affordable housing by funding energy and health and safety improvements. Seabury is moving towards the end of its respective pre-development processes and securing term financing for project implementation. Success Village's governance and management changes have prevented further involvement/support for this project at this time.

PSA 5412 – Solar PPA

- To-date, 5 Solar MAP solar PPA projects have closed in FY23 for .82MW for \$1,505,726 in total funds deployed.
- IPC staff responded to PPA pricing requests received by CTGB staff, particularly extensive scenarios to support the Solar MAP initiative.
- IPC staff continues to survey and monitor pricing competitiveness across installer and developer channels. General feedback is that our current pricing offering is competitive (for those projects requesting pricing).
- IPC staff continues to enhance its use of IPC Salesforce Platform to provide formatted installer/developer pricing responses.

- IPC staff worked with CTGB staff to fund 12 Solar MAP Round 1 projects in the 2022 partnership. Staff continue to coordinate with CTGB staff on funding the remaining 4 Solar MAP Round 1 projects in early 2023.
- IPC staff is finalizing its internal recommendation for a new engineering services provider for O&M, project inspection, etc. in CT by the end of Q3 FY23.
- Staff continues to coordinate as part of the CGB-IPC Storage Product Working Group to identify market opportunities, structures and products to leverage the Green Bank's new storage incentive program.

Use of DEEP Proceeds

Energize CT Health & Safety Revolving Loan Fund

- The multifamily housing team is in process of finalizing loan documentation, closing, and funding two H&S loans to distressed co-ops: Seabury Co-op in New Haven for \$892,500 (in coordination with other funders) and Antillean Manor Co-op in New Haven for \$400,000 (in coordination with CHFA and HUD). Antillean Manor recently closed in Nov of 2022. The Seabury closing remains several months out as emergent HUD REAC health and safety repairs that must be addressed before other the funding partners will close on funding.
- The two loans described above account for the remaining H&S funds available. Once deployed, we will begin funding projects with capital as it becomes available from repayments.

\$5M Capital Grant

- In Q1 FY20, IPC's Board approved a \$1.2M investment in Capital for Change to provide liquidity under its successful LIME Loan program offered in partnership with the Connecticut Green Bank. Although the transaction was expected to close in February 2020 under a master facility construct with CGB, in the wake of the COVID-19 outbreak, CGB funded the entirety of the LIME recapitalization in IPC's stead. IPC is in discussions with CGB to reactivate the participation opportunity with Capital for Change, with a target closing in Q1 of 2023.

General Updates

Below are updates for the fourth quarter of FY22:

- **Capital raising:**
 - No capital raising needs at present.
- **Business/Product Development/Initiatives of interest to Connecticut:**
 - Software licensing agreement for the NGEN platform
 - Colorado Energy Office has transferred the program out of the state energy office to the CO Clean Energy Fund (their green bank) for easier contracting. Discussions in advanced stages for licensing NGEN.

- Advanced discussions for NGEN licensing with CAETFA. Have worked through numerous CA contracting and procurement challenges.
- Full Smart-E Program Implementation
 - Working with Inclusiv on Smart-E launch in NM and AZ with TX to follow later this in 2023 with funding provided by Wells Fargo Foundation. This is for a lender-led model, meaning no green bank or state energy office sponsoring the program, and IPC being compensated to manage the program. IPC closed a \$2.5M guarantee with the Community Investment Guarantee Program for a credit enhancement for participating lenders.
 - Continued work with Inclusiv (the member network of CDFI/community development credit unions) and UNH Carsey (under a DOE grant) on potential Smart-E programs in various geographies, many led by lender interest, some by green bank or state/local government interest. Discussions ongoing with partners in over 20 states.
 - Continued to work with a number of green banks, state energy offices, local governments, community-based lenders (including CDFIs), etc. on leveraging IPC's products and financing strategies. Continue to coordinate with CGC on a variety of opportunities.
- **Administrative:**
 - Staffing and Recruiting Update – Below are changes to staff:
 - Additions
 - Grady Bailey – September 6th
 - Zakisha Love – November 14th
 - Carmen Carson (Senior Manager, People & Culture) – November 28th
 - Departures
 - Michael Solazzo – October 5th



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; Brian Farnen, General Counsel and CLO; Jane Murphy, EVP of Finance & Administration

Date: March 10, 2023

Re: Extension Request - Capital 4 Change ("C4C") for \$4.5M Medium Term Revolving Loan (secured & subordinated) to CEEFCo (100%-owned subsidiary of C4C) for Funding CEEFCo's investment in Energy Efficiency Loans (including Smart-E Loans) in partnership with Amalgamated Bank

Background & Summary of Request for Approval

At the September 12, 2019 meeting of the Connecticut Green Bank (the "Green Bank") Board of Directors (the "Board"), the Board approved \$4.5M for a Medium Term Revolving Loan (secured & subordinated – the "Existing C4C Loan") to CEEFCo (a 100%-owned subsidiary of Capital for Change ("C4C")) for Funding CEEFCo's investment in Energy Efficiency Loans (including Smart-E Loans) in partnership with a private capital source. The private capital source, Amalgamated Bank (presently providing up to \$22.5 million in funding), and CEEFCo / C4C closed that transaction in December 2019 and the facility has functioned as intended – affording CEEFCo with a flexible facility to draw and repay funding associated with its energy efficiency loans.

At the October 21, 2022 meeting of the Board, the Board approved a requested modification of the Existing C4C Loan (see attached as Appendix A the memorandum to the Board dated October 18, 2022 – the "Modified C4C Loan"). At the December 16, 2022 meeting of the Board, the Board approved a requested extension until March 31, 2023 in order for the parties to complete Amalgamated Bank approvals and documentation. This extension was executed by the parties.

While documentation for the Modified C4C Loan is in documentation, there is a chance the documents will not be ready for execution by March 31 by all parties. To provide for this possible delay, staff requests Board approval of a further extension, to April 30, 2023, to allow for any time required for the documentation of the Modified C4C Loan to be completed and executed.

Resolutions

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 effect the above-mentioned legal instrument.

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

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Memo

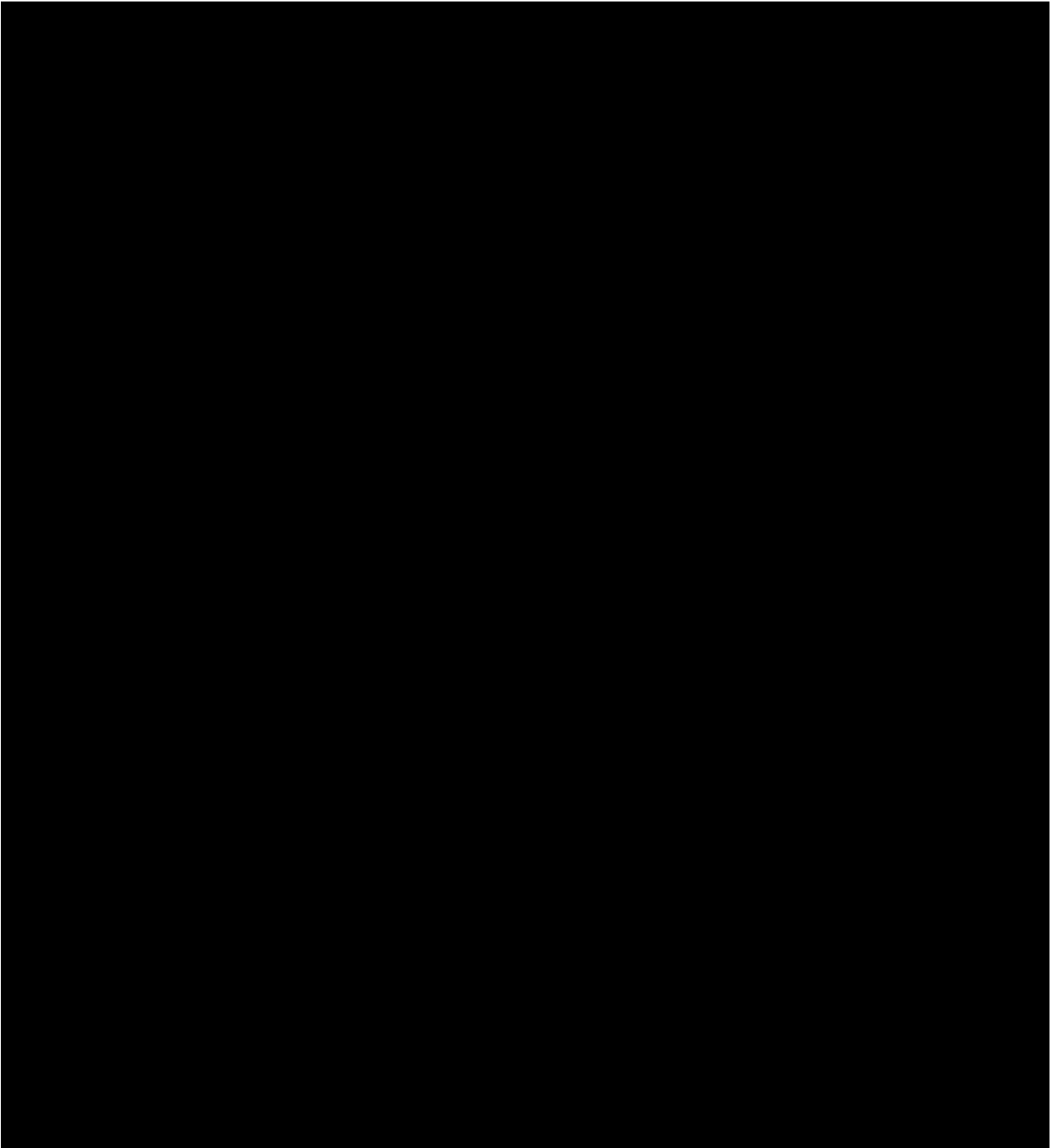
To: Connecticut Green Bank ("Green Bank") Board of Directors (the "Board")

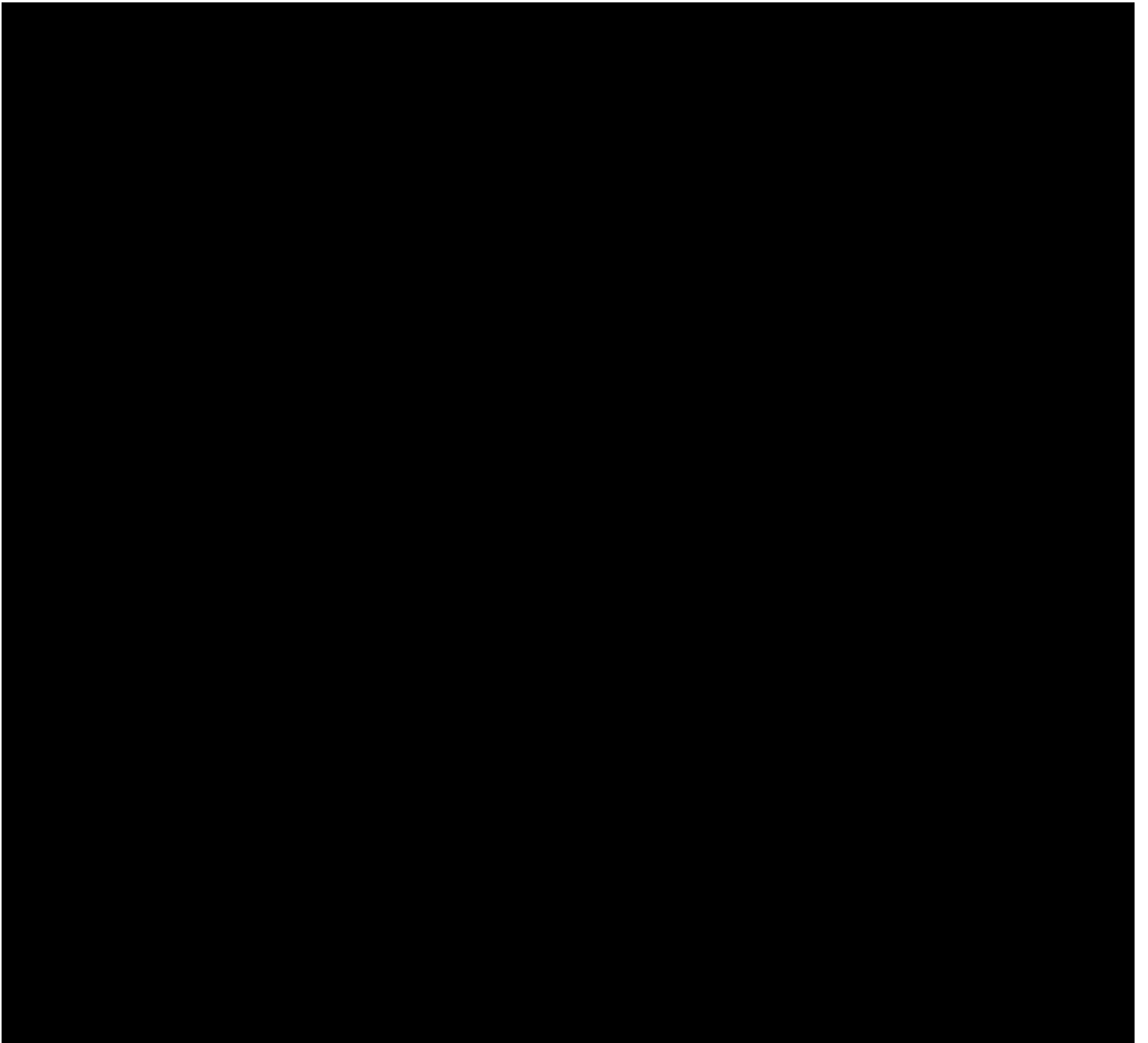
From: Bert Hunter, EVP & Chief Investment Officer

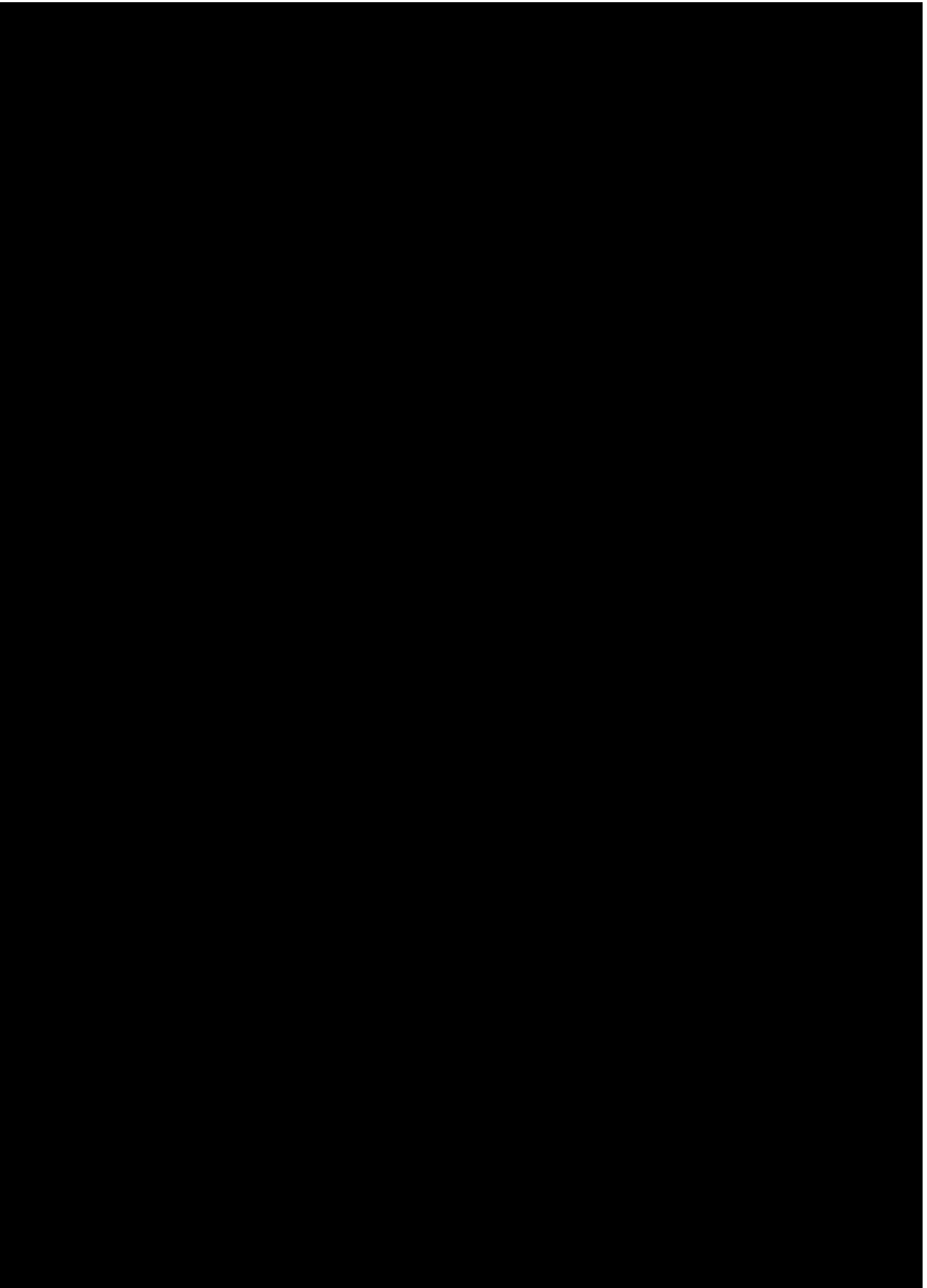
CC: Bryan Garcia, President and CEO; Brian Farnen, General Counsel and CLO; Jane Murphy, EVP of Finance & Administration

Date: October 18, 2022

Re: Modification Request - Capital 4 Change ("C4C") for \$4.5M Medium Term Revolving Loan (secured & subordinated) to CEEFCo (100%-owned subsidiary of C4C) for Funding CEEFCo's investment in Energy Efficiency Loans (including Smart-E Loans) in partnership with Amalgamated Bank









Resolutions

WHEREAS, the Connecticut Green Bank (“Green Bank”) entered into a Smart-E Loan program financing agreement with 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 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

WHEREAS, Green Bank staff recommends approval by the Board for an amended secured and subordinated medium term revolving loan facility for CEEFCo (the “Amended CEEFCo Revolving Loan”) in order to fund CEEFCo’s residential energy efficiency and Smart-E Loan portfolio in partnership with Amalgamated Bank.

NOW, therefore be it:

RESOLVED, that the Board approves the Amended CEEFCo Revolving Loan in an amount of up to \$10 million in capital from the Green Bank balance sheet in support of energy efficiency and Smart-E Loans in partnership with Amalgamated Bank generally consistent with the Modification Memo;

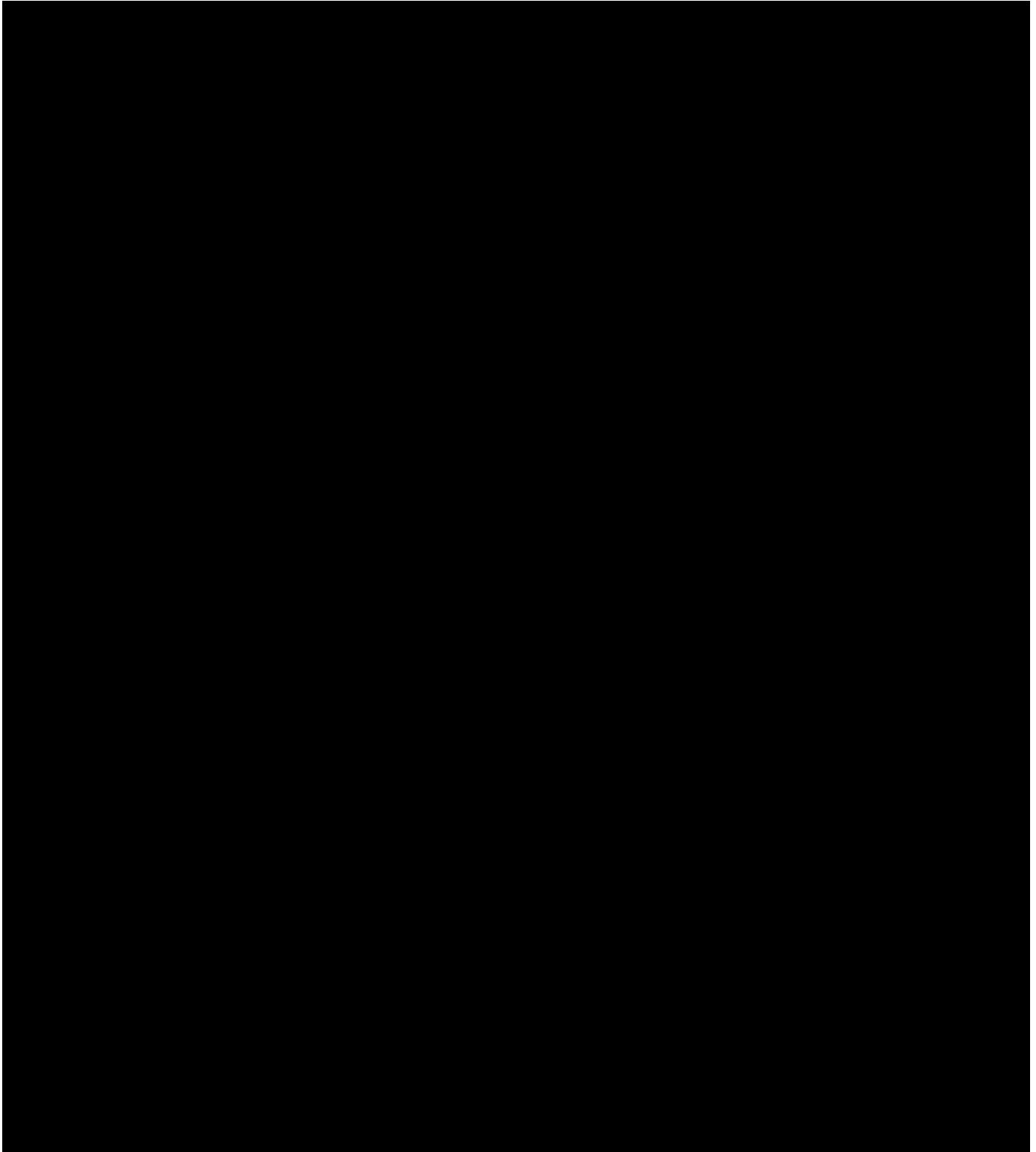
RESOLVED, that the President of the Green Bank; and any other duly authorized officer of the Green Bank, is authorized to execute and deliver, any contract or other legal instrument necessary to effect the CEEFCo Revolving Loan on such terms and conditions as are materially consistent with the Modification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

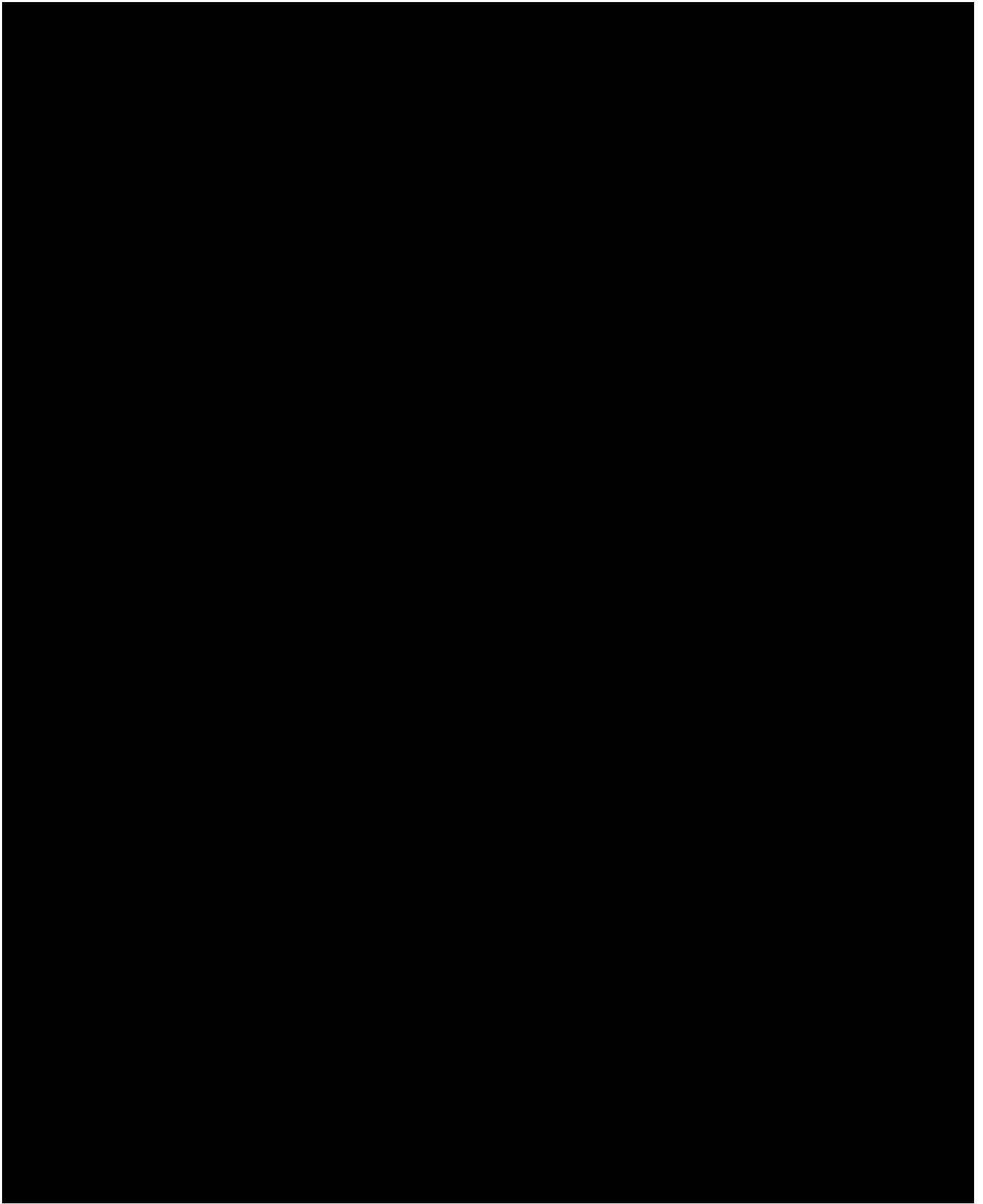
RESOLVED, that the proper Green Bank officers are authorized and empowered to do all other acts and execute and deliver all other documents as they shall deem necessary and desirable to effect the above-mentioned legal instrument.

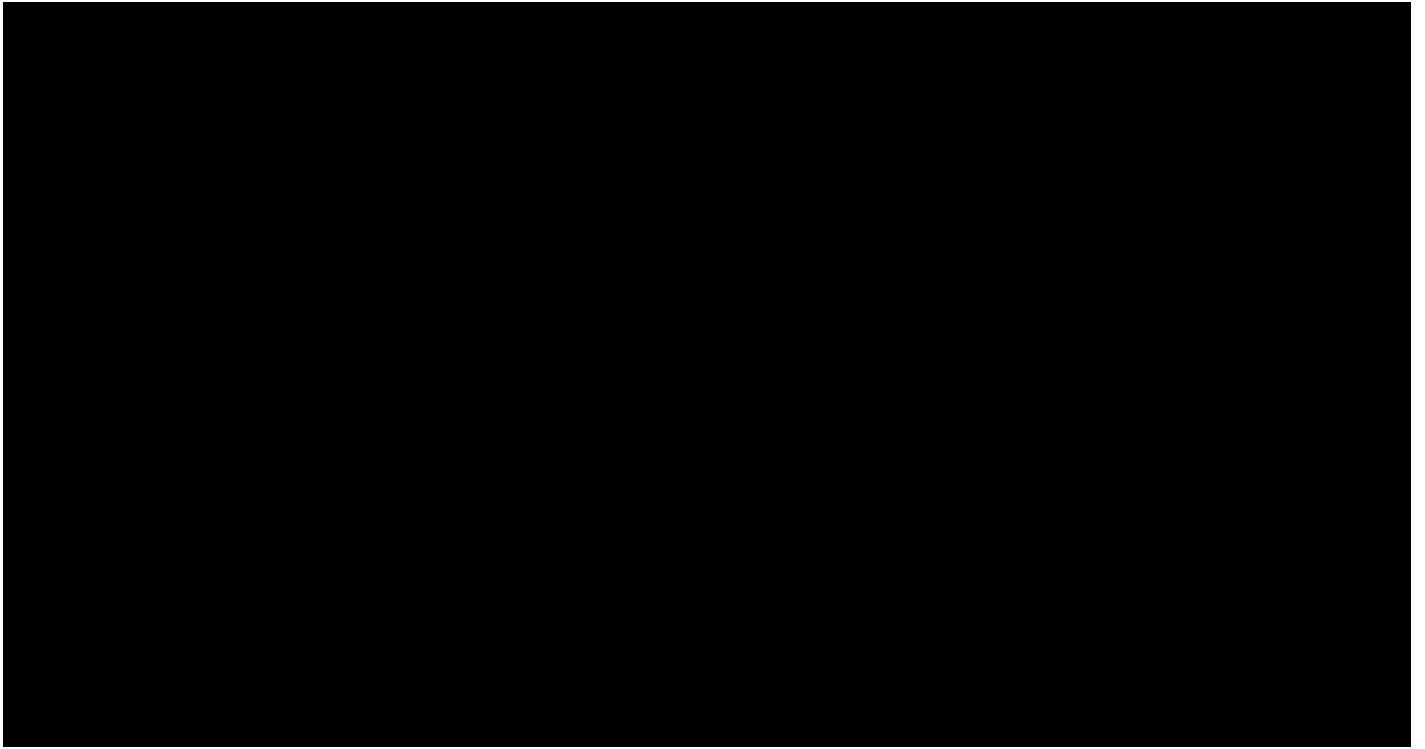
Submitted by: Bryan Garcia, President and CEO and Bert Hunter, EVP and CIO

October 14, 2022

PRELIMINARY TERM SHEET







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



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; Brian Farnen, General Counsel and CLO; Jane Murphy, EVP of Admin and Finance

Date: March 10, 2023

Re: Modification of Capital Commitment for the LIME Program with Capital for Change Bank

Background & Summary of Request for Approval

At the October 25, 2019 meeting of the Connecticut Green Bank ("Green Bank") Board of Directors ("Board"), the Board approved a capital commitment to the LIME Program¹ with Capital for Change ("C4C"), the largest "full-service" CDFI in Connecticut. (See attached memorandum to the Board dated October 21, 2019 which explains in detail the LIME program and the capital commitment extended at that time).

While the LIME program is still successfully underwriting energy efficiency loans for qualifying multifamily properties, the availability period under the facility expires in March 2023.

Given the success of the facility, C4C has requested and Green Bank staff supports an extension of the availability period to March 31, 2024 with identical terms and conditions.

¹ Originally, the LIME stood for "Low Income Multifamily Efficiency" but has recently been rebranded as "Loans Improving Multifamily Efficiency".

Resolutions

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

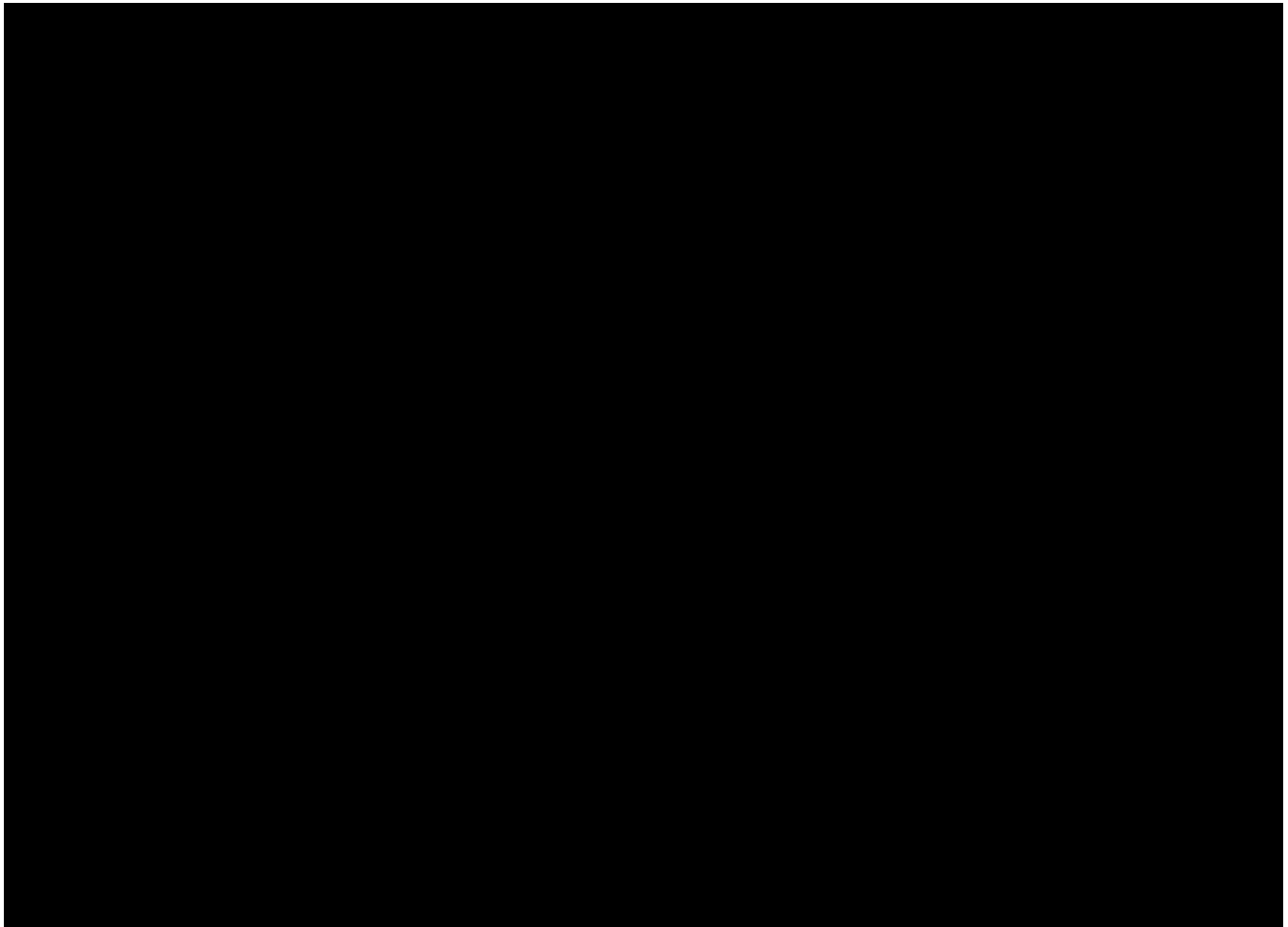
Resolved, that the proper Green Bank officers are authorized and empowered to do all other acts and execute and deliver all other documents as they shall deem necessary and desirable to effect the above-mentioned legal instrument.

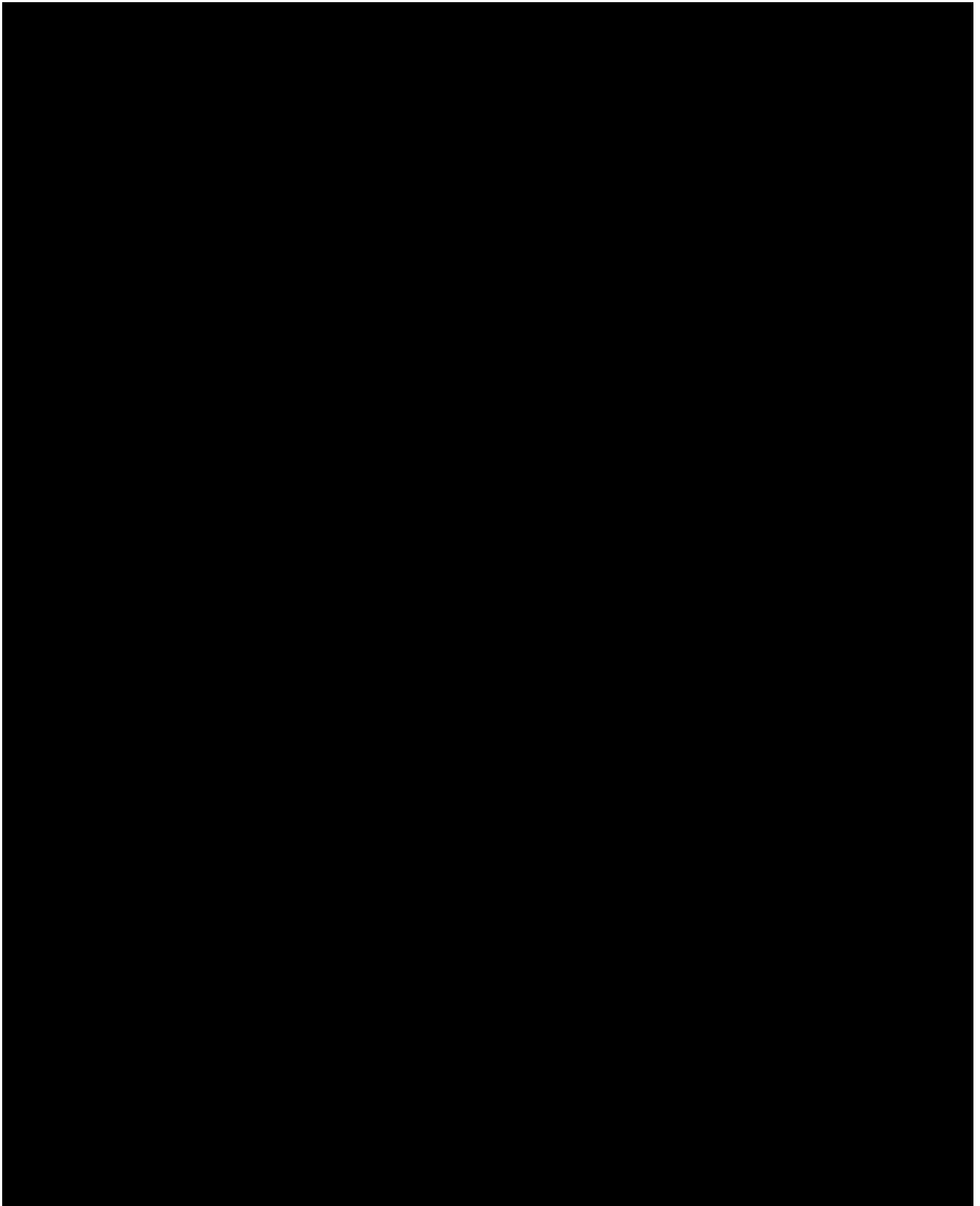
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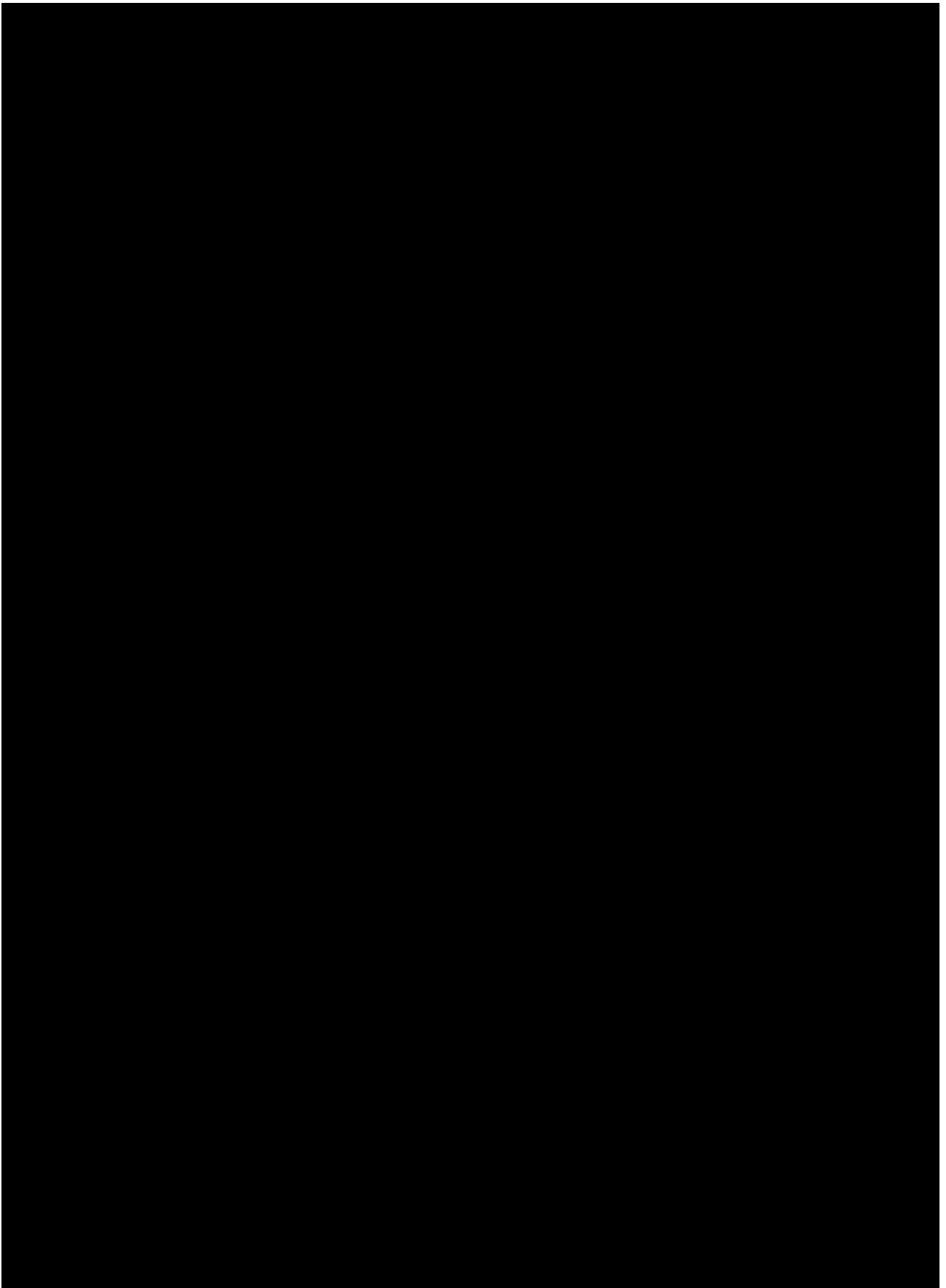
Memo

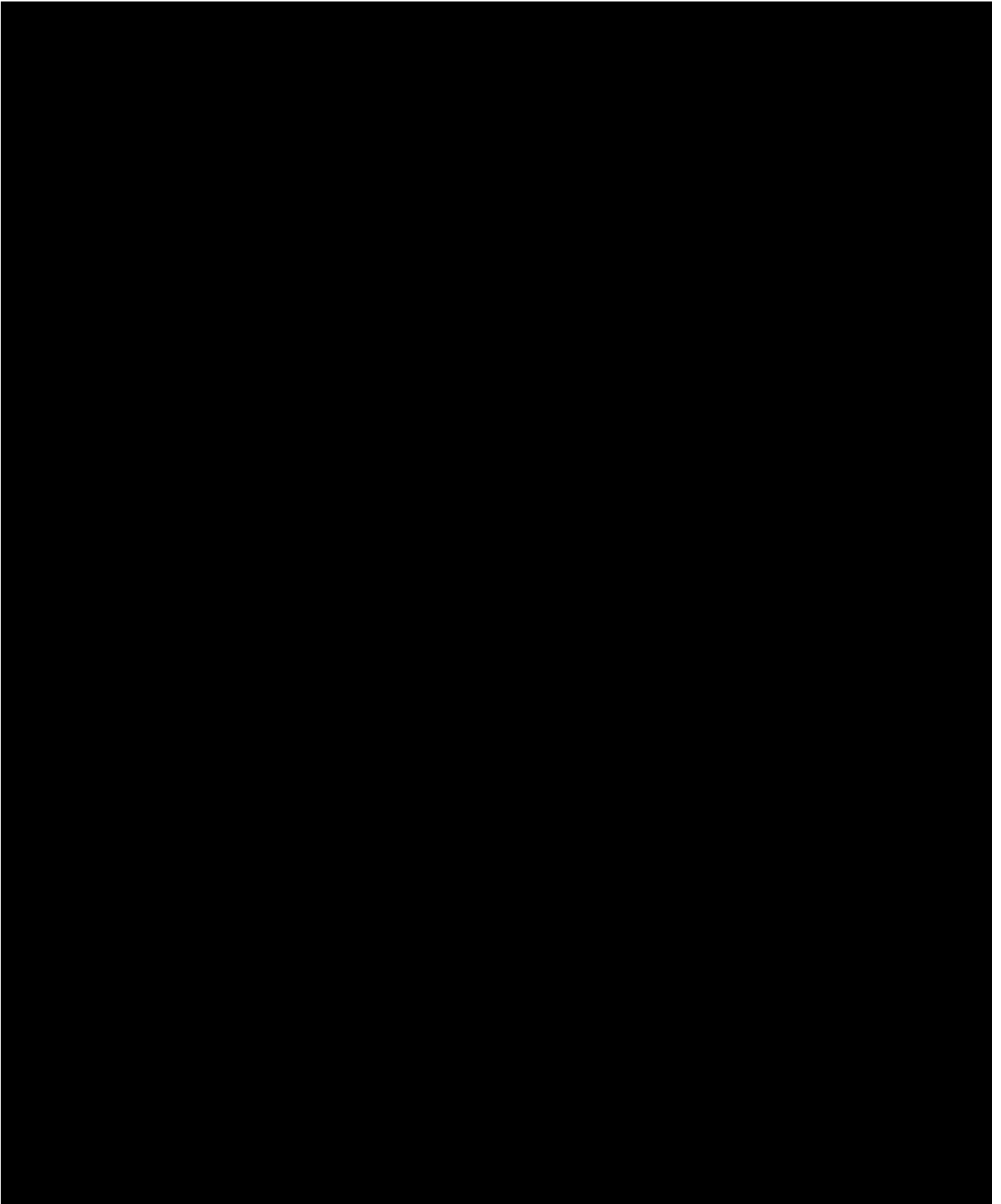
To: Connecticut Green Bank (“Green Bank”) Board of Directors (the “Board”)
From: Bert Hunter, EVP & Chief Investment Officer
CC: Bryan Garcia, President and CEO; Brian Farnen, General Counsel and CLO; Jane Murphy, VP of Admin and Finance
Date: October 21st, 2019
Re: Modification of Capital Commitment for the LIME Program with Capital for Change

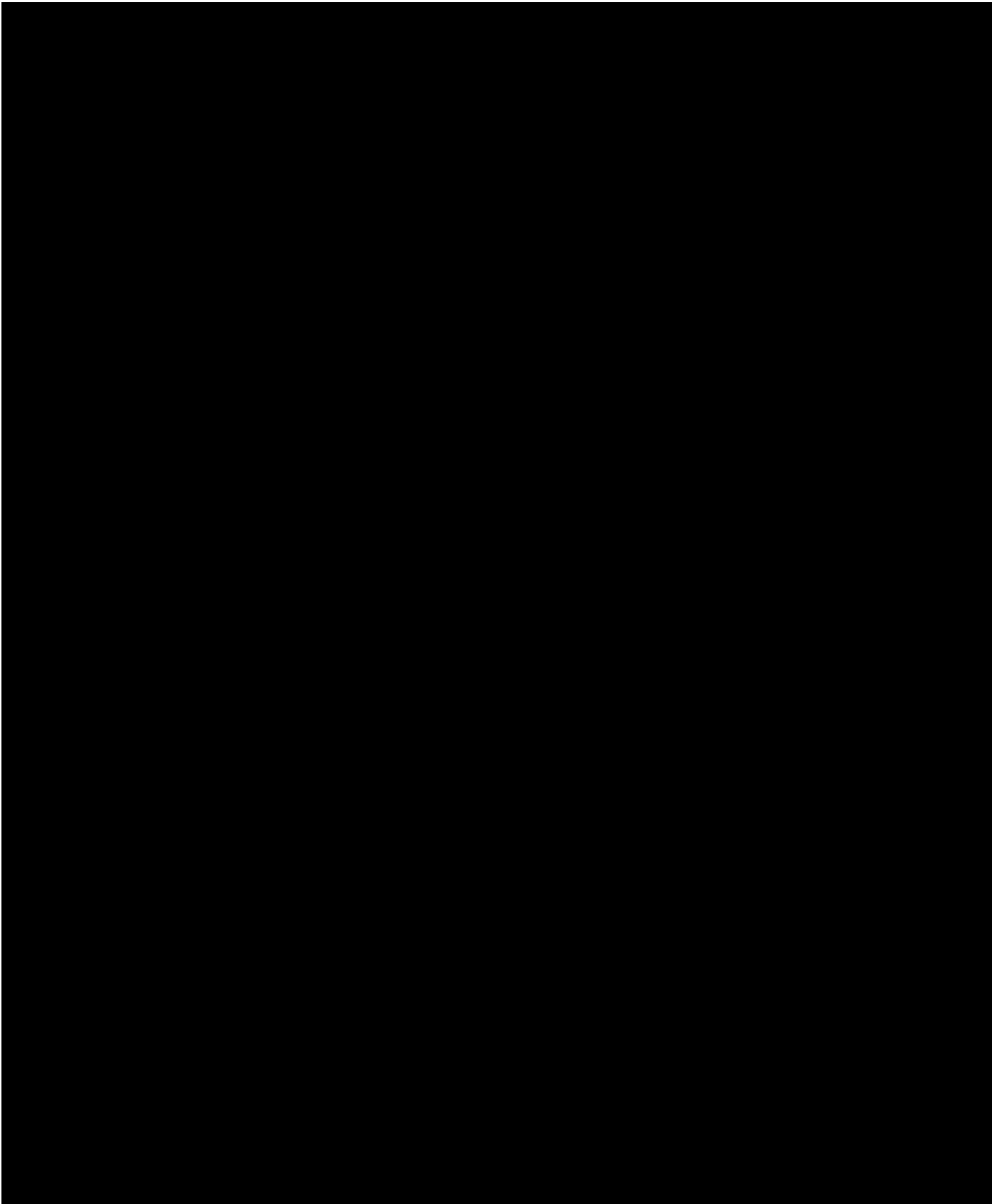


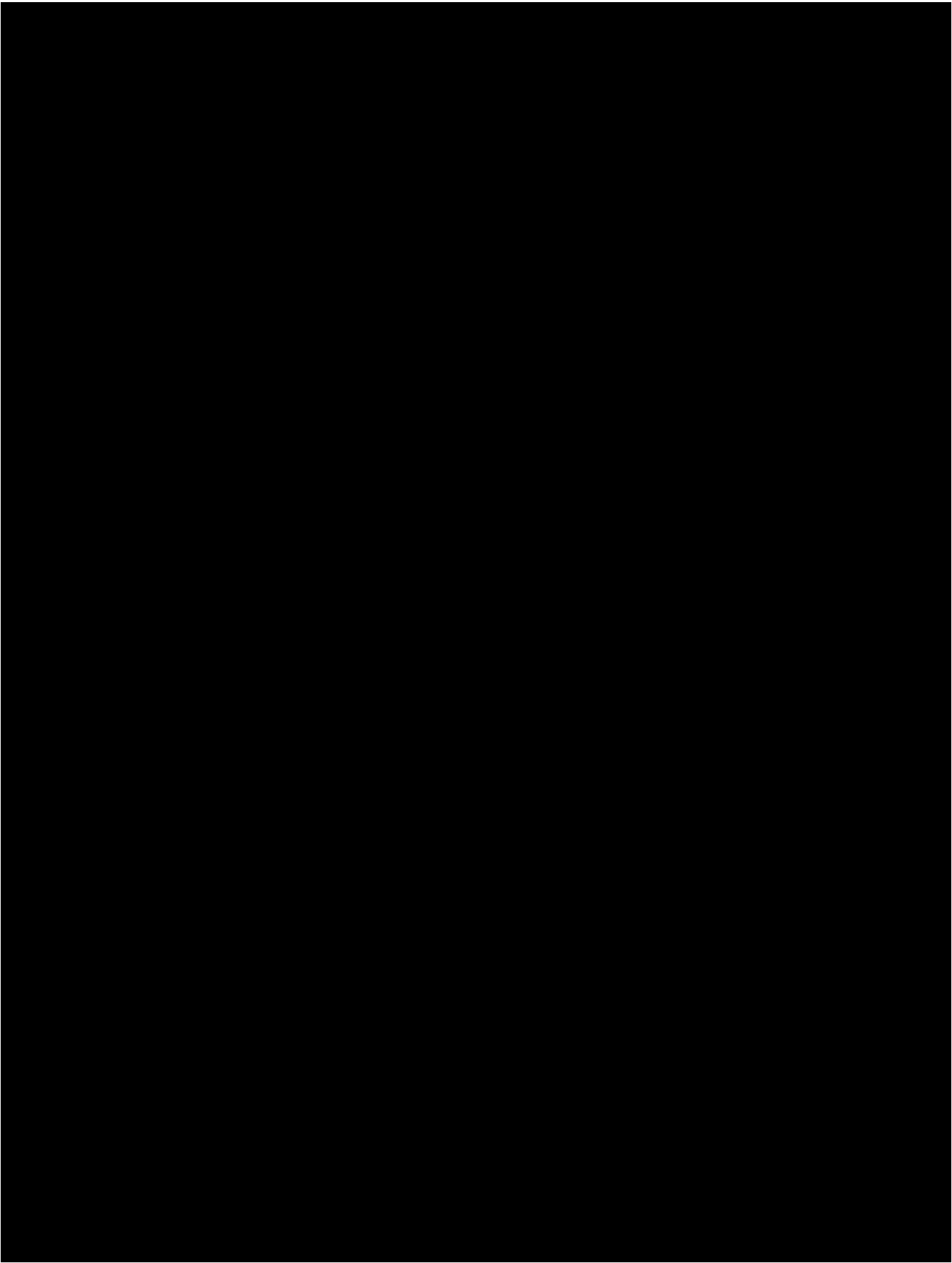


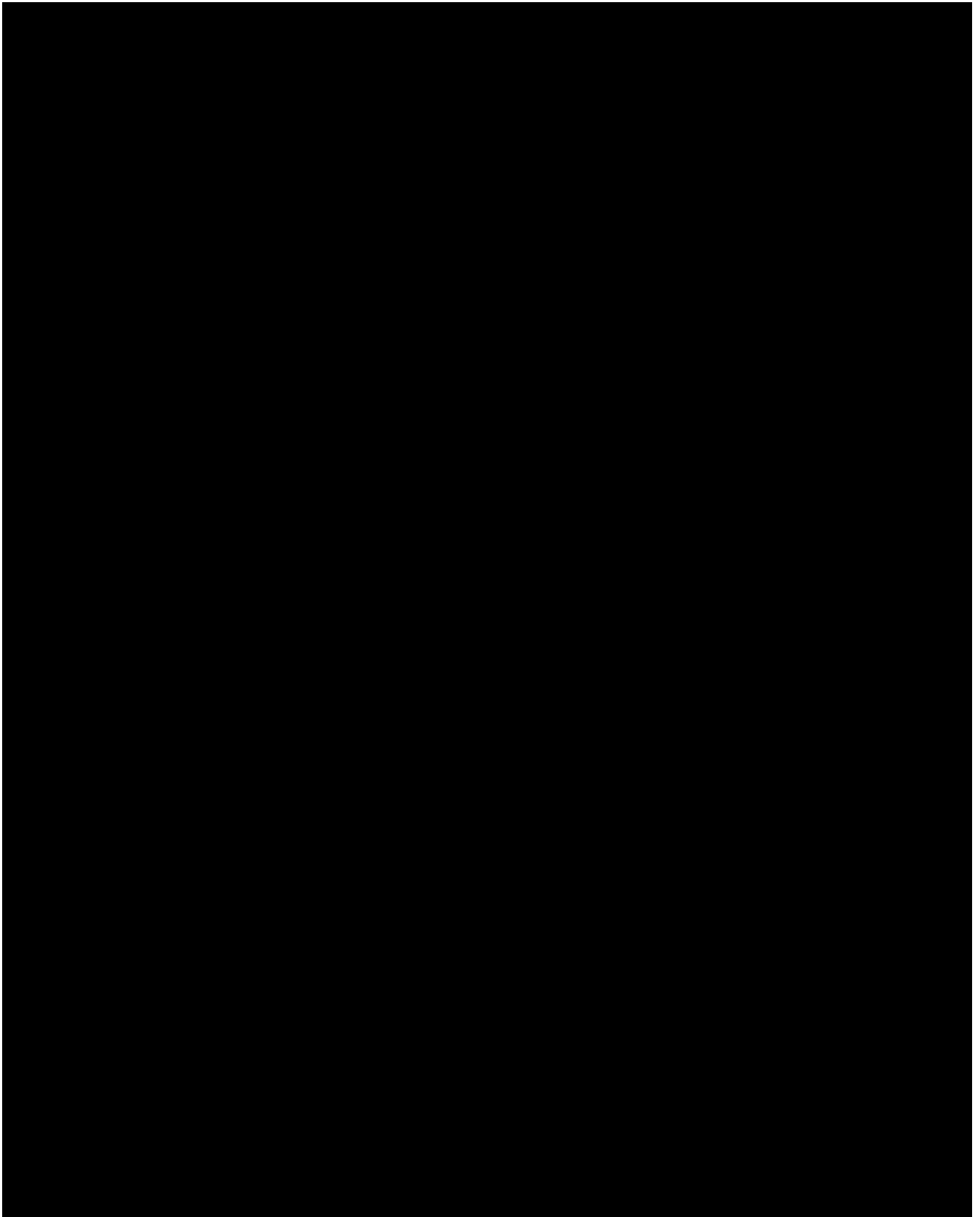
⁴ Additional funding sources included: \$1,000,000 intercompany loan from the CT Energy Efficiency Finance Company ("CEEFCo") at 1.00%; \$1,000,000 from the Opportunity Finance Network ("OFN") at 3.00%.











Resolutions

WHEREAS, the Connecticut Green Bank (“Green Bank”) has an existing Low Income Multifamily Efficiency (“LIME”) loan Program with Capital for Change (“C4C”);

WHEREAS, C4C has been successful in deploying more than \$10 million in LIME Program loans, for 29 projects representing 1,973 housing units improved by the program;

WHEREAS, in order to continue the successful deployment of capital into the LIME Program C4C needs additional funding which it is sourcing from Green Bank and other capital sources;

WHEREAS, Green Bank staff recommends an increase in the LIME funding facility (the “LIME Loan Facility”) to \$6.5 million from the existing \$3.0 million substantially conforming to the terms and conditions explained in staff’s memorandum to the Green Bank Board of Directors (the “Board”) dated October 21, 2019, and inclusive of the term sheet for the proposed facility attached to said memorandum as Exhibit A;

NOW, therefore be it:

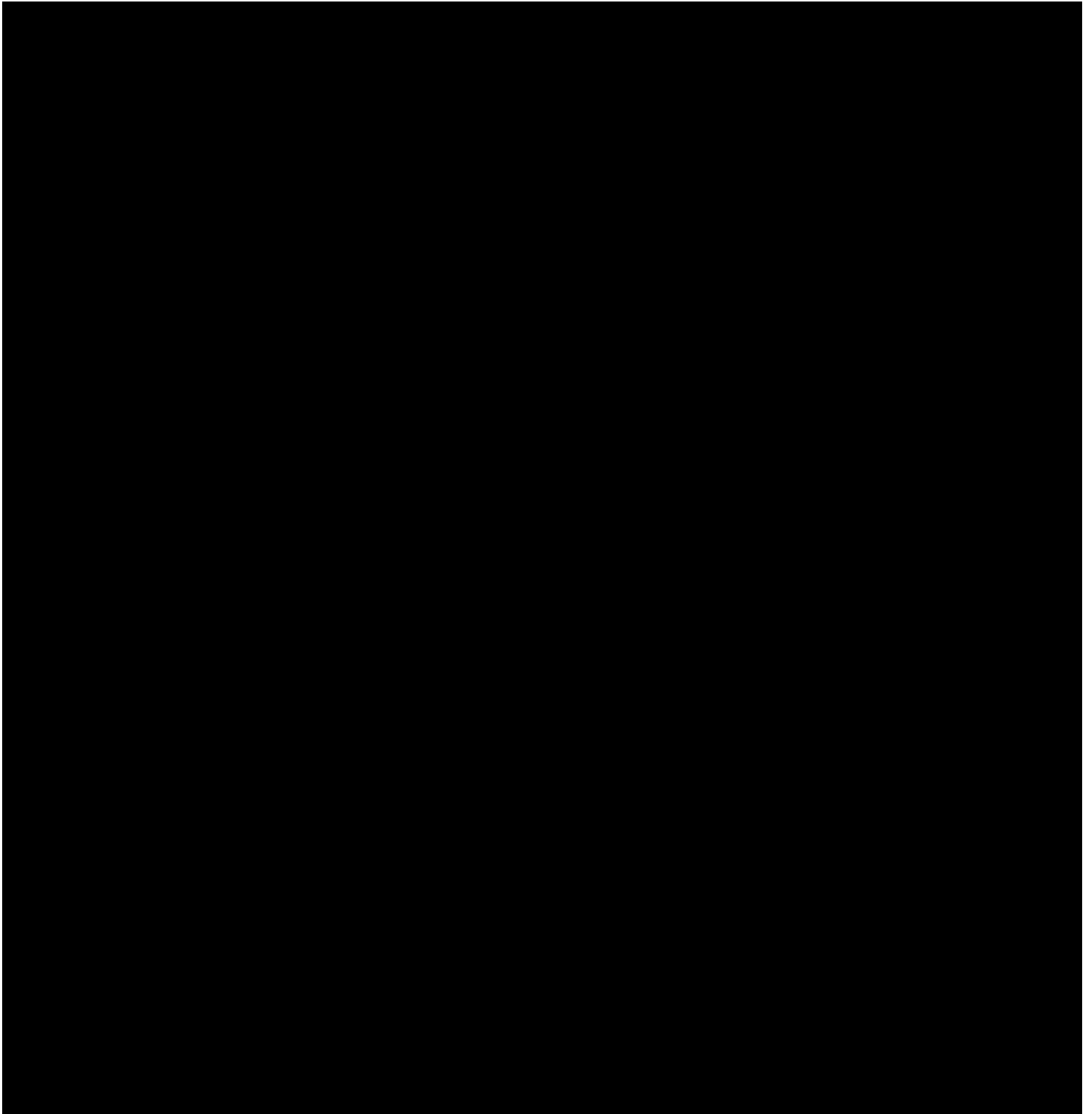
RESOLVED, that the Board approves the LIME Loan Facility to C4C in an amount of up to \$6.5 million in capital from the Green Bank balance sheet in support of the LIME Program;

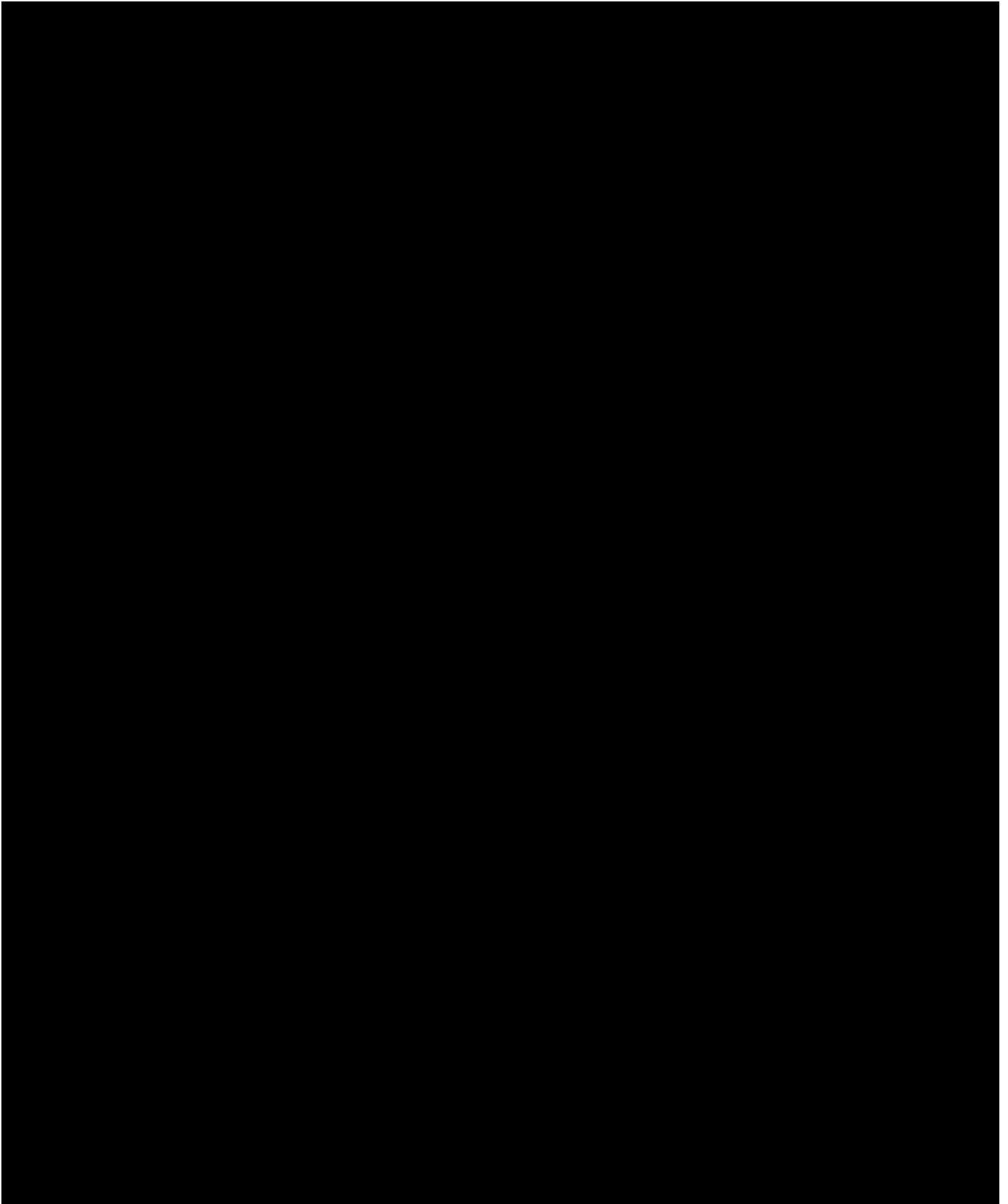
RESOLVED, that the President of the Green Bank; and any other duly authorized officer of the Green Bank, is authorized to execute and deliver, any contract or other legal instrument necessary to effect the LIME Loan Facility on such terms and conditions as are materially consistent with the memorandum submitted to the Board on October 21, 2019; and

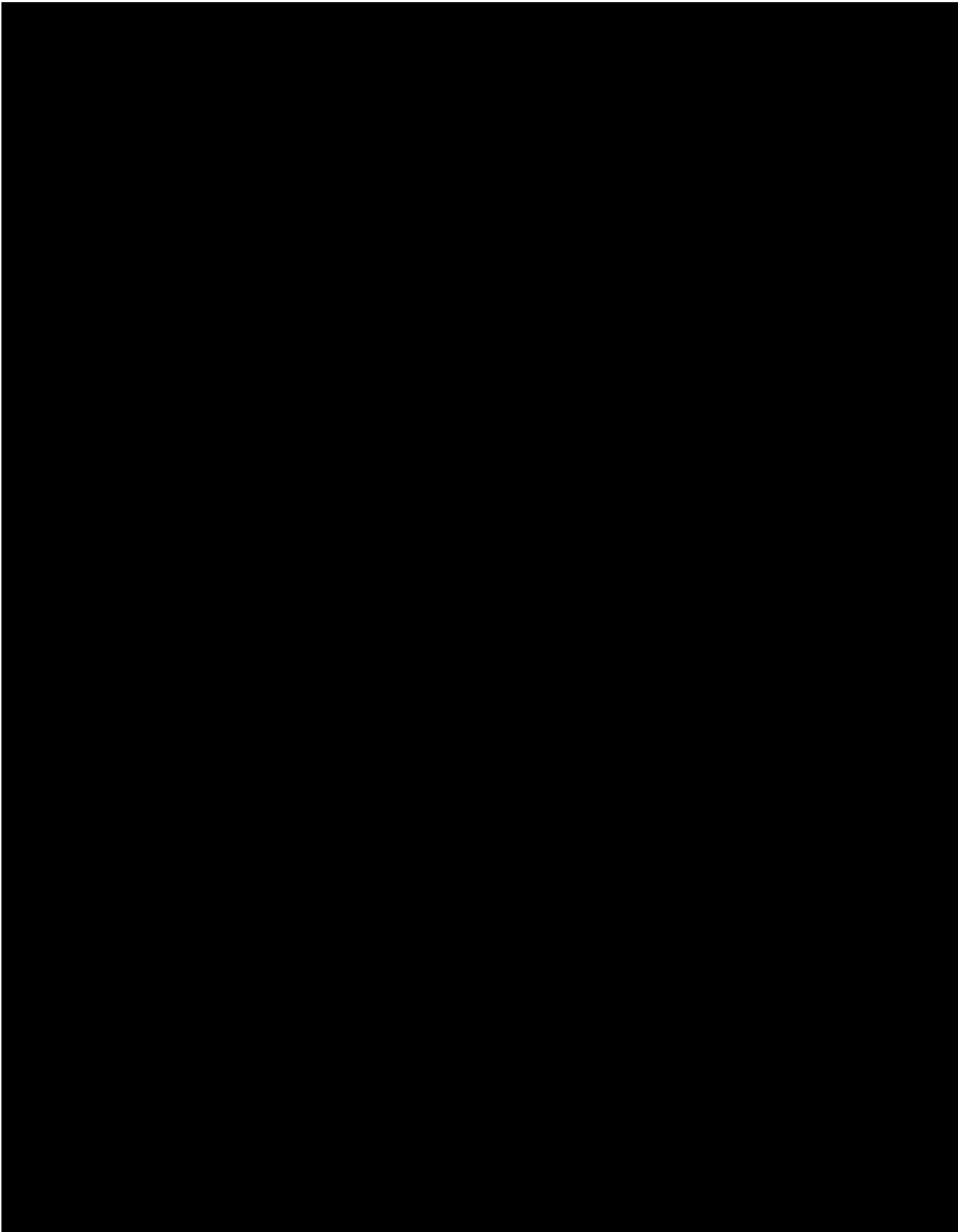
RESOLVED, that the proper Green Bank officers are authorized and empowered to do all other acts and execute and deliver all other documents as they shall deem necessary and desirable to effect the above-mentioned legal instrument.

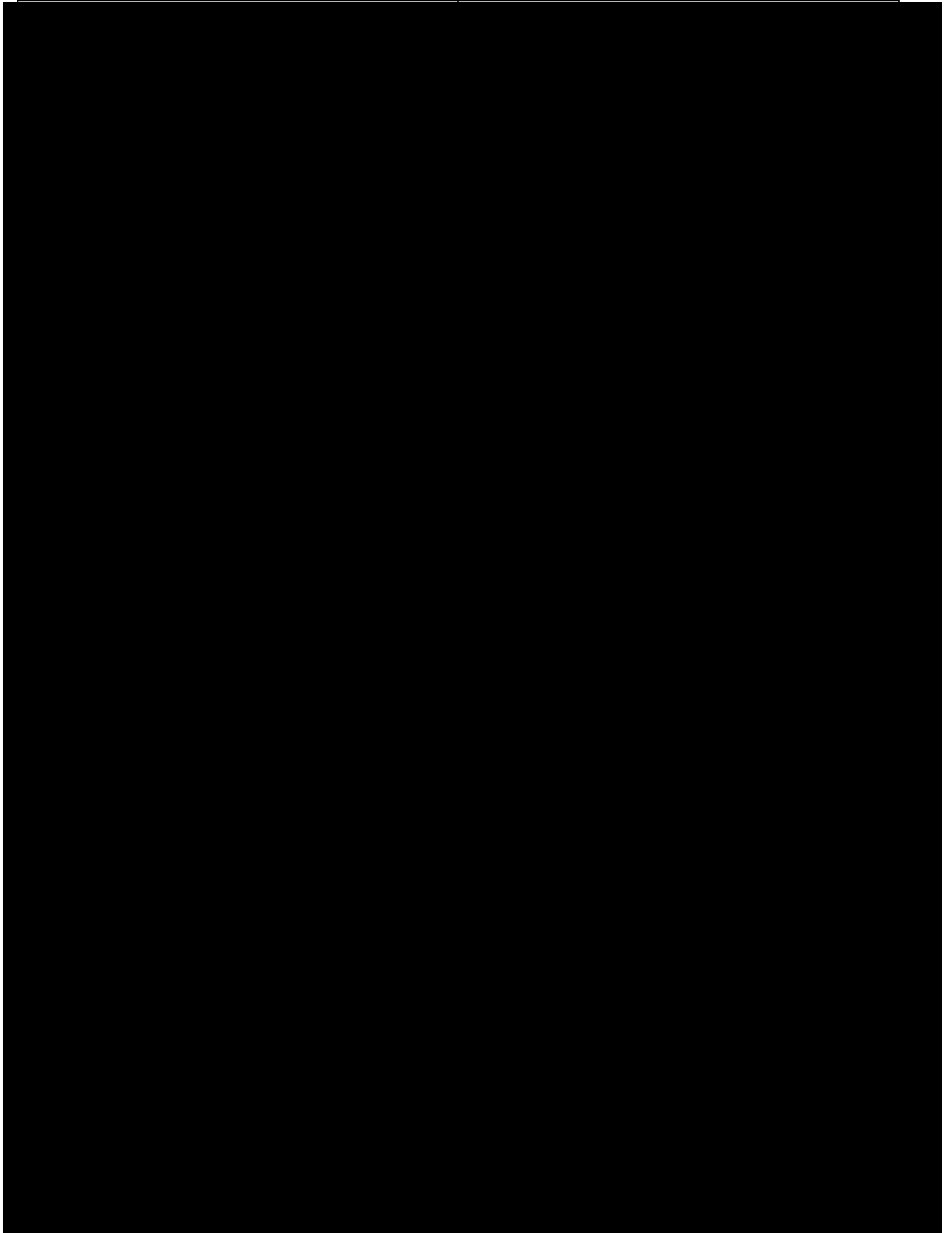
Submitted by: Bryan Garcia, President and CEO and Bert Hunter, EVP and CIO

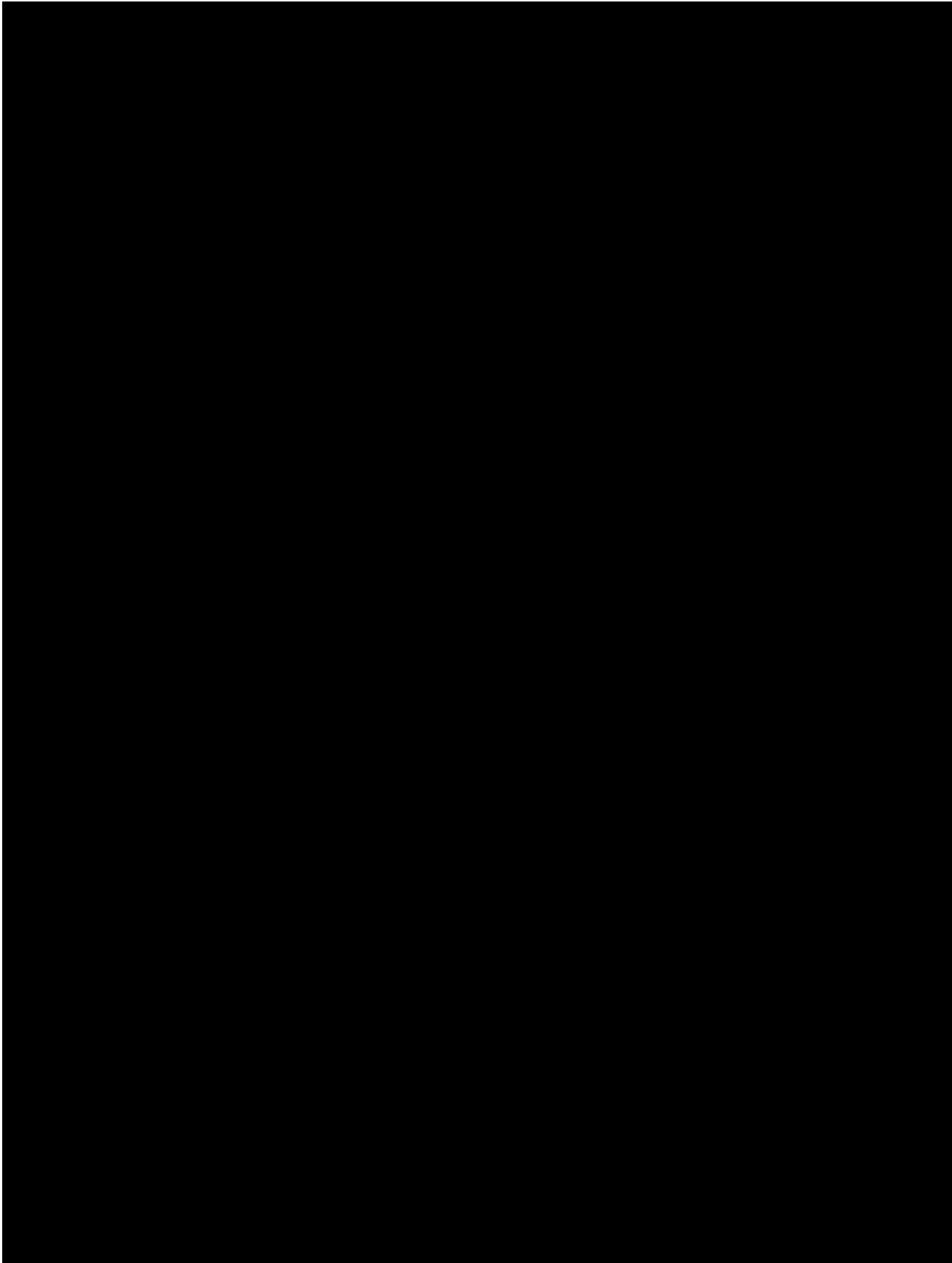
Exhibit A

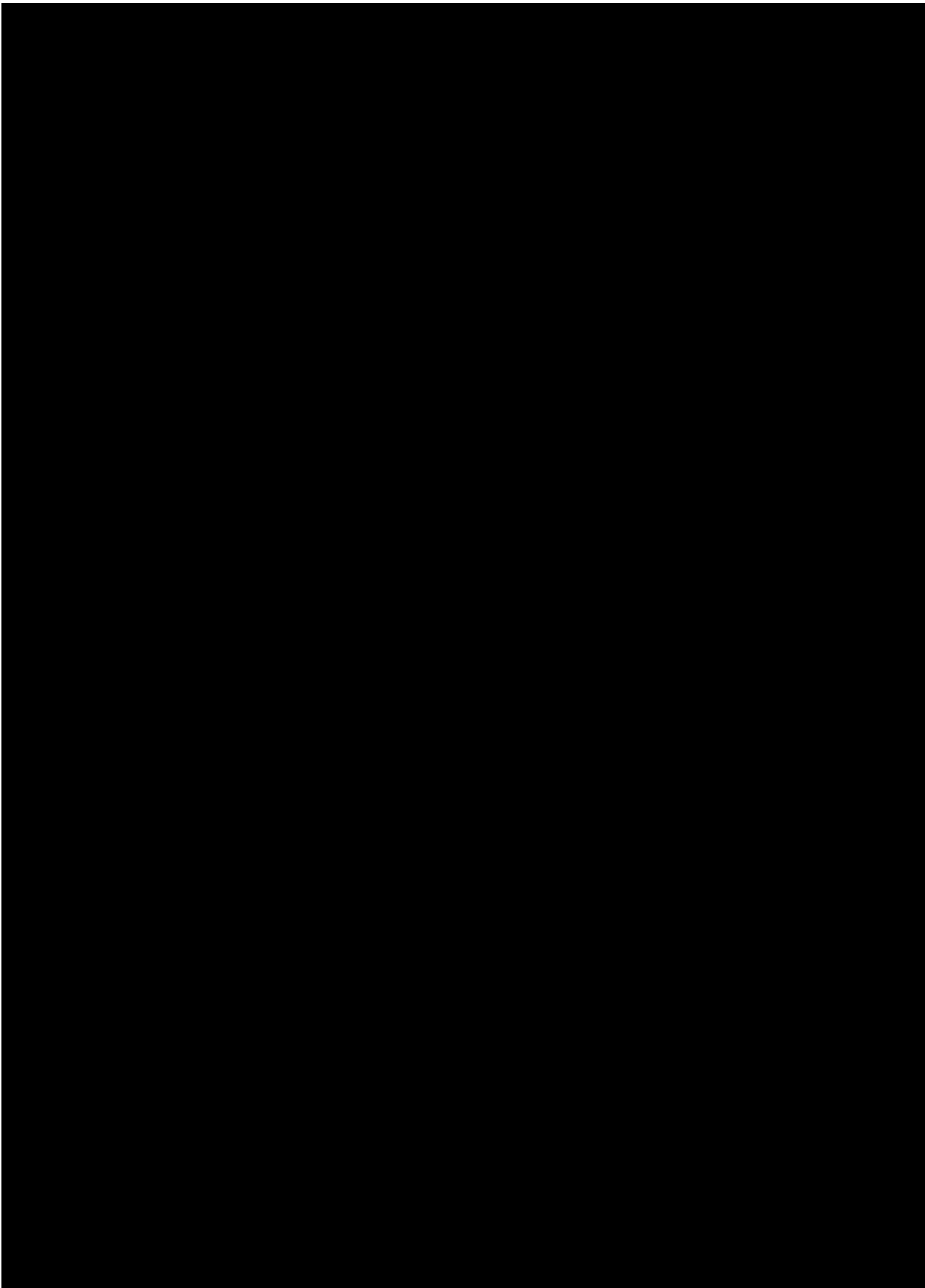


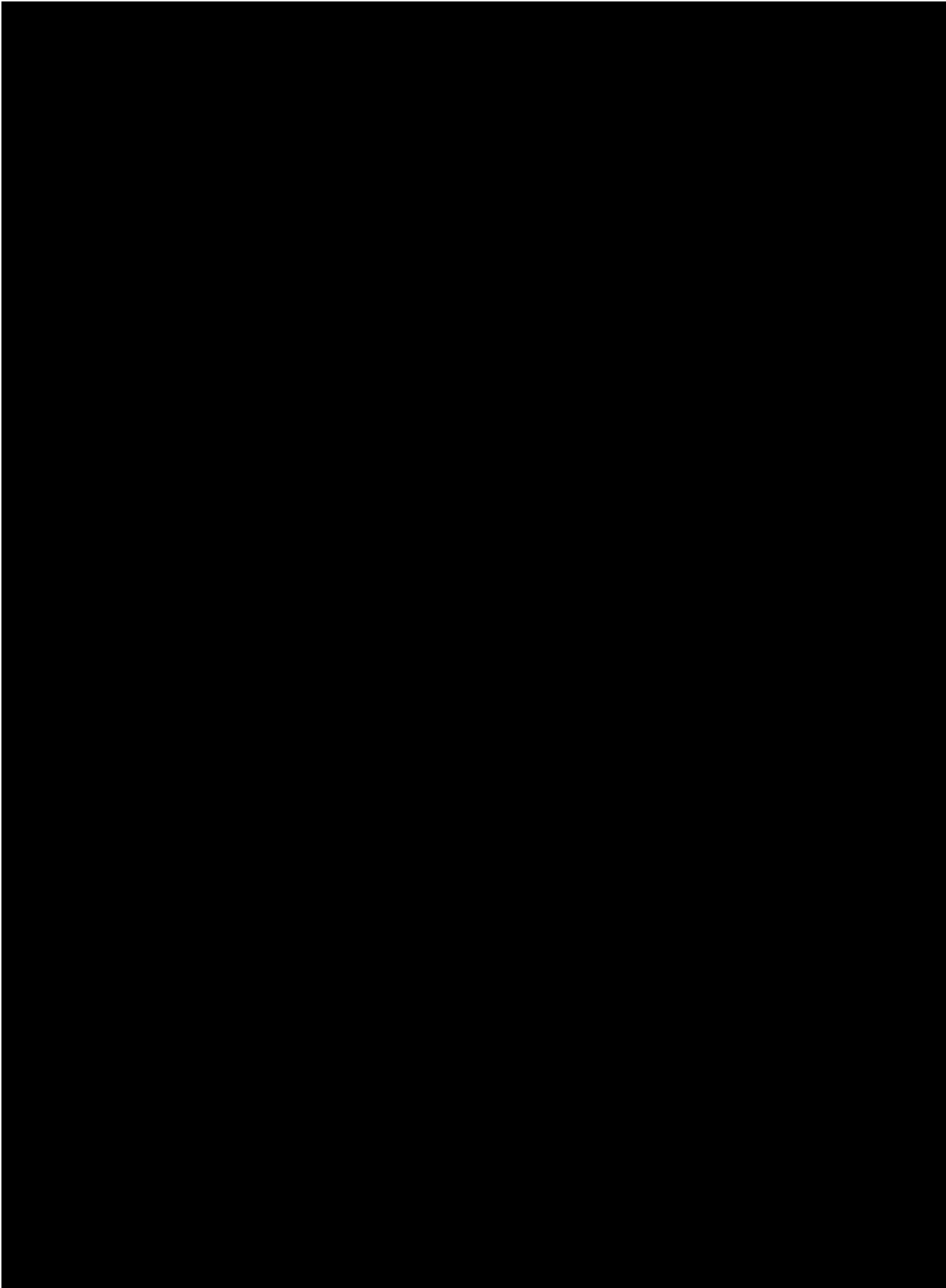




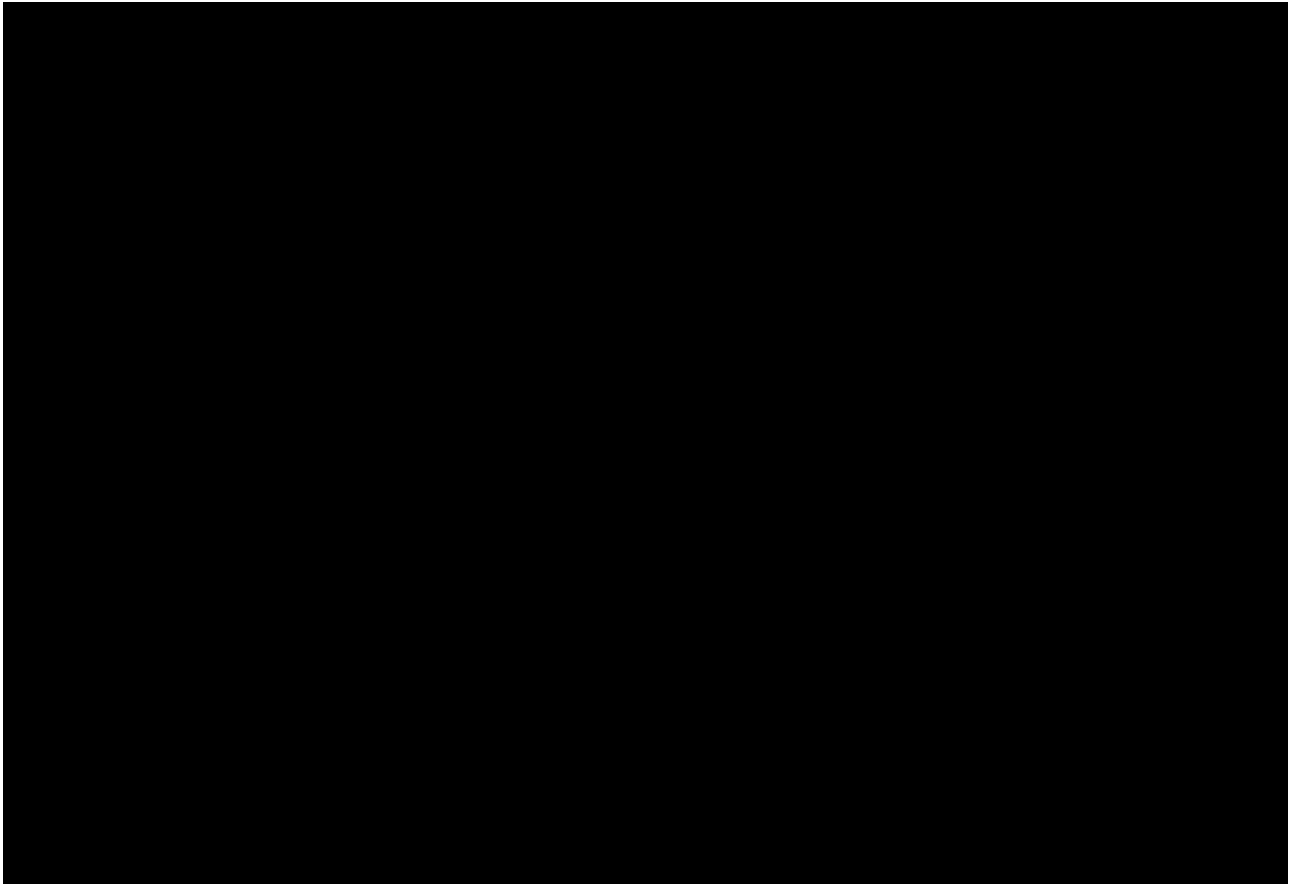










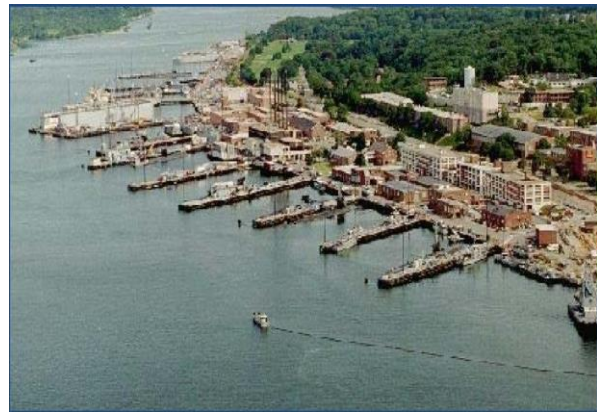


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Connecticut Municipal Electric Energy Cooperative (CMEEC) & US Naval Submarine Base – Groton, CT Fuel Cell Project

A Fuel Cell Debt Financing Strategic Selection
Green Bank Term Loan Facility Modification Request
March 14, 2023



Document Purpose: This document contains background information and due diligence on a proposed credit facility for the FuelCell Energy, Inc. (“FCE” and NASDAQ: FCEL) fuel cell project under a power purchase agreement between FCE and the Connecticut Municipal Electric Energy Cooperative (“CMEEC”) and located at the US Naval Submarine Base – Groton, CT. The information herein is provided to the Connecticut Green Bank Board of Directors for the purposes of reviewing and approving recommendations made by the staff of the Connecticut Green Bank.

In some cases, this package may contain, among other things, trade secrets and commercial or financial information given to the Connecticut Green Bank in confidence and should be excluded under C.G.S. §1-210(b) and §16-245n(D) from any public disclosure under the Connecticut Freedom of Information Act. If such information is included in this package, it will be noted as confidential.

Strategic Selection Financing Memo

To: Connecticut Green Bank Board of Directors

From: Bert Hunter, EVP & CIO; Mariana Trief, Associate Director, Investments; David Beech, Senior Manager, Investments

Cc: Bryan Garcia, President & CEO; Brian Farnen, General Counsel & CLO; Sergio Carrillo, Director, Incentive Programs; Jane Murphy, EVP of Finance and Administration

Date: March 14, 2023

Re: FuelCell Energy / US Navy / CMEEC / Groton Fuel Cell Project
Term Loan Facility Modification Request

Purpose & Term Loan Modification

The purpose of this memorandum is to update the Connecticut Green Bank (“Green Bank”) Board of Directors (the “Board”) and secure approval with respect to a modification of the term loan facility originally approved in October 2018 and most recently modified in December 2020 (“Previously Approved Loan”) by the Board with respect to the 7.4 megawatt FuelCell Energy, Inc. (“FCE”) fuel cell at the US Naval Submarine Base, Groton, CT (the “Navy Project” or the “Project”) in partnership with and subordinated to loans (the “Senior Loans” and together with Green Bank’s loan, the “Term Loans”) from two bank lenders: Liberty Bank and Amalgamated Bank (the “Senior Lenders” and together with Green Bank, the “Lenders”).

As set forth in detail in this memorandum, staff requests approval by the Board to increase and modify the structure of Green Bank funding (the “Revised Term Loan”). To allow the documentation to finalize, staff requests the original approval “execute by date” be extended from March 31, 2023 to 180 days after approval of the transaction (but the parties are working to close the funding not later than April 30, 2023). To summarize – the Previously Approved Loan including the Green Bank Original Term Loan proposal and modified structure of the Revised Term Loan is presented here:

	Previously Approved Structured				Proposed Changes			
	Amount	Term (Yrs)	Rate	Interest Only	Amount	Term (Yrs)	Rate	Interest Only
Green Bank (Subordinated)	\$ 8,000,000	20	8% 7 Years		\$ 8,000,000	20***	8.00% 7 Years	
Green Bank (Subordinated) - Additional Advance	\$ -				\$ 2,000,000 **	20***	8.00% 7 Years	

The key changes for the proposed capital structure are:

1. Tax equity with East West Bank for the Project has been [REDACTED]

- [REDACTED]
- [REDACTED]
2. The Senior Lenders have re-priced their loans to align with current market conditions. The rate has not been finalized but is expected to be [REDACTED]. Once a final term sheet with the Senior Lenders is signed, the rate is locked for a 90 day period.
 3. The Project, currently operating at 6MW, has yet to reach the full 7.4MW of capacity. To account for the possibility that efforts to bring the system to its fully rated capacity are unsuccessful, Senior Lenders may now advance less than the full \$12M of Senior Term Loans. The advanced amount will be sized by applying the agreed Debt Service Coverage Ratio ("DSCR") to the project model with the assumption that the maximum system capacity remains at 6MW for the life of the Senior Loan.
 4. To cover the potential shortfall of Senior Loans outlined in (3) above, Green Bank proposes to provide up to an additional \$2M of subordinate debt to the Project ("Additional CGB Advance"), for a total advance by the Green Bank of a not to exceed amount of \$10M. If FCE can fix the mechanical issues and get the system to its full capacity (which it fully expects to do within the next 6-12 months), any shortfall in initial advance by the Senior Lenders (i.e., any shortfall below the maximum Senior Loan amount of \$12M) would be provided in a subsequent advance once the Project's production capacity is confirmed, and this subsequent advance by the Senior Lenders would be assigned to Green Bank to pay off Green Bank for any Additional CGB Advance.
 5. The FCE fully owned project in California, from which excess cashflows were to be pledged by FCE to the Green Bank for credit support, has been sold by FCE (due to issues related to the project host and not FCE). To offset the loss of this credit enhancement and given the exposure of uncontracted Renewable Energy Credits ("RECs") anticipated from the Project, CGB has negotiated the following changes to the financing structure.

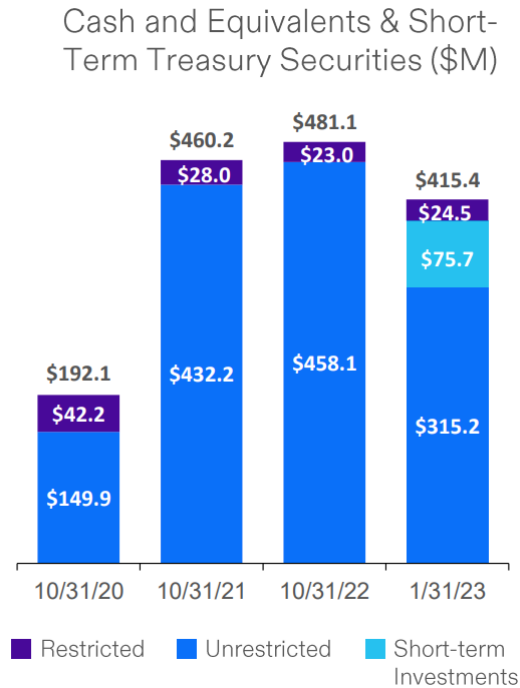
[REDACTED]

Together – these credit enhancements enable the Project to meet projected DSCR covenants while the Senior Loan and the Green Bank loan are outstanding simultaneously. Once the Senior Loan is repaid – projections suggest this additional credit enhancement will not be required – but a decision on whether and to the extent possible such credit enhancement will be released will be determined by Green Bank in its discretion upon the Green Bank becoming sole lender to the project (anticipated when the Senior Lenders are repaid at the conclusion of the 7 year term of their loan).

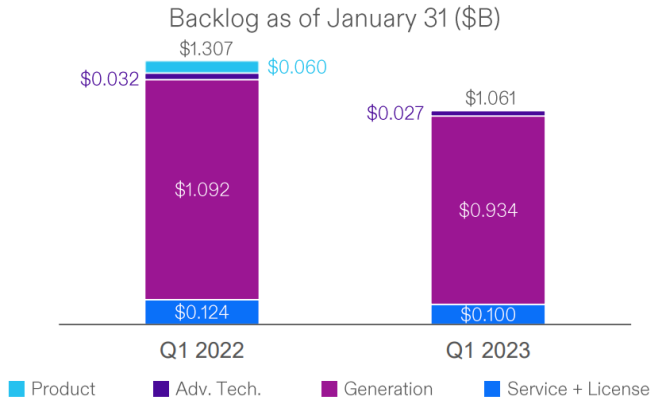
6. Use of Funds: \$3M from the Green Bank's Subordinated Loan will be used to repay the Bridgeport "B" loan (which was used to fund construction costs for the Project and general FCE corporate purposes) or, if the Bridgeport "B" loan is repaid prior to the closing of the Revised Term Loan, then these proceeds would be distributable by the Borrower to FCE. Beyond the specific requirements around this \$3 million of the full proceeds from the Revised Term Loan, the excess would be distributed by the Borrower to FCE.

FuelCell Energy Corporate Update

FCE has sustained strong corporate liquidity and relatively low leverage on its balance sheet, providing a platform for project execution and growth. In its most recent fiscal year (ended October 31, 2022) FCE raised more than \$180,000,000 from the sale of equity and had a negligible amount of debt not related to project assets (such as our loans to the Bridgeport project and projects financed via sale-and-leaseback structures which collectively accounted for about \$75,000,000 at October 31, 2022). FCE’s cash and cash equivalents as of January 31, 2023 now totals approximately \$415 million – more than \$150,000,000 higher than our last report to the Board in October 2020, and includes \$391 million of unrestricted cash and cash equivalents (including short term US Treasuries) and \$24 million of restricted cash and cash equivalents. The Navy/Groton project financing should supplement FCE’s cash resources by at least \$23 million, which would be the \$23 million facility net of required reserves that would be set aside and closing expenses. A separate recapitalization credit facility (“Recapitalization Facility”) for 6 FCE projects (see separate memorandum (“Recapitalization Memo”) to the Board for the March 17, 2023 Board meeting) should yield an additional \$75 million in cash resources for FCE.



FCE’s balance sheet is in its strongest position in several years and poised to realize upon a \$1.1 billion pipeline of commercial opportunities. Additional detail can be found in the Recapitalization Memo.



FuelCell Navy Project Facility – Mechanical Completion & Commercial Operation Date

In July 2021, the Company achieved mechanical completion, executed the interconnect agreement, and commenced the process of commissioning the 7.4 MW platform at the U.S. Navy Submarine Base in Groton, CT (the “Groton Project”). On September 14, 2021, the Company disclosed that the process of commissioning the Groton Project was temporarily suspended due to a needed repair. Following the completion of that repair, the Company resumed commissioning of the Groton Project. During the resumed commissioning process, the Company observed operating parameter data from one of the two fuel cell platforms installed at the project site that indicated a mechanical component was not performing according to engineered specifications. The Company subsequently determined that component should be removed from the project site to facilitate the necessary repair and upgrade. On April 7, 2022, the Company announced that it had completed the necessary repairs and upgrades to the mechanical component, reinstalled the mechanical component at the project site, and restarted the process of commissioning. During the restarted commissioning process, the Company encountered performance anomalies primarily in the mixer eductor oxidizer (“MEO”) which is a sophisticated piece of equipment specific to the “high efficiency” Groton Project designed to optimize fuel and air flows. The Company has decided to operate the project at a reduced output of 3 MW per platform (for a total of 6 MW) at the start of commercial operations in order to optimize performance of each of the two MEO units. Over a period of approximately one year from Q4 2022 to Q4 2023, the Company anticipates implementing upgrades to each of the two MEO units in order to bring the platform to its rated capacity of 7.4 MW. A summary report, prepared by FCE’s VP of Engineering, outlining the mechanical issues and FCE’s corrective action plan is attached below as Appendix I. Having received approval by the Connecticut Municipal Electric Energy Cooperative (“CMEEC”) and the U.S. Navy to commence commercial operations at a reduced power output of 6MW, an Amended and Restated Power Purchase Agreement was signed, and Commercial Operation was achieved on December 16, 2022.

This platform at the Navy Project is expected to highlight the ability of FuelCell Energy’s platforms to perform at high efficiencies and provide low CO₂ to MWh output. Incorporation of the platform into a microgrid is expected to demonstrate the capacity of FuelCell Energy’s platforms to increase grid stability and resilience while supporting the U.S. military’s efforts to fortify base energy supply and demonstrate the U.S. Navy’s commitment to clean, reliable power with microgrid capabilities.

FuelCell Navy Project Facility – Tax Equity Closing & Debt Facility Progress

FCE closed its tax equity facility with East West Bank, which was funded, [REDACTED] in December 2022. FCE has been working with Green Bank and Senior Lenders on the debt structure, per the terms discussed in this memo. Staff is bringing forward Green Bank’s facility for approval from the Board which will enable the Senior Lenders (Liberty Bank and Amalgamated Bank) and Green Bank to finalize the term sheet and have the Senior Lenders present their requests for approval to their respective credit committees. The term sheets for Green Bank’s Revised Term Loan and for the Senior Loan are provided as Exhibit A and B, respectively.

Green Bank’s Existing Approvals and Funding to FuelCell Navy Project

In October 2018, the Board approved as a strategic selection a \$5 million credit facility for the Navy Project as a term loan (the “Original Term Loan”). In October 2019, the Board approved using \$3 million of this exposure to assist with construction funding (Fifth Third Bank had ceased additional construction advances owing to FCE’s strained financial position at the time and due to the fact that the term loan funding commitment from Liberty Bank and Amalgamated Bank had lapsed). Using funds raised from Orion Energy Partners, FCE repaid Fifth Third Bank and completed the Navy Project with its own resources (including additional capital from Orion and other cash sources). Accordingly, with the Navy Project facility substantially complete, the funding from Orion

completely repaid, and with all of the capital (tax equity and bank debt) now arranged, staff returns to the Board for final approval of the Navy Project Term Loan as modified. A recap of the Navy Project follows below. In December 2020, the Board approved an \$8M credit facility for the Project given changes to the loan amount and terms from Senior Lenders. In December 2022, the Board approved an extension to finalize loan documentation by March 31, 2023.

Navy Project Background – Highlights

Project and PPA Summary

On October 19, 2017, FCE announced the execution of a power purchase agreement (“PPA”) with the Connecticut Municipal Electric Energy Cooperative (“CMEEC”)¹ for the supply of power to the U.S. Navy Submarine Base in Groton, Connecticut in order provide the U.S. Navy with energy that is (1.) clean, (2.) resilient (i.e. can operate independent of the grid), and (3.) cost-effective (i.e. reducing energy expenses, which compose approximately 28% of this U.S. Navy sub base’s “shore budget”)². The Project will be sited on the actual U.S. Navy Submarine Base, on land that CMEEC has leased from the U.S. Navy for this purpose and which CMEEC will in turn sub-lease to FCE for the duration of the Project’s operations. Under the terms of the PPA, CMEEC will purchase all of the energy produced by the Project and will in turn utilize that energy for the benefit of the base.

The PPA will be underpinned by the production from two FCE SureSource4000™ power plants which combine for 7.4 MW of total electrical output and an expected annual production in the first full year of “full capacity” operation of over 56,000,000 kWh (full capacity to be achieved by the end of 2023 – and before then proportionately less for 6.0 MW estimated production which equates to approximately 43,000,000 kWh per year). The Navy Project will be constructed, owned, operated, and maintained by FCE – a process which aligns with FCE’s vertically integrated business strategy and also makes the liquidity provided by the Revised Term Loan facility important for FCE’s continued growth and ability to execute on its project development pipeline.

The Navy project has been completed but is currently operating at 6MW, instead of the full 7.4MW of capacity, which it expects to reach in 2023. The Revised Term Loan facility, the Senior Loans and Tax Equity will repay Green Bank’s \$3M Bridgeport “B” loan used to fund construction costs for the Project. The remainder of the funds will fund reserves, closing costs and repay the FCE construction funding. The Lenders will be repaid via (i.) PPA cashflows, and (ii.) Class I REC cashflows.

Green Bank views this Project, and the goals of providing clean, resilient, and cost-effective energy to the US Navy Submarine Base, as collectively of strategic national importance, local economic/development significance and significant environmental benefits:

“The submarine base in Groton is home to 15 nuclear submarines and generates about \$4.5 billion a year for Connecticut’s economy when employment, sale of goods and services and other factors, including housing, are considered” – The CT Mirror, September 13, 2017³

In addition to direct benefits from the base, FCE is a Connecticut-domiciled company and the inclusion of (i.) Liberty bank, a Connecticut-based lender, and (ii.) Amalgamated Bank, an out-of-state bank (NY/CA/DC)

¹ On 26 May 2020, Fitch Ratings announced it has upgraded CMEEC’s Issuer Default Rating (IDR) to ‘AA-’ from ‘A+’. Fitch has also upgraded CMEEC bonds to ‘AA-’ from ‘A+’.

² “FuelCell Energy Finalizes 7.4 Megawatt Utility Project to Power a Strategic Military Installation”, <https://investor.fce.com/press-releases/press-release-details/2017/FuelCell-Energy-Finalizes-74-Megawatt-Utility-Project-to-Power-a-Strategic-Military-Installation/default.aspx>, Accessed August 21, 2018.

³ “Senate heads toward political fight over new base closing round”, <https://ctmirror.org/2017/09/13/senate-heads-toward-political-fight-over-new-base-closing-round/>, Accessed October 18, 2018.

committed to environmental and social responsibility injecting capital into Connecticut helps promote further economic development and local direct investment. Liberty Bank and Amalgamated Bank are active and substantial lending partners with Green Bank on other credit activities, including fuel cell project finance and energy efficiency and solar PV financing for residential and commercial customers (including the Bridgeport fuel cell project, SL2, SBEA and funding for Capital for Change).

Navy Project Investment/Risk Profile

From both Tax Equity and the Lenders' perspective, the Navy Project carries key attributes that make it an attractive asset. As part of FCE's strategic goals to own as many of these projects on balance sheet as possible in order to build a stable and significant cash flow for FCE and build enterprise value, FCE seeks to be the ultimate owner of the Navy Project together with Tax Equity using a partnership flip structure (explained in a prior footnote). Below are key investment attributes, though an extensive list of Navy Project risks and mitigants to the Green Bank's position are discussed further in the sections below:

- **Construction & Technology Risk:** Full engineering, procurement, and construction ("EPC") wrap provided by FCE (together with customary construction bonding for the EPC contractor), coupled with a 20-year service contract (also provided by FCE) covering full maintenance and production requirements, include stack replacements after 7 and 14 years;
- **Development & Siting Risk:** Navy Project sited on the U.S. Naval Submarine Base, Groton CT, with construction having achieved a commercial operations date of December 16, 2022.
- **Counterparty Risk:** Experienced fuel cell manufacturer and operator (over 220 MW of clean power generating plants in operation, with another \$934,000,000 of projects in development— including projects awarded to FCE under the CT-DEEP RFP and the DEEP Shared Clean Energy Facilities (SCEF) RFP);
- **Credit/Repayment Risk:** Approximately 50,000,000 – 60,000,000 kWh of annual electricity production, monetized by both contracted PPA cashflows and uncontracted RECs⁴, with an Investment Grade offtaker (rated AA- by Fitch).

Use of Proceeds – High Efficiency Fuel Cell Navy Project

The Revised Term Loan, as part of the Term Loans, will help finance the largest configuration to date of FCE's Direct FuelCell ("DFC") fuel cell technology, which is the most efficient fuel cell installed by FCE. Green Bank had the benefit of reviewing this technology during underwriting for the FCE Triangle project in Danbury, CT, which was approved for a credit facility by the Board in 2017 (now lapsed; FCE self-funded Triangle).

The Navy Project will similarly utilize in-state developed, designed, and manufactured technology to create a new benchmark of product efficiency across the fuel cell industry, converting natural gas into electricity at an efficient fuel-to-electricity ratio while also reducing pollution by up to 99.99% in comparison to conventional power generating plants and with a lower carbon footprint than the NE-ISO average (See: Strategic Selection and Importance, Connecticut Impact – Benefits to the RPS & Environmental Benefits). The innovative

⁴ Long Term Contracted RECs ("LRECs") are not available for this project due to its size and location in CMEEC service territory.

technology achieves additional electrical output through a proprietary design developed by FCE, which has extensive experience deploying innovative fuel cell projects (as discussed in the section above).

Construction Facility – Fifth Third Bank & Orion Energy Partners (Repaid)

Green Bank together with Inclusive Prosperity Capital (“IPC”) arranged for a construction loan facility provided by Fifth-Third Bank. The Fifth Third Bank facility was repaid by funding from Orion, and Orion, in turn, was repaid on December 4, 2020 from funds FCE raised in the equity markets in early December.

Term Loan Facility – Liberty Bank, Amalgamated Bank & Green Bank

Summary Terms and Conditions

The Term Loan facility is comprised of a \$20,000,000 senior-subordinated term loan package whereby \$12 million is the Senior Loan held by Senior Lenders, and \$8 million represents the Green Bank Revised Term Loan, which is subordinated to the Senior Loans.

The \$12 million Senior Loans will be priced at approximately [REDACTED]. The Senior Lenders will make a first advance by applying a planned [REDACTED] DSCR to the Project model with the assumption that the maximum system capacity remains at 6MW for the life of the Project. This could result in an advance by the Senior Lenders at the closing of an amount somewhat less than the expected \$12M commitment. Should this occur, once the Project reaches the full 7.4MW of capacity, Senior Lenders will advance the rest of the loan, up to \$12M. To account for a potential shortfall in the Senior Loan at the time of closing, prior to reaching the full 7.4 MW of capacity, the Green Bank is requesting approval to increase its loan from \$8M to at most \$10M. The additional advance over \$8M from the Green Bank loan would be repaid upon the Project reaching the 7.4 MW capacity and receiving the remaining advance under the Senior Loan. Should output remain below 7.4 MW for an extended period (the senior lenders could impose a “fix by” date), then Green Bank might need to recover the amount of the advance in excess of \$8 million over the life of the subordinated Green Bank facility. The DSCR is sized against PPA and REC cashflows together with a 6-month debt service reserve account supplemented by an operations and maintenance and module replacement reserve account (the “O&M Reserve”). The O&M Reserve will be initially funded in the amount of \$ [REDACTED] upon closing of Senior Loan with additional deposits of \$ [REDACTED] per year up to a maximum overall O&M Reserve of \$ [REDACTED]. As the Green Bank and FCE are currently in the process of finalizing the terms and conditions associated with the Senior Loans and the Green Bank loan, variations to the structure may arise that are not expected to put any additional risks onto the Green Bank’s position.

The Green Bank’s position in the Revised Term Loan is as proposed in prior submissions to the Board: a subordinate, secured interest in the Navy Project, relative to the Senior Loans, that is repaid via a combination of (i.) PPA cashflows, (ii.) REC cashflows and (iii) a debt service reserve account. Given the REC cashflows are not contracted, Green Bank is requiring [REDACTED]

[REDACTED]. The Green Bank note is interest only during the term of the Senior Loan (7 years), fully amortizing over a 20-year term, but with expected repayment over 15 years as there is a 50% cash sweep and carries an interest rate of [REDACTED]% to account for its subordinated position in the structure and longer term. There is the potential for Green Bank to offer a loan priced at [REDACTED]

[REDACTED]. In this way, should interest rates eventually fall,

FCE could realize some interest savings on a portion of the facility (this particular term is not yet agreed amongst the Senior Lenders, FCE and Green Bank). In either case, the interest rate would step down to [REDACTED] upon the date (the “Step-Down Date”) in which Green Bank becomes the sole lender to the project following both (y) the exit from the project company by the tax equity investor following the flip date and (z) the repayment in full of the Senior Loan. The required DSCR is [REDACTED]x (inclusive of senior and Green Bank debt service).

Strategic Selection and Importance

Connecticut Impact

Support for the Connecticut CES

Fuel cells, as an electrical power generating technology, convert hydrogen fuel sources (e.g. natural gas) into electricity via a chemical process without the combustion cycle typically found in traditional generation technologies, and thus without the associated pollution⁵. Fuel cells are defined as a Class I renewable energy source as per CGS §16-1(a)(20), and operate at an effective annual capacity factor of ~90%, providing clean, consistent, and reliable power to associated off-takers, whether grid-tied or behind-the-meter. In aggregate, the fuel cell industry is of strategic importance to Connecticut as it relates to economic development, job creation and retention, and clean energy deployment

Green Bank staff believes that by providing key pieces of the capital stack and financing structures for strategic fuel cell assets in Connecticut, such as the Revised Term Loan, Green Bank can help promote the foundation for a viable transition from subsidizing to financing models for a key clean energy technology that promotes environmental, energy, and economic benefits for the state. This approach and its progress towards the intended goal of leveraging private capital towards project finance investment continues to show promise, as evidenced by the results of the \$8 million Revised Term Loan from Green Bank leveraging a \$22.4 million Construction Facility, a \$12 million Senior Loan facility, a \$15 million tax equity investment and \$18 million of sponsor (FCE) investment for the Navy Project, achieves an overall leverage ratio of \$8 in private capital to \$1 of Green Bank investment. If the Project did not achieve its full 7.4 MW capacity and remained at 6 MW capacity resulting an increase \$10M of Green Bank’s loan, a \$10M Senior Loan facility, a \$15M tax equity investment and \$18M of sponsor investment for the Navy Project, achieves and overall leverage of \$6.7 in private capital to \$1 of Green Bank investment.

Grid Stability & Support

From a power generation perspective, fuel cells benefit the existing electric distribution system as distributed baseload plants that stabilize loads (versus intermittent renewable energy technologies such as solar and wind), provide voltage support, and mitigate system upgrade requirements⁶, resulting in enhanced system stability and cost-savings.

⁵ FuelCell Energy, “How a Fuel Cell Works,” http://www.fuelcellenergy.com/?page_id=15806, (February 26, 2017).

⁶Connecticut Department of Energy & Environmental Protection, “Testimony Submitted by DEEP Commissioner Robert J. Klee, and Katie Dykes, Chair, Public Utility Regulatory Authority,” *Public Hearing – February 21, 2017 – Energy and Technology Committee*, <https://www.cga.ct.gov/2017/ETdata/Tmy/2017HB-07036-R000221-Klee,%20Robert,%20Commissioner-DEEP-TMY.PDF>, (February 26, 2017).

Benefits to the RPS and Environmental Benefits

From a clean energy power generation perspective, fuel cells provide Connecticut with a viable means of achieving its current Renewable Portfolio Standard (“RPS”) policy of 20% of energy generation from Class I renewable energy sources by 2020⁷, and provide potential off-takers with clean and reliable power that can be used in standalone and aggregated (e.g. microgrid) applications. This is especially true for the US Navy submarine base at Groton. In fact, fuel cells have enabled Connecticut to meet its Class I RPS with more in-state deployment of clean renewable energy as opposed to out-of-state generation.

Looking at the Navy Project from its pollution reduction potential, accordingly to an EPA report published on March 9, 2020, the average non-baseload output emissions rate across the New England eGRID subregion is 931 lbs of CO₂ per MWh of power produced⁸. In contrast, the technology underpinning the Navy Project has a CO₂ emissions rate ranging between 520 – 680 lbs per MWh. Comparing the midpoint of the Navy Project’s emissions rate with the average regional non-baseload production rate, the Navy Project saves, on average, 331 lbs of CO₂ per MWh (36%) of power produced. The Navy Project is expected to produce 56,239 MWh of electricity during its first year of operation, offsetting 18,615,100 lbs of CO₂, or the equivalent of 9,300 tons of CO₂ in that first year of operation. Across the 20-year financing term, the Navy Project is expected to produce up to 1,087,686 MWh of electricity, offsetting approximately 180,000 tons of CO₂. Comparing the project’s CO₂ reduction capacity with the performance of other Green Bank projects in meeting pollution reduction goals, during its 2020 Fiscal Year Green Bank approved, closed, or completed clean energy projects which, in aggregate, will offset 1,474,033 tons of lifetime CO₂ emissions. The proposed Navy Project, by offsetting 180,000 tons of CO₂, would have by itself accounted for approximately 12% of expected CO₂ emissions reductions from all Green Bank financing and development activities in its 2020 Fiscal Year.

Economic Impact

From an economic perspective, Connecticut is home to over 600 companies that take part in the fuel cell industry supply chain, which account for over 2,600 direct and indirect jobs⁹, and which in 2015 contributed \$726 million in total revenue and investment and roughly \$40 million in state and local tax revenue¹⁰, which is a material portion of commercial tax revenues for the state. Support of the Navy Project will directly lead to not only the creation and retention of jobs associated with the Navy Project, but also to FCE’s ability to ultimately grow its workforce as other projects in its pipeline come online and as it implements its long-term growth strategy.

⁷Connecticut Department of Energy & Environmental Protection – Public Utilities Regulatory Authority, “Connecticut Renewable Portfolio Standard,” <http://www.ct.gov/pura/cwp/view.asp?a=3354&q=415186>, (February 26, 2017).

⁸United States Environmental Protection Agency, “eGRID2018 Summary Tables,” https://www.epa.gov/sites/production/files/2020-01/documents/egrid2018_summary_tables.pdf

⁹Department of Economic and Community Development, “Testimony Before the Energy and Technology Committee 2/21/17 – RE: HB7036: An Act of Promoting the Use of Fuel Cells for Electric Distribution System Benefits and Reliability,” *Public Hearing – February 21, 2017 – Energy and Technology Committee*, <https://www.cga.ct.gov/2017/ETdata/Tmy/2017HB-07036-R000221-Smith,%20Catherine,%20Commissioner-Department%20of%20Economic%20and%20Community%20Development-TMY.PDF>, (February 26, 2017).

¹⁰Connecticut Center for Advanced Technology, Inc., “Testimony of Joel M. Rinebold, Director of Energy Initiatives, Connecticut Center for Advanced Technology, Inc., Before the Energy and Technology Committee February 21, 2017, Regarding Governor’s Bill No. 7036 – An Act Promoting the Use of Fuel Cells for Electric Distribution System Benefits and Reliability,” *Public Hearing – February 21, 2017 – Energy and Technology Committee*, <https://www.cga.ct.gov/2017/ETdata/Tmy/2017HB-07036-R000221-Rinebold,%20Joel,%20Director%20of%20Energy%20Initiatives-CT%20Center%20for%20Advanced%20Technology-TMY.PDF>, (February 26, 2017).

Green Bank Strategic Alignment

With the goal of creating a viable market for the transition from subsidy-based to financing-based models of development for fuel cells in Connecticut, financing the Navy Project is also of strategic importance to Green Bank, as the Navy Project exhibits the following criteria, which are required of all Green Bank strategic selection and award investments:

- **Special Capabilities** – FCE has significant experience in manufacturing and developing fuel cells (as discussed in the “Navy Project Background – Highlights” section above), and is a locally-domiciled market leader in the industry. FCE can spearhead the pivot away from tax incentives and state procurement subsidies via cost reductions derived from technological innovation and market penetration.
- **Uniqueness** – The Navy Project is of strategic national importance, supporting the U.S. Navy submarine base in Groton, CT, and will be part of an eventual microgrid (supported by a grant from DEEP) to strengthen resiliency for the Navy submarine base.
- **Strategic Importance** – The Navy Project is aligned with Green Bank goals, including the creation and retention of local jobs associated with FCE, the deployment of an innovative technology that will play an integral role in the economic transformation of the fuel cell industry, and the development of a clean energy generating asset that, both on an individual basis and as similar projects are deployed at scale, will continue to provide a combination of cleaner, cheaper, and more reliable energy, while creating jobs and supporting local economic development.
- **Urgency and Timeliness** – There is an urgent need to act on the opportunity as the Navy Project is already in commercial operation, with Tax Equity closed (in December 2022) and with the senior lenders submitting to their credit committees soon.
- **Multiphase Project** – Successful execution of the Credit Facility will set the stage for the Green Bank to support the development of similarly strategic projects both for FCE (e.g., the CT DEEP RFP and SCEF projects) and for the greater fuel cell industry within Connecticut.

Green Bank Project Risk and Mitigants

The Green Bank faces risks by means of the Navy Project itself and the Green Bank’s subordinated position in the term financing structure of the Navy Project. Green Bank staff believes it has identified and mitigated those risks.

Staff recommends the authorization of the Credit Facility on the basis that Navy Project risks have been reasonably mitigated, and that the strategic importance of the Navy Project, to both the state and Green Bank, warrant the investment:

Manufacturer Risk

A. Overview

Tax Equity and the Lenders need to be comfortable with FCE’s financial condition and prospects for continuing as a going concern. Considering the substantial cash position (\$415 million at the end of January 2023), and

after extensive review of FCE’s financial condition and interviews with its management, including its CFO, staff is comfortable that FCE is firmly on a path to long-term sustainable operations, confirming that Green Bank, the other lenders and tax equity can have reasonable assurance that FCE can stand behind its obligations under both the outstanding Bridgeport loan (which continues to perform as anticipated) and the proposed Revised Term Loan.

B. Business Summary

FCE is engaged in designing, manufacturing, installing, operating and maintaining fuel cell power solutions. FCE also provides turnkey power generation solutions to the customers, including power plant installation, operations and maintenance. FCE offers its services to various sectors, including utility companies, municipalities, universities, government entities and a range of industrial and commercial enterprises. FCE, by utilizing its DFC plants, is commercializing a tri-generation distributed hydrogen configuration that generates electricity, heat and hydrogen for industrial and/or transportation uses, as well as a fuel cell carbon capture solution for coal or gas-fired power plants. In addition, FCE is developing with Exxon Mobil Research and Engineering a carbon capture system that utilizes FCE’s carbonate fuel cell technology. Moreover, FCE is executing a hydrogen generation project with Toyota. Under the arrangements, Toyota will purchase the hydrogen through a long-term purchase agreement as well as a portion of the electricity generated, with enough hydrogen to meet the daily driving needs of 1,500 vehicles.

C. Financial Condition

See the Corporate Update earlier in this memo as well as a further update of FCE’s financial condition presented in the FuelCell Energy Inc. Master Refinance Term Loan Facility memo submitted to the Board March 14, 2023.

D. Diversified Business Mix

In addition to FCE’s Energy Supply Business, FCE is taking advantage of the ability of its technology to meet applications for various energy and storage-related purposes, including carbon capture, hydrogen for transportation, and energy storage:

FuelCell Energy: A Global Leader in Fuel Cell Technology – Operating Since 1969

FuelCell Energy Snapshot

ENGINEERING EXPERTISE AND MANUFACTURING FACILITIES ALIGNED WITH CUSTOMERS WORLDWIDE

A global leader in manufacturing stationary fuel cell **energy platforms** for **decarbonizing power** and **producing hydrogen** through our proprietary fuel cell technologies

KEY STATISTICS¹

Primary Market Focus	APAC, EMEA, NA
Employees Worldwide	>500
Manufacturing sites	U.S., Canada, Germany
Platforms in Commercial Operation	95
Capacity in Field	>220 MW

LONG-TERM REVENUE MIX TARGETS



- Recurring Revenue
- Product
- Advanced Technologies
- Generation
- Service & License

EXPANDING GLOBAL COLLABORATIONS / SOLUTIONS DELIVERED / PARTNERS / RELATIONSHIPS



¹ As of January 31, 2022; Note that certain sites have multiple platforms. As an example, our 14.9 MW Bridgeport project site has five SureSource platforms. Currently there are 38 sites with the Company’s carbonate fuel cell platforms.

E. Conclusion

FCE has evolved successfully beyond its balance sheet and corporate liquidity challenges in 2019. Several successful equity raises reflect confidence of the capital markets in FCE's business model. A refinancing of several project assets will result in considerable additional liquidity for the company (and Green Bank – separately – is requesting approval to participate in this refinancing which is comprised substantially of Connecticut-based assets). These events have raised Green Bank staff's confidence in FCE's ability to continue deliver on its solid pipeline of opportunities, many of these in Connecticut, including this Navy Project as well as FCE's success in securing projects under the CT-DEEP RFP, the SCEF RFP and Long Island (NY) Power Authority RFP (which is part of the refinancing noted above).

Continuing successful implementation of FCE's strategy will allow FCE to better align its operations with current reality, and to diversify revenues so as to enhance FCE's path to sustained growth.

That said, FCE also needs to remain successful in continuing to develop its core business – and the existing fuel cells and its next generation high efficiency modules should position the company well to succeed competitively as the power generation marketplace progressively moves to cleaner, sustainable and higher availability sources.

General Risk Mitigants:

1. The Credit Facility will be secured by second priority security interest on all assets of FuelCell Energy Finance Holdco (the "Borrowing Entity" as presented in the organizational structure below), including a pledge of the Class B Units owned by the Borrower in the Tax Equity partnership (and all revenues and distributions, other economic rights, and governance rights related thereto) (the "Collateral"). Upon exit by the Tax Equity investor from the Tax Equity partnership, a perfected security interest in and lien, subordinate only to the Senior Loan (if then outstanding) in addition to the Collateral of: i) all assets of the Borrower, including the fuel cells and all other personal property located at the Facility; ii) PPA; (iii) all leases, contracts and agreements of the Borrower, including leases, contracts and agreements relating to the Facility; (iv) all rights as beneficiary under any warranty policies and under other required insurance policies; (v) all membership interests of Borrower held by FCE or any of its affiliates; (vi) all deposit accounts of Borrower (including the reserve accounts required hereunder); (vii) [an assignment of the sublease and/or a leasehold mortgage of the sublease; and (viii) any and all agreements for the sale of RECs .
2. [REDACTED]
4. Green Bank staff has conducted extensive cash flow modeling and stress tests, under various "downside" scenarios, even with Class I REC price of [REDACTED] there are sufficient funds for the Green Bank's loan to be repaid out of PPA, REC and Debt Service Reserves.¹¹

¹¹ [REDACTED]

Technology Risk

The Navy Project represents the largest commercial implementation to date of the latest configuration of FCE's DFC fuel cell technology, which is capable of achieving up to 60% electric power generation system compared with up to 47% in previous configurations. An independent engineering review of the Project was conducted and confirmed the Project's ability to generate 6 MW.

Technology Risk Mitigants:

- 1.) The Project has completed construction and has been signed off on by an independent Engineer who has confirmed the production forecast, commissioning and performance test reports, suitability for the intended application, site drawings and plans, among others.
- 2.) FCE has developed and operated a small-scale version of the technology on its corporate location providing valuable operating data and experience with the high-efficiency unit.
- 3.) FCE has significant experience and expertise in developing and operating innovative fuel cells, such as the Bridgeport Project, which remains the largest standalone fuel cell in the United States.
- 4.) At the portfolio level, FCE's long-term average historical fleet performance is at an availability factor of ■■■% and a capacity factor of ■■%, and with technology improvements FCE expects that capacity factor to increase to ■■%.

Production Risk

Aside from performance risk associated with any relatively new technology (which, as explained above, staff believes are reasonable under the circumstances as the technology is derivative of existing successful technology), Navy Project cash flows available for debt service can fluctuate due to a range of unexpected operational issues, ranging from unexpected outages from fuel line disruptions to disturbance from the surrounding urban environment.

Production Risk Mitigants:

- 1.) Green Bank pro forma modeling scenarios account for an initial cash reserve and annual allocations of cash to support planned module restacking and, if cash is available, O&M.
- 2.) The Navy Project is in operations and, once the Term Loan is completed, FCE will have sourced the capital needs of the projects through an investment from tax equity, Senior Lenders and Green Bank.
- 3.) The PPA agreement between FCE and CMEEC requires a minimum production guarantee from FCE for the benefit of CMEEC, creating an incentive for FCE to maintain production beyond solely debt service requirements.

Credit Risk

As the off-taker in the PPA, purchasing energy from FCE and reselling it to the U.S. Navy as part of its purpose as an electric energy cooperative utility servicing the submarine base, Navy Project cashflows are dependent on CMEEC's ability to pay for electric energy produced from the Navy Project. Furthermore, CMEEC is leasing the land on which the Navy Project is sited from the U.S. Navy and subleasing that land to FCE in order to operate and maintain the Navy Project. Should either CMEEC become financially impaired or the U.S. Navy terminate its land lease with CMEEC, the ability of the Navy Project to repay the Green Bank with Navy Project cashflows is at risk.

Credit risk mitigants:

- 1.) CMEEC is an investment-grade rated entity (AA- by Fitch, Aa3 by Moody's);
- 2.) CMEEC has been operating for over 40 years, and its member utilities provide electricity to 70,000 customers within Connecticut¹².
- 3.) CMEEC has a executed lease with the U.S. Navy, for the purpose of the Navy Project, the terms of which are aligned with the terms of CMEEC's sublease and PPA agreements with FCE for the Navy Project.

Commodity Risk – Natural Gas

Because the terms of FCE's PPA with CMEEC dictate that CMEEC is responsible for fuel (natural gas) and fuel costs for the Navy Project, there is no natural gas/commodity risk to the Navy Project and the lenders/Green Bank.

Portfolio/Exposure Risk

Green Bank currently has a \$5.0 million loan outstanding to FCE for the Bridgeport Project, and \$3 million for construction funding for the Navy Project (the Term Loan "B" explained above). The addition of the Credit Facility (\$5 million incremental, \$8-\$10 million total), would bring Green Bank's total exposure to FCE and FCE projects up to a maximum of \$15 million excluding the Recapitalization Facility. Green Bank credit exposure to FCE following approval of the Groton Term Loan would be:

Project	Financing Facility	Credit Exposure Outstanding
Bridgeport (15 MW)	Acquisition Funding Facility – Subordinated	\$ 3.2 million
Bridgeport (15 MW)	Performance Assurance Finance Facility Term Loan A – Subordinated	\$ 1.8 million
Navy Project (7.4 MW)	Long Term Loan (construction takeout) – Subordinated (Existing \$3m Term Loan B supported by Bridgeport Project being repaid)	\$ 8.0-\$10 million
	Aggregate Exposure A:	\$13-\$15 million
6 Projects / 32.3 MW	Recapitalization Facility Participation (being proposed)	\$10 million
Less: Bridgeport	Recapitalization Facility prepays Bridgeport Loans	(\$5.0 million)
7 Projects / 39.7 MW	Aggregate Exposure B:	\$18-\$20 million

A separate incremental request is being submitted to the Board for \$10 million in financing (which represents \$5 million of additional exposure as Green Bank would be repaid \$5 million in loans associated with the Bridgeport project) along with partner banks expected to include: Investec Bank, and potentially Liberty Bank, Amalgamated Bank and Berkshire Bank who may lend (collectively with Green Bank) \$93.7 million toward 6 FuelCell projects producing 32.3 MW of energy (including the Bridgeport project noted above). If the Board approves as a second separate decision Green Bank's participation in this other financing as a senior lender, Green Bank's exposure would rise to a maximum of \$20 million backed by a total of 7 projects generating approximately 40 MW.

Portfolio/Exposure Risk Mitigants:

- 1.) Mitigants such as the Navy Project Collateral, the Guaranty, and the potential to either syndicate or cross-collateralize across projects all combine to limit the exposure to losses that Green Bank could experience on principal invested.
- 2.) Staff's stress-testing of financial models show that, even under duress, the project can reasonably be expected to perform in a manner sufficient to deliver a return of principal, plus interest, to Green Bank, over the course of the financing term.

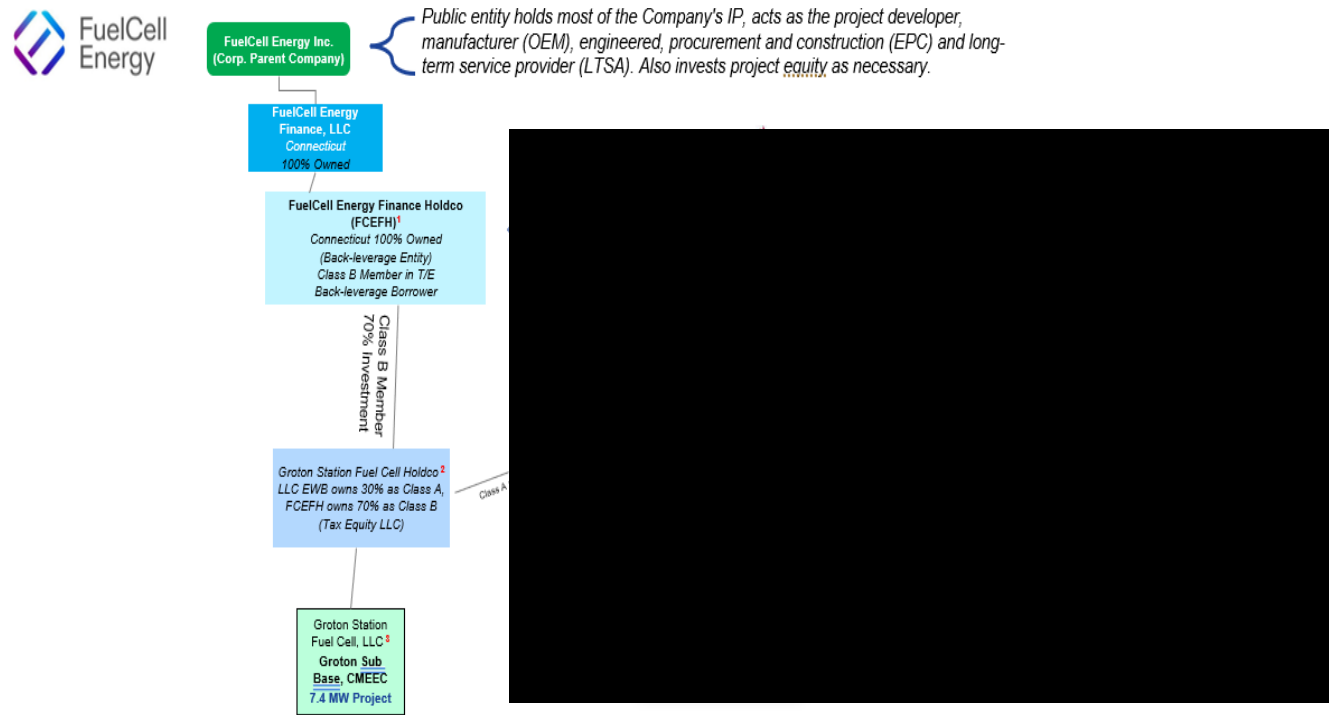
¹² <https://cmeec.com/about/>

Proforma Projection Model for Debt Service

Staff has worked with FCE to develop reasonable projection model estimates for the Navy Project. Based on these estimates, staff anticipates that over the 20-year term the Navy Project will generate sufficient cash flow to service the Loan and effectively amortize the balance over a 15-year period.

Capital Flow Diagram and Tables

Capital Flow Diagram - Term Financing



Sources and Uses – Navy Project Construction

Construction Sources (\$000s)	Construction Uses (\$000s)

Strategic Plan

Is the program proposed, consistent with the Board approved Comprehensive Plan and Budget for the fiscal year?

As confirmed in the Bridgeport Fuel Cell Project Qualification Memo approved by the Board and Deployment Committee on November 30, 2012, pursuant to the Green Bank's mandate to foster the growth, development, and commercialization of renewable energy sources and related enterprises, and to stimulate demand for renewable energy and the deployment of renewable energy sources that serve end use customers in Connecticut, the Board has determined that is in keeping with Conn. Gen. Stat. Section 16-245n for Green Bank to fund certain commercial activities that support projects involving the use of fuel cell technology for distributed generation ("DG") power production.

Staff recommends that these same criteria be applied to fuel cell facilities, such as the Navy Project, for the reasons included throughout this Memo, and in particular as laid out in the **Strategic Selection and Importance** section of this Memo.

Ratepayer Payback

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

The Navy Project is expected to produce 42,714 MWh during the first year of operation, 56,177 during the second year of operation (once it operates at 7.4 MW capacity), and up to 1,605,097 MWh during its 20-year useful life. Compared with the maximum \$10,000,000 of ratepayer funds at risk, the Navy Project is expected to yield up to 161 kWh per \$1 of ratepayer funds over a 20-year term.

Terms and Conditions

What are the terms and conditions of ratepayer payback, if any?

The Credit Facility carries an interest rate of [REDACTED]¹³ over a 20-year, fully amortizing term with an initial 7 year interest only period coupled with a 50/50 excess cash flow share. The Project has been completed Green Bank loan will be advanced upon closing of the Term Loan, within the next few months. Green Bank Loan will be secured by a subordinated lien and position on all assets of the Borrower. In addition, the Credit Facility will benefit from a floor price of \$10/MWH provided by FCE and subordination of certain O&M costs.

Capital Expended

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

\$10,000,000 (\$8,000,000 firm and possibly up to \$10,000,000)

Risk

What is the maximum risk exposure of ratepayer funds for the program?

\$8,000,000 to \$10,000,000

¹³ [REDACTED]

Financial Statements

How is the program investment accounted for on the balance sheet and profit and loss statements?

The loan would result in a \$8,000,000 to \$10,000,000 reduction of cash and a \$8,000,000 to \$10,000,000 increase in promissory notes (Statutory & Infrastructure program).

Target Market

Who are the end-users of the engagement?

The U.S. Navy submarine base located in Groton, CT.

Green Bank Role, Financial Assistance & Selection/Award Process

Lender via Strategic Selection process pursuant to the Green Bank Operating Procedures (see **Strategic Selection and Importance** section of this Memo).

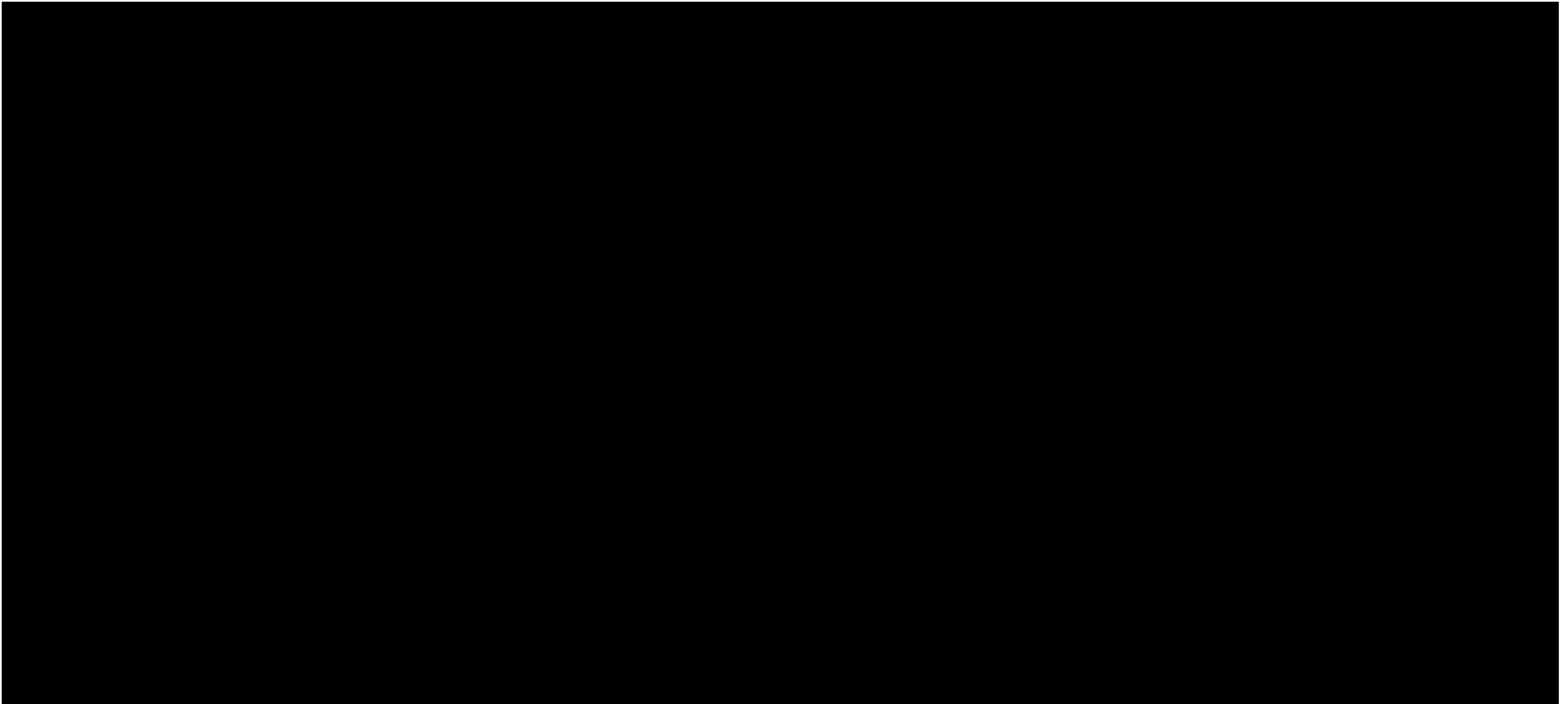
Program Partners

FuelCell Energy, Inc., Liberty Bank, Amalgamated Bank and (potentially) Inclusive Prosperity Capital, Inc.

Risks and Mitigation Strategies

Lending risks and mitigation strategies have been addressed in the **Project Risks and Mitigants** section of this Memo.





Resolutions

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 effect the above-mentioned New Credit Facility and participation.

Submitted by: Bert Hunter, EVP and CIO; Mariana Trief, Associate Director, Investments; David Beech, Senior Manager, Investments

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FuelCell Energy, Inc.

\$93.7 Million Senior Secured Credit Facilities

Recapitalization of 32 MW Portfolio of

6 Baseload Fuel Cell Plants

March 14, 2023



**FuelCell
Energy**

Document Purpose: This document contains background information and due diligence on a proposed credit facility for the FuelCell Energy, Inc. ("FCE" and NASDAQ: FCEL) to recapitalize six baseload fuel cell projects representing over 32 MW of power generation facilities. The information herein is provided to the Connecticut Green Bank Board of Directors for the purposes of reviewing and approving recommendations made by the staff of the Connecticut Green Bank.

In some cases, this package may contain, among other things, trade secrets and commercial or financial information given to the Connecticut Green Bank in confidence and should be excluded under C.G.S. §1-210(b) and §16-245n(D) from any public disclosure under the Connecticut Freedom of Information Act. If such information is included in this package, it will be noted as confidential.

Strategic Selection Financing Memo

To: Connecticut Green Bank Board of Directors

From: Bert Hunter, EVP & CIO; Mariana Trief, Associate Director, Investments; David Beech, Senior Manager, Investments

Cc: Bryan Garcia, President & CEO; Mackey Dykes, VP of Financing Programs and Officer; Brian Farnen, General Counsel & CLO; Sergio Carrillo, Director, Incentive Programs; Jane Murphy, EVP of Finance and Administration

Date: March 14, 2023

Re: FuelCell Energy, Inc. - \$93.7 Million Senior Secured Credit Facilities to Recapitalize 32 MW Portfolio of 6 Baseload Fuel Cell Plants

Purpose & Term Loan Participation Request

The purpose of this memorandum is to present to the Connecticut Green Bank (“Green Bank”) Board of Directors (the “Board”) staff’s proposal to participate in a recapitalization of 6 baseload FuelCell Energy, Inc. (“FCE”) fuel cell plants, the majority of the capacity being located in Connecticut and one plant (Bridgeport) presently being financed by Green Bank and included in the recapitalization. All fuel cells are manufactured at FCE’s Torrington, CT facility.

FCE has engaged Investec Inc. (“Investec”) to act as Sole Arranger, Bookrunner and Administrative Agent to structure, arrange and syndicate \$93.7 million of senior secured credit facilities (“Credit Facilities”) to recapitalize a 32.3 MW portfolio of six critical, baseload generation fuel cell power plants (“Projects”) three of which are located across Connecticut (the “CT Projects”), one in New York (the “NY Project”) and two in California (the “CA Projects” and collectively the “Portfolio”). The Portfolio is fully contracted under long-term take-or-pay agreements with more than 95% (by capacity) to investment-grade counterparties providing high cash flow visibility during the tenor of the Credit Facilities and beyond. FCE owns 100% equity interest in the Portfolio, except for the project contracted with Long Island Power Authority (“LIPA”, which has a 25% tax equity stake by Franklin Park).

Staff’s proposed \$10 million participation by Green Bank in the term loan portion of the Credit Facilities 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.¹ Staff supports participating in the Credit Facilities as this would transform Green Bank’s existing \$8 million loans supported in a subordinate position by the Bridgeport project alone to a \$10 million senior secured creditor position supported by the Bridgeport project plus the cash flows and related collateral of 5 additional projects. In addition to being 50% underwritten by Investec (an Anglo-South African international banking and wealth management group providing a range of financial products and services to a client base in Europe, Southern Africa, Asia-Pacific and North America), the Credit Facilities are under active consideration by Liberty Bank and Amalgamated Bank (who are the senior lenders to FCE in the Bridgeport project that will be recapitalized) as

¹ Green Bank’s participation in the proposed Credit Facility is separate from Green Bank’s contribution to the Navy Groton project.

well as Berkshire Hills Bancorp (whose Regional President for Southern Connecticut is a former senior executive of Webster Bank with whom Green Bank accomplished several notable clean energy transactions (Solar Lease 2, SHREC warehouse, Colebrook wind, and financing for Capital for Change)). Green Bank is working with Investec's North American Power and Infrastructure Group on the participation.

Transaction Summary

The \$93.7 million 7-year Credit Facilities will consist of:

- i. A \$[REDACTED] million senior secured term loan facility ("Term Loan"); and
- ii. A \$[REDACTED] million debt service reserve letter of credit ("DSR LC")

Note: The Green Bank is not able to participate in the DSR LC portion of the Credit Facilities and would participate only in the Term Loan.

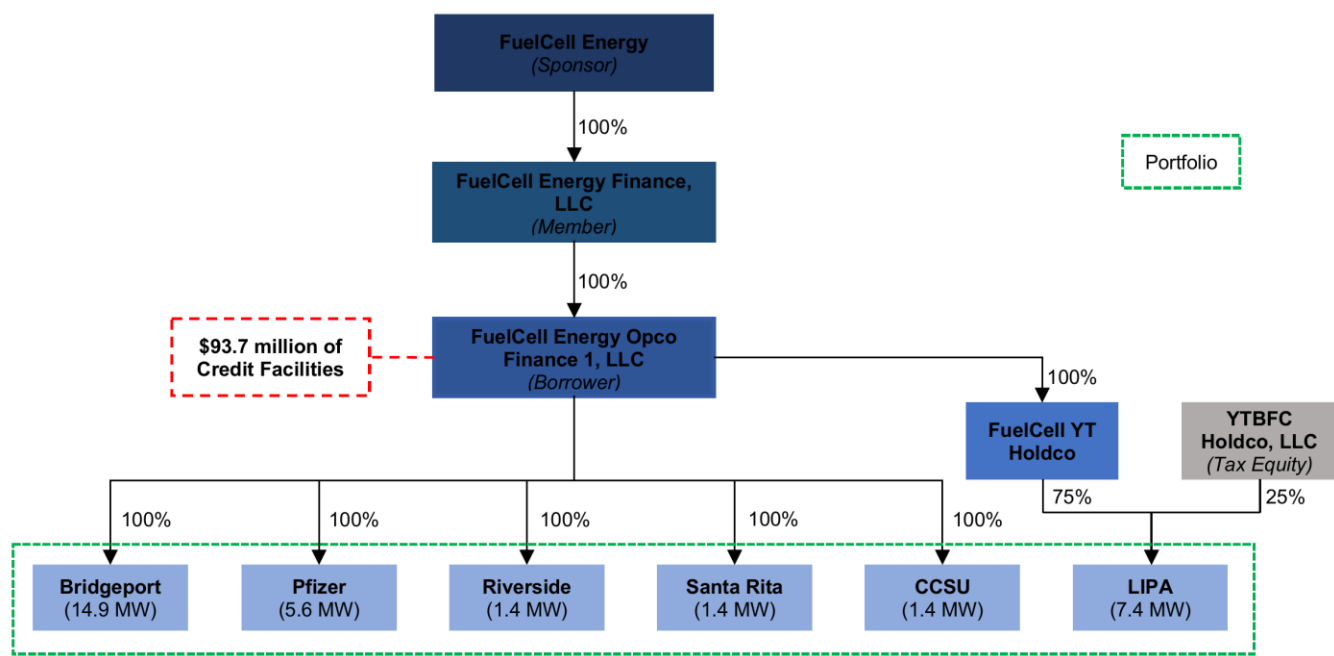
The Term Loan will be used to (i) repay existing project-level debt and sale-leaseback agreements associated with certain projects (including the Bridgeport project which supports existing Green Bank subordinate loans); (ii) fund \$[REDACTED] million to the module replacement reserve ("Replacement Reserve"); (iii) pay related transaction costs; and (iv) fund a distribution of approximately \$[REDACTED] million to FCE. The DSR LC will be used to fulfill the debt service reserve obligations.

The Portfolio comprises the following projects (68% of nameplate capacity are CT Projects, all fuel cells are manufactured at FCE's Torrington, CT facility and Green Bank's financial support is approximately 10% of the total credit facilities being raised):

Bridgeport	14.9 MW fuel cell power plant located in Bridgeport, CT, and the largest fuel cell power plant in North America. The Project comprises five SureSource1 3000™, 2.8 MW fuel cell power plants that use natural gas to deliver electric power to the local utility, the United Illuminating Company, on a 24-hour baseload basis, Bridgeport's configuration also includes a bottoming generator and ancillary equipment that allows the Project to generate 900 kW of additional power alongside the fuel cell modules. Bridgeport financing by Liberty Bank and Amalgamated Bank (the senior lenders) and Green Bank (the subordinate lender) would be repaid from a portion of the proceeds from the Term Loan;
Pfizer	5.6 MW fuel cell power plant at Pfizer Inc.'s campus in Groton, CT. The Project comprises two SureSource 3000™ 2.8 MW fuel cell power plants that use natural gas to deliver up to 5.6 MW electric power and 6,800 lb/hr steam at 45 psig to the Pfizer facility on a 24-hour baseload basis;
Central Connecticut State University ("CCSU")	1.4 MW fuel cell power plant adjacent to a university campus in New Britain, CT. The Project is capable of using natural gas and biogas as fuel inputs and includes a SureSource 1500™ fuel cell plant (single module);
LIPA Solid Waste Management Corp. ("LIPA SWMC")	7.4 MW fuel cell power plant located in Yaphank, NY. The Project comprises three SureSource 3000™, 2.8 MW fuel cell power plants that use natural gas to deliver up to a contracted output of 7.4 MW electric power to the local utility, LIPA, on a 24-hour baseload basis;

Riverside	1.4 MW fuel cell power plant installation at the water treatment plant in Riverside, CA. The Project uses biogas produced on-site and includes a SureSource 1500™ fuel cell plant (single module) and a biogas cleanup skid that produces combined heat and electric power for the City’s wastewater treatment plant. The Project also provides thermal energy to an adjacent biogas digester; and
Santa Rita	1.4 MW fuel cell combined heat and power plant installation at the Santa Rita Jail in Dublin, CA. The Project includes a SureSource 1500™ fuel cell plant (single module). The Project uses natural gas to deliver electric power and ~2.0 MMBtu/hr of hot water to the jail on a 24-hour baseload basis.

Transaction Organizational Structure



Portfolio Overview

The Portfolio comprises six fully operational fuel cell power plants that generate electric power by directly converting the chemical energy held in the bonds of a fuel (i.e., natural gas, biogas, and blended gas) into electrical energy via an electrochemical reaction rather than combustion, resulting in significantly higher efficiencies and lower emissions. The Projects deliver the generated power to their respective offtakers on a 24-hour baseload basis. Through maturity, the Portfolio will generate approximately \$[REDACTED] million in EBITDA per annum at an EBITDA margin ranging between [REDACTED] %.

The Projects are fully contracted under long-term take-or-pay power purchase agreements (“PPAs”) with more than 95% (by capacity) to investment grade offtakers spanning utilities, public companies, local governing bodies, and public universities, such as Connecticut Light and Power Company (A/A3), Pfizer Corporation (A+/A1) and the City of Riverside (Aa3).² The Portfolio has approximately 36 cumulative years of operations across the various Projects and benefits from a longstanding customer base that heavily relies on its critical

² There is a negligible \$2.4 million of uncontracted revenues at LIPA and Pfizer, representing less than 0.1% of total revenues throughout the tenor of the Credit Facilities.

baseload power generation. The majority of the PPAs extend beyond the tenor of the Credit Facilities, with only the Bridgeport and CCSU PPAs set to expire shortly before maturity.

FCE has demonstrated a track record of extending previous PPAs on mutually beneficial terms, providing comfort on contract renewals, particularly given the assets' importance to their offtakers. All of the Projects, with the exception of CCSU, are contracted under the original PPAs which commenced at COD. The original CCSU 10-year PPA was renewed in 2022 for an additional five years, demonstrating FCE's ability to successfully renew and extend PPAs. Nevertheless, the Term Loan is sized on existing executed contracts only and does not assume the extension or renewal of any PPAs or any REC revenues, has sustained strong corporate liquidity and relatively low leverage on its balance sheet, providing a platform for project execution and growth.

Portfolio Overview

	Bridgeport	LIPA SWMC	Pfizer	Riverside	Santa Rita	CCSU
COD	2014	2021	2016	2016	2016	2012
Output	Power	Power	Power & Steam	Power & Hot Water	Power & Thermal Energy	Power
Capacity	14.9 MW	7.4 MW	5.6 MW	1.4 MW	1.4 MW	1.4 MW
Module Replacement	7-year modules installed in 2022	7-year modules installed in 2021	7-year modules installed in 2022	7-year module installed in 2022	7-year module installed in 2022	7-year module to be installed in March 2023
Fuel Input	Natural Gas	Natural Gas	Natural Gas	Biogas	Natural Gas	Natural Gas or Biogas
Fuel Exposure	Pass Through ⁴	Hedged ⁵	Pass Through	Pass Through	Pass Through	Pass Through
Offtaker	Connecticut Light and Power Company	Long Island Lighting Company	Pfizer Inc.	City of Riverside	Alameda County	Central Connecticut State University
Offtaker Rating	A/A3	A2	A+/A1	Aa3	Aaa	N/A ⁶
Offtaker Description	Regulated electric utility that serves approximately 1.27 million residential, commercial, and industrial customers across Connecticut	Non-profit municipal electric utility that services over 1.1 million residential and commercial customers across Long Island, NY and Queens, NY	Multinational pharmaceutical and biotechnology corporation that develops, manufactures, distributes, and sells bio-pharmaceutical products globally	City in California located approximately 60 miles east of downtown Los Angeles with a population of 326,000 and a rapidly growing tax base and economy	County in the San Francisco Bay Area with a population of over 1.6 million and a large diverse economic base and a growing tax base	Oldest publicly funded university in Connecticut with an estimated endowment of \$100 million ⁷ and on average 9,600 enrolled students at any given time
Current PPA Term	15 years	18 years	20 years	20 years	20 years	5 years
PPA Base Rate (\$/kWh)						
PPA Expiration	December 2028	December 2039	October 2036	September 2036	December 2036	May 2027

The fuel cells are produced at FCE's manufacturing facility in Torrington, CT, which currently has an annual production capacity of at least 100 MW and is expected to ramp up to 200 MW, providing ample capacity to meet its current and projected near-term production requirements.

FCE's fuel cell power plants have a design life of 25 to 30 years while the modules (stacks of individual fuel cells) have a design life of 5 or 7 years, depending on the model. By Financial Close, all the Projects in the Portfolio will have recently replaced their existing 5-year design modules with the newer 7-year modules, which DAI (the independent engineer or "IE") confirmed are significantly less susceptible to end-of-life module degradation.

LIPA SWMC, which achieved COD in December 2021, installed the 7-year module during construction and CCSU is scheduled for module replacement in March 2023 before Financial Close. The Projects are scheduled for the next round of routine module replacements in 2028 and 2029, the cost of which is being reserved from Term Loan proceeds and cash flows.

FCE's fuel cell platforms are easy to site due to the technology's relatively small footprint, which allows for the platforms to be located directly at the point of demand. FCE's platforms produce more than 10 times and 400 times as many MWh per acre than wind and solar assets, respectively, and produce less carbon dioxide compared to fossil-fueled generators with negligible NOx, SOx, and particulates.

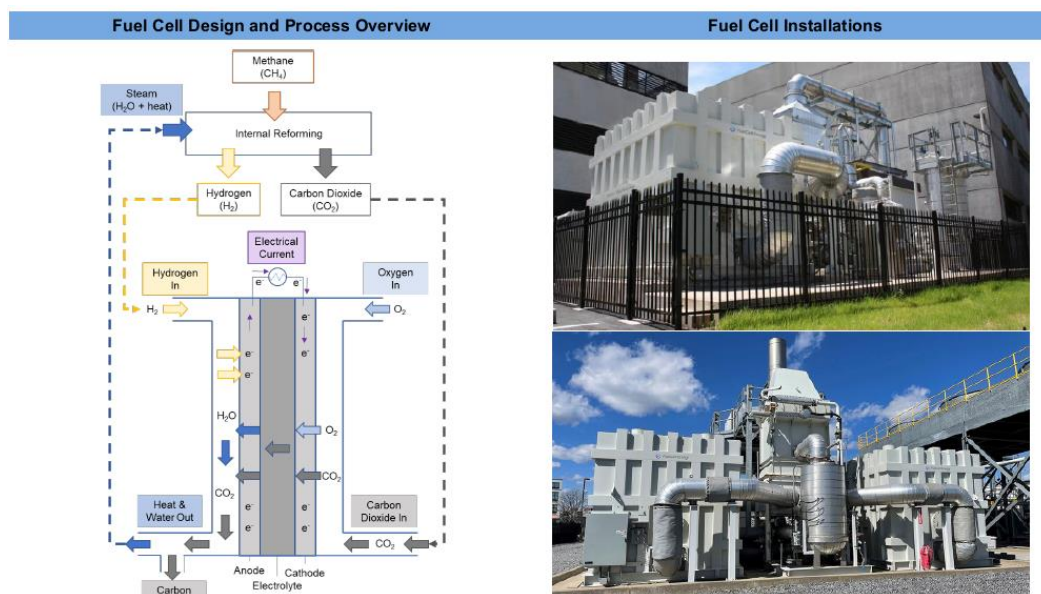
All of the Projects have entered into Long Term Service Agreements with FCE to run coterminous with each Project's respective PPA.

Technology Overview

The Projects utilize molten carbonate fuel cells, which are fully integrated baseload power generating systems that directly convert natural gas and other methane-bearing fuels to electrical power via an electrochemical reaction rather than combustion, resulting in significantly higher efficiencies and lower emissions. The electrochemical approach avoids pollutants that are created by high flame temperatures, and it is a more direct and efficient way to make power from a fuel. Fuel cells generate electricity with 45% to 60% efficiency compared to typical gas engine generators at 25% to 35%.

With over 220 MW in operation to date across 95 plants and over 19 MW in construction and development across 7 plants, the technology utilized in FCE's power plants is established and proven. The IE reviewed the global module fleetwide performance since January 2012, which showed an average availability of █% and a capacity factor of █%.

The modular design of the fuel cell units allows a site to scale up to its energy requirements. Systems can range from a single sub-MW powerplant to an entire multi-MW fuel cell park. FCE's single-stack platforms produce between 250 kilowatts to 400 kilowatts of power. Their MW-scale platforms are configured around four-stack modules, which net 1.4 MW of power each, which is enough power to sustain 1,400 average-sized homes in the United States. This modular approach allows the configuration of a wide variety of system sizes. Fuel cell technology has powered everything from laptops to space shuttles.



Financing Overview

The Term Loan is sized only on contracted cash flows with no recontracting assumption and a DSCR of 1.0x. The Term Loan is sculpted to fully amortize by 2039 when the last PPA currently in place expires with a conservative debt-to-capitalization of 70% at Financial Close. In the Base Case, the repayment profile will result in a balloon of 10% that pays out in 5 years post-maturity³ with a minimum and average DSCR of 1.0x and 1.2x, respectively.

As the existing modules installed at the Projects ultimately reach the end of their design life during the tenor of the Credit Facilities, FCE is projected to incur approximately \$[REDACTED] million of module replacement costs to fund the replacements. To mitigate any module replacement risk, the financing benefits from an approximately \$[REDACTED] million Replacement Reserve to ensure that FCE will have adequate cash available to fund the expected module replacements in 2025, 2028, and 2029 with additional cushion should the modules require replacement earlier than expected. At financial close, \$[REDACTED] million of the Term Loan will be funded into the Replacement Reserve with the remaining costs to be funded with cash flows from operations.

Lenders take no construction risk, as all Projects in the Portfolio are operational, and have a stable track record as verified by the IE. The Portfolio's construction has been fully funded by FCE equity with a book equity value of \$[REDACTED] million. At financial close, there will be no project-level debt as the existing \$[REDACTED] million Bridgeport financing (inclusive of all Green Bank financing supported by Bridgeport's cash flows) will be extinguished as part of this transaction.

The following table shows the sources and uses for the Credit Facilities and pro-forma capitalization of the Borrower at Closing:

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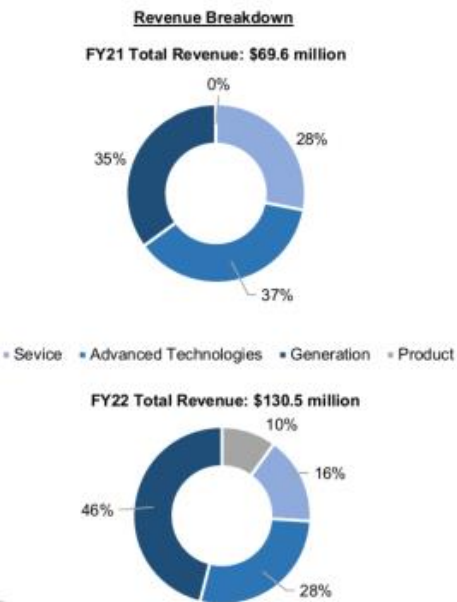
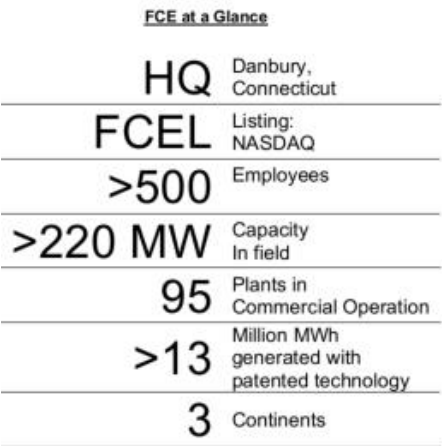
FCE Overview

Well known to the Green Bank for nearly 2 decades (including Green Bank’s predecessor entity: the Connecticut Clean Energy Fund) FCE (NASDAQ: FCEL) is a publicly traded fuel cell development company that designs, manufactures, operates and services fuel cells to be used for clean power generation across three continents. Founded in 1969, FCE has a market capitalization of \$1.36 billion (as of February 21, 2023) and generated FY22 revenues of \$130.5 million. Since inception, FCE has established itself as a global leader in decarbonizing power and producing hydrogen through its proprietary fuel cell technology by capturing carbon and greenhouse gasses at a low cost while simultaneously generating low-to-zero carbon power. FCE has publicly committed to a goal to reduce its carbon emissions to net zero by 2050, which is further supported by its cross-functional team of strategic and operational leaders with deep industry expertise spanning over 200 cumulative years of experience.

Since inception, FCE has been at the forefront of fuel cell innovation with nearly 100 fuel cells in operation and 13.8 million MWh generated globally. FCE has developed and operated the world’s most notable fuel cell parks, such as Gyeonggi Green Energy, the world’s largest fuel cell park located in Korea which comprises 21 power plants providing 59 MW of electricity and district heating to a variety of Korean customers, and Bridgeport, the largest fuel cell park in North America.

FCE has four main operating segments:

- 1. Product: Development and installation of projects, and the direct sale of equipment to customers
- 2. Generation: Sale of power and renewable energy credits under PPAs and tariffs for projects within FCE’s generation operating portfolio
- 3. Advanced technologies: Research, development and demonstration programs both privately and publicly funded by third parties focused on accelerating the commercialization of solid oxide fuel cells, carbon capture and separation, and long-duration energy storage solutions
- 4. Service: Provides customers with maintenance services under long-term service agreements



Summary Terms and Conditions

Sponsor:	FuelCell Energy, Inc.
Borrower:	FuelCell Energy Opco Finance 1, LLC
Member:	FuelCell Energy Finance, LLC, which owns 100% of equity interests in the Borrower
Use of Proceeds:	
Credit Facilities:	
Interest Rate:	
Front-end Fee	
Target Closing Date:	
Maturity Date:	
Debt Sizing Parameters:	
Repayment:	
Mandatory Amortization:	
Mandatory Prepayments:	
Optional Prepayments:	
Interest Rate Hedging:	
Minimum Equity:	
Change of Control:	
Reserves:	
Distribution Test:	
Affirmative and Negative Covenants:	
Lenders' Legal Counsel:	
Borrower's Legal Counsel:	
Independent Engineer:	
Environmental Consultant:	
Insurance Consultant:	

Key Credit Risks and Mitigants

- **Long-Term, De-Risked Contracted Stable Cash Flows:** The Portfolio benefits from a stable profile of fully contracted cash flows under long-term take-or-pay agreements with a weighted average remaining life of approximately 13 years, providing high cash flow visibility and certainty through maturity. The Portfolio will generate approximately \$■ million to \$■ million of EBITDA per annum at robust EBITDA margins of ■%. None of the Projects, except LIPA SWMC, have exposure to fuel procurement, supply, or pricing risk as the offtakers are responsible for procuring and supplying the feedstock gas. Nonetheless, LIPA SWMC has hedged approximately ■% of its fuel costs through ■, resulting in negligible fuel pricing exposure across the Portfolio.
- **Longstanding, Diversified, and Creditworthy Customer Base:** The Portfolio has a diverse customer base comprising a mix of investment-grade counterparties for more than 95% of the portfolio (by capacity) spanning utilities, public companies, local governing bodies, and public universities, such as Connecticut Light and Power Company (A/A3), Pfizer Corporation (A+/A1) and the City of Riverside (Aa3) that heavily rely on the critical baseload power generated by the Projects. Since inception, none of the offtakers have failed to make a payment under their respective PPAs, demonstrating the reliability and certainty of future cash flows.
- **Proven Technology and Established Operational Track Record:** With over 220 MW in operation to date across 95 plants and over 19 MW in construction and development, the fuel cells used across the Portfolio are an established and proven technology, with 20 years of commercial experience, that provides customers with a secure and reliable source of power. The Portfolio is fully operational with a successful performance rate of 89% between January 2020 and August 2022, and has experienced minimal historical performance penalties, demonstrating the reliability of the Projects since achieving COD. The IE has attributed any performance shortcoming to the end-of-life degradation of the previously installed 5-year modules which has been addressed by the recent and upcoming 7-year module replacements, which the IE believes are capable of meeting typical forecasted production requirements even at the end of design life. The Portfolio is forecasted to have an expected capacity factor of ■% in 2023 and an expected annual availability factor of ■%.
- **Conservative Financing Structure with Strong Credit Metrics:** The Term Loan is sized with a DSCR of ■x on contracted cash flows only through the tenor of the Credit Facilities and is designed to fully amortize by 2039 when the last PPA expires. Approximately half of the Term Loan will be repaid by maturity, resulting in a balloon of ■% that pays out in ■ years post-maturity (meaning if Borrower fails to pay or refinance the balloon at the end of the 7th year, all cash flow available for debt service is capable of repaying the balloon balance in ■ years). At financial close, debt-to-capitalization is conservative at ■%, demonstrating significant FCE capital support and commitment. The financing also benefits from a Replacement Reserve that is partially funded with the Term Loan at financial close and incrementally funded with cash flows from operations during the tenor.
- **Favorable Market Dynamics Driving Momentum for Fuel Cell Adoption:** The fuel cell technology utilized in the Portfolio is a critical component of the energy since there is no burning of the fuel source during the electrochemical process, with minimal air emissions compared to combustion systems. Several U.S. states have already classified certain fuel cells as Class I renewable power generation due to their low carbon emissions, negligible criteria pollutants, and high efficiency. The fuel cells provide strong environmental benefits compared to conventional power generation assets in terms of carbon emissions and efficiency, alongside the improvement of air quality due to the lack of combustion from the generating process. The Inflation Reduction Act includes various tax credits specifically for fuel cell

assets and green power generation, providing incentives for fuel-cell installations and power generation across the U.S.

- **Established Sponsor with Strong Cash Position:** FCE is a global leader in the development of high-temperature fuel cells with a senior management team that has over 200 years of fuel cell development experience, \$130 million of LTM revenues, and a market capitalization of \$1.4 billion. The Sponsor benefits from a strong cash position of \$481 million, providing a strong cash runway to support the Portfolio as well as the Company's own strategic priorities, such as its publicly announced commitment to achieving net zero by 2050.

The lenders under the Credit Facilities need to be comfortable with FCE's financial condition and prospects for continuing as a going concern. Considering the substantial cash position (\$415 million at the end of January 2023), and after extensive review of FCE's financial condition and interviews with its management, including its CFO, staff is comfortable that FCE is firmly on a path to long-term sustainable operations (breakeven EBITDA by 2025), confirming that Green Bank and the other lenders can have reasonable assurance that FCE can stand behind its obligations under the proposed Credit Facilities.

With a solid level of liquidity for operations and project development and support from the capital markets, FCE is on a path to breakeven EBITDA over an approximate 3 year horizon (i.e., by FY2025 which ends in October 2025). Please see additional details in the FCE Overview above and FuelCell Energy Financial Update section below.

Class I REC Risk

While the CT Projects benefit from REC revenue to some degree, the recapitalization debt sizing and debt service coverage ratios assume no REC revenue is generated for the benefit of the lenders, but if such revenue is generated, it will supply additional resources for the servicing of the debt.

Commodity Risk – Natural Gas

As noted, because the terms of FCE's PPA with project offtakers (other than LIPA SWMC which is substantially fully hedged) dictate that the offtakers are responsible for fuel (natural gas) and fuel costs for the respective projects, there is no natural gas/commodity risk to the lenders/Green Bank.

Green Bank Portfolio/Exposure Risk

Green Bank currently has \$5 million in loans outstanding to FCE for the Bridgeport Project directly and \$3 million for construction funding for the Navy Project and general FCE corporate purposes (the Term Loan "B" explained above). The addition of the participation in the Recapitalization Facility (\$2 million incremental above exposure to the \$8 million tied to Bridgeport that would be repaid upon the financial close of the Recapitalization Facility and \$10 million total), would bring Green Bank's total exposure to FCE and FCE projects up to a maximum of \$20 million summarized here (Maximum Aggregate Exposure B):

Project	Financing Facility	Credit Exposure Outstanding
Bridgeport (15 MW)	Acquisition Funding Facility – Subordinated	\$ 3.2 million
Bridgeport (15 MW)	Performance Assurance Finance Facility Term Loan A – Subordinated	\$ 1.8 million
Navy Project (7.4 MW)	Long Term Loan (construction takeout) – Subordinated (Existing \$3m Term Loan B supported by Bridgeport Project being repaid)	\$ 8.0-\$10 million
	Aggregate Exposure A:	\$13-\$15 million
6 Projects / 32.3 MW	Recapitalization Facility Participation (being proposed)	\$10 million
Less: Bridgeport	Recapitalization Facility prepays Bridgeport Loans	(\$5.0 million)
7 Projects / 39.7 MW	Aggregate Exposure B:	\$18-\$20 million

Partner banks in the Recapitalization Facility are expected to include: Investec Bank (the arranger), and potentially Liberty Bank, Amalgamated Bank and Berkshire Bank who may lend (collectively with Green Bank) \$93.7 million toward 6 FuelCell projects producing 32.3 MW of energy (including the Bridgeport project noted above). If the Board approves Green Bank's participation in this Recapitalization Facility as a senior lender (vs Green Bank's existing subordinate position in the Bridgeport project for roughly the same exposure) as well as the direct and subordinated exposure in the single Navy / Groton project as subordinate lender, Green Bank's exposure to FCE projects would rise to a maximum of \$20 million but with this exposure backed by a total of Z projects generating nearly 40 MW for investment grade offtakers for over 95% of the capacity.

Portfolio/Exposure Risk Mitigants:

- 1.) Mitigants such as the collateral for the 6 projects (7 projects including Navy/Groton) and the potential to cross-collateralize across all projects all combine to limit the exposure to losses that Green Bank could experience on principal invested and diversifies the risk across multiple projects.
- 2.) Staff's stress-testing of financial models show that, even under duress, the project can reasonably be expected to perform in a manner sufficient to deliver a return of principal, plus interest, to Green Bank, over the course of the financing term with ample debt service coverage ratios which averages ■■■x with ample reserves (■ months debt service).

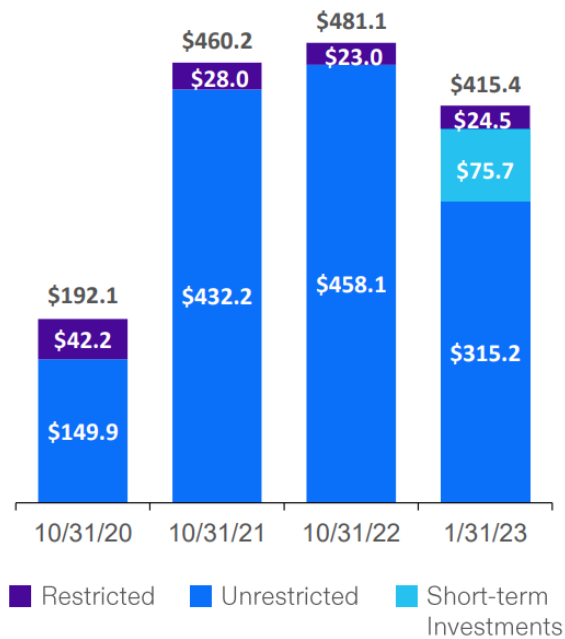
Proforma Projection Model for Debt Service

Investec has worked with FCE to develop reasonable projection model estimates for the Recapitalization Facility. Based on these estimates, staff anticipates that over the 7-year term the Recapitalization Facility, the 6 projects will generate sufficient cash flow to service the loan and effectively amortize the starting balance over a 7-year period to a ■■■% balloon. If Borrower fails to pay or refinance the balloon at the end of the 7th year, all cash flow available for debt service is capable of repaying the balloon balance in ■■■ years, for a total downside credit facility exposure of ■■■ years.

FuelCell Energy Financial Update

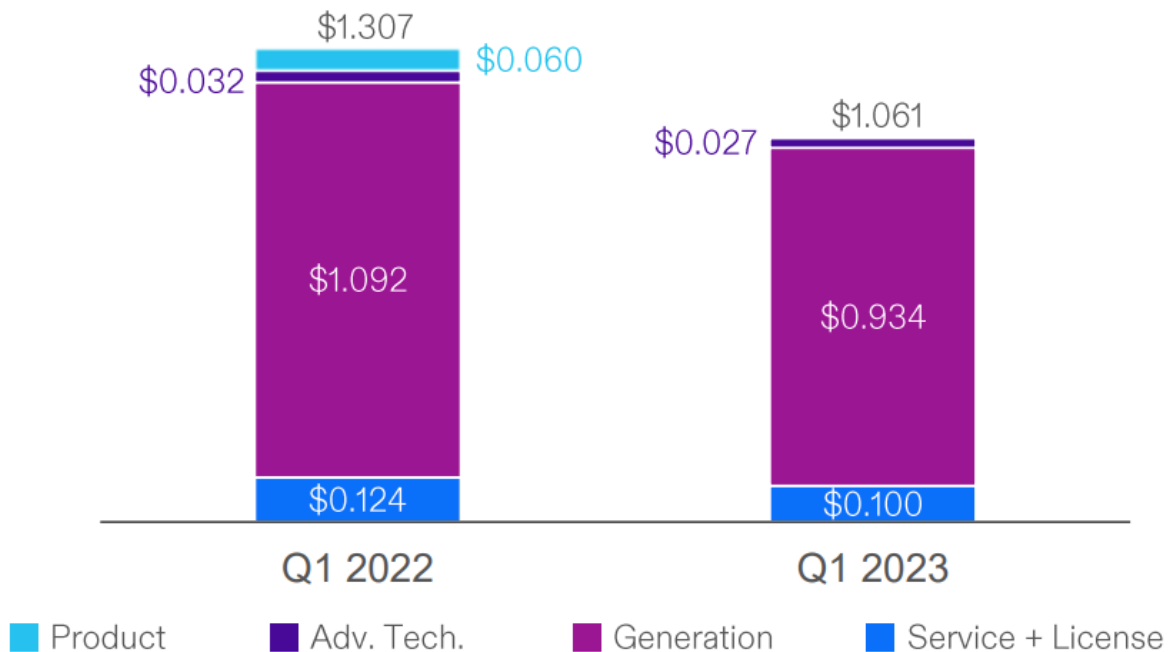
FCE has sustained strong corporate liquidity and relatively low leverage on its balance sheet since 2020, providing a platform for project execution and growth. In its most recent fiscal year (ended October 31, 2022) FCE raised more than \$180 million from the sale of equity and had a negligible amount of debt not related to project assets (such as our loans to the Bridgeport project and projects financed via sale-and-leaseback structures which collectively accounted for about \$75 million at October 31, 2022). FCE's cash and cash equivalents as of January 31, 2023 now totals approximately \$415 million – more than \$150 million higher than our last report to the Board in October 2020, and includes \$391 million of unrestricted cash and cash equivalents and \$24 million of restricted cash and cash equivalents:

Cash and Equivalents & Short-Term Treasury Securities (\$M)



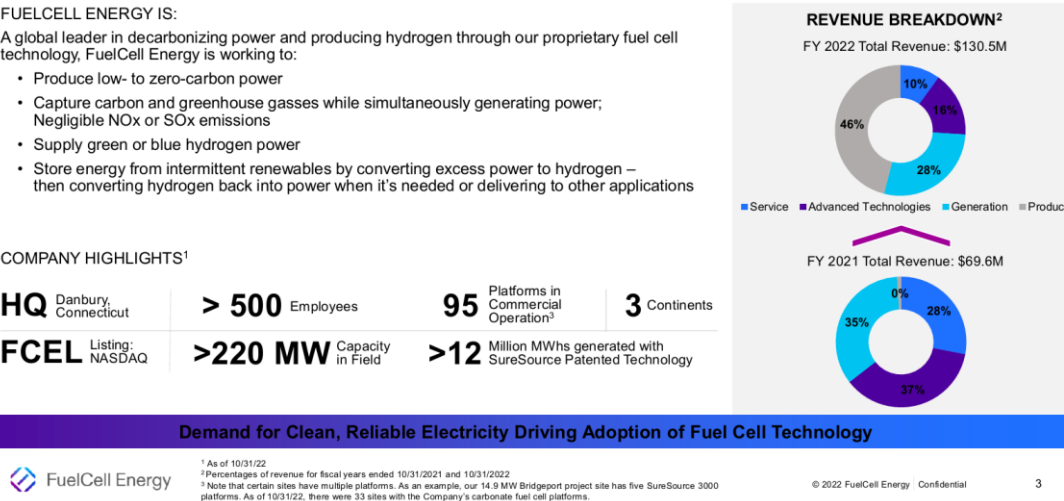
FCE's balance sheet is in its strongest position in several years and poised to realize upon a deep \$1.1 billion pipeline of commercial opportunities.

Backlog as of January 31 (\$B)



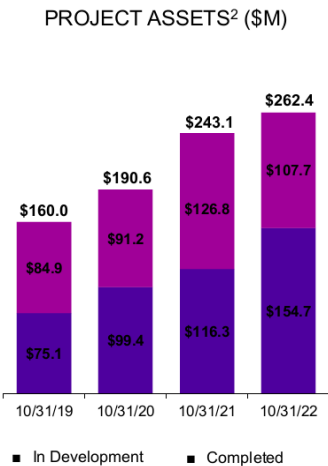
Diversified Business Mix

In addition to FCE’s Energy Supply Business, FCE is taking advantage of the ability of its technology to meet applications for various energy and storage-related purposes, including carbon capture, hydrogen for transportation, and energy storage:



GROWING PROJECT ASSETS

Total project assets² grew to \$262.4M as of October 31, 2022, reflecting progress made against project backlog



Conclusion

FCE has evolved successfully beyond its balance sheet and corporate liquidity challenges in 2019. Several successful equity raises reflect confidence of the capital markets in FCE’s business model. A refinancing of several project assets through the proposed transaction and the Navy / Groton financing also being supported by Green Bank will result in considerable additional liquidity for FCE (estimated to be approximately \$74 million in additional cash for FCE). These events have raised Green Bank staff’s confidence in FCE’s ability to continue deliver on its solid pipeline of opportunities, many of these in Connecticut, including the Navy Groton Project (financing being closed March/April 2023) as well as FCE’s success in securing projects under the CT-DEEP RFP, the SCEF RFP and Long Island (NY) Power Authority RFP (which is part of the recapitalization).

Continuing successful implementation of FCE’s strategy will allow FCE to better align its operations with current reality, and to diversify revenues so as to enhance FCE’s path to sustained growth.

That said, FCE also needs to remain successful in continuing to develop its core business – and the existing fuel cells and its next generation high efficiency modules should position FCE well to succeed competitively as the power generation marketplace progressively moves to cleaner, sustainable and higher availability sources.

Strategic Selection Award and Importance

Connecticut Impact

Support for the Connecticut CES

Fuel cells, as an electrical power generating technology, convert hydrogen fuel sources (e.g. natural gas) into electricity via a chemical process without the combustion cycle typically found in traditional generation technologies, and thus without the associated pollution⁴. Fuel cells are defined as a Class I renewable energy source as per CGS §16-1(a)(20), and operate at an effective annual capacity factor of ~90%, providing clean, consistent, and reliable power to associated off-takers, whether grid-tied or behind-the-meter. In aggregate, the fuel cell industry is of strategic importance to Connecticut as it relates to economic development, job creation and retention, and clean energy deployment

Green Bank staff believes that by providing key pieces of the capital stack and financing structures for strategic fuel cell assets in Connecticut, such as this Recapitalization Facility, Green Bank can help promote the foundation for a viable transition from subsidizing to financing models for a key clean energy technology that promotes environmental, energy, and economic benefits for the state. When Green Bank initiated this approach with FCE back in 2018, FCE had yet to break into the lower cost capital offered by commercial and community bank project finance. Five years and two successful financings later by Green bank: Bridgeport and Groton – have enabled this \$92 million recapitalization and could very well lead to this transaction being underwritten and syndicated in record time with banks that Green Bank brought to the table. If successful – Green Bank can take meaningful credit for bringing an additional \$36 million into this transaction in addition to \$10 million of its own funds, an overall leverage ratio of \$3.60 in private capital to \$1 of Green Bank investment.

Grid Stability & Support

From a power generation perspective, fuel cells benefit the existing electric distribution system as distributed baseload plants that stabilize loads (versus intermittent renewable energy technologies such as solar and wind), provide voltage support, and mitigate system upgrade requirements⁵, resulting in enhanced system stability and cost-savings.

Benefits to the RPS and Environmental Benefits

From a clean energy power generation perspective, fuel cells provide Connecticut with a viable means of achieving its current Renewable Portfolio Standard (“RPS”) policy of 20% of energy generation from Class I renewable energy sources by 2020⁶, and provide potential off-takers with clean and reliable power that can be

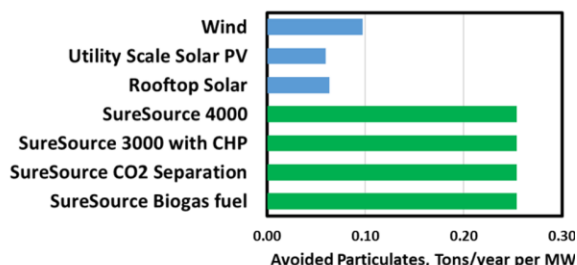
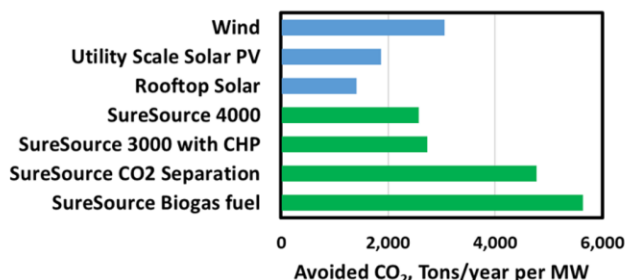
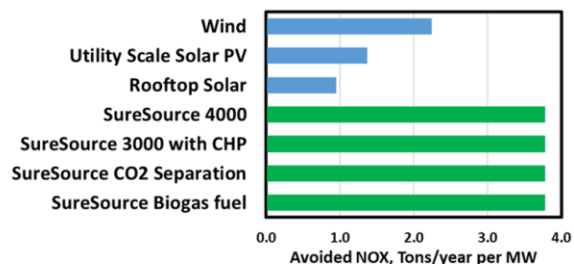
⁴ FuelCell Energy, “How a Fuel Cell Works,” http://www.fuelcellenergy.com/?page_id=15806, (February 26, 2017).

⁵Connecticut Department of Energy & Environmental Protection, “Testimony Submitted by DEEP Commissioner Robert J. Klee, and Katie Dykes, Chair, Public Utility Regulatory Authority,” *Public Hearing – February 21, 2017 – Energy and Technology Committee*, <https://www.ct.gov/2017/ETdata/Tmy/2017HB-07036-R000221-Klee,%20Robert,%20Commissioner-DEEP-TMY.PDF>, (February 26, 2017).

⁶Connecticut Department of Energy & Environmental Protection – Public Utilities Regulatory Authority, “Connecticut Renewable Portfolio Standard,” <http://www.ct.gov/pura/cwp/view.asp?a=3354&q=415186>, (February 26, 2017).

used in standalone and aggregated (e.g., microgrid) applications. A substantial portion of this recapitalization (68%) is in support of Connecticut RPS and environmental benefits. These benefits are captured in the following charts below:

	Capacity Factor, %	Emissions, lb./MWh			Avoided Emissions, Tons/y per MW		
		NOX	PM	CO2	NOX	PM10	CO2
Average US Grid		0.97 ¹	0.06 ²	1432 ¹			
SureSource Biogas fuel ⁵	90%	0.01	0.00	0	3.8	0.25	5,646
SureSource w CO ₂ Separation ⁵	90%	0.01	0.00	221	3.8	0.25	4,773
SureSource 3000 w CHP ⁵	90%	0.01	0.00	738	3.8	0.25	2,737
SureSource 4000	90%	0.01	0.00	778	3.8	0.25	2,577
Rooftop Solar	23% ³				1.0	0.06	1,411
Utility Scale Solar PV ⁴	29% ³				1.4	0.06	1,874
Wind	47% ³				2.2	0.10	3,057



Sources:

1. Grid emissions rates for NOX and CO₂ are from EPA eGrid 2018, US Average non-baseload rates.
2. Grid particulate emissions rate is from EPA eGrid PM 2.5 US average for 2018.
3. Solar and Wind capacity factors are average of range from Lazard LCOE Analysis version 13, November 2019.
4. Utility scale avoided emissions assumes 5% transmission and distribution losses.
5. SureSource estimates are based on Company specifications and estimates.

Economic Impact

From an economic perspective, Connecticut is home to over 600 companies that take part in the fuel cell industry supply chain, which account for over 2,600 direct and indirect jobs⁷, and which in 2015 contributed \$726 million in total revenue and investment and roughly \$40 million in state and local tax revenue⁸, which is a material portion of commercial tax revenues for the state. While the 3 CT Projects are already “on line” – this recapitalization will provide FCE with more than \$█ million of fresh capital for investment (nearly \$█ million when combined with the Navy / Groton project) – some of which supports Connecticut jobs and a portion which can be used for capital investment for projects under development in Connecticut as well as to assist with FCE’s ability to ultimately grow its workforce as other projects in its pipeline come on line and as it implements its long-term growth strategy.

⁷Department of Economic and Community Development, “Testimony Before the Energy and Technology Committee 2/21/17 – RE: HB7036: An Act of Promoting the Use of Fuel Cells for Electric Distribution System Benefits and Reliability,” *Public Hearing – February 21, 2017 – Energy and Technology Committee*, <https://www.cga.ct.gov/2017/ETdata/Tmy/2017HB-07036-R000221-Smith,%20Catherine,%20Commissioner-Department%20of%20Economic%20and%20Community%20Development-TMY.PDF>, (February 26, 2017).

⁸Connecticut Center for Advanced Technology, Inc., “Testimony of Joel M. Rinebold, Director of Energy Initiatives, Connecticut Center for Advanced Technology, Inc., Before the Energy and Technology Committee February 21, 2017, Regarding Governor’s Bill No. 7036 – An Act Promoting the Use of Fuel Cells for Electric Distribution System Benefits and Reliability,” *Public Hearing – February 21, 2017 – Energy and Technology Committee*, <https://www.cga.ct.gov/2017/ETdata/Tmy/2017HB-07036-R000221-Rinebold,%20Joel,%20Director%20of%20Energy%20Initiatives-CT%20Center%20for%20Advanced%20Technology-TMY.PDF>, (February 26, 2017).

Strategic Selection Award

With the goal of creating a viable market for the transition from subsidy-based to financing-based models of development for fuel cells in Connecticut, participating in the Portfolio recapitalization is also of strategic importance to Green Bank, as the Portfolio recapitalization exhibits the following criteria, which are required of all Green Bank strategic selection and award investments:

- **Special Capabilities** – FCE has significant experience in manufacturing and developing fuel cells (as discussed in the “FCE Background” section above) and is a locally-domiciled market leader in the industry. FCE can spearhead the pivot away from tax incentives and state procurement subsidies via cost reductions derived from technological innovation and market penetration.
- **Strategic Importance** – FCE projects are aligned with Green Bank goals, including the creation and retention of local jobs associated with FCE, the deployment of an innovative technology that will play an integral role in the economic transformation of the fuel cell industry, and the development of a clean energy generating asset that, both on an individual basis and as similar projects are deployed at scale, will continue to provide a combination of cleaner, cheaper, and more reliable energy, while creating jobs and supporting local economic development.
- **Urgency and Timeliness** – There is an urgent need to act on the opportunity as the closing for this recapitalization is scheduled for April 2023 in order to supplement FCE’s resources for continued investment in projects and initiatives under development in CT, the USA and abroad.
- **Multiphase Project** – Successful execution of the Recapitalization Facility is a follow-on from the Bridgeport project (which would be refinanced / repaid from some of the proceeds of the credit facility) and will set the stage for the Green Bank to support the development of additional projects both for FCE (e.g., the CT DEEP RFP and SCEF projects) and for the greater fuel cell industry within Connecticut.

Strategic Plan

Is the program proposed, consistent with the Board approved Comprehensive Plan and Budget for the fiscal year?

Pursuant to the Green Bank’s mandate to foster the growth, development, and commercialization of renewable energy sources and related enterprises, and to stimulate demand for renewable energy and the deployment of renewable energy sources that serve end use customers in Connecticut, the Board has determined that is in keeping with Conn. Gen. Stat. Section 16-245n for Green Bank to fund certain commercial activities that support projects involving the use of fuel cell technology for distributed generation (“DG”) power production.

Ratepayer Payback

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

The CT Projects that are included in the Recapitalization Facility are expected to produce 168,000 MWh during 2023 and up to 1,126,000 MWh during the 7-year life of the Recapitalization Facility. Compared with the maximum \$10,000,000 of ratepayer funds at risk, the [REDACTED] is expected to yield up to 113 kWh per \$1 of ratepayer funds over the 7-year term.

Terms and Conditions

What are the terms and conditions of ratepayer payback, if any?

The Credit Facility carries an interest rate of [REDACTED]. The facility amortizes over a 17-year period to a 7-year balloon payment of [REDACTED]% of original financed amount (which becomes \$[REDACTED] million at the end of the 7th year, and Green Bank's share is \$[REDACTED] million). The Projects are in full operation and the Green Bank will fund its share of the loan upon closing – expected to be in April 2023.

Capital Expended

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

\$10,000,000

Risk

What is the maximum risk exposure of ratepayer funds for the program?

\$10,000,000

Financial Statements

How is the program investment accounted for on the balance sheet and profit and loss statements?

The loan would result in a \$10,000,000 reduction of cash and a \$10,000,000 increase in promissory notes.

Target Market

Who are the end-users of the engagement?

FCE and the Projects identified in the memo, 68% of which by capacity are in Connecticut compared with our share of the exposure of 10.6%

Green Bank Role, Financial Assistance & Selection/Award Process

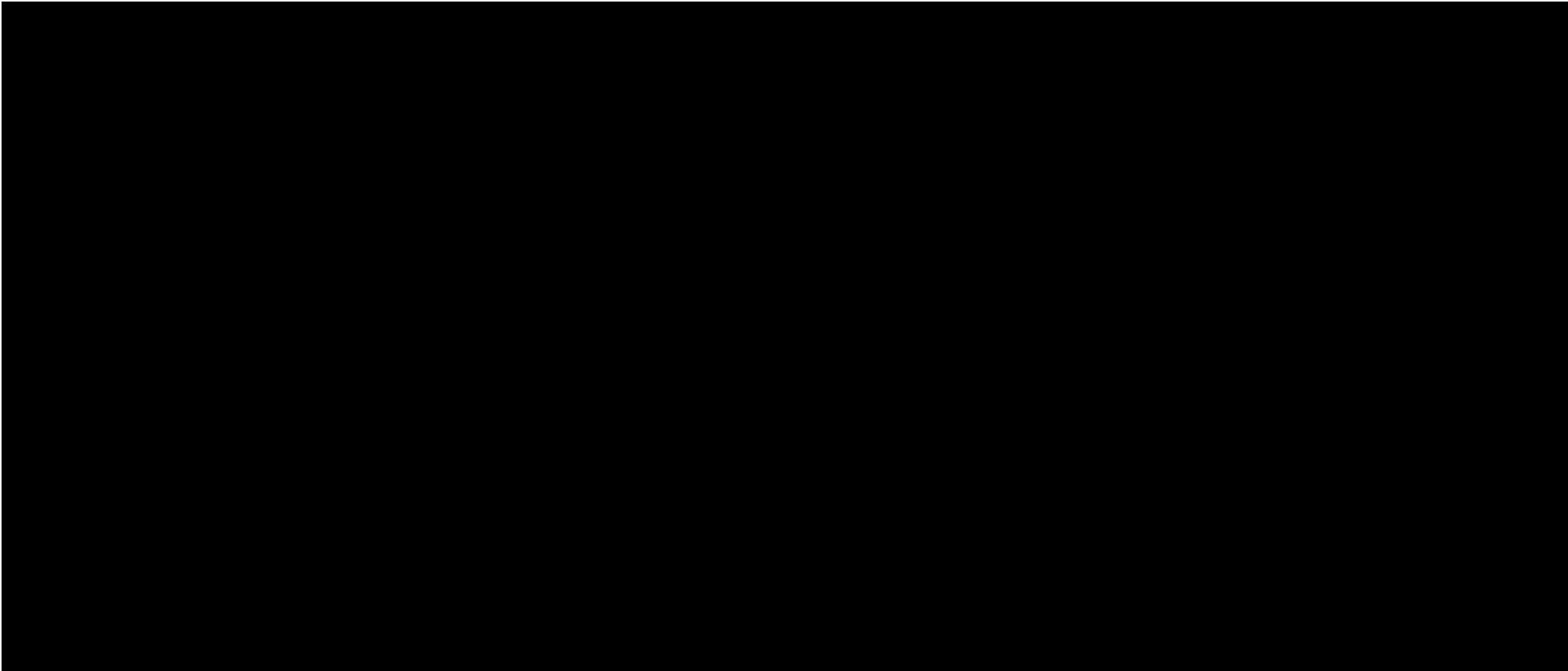
Lender via Strategic Selection process pursuant to the Green Bank Operating Procedures (see **Strategic Selection and Award** section of this Memo).

Program Partners

FuelCell Energy, Inc., Investec Bank, and potentially Liberty Bank, Amalgamated Bank, Berkshire Hills Bancorp.

Risks and Mitigation Strategies

Lending risks and mitigation strategies have been addressed in the **Project Risks and Mitigants** section of this Memo.



Resolutions

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 effect the above-mentioned term loan and participation.

Submitted by: Bert Hunter, EVP and CIO; Associate Director, Investments; David Beech, Senior Manager, Investments

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PosiGen

Green Bank Term Loan Facility Modification Request

March 10, 2023



Document Purpose: This document contains background information and due diligence on modification of existing credit facilities for PosiGen Inc. ("**PosiGen**") collateralized by residential solar PV facilities located within and outside of Connecticut and by the future performance-based incentive ("**PBI**") payments PosiGen will earn from various residential solar PV projects in Connecticut. The information herein is provided to the Connecticut Green Bank Board of Directors for the purposes of reviewing and approving recommendations made by the staff of the Connecticut Green Bank.

In some cases, this package may contain, among other things, trade secrets and commercial or financial information given to the Connecticut Green Bank in confidence and should be excluded under C.G.S. §1-210(b) and §16-245n(D) from any public disclosure under the Connecticut Freedom of Information Act. If such information is included in this package, it will be noted as confidential.

Investment Modification Memo

To: Connecticut Green Bank Board of Directors

CC: Bryan Garcia, President and CEO; Jane Murphy, Executive Vice President of Accounting and Financial Reporting; Brian Farnen, General Counsel and CLO; Eric Shrago, Managing Director of Operations; Sergio Carrillo, Director of Incentive Programs

From: Bert Hunter, EVP and CIO

Date: March 10, 2023

Re: PosiGen Back Leverage Modification

Background

PosiGen, Inc. (together with its subsidiaries, collectively, “**PosiGen**”) currently has a first lien asset-backed facility (the “**FLCF**”) led by Forbright Bank (“**Forbright**”) with a total commitment of \$140 million. In turn, the Connecticut Green Bank (the “**Green Bank**”) – in order to continue to support PosiGen as our strategic partner for low to moderate income (“**LMI**”) solar, battery storage, and energy efficiency – provides a “2nd Lien” facility subordinated to Forbright (the second lien credit facility, or “**SLCF**”) with a total commitment of \$11.25 million. Of this amount, the Green Bank’s maximum exposure is set at \$4.5 million, with the remaining \$6.75 million provided by a variety of mission-aligned investors. PosiGen’s portfolio of solar leases, both in Connecticut and nationally, serve as the collateral for these two facilities. In December 2022, the Board approved, but staff and PosiGen have not yet completed, increasing Green Bank’s support under the SLCF together with a \$6 million position in a \$12 million tax equity bridge loan facility (the latter being completed and funded in January 2023). This memo will update the Board on proposed changes to the FLCF (but no approval to increase Green Bank’s exposure to PosiGen beyond what was approved in December 2022 is being sought as part of this request).

In addition to the SLCF, the Green Bank has a first lien commitment to PosiGen associated with the now-closed Residential Solar Investment Program, lending against the Performance Based Incentive (“**PBI**”) that PosiGen systems earn as they generate clean energy and deliver Solar Home Renewable Energy Credits (“**SHRECs**”) to the Green Bank. That is now a static pool of projects, with ~\$10 million in principal outstanding. Further, in April 2022, the Board approved an \$8 million facility to support the rollout of battery storage systems under the Energy Storage Solutions (“**ESS**”) program for LMI families in the state (\$2 million revolver for purchasing the batteries and associated equipment from Generac (their strategic partner for the ESS program) and \$6 million that will be funded by payments from Eversource and UI as well as customer lease payments). Finally, and as noted above, in December 2022, the Board approved – and the Green Bank has since fully funded (in January 2023) – its \$6 million position in a \$12 million tax equity bridge loan facility to PosiGen associated with last year’s passage of the Inflation Reduction Act at the Federal level. Specifically, the loan is tied to the company’s eligibility for a variety of Investment Tax Credit “adders” in 2023, focused mainly on PosiGen’s delivery of solar (including battery storage) to LMI communities in specifically eligible census tracts, as well as their use of domestically produced content in the systems they deploy (including in energy communities and for low-income families).

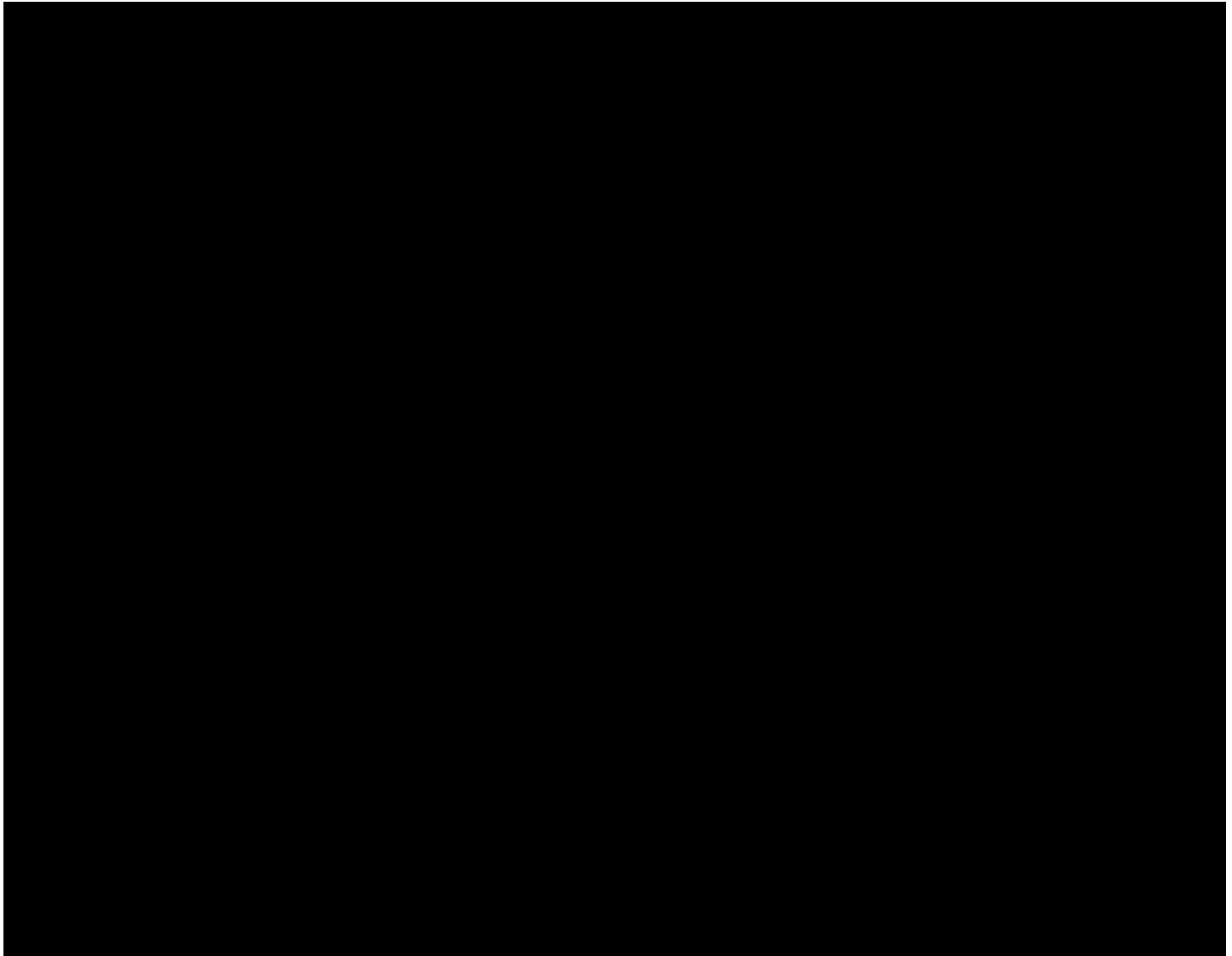
Due to PosiGen’s growth in Connecticut and more broadly (detailed further below in this memo), the company had originally planned to exercise the accordion feature of its Forbright facility (related to the

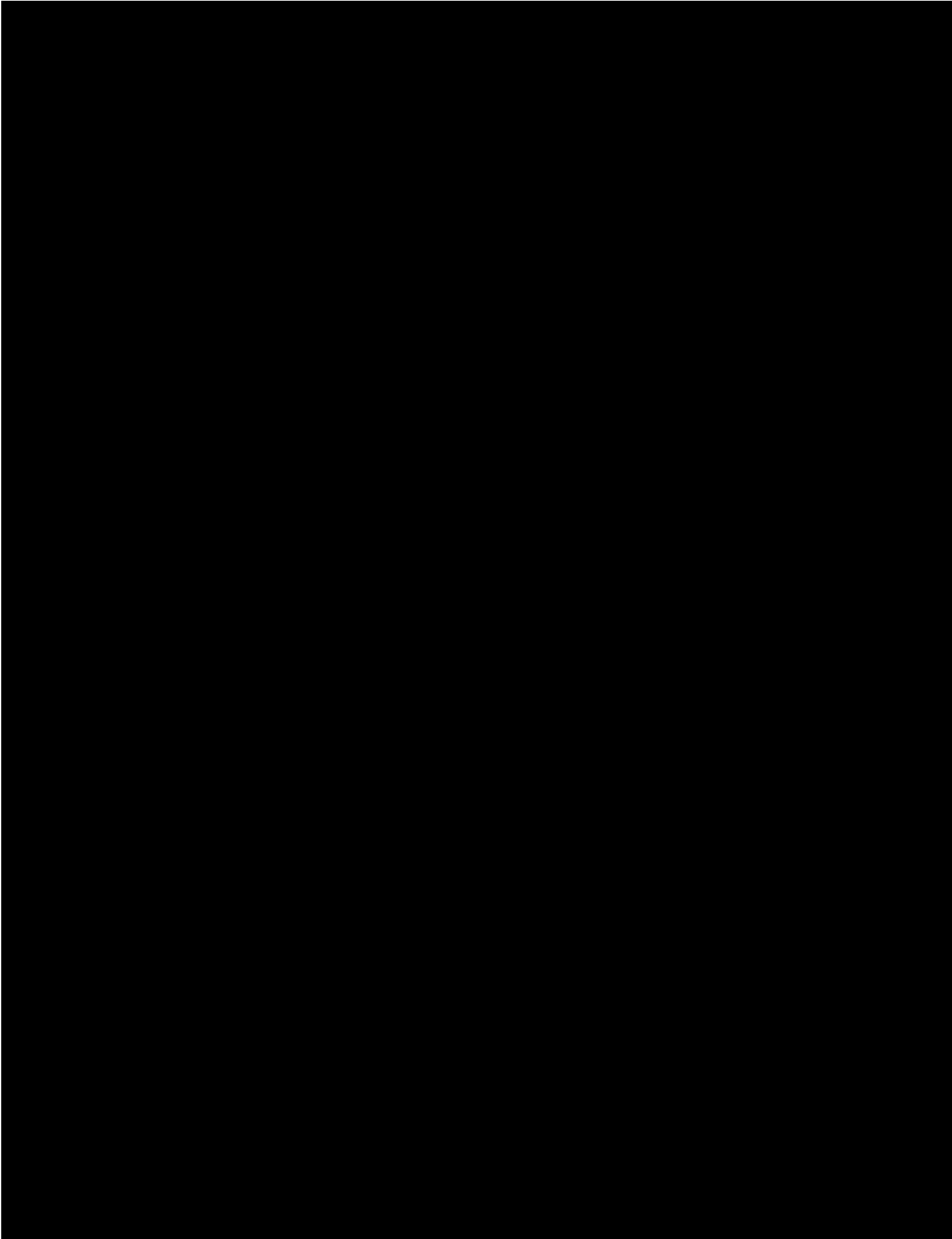
Board's approvals in December noted above). [REDACTED]

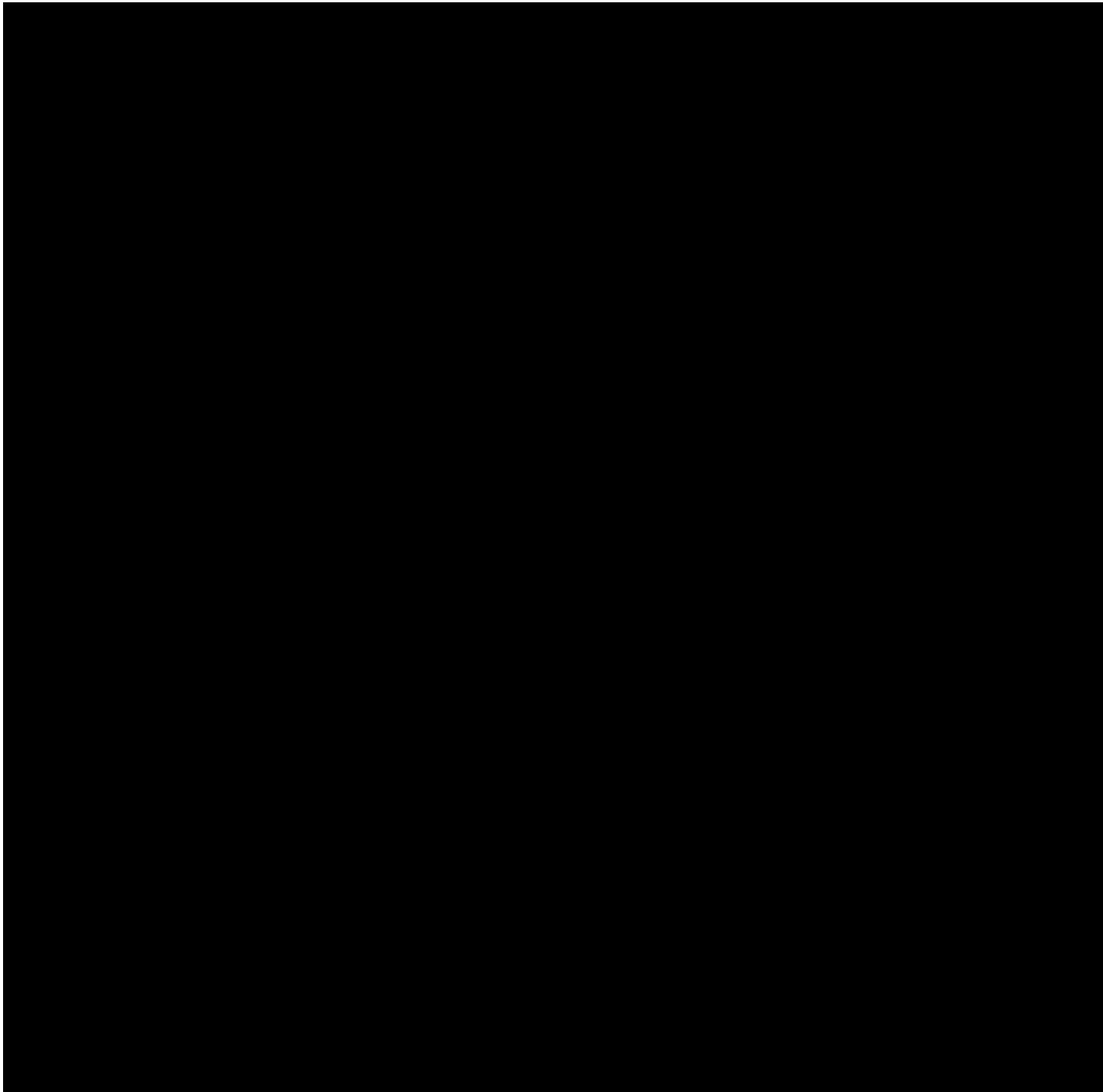
[REDACTED]. Thus, PosiGen has agreed in principle to refinance the Forbright FLCL in its entirety, with a larger commitment from Brookfield Asset Management ("**Brookfield**") and on terms that are more favorable to PosiGen given the current market and interest rate environment.

While the Board has previously authorized Green Bank upsizing its SLCF commitment in December 2022, staff believes it prudent to: (i) adjust that approval for the new first lien lender; and (ii) in an abundance of caution, confirm the approvals granted in December 2022, for good order's sake.

PosiGen Updates







PosiGen Asset Backed Facility

Timing	Pre-Accordion Approved	Post-Accordion Approved	Post-Accordion Approved Dec 22
First Lien Amount	\$140,000,000	\$200,000,000	\$200,000,000
Second Lien Amount	\$11,206,048	\$16,008,640	\$16,008,640
Green Bank Max Exposure	\$4,500,000	\$6,400,000	\$9,302,592

-
-
- Overall exposure

	<u>Previous</u>	<u>Proposed</u>	<u>Repayment Source</u>
2 nd Lien Credit Facility	\$ 6,400,000	\$ 9,302,592	- Customer Leases
PBI Facility	\$ 10,000,000	\$ 7,500,000	- CGB PBI sweep
ESS/Generac	\$ 8,000,000	\$ 8,000,000	- CGB/ES/UI incentive sweep w/ Generac performance gtee
Capital Solutions 2 Yr Bridge	\$ 0	\$ 6,000,000	- Tax equity funding
Max Exposure	\$24,400,000	\$30,802,592	
Est Exposure Dec 2023	\$15,500,000	\$18,500,000⁴	

Risk Assessment

PosiGen's portfolio performance remains strong and the lease structure aligns well with customers' benefits of electric bill savings which are only increasing with higher rates from Eversource & UI. PosiGen's capital raising activities are strong as well. In addition to this refinancing and upsizing through Brookfield, which represents a \$110 million capital raise of first lien capital (in addition to the increment of second lien capital approved by the Green Bank Board in December 2022), PosiGen's new investor base has injected another [REDACTED] million of corporate capital into the company as of early 2023, which the company projects to take it through to breakeven and parent level profitability by [REDACTED]. This is in addition to tax equity capital, where the company is currently in documentation with M&T Bank for a \$[REDACTED] million commitment closing on or about [REDACTED].

The confirmatory approval being sought today by staff is to account for a new first lien lender (Brookfield).

Recommendation

In partnership with the Green Bank, PosiGen has continued to make Connecticut a leader in the equitable deployment of clean energy. The company's model (based on underwriting to customer savings rather than FICO or income thresholds) is increasingly gaining acceptance in the market, but public-private investment partnerships continue to be critical to supporting growth and achieving scale. As such, Green Bank staff recommends approval of (i) Brookfield Asset Management as the new first lien lender under the FLCF and the other PosiGen financing facilities and (ii) confirmation of Green Bank's approved 2nd lien credit facility as described in this memo.

Resolutions

WHEREAS, the Connecticut Green Bank ("**Green Bank**") has an existing partnership with PosiGen, Inc. (together with its affiliates and subsidiaries, "**PosiGen**") to support PosiGen in delivering a solar lease (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.

Submitted by: Bert Hunter, EVP and CIO

EXHIBIT A

Proposed Terms of the Refinanced 1st Lien Facility

Non-Binding Term Sheet

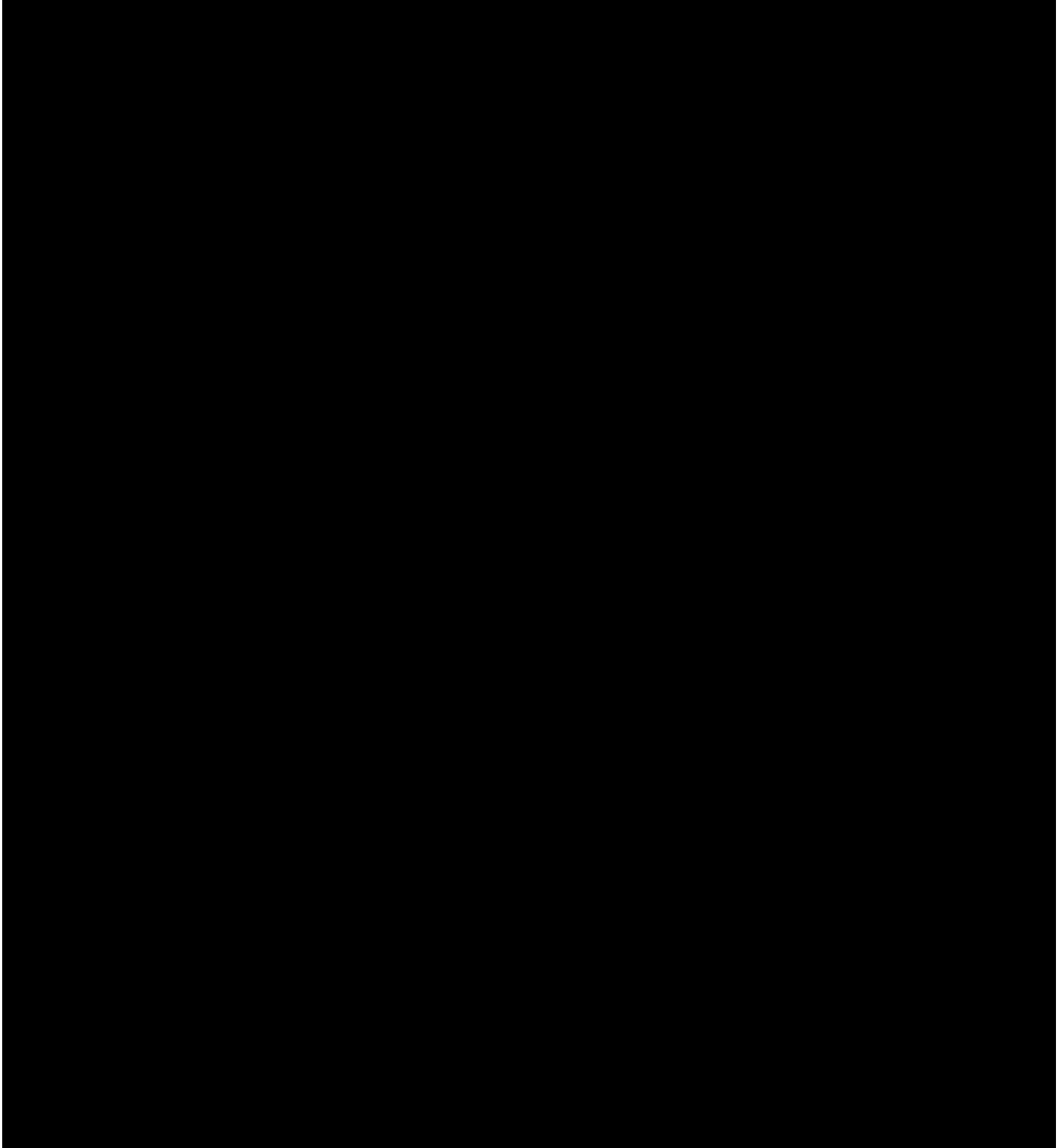


EXHIBIT B1
DOE-LPO Press Release

**LPO Offers New Opportunities for Projects Funded by State Energy Financing Institutions
(DECEMBER 8, 2022)**

A new authority waives the innovative technology requirement in Title 17 for projects receiving financial support or credit enhancements from a **state energy financing institution (SEFI)**. Previously, all projects funded under Title 17 were required to employ technologies that were new or significantly improved compared to commercially available technologies. Now, projects that reduce greenhouse gas emissions without using an innovative technology may be eligible for loans under Title 17, so long as the projects receive qualifying funding from a SEFI (*e.g.*, a state green bank or other qualifying state entities) and fall into one of the categories of eligible projects under Title 17.

Congress [enacted this change](#) to Title 17 in part to provide access to debt for borrowers seeking to deploy already commercialized clean energy technologies. By providing loan guarantees to SEFI-supported projects (which can include guarantees of loans made by eligible private lenders), the Loan Programs Office (LPO) can now offer project financing to a wider range of borrowers under Title 17, including small, rural, and underserved communities.

The expanded authority was established by the Bipartisan Infrastructure Law and funded by the Inflation Reduction Act (IRA). The IRA provided an additional \$40 billion of loan authority for projects eligible for loan guarantees under section 1703 of the Energy Policy Act of 2005, and that authority will remain available through September 30, 2026.

The SEFI-related authority broadens the scope of projects LPO can finance under [Title 17](#) and will further advance private sector-led, government-supported efforts to reduce greenhouse gas emissions.

HYPOTHETICAL PROJECT APPLICATIONS

The following scenarios represent example projects and funding structures that might be eligible for a loan from LPO under this authority.

Example 1: A private lender provides debt financing and servicing to small businesses that acquire, renovate, and rent or re-sell mid-market single-family homes. The small businesses use the proceeds to install on-site renewable energy generation, build EV infrastructure, and improve the overall energy efficiency of the homes. Several state energy offices provide subordinated debt capital or loan loss reserves for the project. The lender seeks a loan guarantee from LPO for senior debt used to originate or purchase the portfolio of small business loans.

Example 2: A community solar developer is constructing multiple solar facilities. The project portfolio has SEFI funding in the form of up-front state grants, which the developer receives for serving certain geographic areas of the state. The developer may be eligible to receive additional state grants if it serves lower- and moderate-income and disadvantaged communities. The developer applies for an LPO SEFI loan guarantee to support deployment of solar facilities. The developer repays the loans for facility construction through customer subscriptions. The

developer would like LPO to guarantee a multi-draw construction loan or similar facility used to finance the portfolio.

Example 3: A state has invested in a project to transport natural gas for use in production of blue ammonia. The developer secured SEFI support for electrolyzer facilities to complement existing state-backed blue ammonia infrastructure. Because the project receives SEFI support, the developer explores a guarantee for the new infrastructure under Title 17. In addition to providing financing for the electrolyzers, a loan guarantee from LPO would come with valuable technical expertise.

Example 4: A private developer builds residential housing projects to high energy efficiency standards. As a result, the state housing finance agency provides grants and credit enhancement for the construction, potentially making the developer's projects eligible for a loan from LPO under Title 17. The developer mentions this to the state housing finance authority, which also supports dozens of other developers. The SEFI decides to bundle projects from multiple developers into a single application to LPO. The SEFI seeks a loan guaranteed by LPO to further incentivize developers to prioritize energy efficiency in new buildings.

Example 5: A company finances the purchase of energy-efficient appliances through an online utility marketplace platform and provides point-of-sale rebates for customers throughout the United States. In several states, the company developed loan-loss reserve (LLR) programs with state energy offices. The LLR programs cover a significant portion of qualifying losses resulting from consumer loan defaults, which are infrequent. The company seeks a loan guaranteed by LPO to scale up its service offerings and make more loans available to consumers in states where it receives SEFI funding.

WHAT IS A "SEFI" ?

Examples of State Energy Financing Institutions (SEFI)

- Housing Finance Agencies
- Economic Development Authorities
- State Green Banks
- State Energy Offices



WHAT QUALIFIES AS A SEFI?

The provision defines a SEFI as a quasi-independent entity or an entity within a state agency or financing authority established by a State to satisfy two broad functions:

1. Provide financing support or credit enhancements, including loan guarantees and loan loss reserves, for eligible projects under Title 17.
2. Create liquid markets for eligible projects, including warehousing and securitization, or take other steps to reduce financial barriers to the deployment of existing and new eligible projects.

Examples of SEFIs may include, but are not limited to:

- Housing Finance Agencies.

- Economic Development Authorities.
- State Green Banks.
- State Energy Offices.

Note that for the provision to apply, the project must receive financing or credit enhancement from a SEFI.

WHAT QUALIFIES AS FINANCING OR CREDIT ENHANCEMENT FROM A SEFI?

Qualifying SEFI support can take many forms. Until a rulemaking and related guidance are issued, LPO will assess applications on a case-by-case basis to determine whether the project funding structure meets the criteria.

Examples of qualifying funding may include, but are not limited to:

- State providing equity/subordinate portion of capital stack.
- State providing loan loss reserve with respect to junior portion of capital stack.
- State or SEFI co-lending with LPO (pari passu or mezzanine).
- State backstop of specific key project elements that may be subject to regulatory or local market risk.

HOW TO APPLY

Potential applicants should become familiar with requirements applicable to all loans and loan guarantees issued under Title 17. These requirements can be found in the Title 17 Innovative Clean Energy (section 1703) solicitation [here](#). Further guidance for potential applicants to apply under the SEFI authority will be provided in an upcoming Title 17 rulemaking and subsequent guidance.

To apply using the SEFI authority, potential applicants should follow these additional instructions for Part I:

- Replace “Eligible Project” Condition 2 (New or Improved Technology) with “Receives qualifying support from a qualifying SEFI.”
- Applicants **should** fill out Attachment A with the following two updates:
 - In addition to providing the information requested in Section C/Part 1 (Executive Summary), applicants **should also** explain how the proposed project meets the SEFI funding requirements defined in this provision.
 - In Section D/Part 2 (Description of New or Significantly Improved Technology), applicants **should** describe the technology being deployed but **are not required** to explain how it is new or significantly improved.


LPO’s Outreach and Business Development team will provide guidance regarding potential eligibility and work with applicants to prepare applications. Applicants will have ample opportunity and support to refine their initial applications to ensure they comply with the requirements set forth in any rulemaking.


LPO encourages interested parties to begin the application process as soon as possible by calling 202-586-8336 or writing to lpo@hq.doe.gov to schedule a no-fee, pre-application consultation.


EXHIBIT B2


PosiGen's Proposal re: Expansion of State Energy Financing Institution Programs



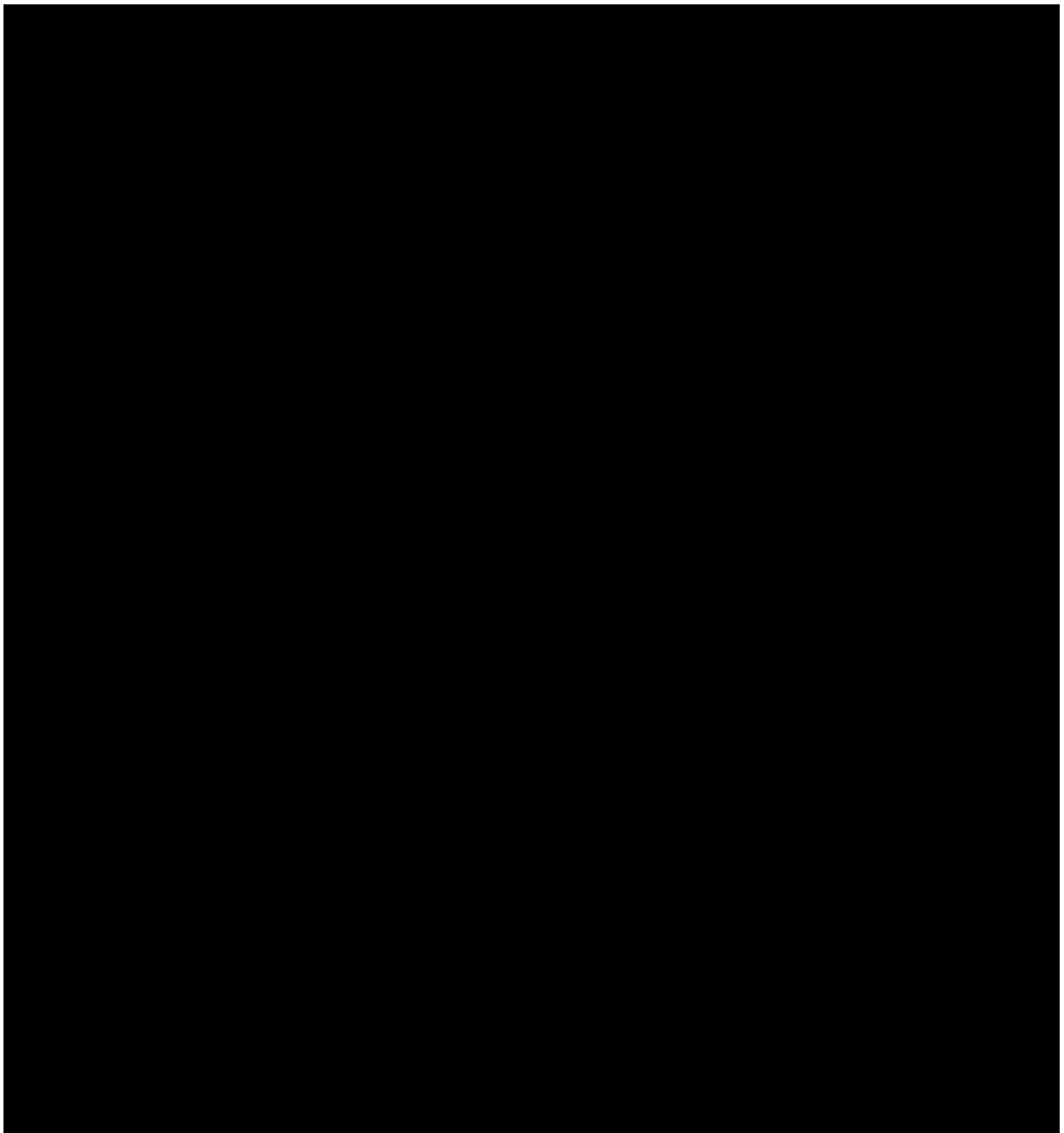
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New Orleans, LA 70121

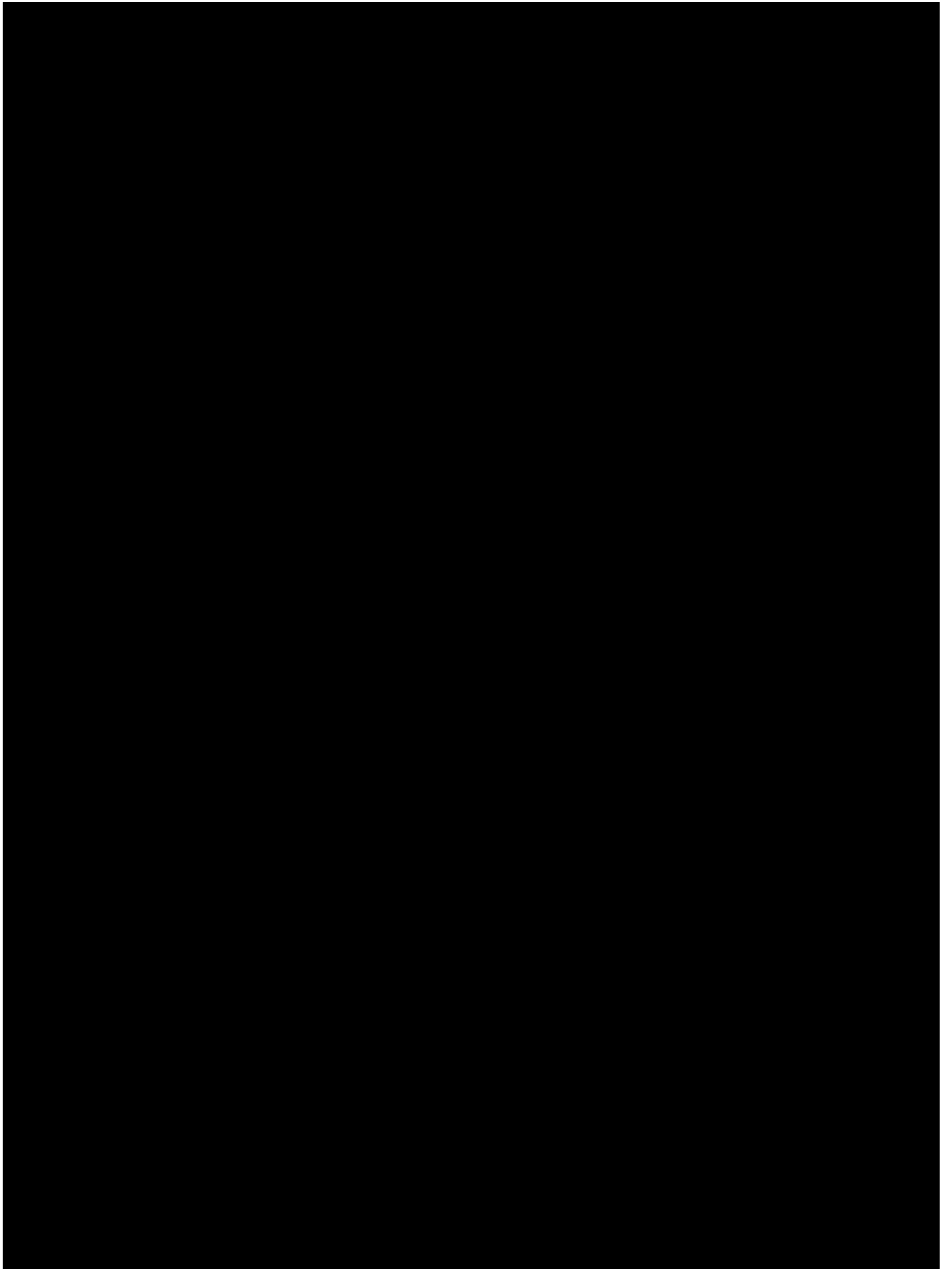
 203-214-6418

 bhealey@posigen.com

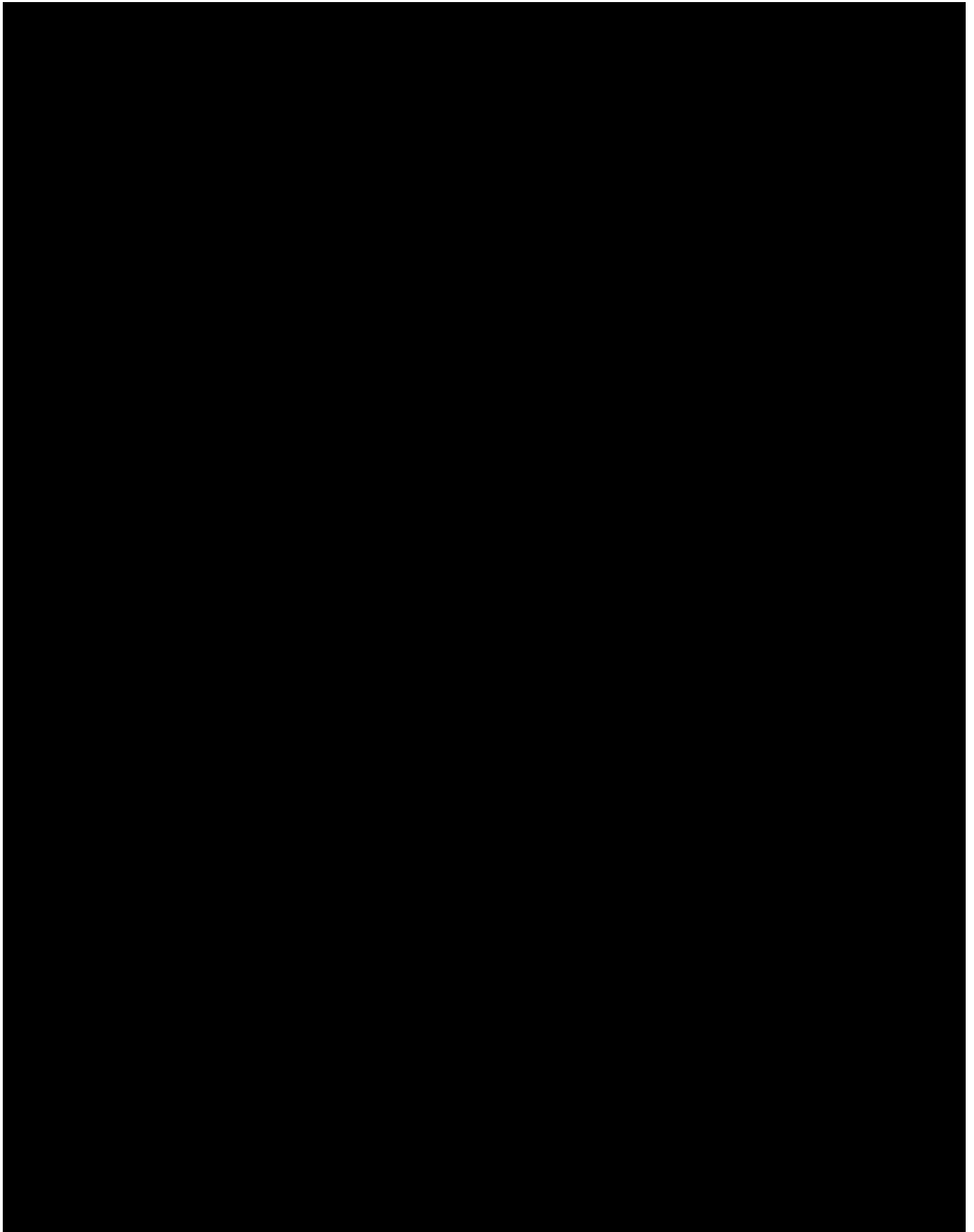
 www.PosiGen.com

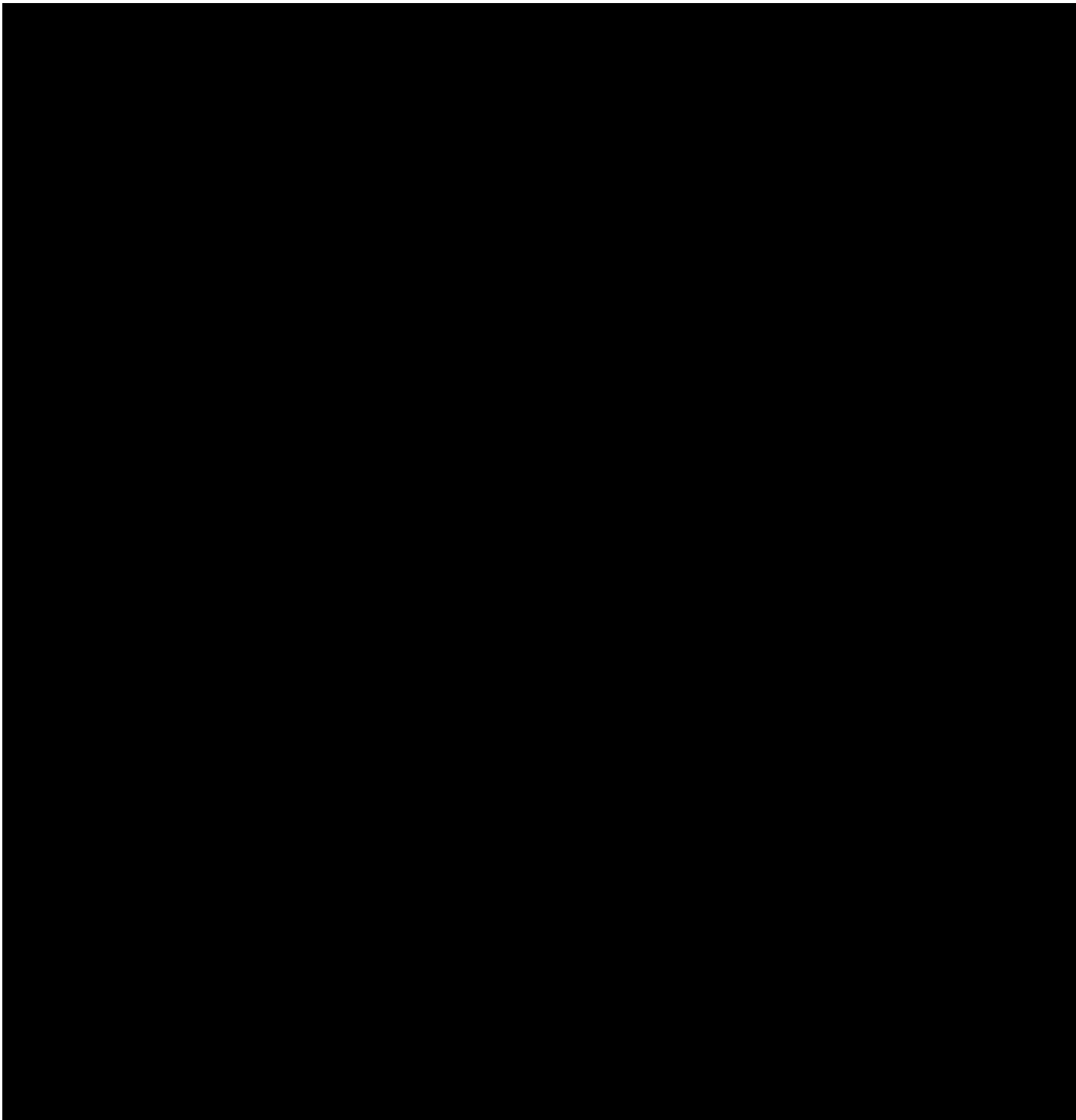
**PosiGen: State Green Bank-Supported Expansion of Low- and Moderate-Income
Rooftop Solar Program**






Development Pipeline by State







2022 CLEAN & RENEWABLE ENERGY REPORT

February 22, 2023

Connecticut Public Utilities
Regulatory Authority

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About this Report

The following report details the status of the current clean and renewable energy programs and contracts administered by the electric distribution companies (EDCs), The Connecticut Light and Power Company d/b/a Eversource Energy (Eversource) and The United Illuminating Company (UI), and overseen by the Connecticut Public Utilities Regulatory Authority (Authority or PURA).



The clean and renewable energy programs and relevant market segments include, but are not limited to:

- Residential solar photovoltaic (PV) systems
- Non-Residential clean energy systems, including solar photovoltaic (PV) fuel cell energy systems
- Shared Clean Energy Facility (SCEF) Program
- Public Policy Contracts / Power Purchase Agreements (PPAs) selected through Department of Energy and Environmental Protection (DEEP) procurements
- Clean Energy Options Program (CEOP) / Voluntary Renewable Option (VRO) Program
- Compliance with Connecticut's Renewable Portfolio Standards (RPS).

This report is intended to act as a centralized document for tracking key performance metrics related to deployment levels and other data associated with these programs and contracts. This report acts as a framework for future annual reports; however, the Authority is committed to making incremental improvements each year, to the extent possible.

The publicly available data used to generate this report can be accessed via Docket No. 22-08-01, [2022 Clean and Renewable Energy Program Data and Report](#). Any publicly available data used to generate future reports will be made available through the corresponding proceeding using the same numbering convention, Docket No. XX-08-01, where XX is the last two digits of the year (e.g., "22" for 2022). Information on the program eligibility requirements, additional documents and resources, and an acronym glossary can be found in the appendices.

Equitable Modern Grid (EMG)

On October 2, 2019, PURA issued an [Interim Decision](#) in Docket No. 17-12-03, [PURA Investigation into Distribution System Planning of the Electric Distribution Companies](#). The Interim Decision outlines the Authority's framework for investigating near-term and long-term methods for realizing an equitable modern electric grid in Connecticut (EMG Framework).

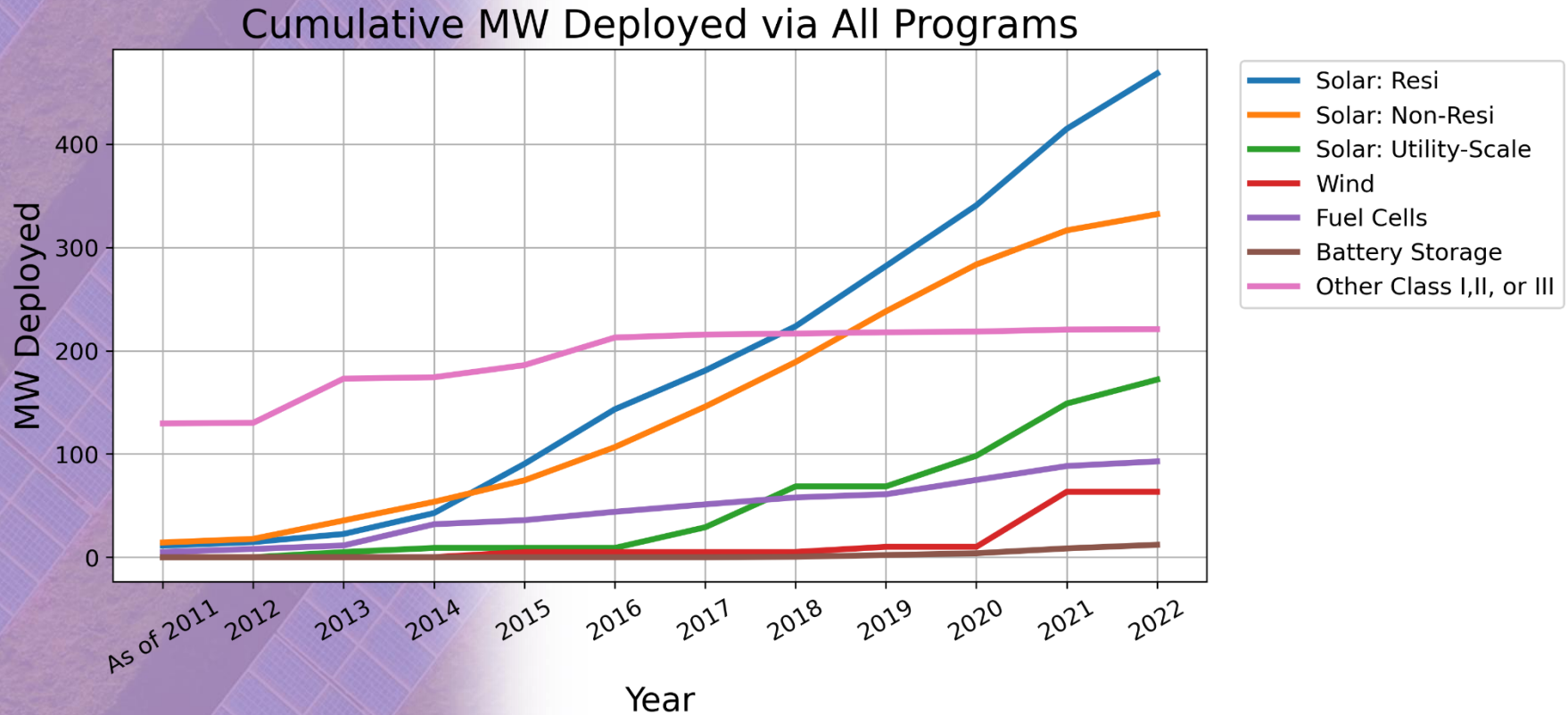


The decision also identified and outlined 11 dockets to help realize the EMG Framework's objectives. While those dockets and the EMG Framework are not the subject of this report, PURA strives to achieve the goals of the EMG Framework in its oversight of the programs that are outlined herein and the programs established effective January 1, 2022. Those goals, shown above, are:

1. Support (or remove barriers to) the growth of Connecticut's green economy;
2. Enable a cost-effective, economy-wide transition to a decarbonized future;
3. Enhance customer access to a more resilient, reliable, and secure commodity; and
4. Advance the ongoing energy affordability dialogue in the State, particularly in underserved communities.

To date, the Authority has reached a final determination in nine of the 11 EMG Framework dockets, resulting in numerous new programs, processes, and frameworks established to better achieve the goals outlined above. More information on the EMG Framework and the resulting programs, processes, and frameworks can be found on the [Authority's dedicated website](#).

Emissions, Employment & Combined Program Data



The above figure shows the cumulative deployment of fuel cell, wind, and battery storage via all relevant state programs, including projects where the physical deployment is out of state (e.g., in New York or in federal waters).¹ It also shows the cumulative deployment of solar resources via all relevant state programs.² For solar, 1 MW of installed capacity powers approximately [130-140](#) houses in Connecticut. The data for 2022 is through September 30, 2022, aside from residential solar, which is through October 31, 2022.

The plot^{3,4} shows the combined data for both EDCs, Eversource and UI. Notably, the plots do not show deployment through programs or procurements of the state's municipal electric utilities. For more information on deployment over time for individual programs, see the relevant sections below.

The following table highlights deployment data by energy type, separated by year, for both EDCs. The table reflects only deployment in the state of Connecticut via relevant state programs, as opposed to the plot on the previous page which includes projects physically located outside of Connecticut. Further, tables for the individual EDC's can be found in Appendix A3. The data in the Table is derived from Eversource and UI's responses to Interrogatory CAE-64 and their compliance filings dated November 15, 2022. More specifically, the relevant data from the EDC compliance filings are the EDC responses to CAE-33. Data for 2022 represents values through September 30, 2022, except for residential solar deployment data which is data through October 31, 2022.⁵

Deployment by Year by Technology Type

Total (both EDCs) ⁶		As of 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total (2011-2022)
Solar Photovoltaic (PV)	Residential	11.14	3.513	7.867	20.230	47.644	52.885	37.485	42.909	58.397	58.733	74.048	49.123	463.98
	Non-Residential	14.3	3.49	17.79	18.08	20.81	32.14	39.25	43.17	49.11	45.37	33.02	15.65	332.18
	Utility	0	0	5	4	0	0	20	20	0	4.98	25.89	23.2	103.07
Wind		0.08	0.01	0	0.01	4.98	0	0	0	0	0	0	0	5.08
Fuel Cells		5	3	3.4	20.54	3.95	8.12	7.2	6.72	3.04	13.89	13.47	4.48	92.81
Battery Storage ⁷		0	0	0	0	0	0	0.02	0.46	1.65	1.73	4.71	3.51	12.08
Energy Efficiency/Demand Response		893.35	131.75	129.36	130.71	176.75	94.76	105.31	90.36	68.51	110.47	129.05	134.81	2195.19
Other Class I, II, or III Resources		129.54	0.62	42.81	1.34	3.64	5.2	2.91	0.98	1.25	0.63	1.99	0.33	191.24



Overview of Programs – Including Total Deployment (In and Out of State)

	Statutory Authority ^{8,9}	Renewable Energy Source(s)	Duration of Tariff or Contract	Total No. of Annual Solicitations (or Program Length)	Initial Project Award Year	Total Deployment Levels	Total Deployment Levels through 2022 ^{10,11}
Residential Solar [RSIP + RRES] ¹²	16-245ff, 16-244u	Solar PV	15-year REC contract for RSIP	0 (~10 years)	2011 (RSIP)	Deployment in MWs (AC)	329.140
					No. Projects In-Service	46,219 ¹³	
	16-244z, P.A. 19-35		20-year tariff	0 (6 years)	2022 (RRES)	Deployment in MWs (AC)	30.689
					No. Projects In-Service	3,904 ¹⁴	
NRES Program	16-244z, P.A. 19-35	Solar PV	20-year tariff	0 (6 years)	2022	Deployment in MWs (AC)	0
						No. Projects In-Service	0
LREC/ZREC Program	16-244r, 16-244s, 16-244t	Class I RECs*	15-year tariff	10 (*10-yr procurement term)	2012	Deployment in MWs (AC)	376.191
						No. Projects In-Service	2,297
VNM Program ¹⁵	16-244u(5)	Class I & *Class III Energy	Project life	N/A	2014	Deployment in MWs (AC)	7.212
						No. Projects In-Service	11
SCEF Pilot Program	16-244x	Class I Energy + RECs	20-year tariff *Pilot	1 RFP (*2-year Pilot program)	2017	Deployment in MWs (AC)	1.62
						No. Projects In-Service	1
SCEF Program	16-244z(a)(1)(C)	Class I Energy + RECs	20-year tariff	6 (*6-year procurement term)	2020	Deployment in MWs (AC)	0
						No. Projects In-Service	0
DEEP Procurements/PPAs	<i>*Varies - See Public Policy Contracts Section for details</i>					Deployment in MWs (AC)	1639.99
						No. Projects In-Service	17,575
CEOP/VRP Program	16-244c / 16-245p(a)	Voluntary Class I RECs only	Enroll 1-year customer contract		2005 / January 2021	No. RECs Delivered (MWh)	N/A
						No. Enrolled Customers ¹⁶	N/A
RPS Compliance	16-245a, 16-244c(h)(1) and 16-243q	Required Percentages of Class I, Class II and Class III RECs	Annual Compliance	N/A	2000	2022 Class I - Required %	22.5%
						2022 Class II - Required %	4.0%
						2022 Class III - Required %	4.0%
ESS Program	P.A. 21-53, 16-11, 16-19, 16-19e, 16-244i	Energy Storage	N/A, through 2030 for the Performance Incentive	0 (9 years)	2022	Deployment in MWs (AC)	0.05
						No. Projects In-Service ¹⁷	4
EV Charging Program ¹⁸	16-11, 16-244i	EV Charging Infrastructure	N/A, through 2030 for Managed Charging	0 (9 years)	2022	Residential Deployment in MWs (AC) ¹⁹	10.24
						Non-Residential Deployment in MWs (AC) ²⁰	8.52

Deployment by Year by Program

Clean and Renewable Energy Programs/Procurements		2011-2017	2018	2019	2020	2021	2022	TOTAL
RRES Program	Annual Deployment in MWs (AC)	0	0	0	0	0	30.689	30.689 ²¹
	No. of Projects In-Service	0	0	0	0	0	3,904	3,904 ²²
RSIP	Annual Deployment in MWs (AC)	152.093	38.172	51.556	46.438	35.961	4.920	329.140
	No. of Projects In-Service	22,135	5,411	7,137	6,437	4,477	622	46,219
LREC/ZREC Program ²³	Annual Deployment in MWs (AC)	138.398	55.757	43.943	54.448	46.209	37.433	376.191
	No. of Projects In-Service	1,042	314	346	243	235	117	2,297
NRES Program	Annual Deployment in MWs (AC)	0	0	0	0	0	0	0
	No. of Projects In-Service	0	0	0	0	0	0	0
SCEF Pilot Program	Annual Deployment in MWs (AC)	0	0	1.62	0	0	0	1.62
	No. of Projects In-Service	0	0	1	0	0	0	1
SCEF Program	Annual Deployment in MWs (AC)	0	0	0	0	0	0	0
	No. of Projects Awarded & In-Service	0	0	0	0	0	0	0
VNM Program ²⁴	Annual Deployment in MWs (AC)	1.530	0.795	0.047	0.900	1.940	2.000	7.212
	No. of Projects In-Service	2	1	2	1	3	2	11
CEOP/VRO Program ²⁵	Annual No. RECs Delivered	1,685,232	189,017	165,509	157,541	134,416	75,640	N/A
	No. Enrolled Customers	171,490	21,184	19,695	18,224	16,404	11,652	N/A
DEEP Procurements ²⁶	Annual Deployment in MWs (AC)	97.425	63.79	1054.751	60.641	133.379	230	16399.99
	No. of Projects In-Service	384	12,033	4,134	501	522	1	17,575
C&LM Plan ²⁷	Annual Deployment in MWs (AC) ²⁸	1652.059	81.528	65.359	104.05	123.418	134.805	2,161.22
	No. of Projects In-Service ²⁹	407302	33,743	39,046	57,402	56,849	195,867	785,270
ESS Program ³⁰	Annual Deployment in MWs (AC)	0	0	0	0	0	0.05	0.05
	No. of Projects In-Service	0	0	0	0	0	4	4
EV Charging Program	Residential Annual Deployment in MWs (AC)	0	0	0	0	0	10.24	10.24
	Non-Residential Annual Deployment in MWs (AC)	0	0	0	0	0	8.52	8.52

The table above outlines the total deployment levels in MW (AC) and number of projects installed for each state program.³¹ The 2022 data is through the last month of data available for each program.³²

Statutory Renewable Energy Goals

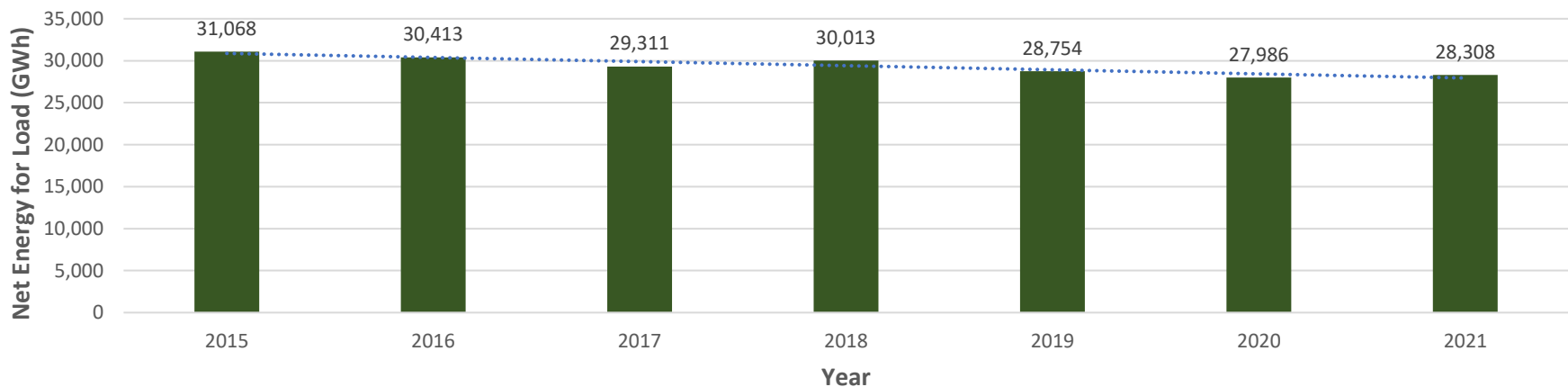
In May of 2022, the Connecticut General Assembly passed [Public Act No. 22-5](#), *An Act Concerning Climate Change Mitigation*, (PA 22-5) which established ambitious statutory renewable energy goals for the state of Connecticut. PA 22-5 amends Section 22a-200a of the General Statutes of Connecticut, which requires the State to reduce the level of emissions from greenhouse gases to at least 45% below 2001 levels by 2030 and 80% below 2001 levels by 2050, to also require all electricity supplied to customers in Connecticut to come from zero-carbon sources by January 1, 2040.

Electricity supplied to electric customers can be thought of as the electricity consumed in the state, otherwise known as the electric load, which typically has units of megawatt-hours (MWh) or gigawatt-hours (GWh). The below graph displays Connecticut's net electricity load over time.³³ As can be seen in the chart below, Connecticut's electricity load requirement has been steadily decreasing (by about 9% between 2015 and 2021), in part due to increased energy efficiency.

What is a MWh? A MWh is the amount of energy produced if a 1 MW electric generation unit ran for 1 hour. As an example, if a 3 MW capacity solar panel installation ran at full capacity (3 MW) due to optimal operating conditions (perfect weather) for 2 hours, it would generate 6 MWh of energy. Conversely, a MWh is the amount of energy consumed if a 1 MW engine ran for 1 hour.

Per [FERC Financial Reports – Form 1](#), the average home in Connecticut uses approximately 8.4 MWh of energy per year, or 700 kWh per month.

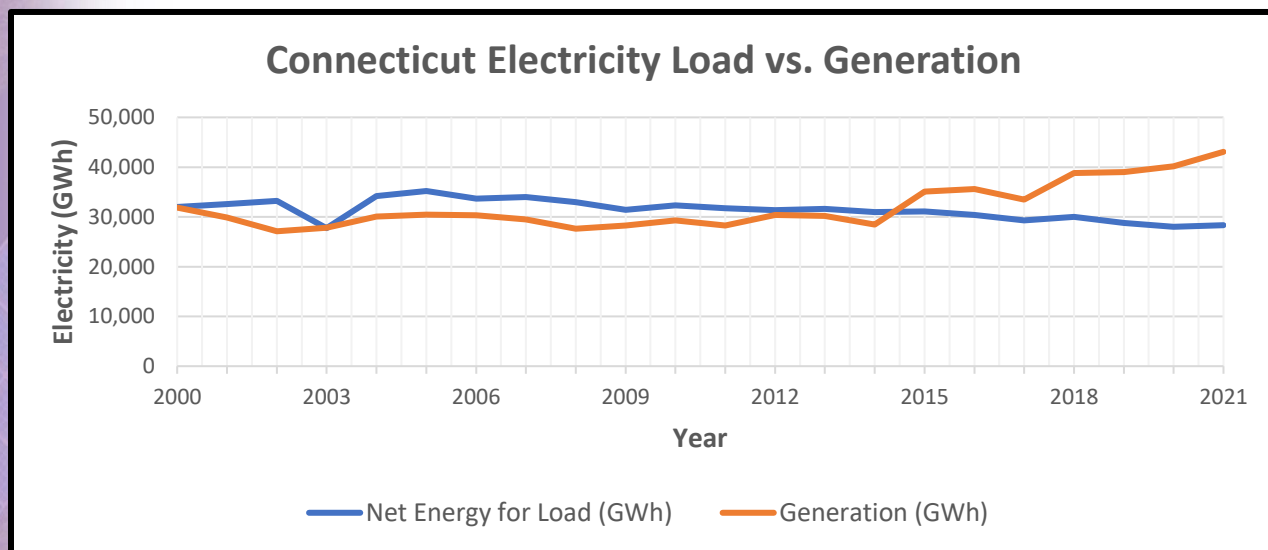
Connecticut Net Energy for Load (GWh) Over Time



Connecticut Greenhouse Gas Emissions – Power Sector

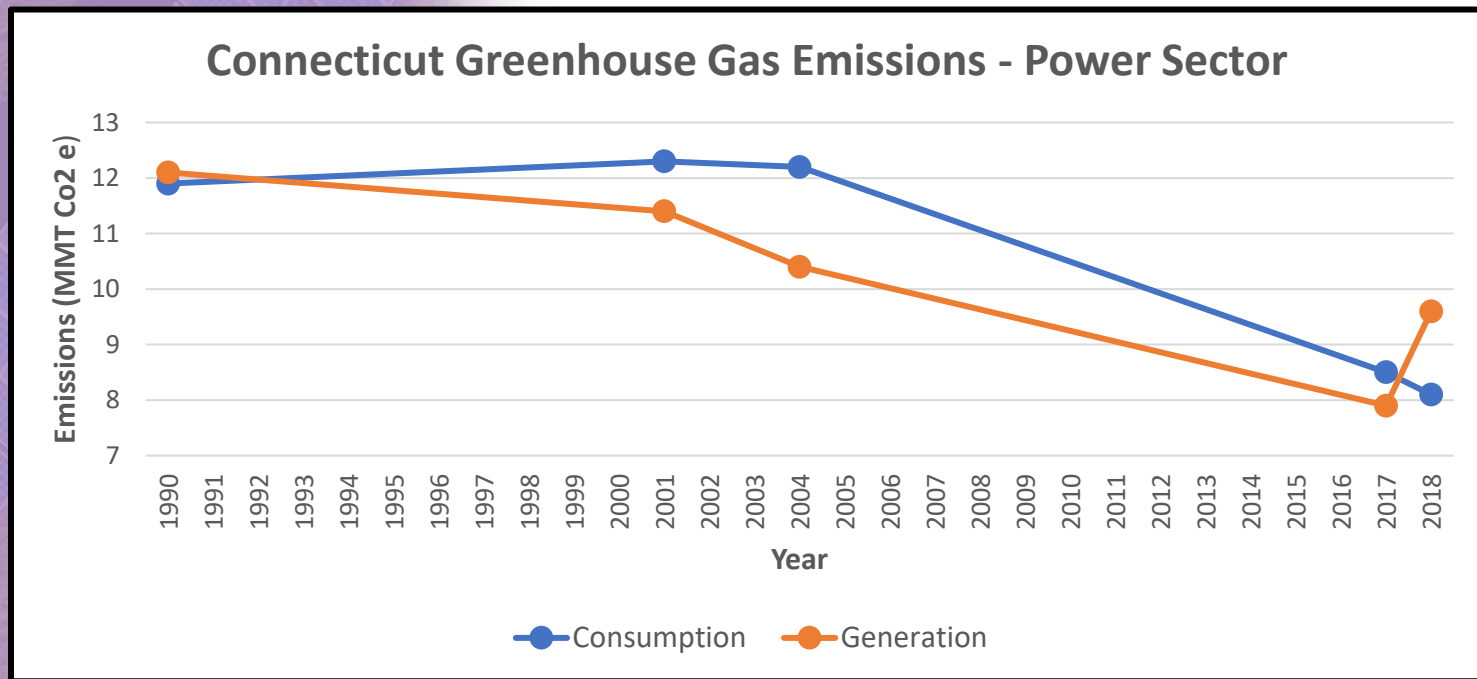
There are two ways to measure electricity-sector emissions in Connecticut: (1) Emissions associated with electricity usage or consumption within the state (load); and (2) Emissions from power generation within the state.³⁴ In 2018, electric-sector greenhouse gas emissions accounted for 19.1% of the state's total greenhouse gas emissions. Electric-sector emissions in Connecticut have been decreasing overtime and are currently 35% below 2001 levels, due to increases in energy efficiency and the retiring of petroleum and coal-fired power plants in favor of natural gas and renewable energy generation. See, DEEP Response to CAE-78, p. 5.

As shown in the graph, Connecticut is currently a net exporter of energy, consuming energy that sums to only about 66% of the energy generated in the state in 2021.³⁵ Consequently, if Connecticut used the energy it generates from non-carbon sources to serve the states load and meet the zero-carbon electricity goal outlined in PA 22-5, the state would have to increase its zero-carbon energy production from 41% to approximately 66% of total electricity generation. However, in that case, all remaining energy (the energy to be exported to surrounding states) would be from carbon-based energy sources as all non-carbon energy would be used to serve the state's own load.



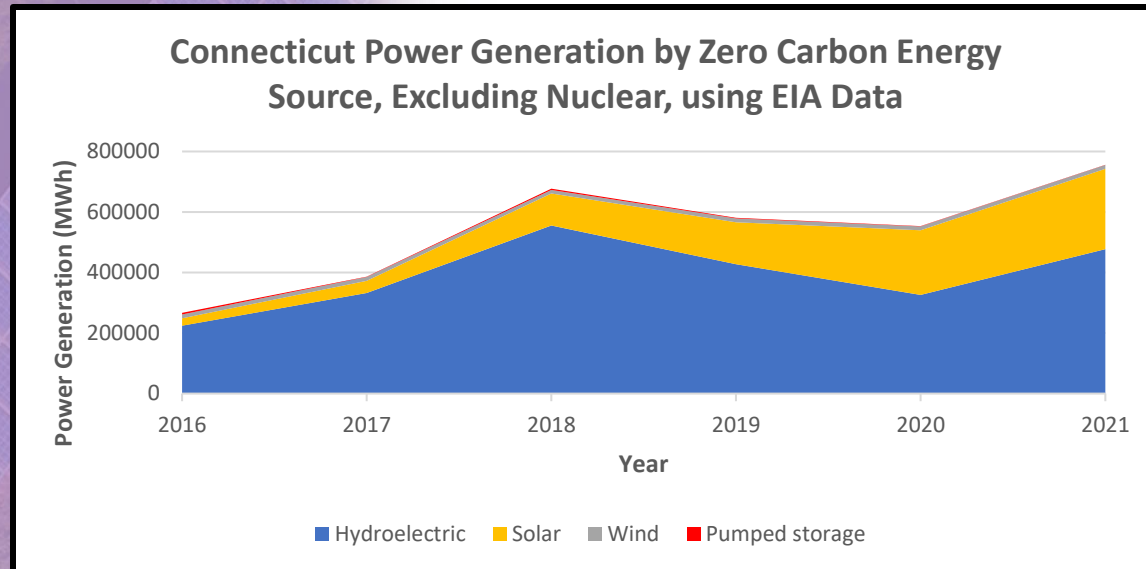
In the future, Connecticut is expected to produce a greater share of the region's power, increasing the state's power generation emissions total, despite the increase in state-wide renewable energy generation, due to an increased burning of natural gas. This trend was evident in 2018, when emissions from power generation within the state increased by 22% from the prior year. Conversely, emissions based on power consumption within the state are expected to continue to decrease, as the current trend indicates, because the state continues to invest in energy efficiency and renewable energy generation. Consequently, generation- and consumption-based power emissions in Connecticut are expected to increasingly diverge in the future. See, DEEP Response to CAE-78, p. 5.

The below table and graph highlight both generation- and consumption-based power emissions in Connecticut over time, where consumption-based emissions are those emissions related to electric load in Connecticut, and generation-based emissions are based on energy generated in the state. As previously mentioned, these values are expected to diverge, with generation-based emissions rising and consumption-based emissions decreasing.

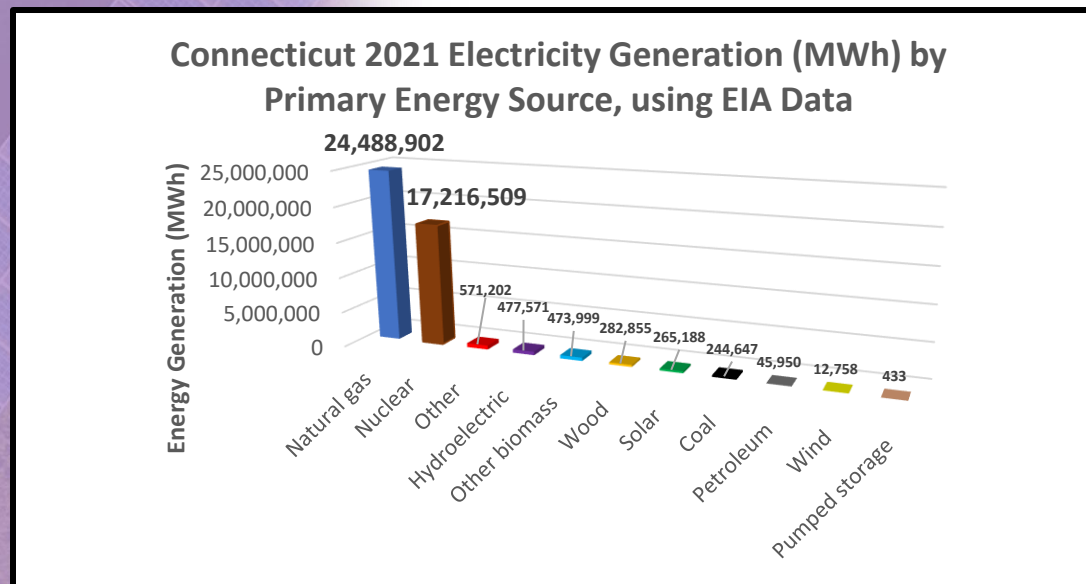


	Year	1990	2001	2004	2017	2018
Electric Power Emissions (MMTCO2e) ³⁶	Consumption	11.9	12.3	12.2	8.5	8.1
	Generation	12.1	11.4	10.4	7.9	9.6

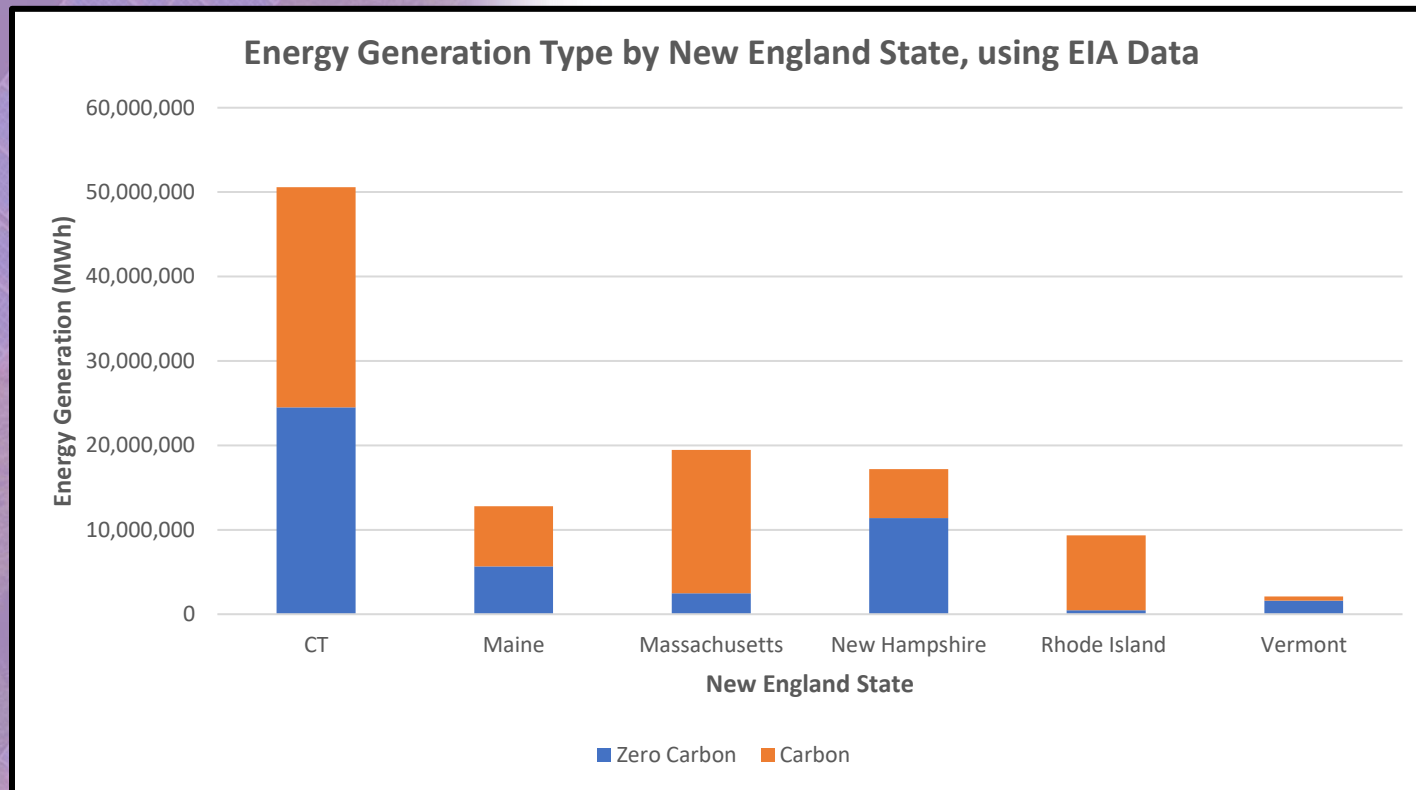
The first graph below provides insight into how Connecticut's zero carbon power generation has changed overtime. As can be seen from the graph, total power zero carbon generation in Connecticut has steadily increased overtime. Most notably, power generation from solar sources has sharply increased since 2016, as can be seen in the graph.



The second graph highlights electricity generation by primary energy source for the state of Connecticut in 2021. Natural gas and nuclear energy accounted for the majority of electricity generation in Connecticut last year, making up 56% and 39%, respectively.



The following chart provides additional regional context for Connecticut's electric generation.³⁷ As can be seen from the chart, Connecticut is the largest producer of electricity in New England, producing more than the double the electricity of each individual New England state. As discussed previously, Connecticut's high electricity generation can be explained, at least in part, by Connecticut's exportation of electricity to other New England states. Further, at 24,488,902 MWh, Connecticut generates the most zero-carbon power out of any New England state. In terms of *percent* of total electricity generated from zero carbon sources, however, Connecticut ranks third, behind New Hampshire and Vermont.



Employment Data³⁸

According to the 2021 Connecticut Clean Energy Industry Report, at the end of 2020, Connecticut had roughly 41,500 clean energy jobs, a decline of roughly 2,600 jobs, or roughly 6%, from the prior year due in large part to the effects of the COVID-19 pandemic. Further, in 2020, Connecticut's clean energy job market outperformed other states and experienced fewer job losses from the pandemic. For example, nationwide, clean energy jobs declined by roughly 9% in 2020, while nearby states, Massachusetts and Rhode Island, experienced clean energy job losses of between 11 and 16%. Economy-wide job losses in Connecticut, at 7%, were also greater than the job loss percentage in the State's clean energy sector, thereby highlighting the resilience of the State's clean energy economy.



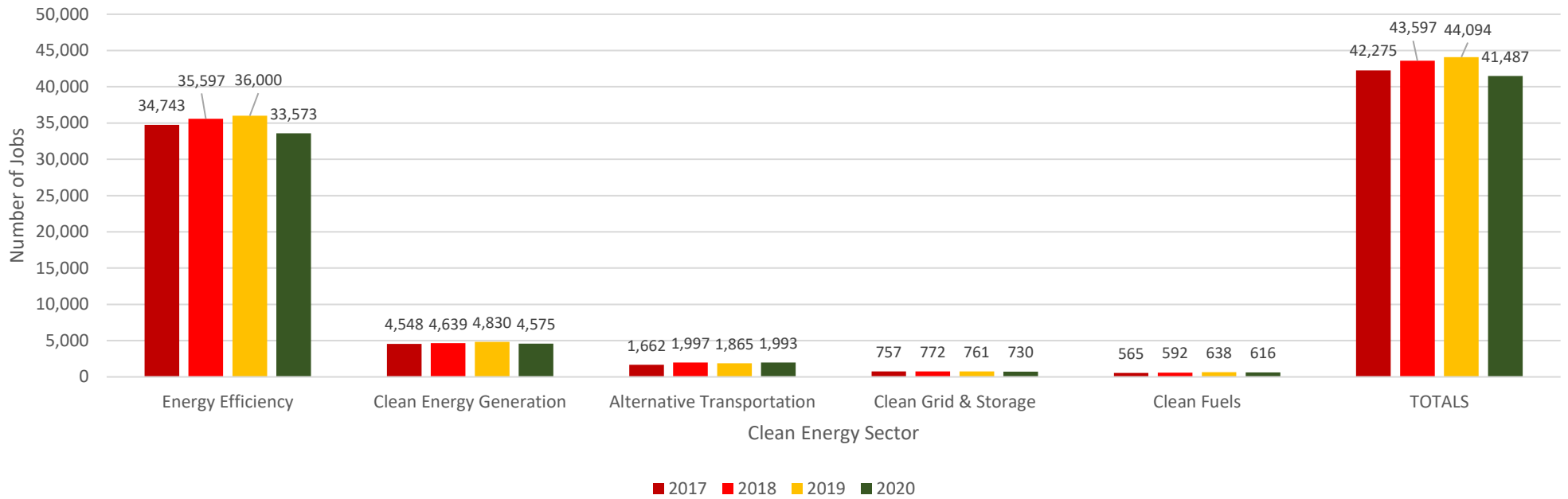
The clean energy job market in Connecticut was expected to rebound in 2021, recovering all of the jobs lost in 2020 and then some (increasing to a projected total of 44,890 clean energy jobs), as the state recovered from the effects of the pandemic.

Last, the State's clean energy industry positively contributes to the State's economy as a whole. In 2020, the State's clean energy economy "contributed roughly \$6.64 billion to statewide [gross regional product (GRP)], accounting for almost three percent of total GRP."³⁹

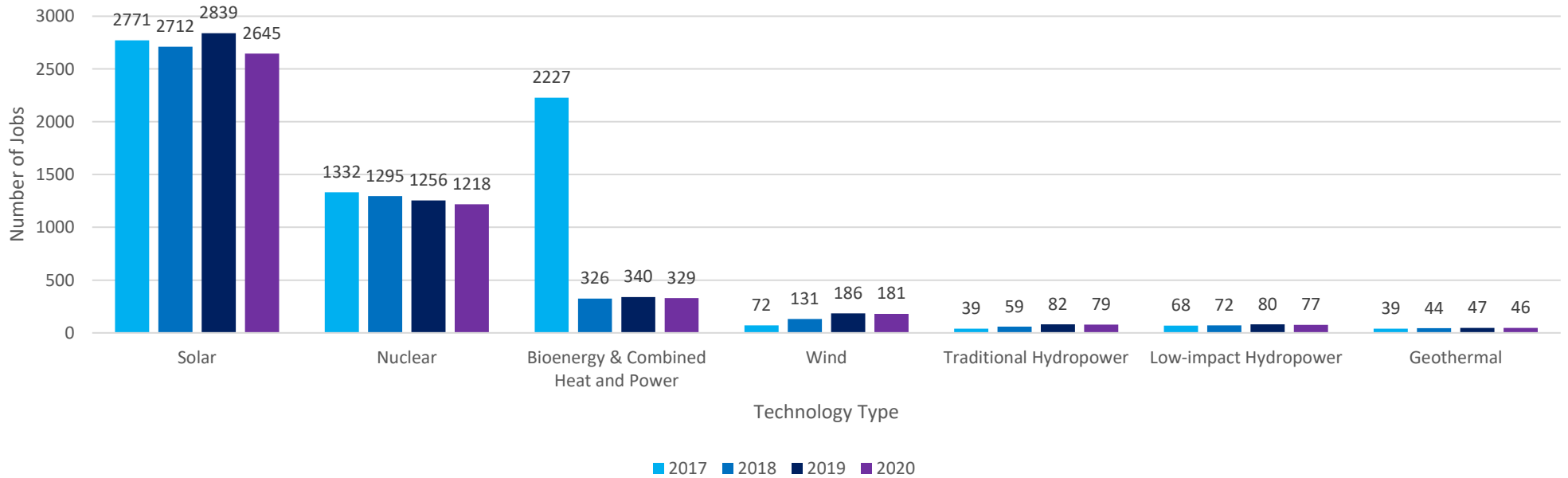
The 2021 Connecticut Clean Energy Industry Report, the most recently available report at the time this report was written, can be found here: [2021-CT-Clean-Energy-Industry-Report.pdf \(ctgreenbank.com\)](https://ctgreenbank.com/2021-CT-Clean-Energy-Industry-Report.pdf).

The below graphs highlight employment trends in the State's clean energy economy, showing the number of jobs by clean energy sector and by clean energy generation technology type, from 2017 to 2020.⁴⁰ As can be seen below, clean energy jobs were generally increasing in Connecticut for each clean energy sector in the years prior to 2020, before the COVID-19 pandemic.

Number of Jobs in Connecticut by Clean Energy Sector



Connecticut Clean Energy Generation Employment by Technology Type



Residential Renewable Energy Solutions (RRES) Program



Pursuant to § 16-244z of the General Statutes of Connecticut (Conn. Gen. Stat.), beginning in 2022 and lasting through 2027, the Residential Solar Incentive Program (RSIP) and traditional net metering were replaced by a new residential tariff program, named the Residential Renewable Energy Solutions (RRES) Program, that offers eligible projects compensation for a 20 year term. I

The Authority authorized the RRES Program through a [Decision](#) in Docket No. 20-07-01, PURA Implementation of Section 3 of P.A. 19-35, Renewable Energy Tariffs and Procurement Plans, dated February 10, 2021. More recently, the 2023 rules and documents for the RRES Program were reviewed and [approved](#) by PURA in Docket No. 22-08-02, Annual Residential Renewable Energy Solutions Program Review – Year 2.

The RRES Program is administered by the electric distribution companies (EDCs) in their respective service territories. The RRES Program gives residential solar customers the opportunity to sell energy and renewable energy certificates (RECs) for a 20-year term under one of two tariff rate structures: (1) Buy-All; or (2) Netting.

Under the Buy-All tariff, the residential solar project is provided fixed compensation for all energy and RECs produced over a 20-year term. Alternatively, under the Netting tariff, qualified projects are effectively compensated for all energy produced at the retail electric rate at the time of generation (i.e., all renewable energy production not consumed within the established netting interval is explicitly compensated by the EDCs at the retail rate and any production consumed within the netting interval avoids costs equivalent to the retail rate) and for the RECs created at a fixed rate over a 20-year term.

Additionally, under the Buy-All tariff, compensation can be provided directly to customers in the form of monetary on-bill credits, with the potential for an annual cash out of credits in excess of their utility bill, or to third-party beneficiaries, or some combination thereof. Under the Netting tariff, a customer’s energy consumption and monthly energy bill are reduced by the energy produced and used on site. Further, under the Netting tariff, the EDCs provide customers with monetary on-bill credits for any energy the eligible project exported to the electric grid and was not consumed on site. Last, under the Netting tariff, all REC payments are made to either the customer of record or a third-party beneficiary on a quarterly basis.

More information and resources are available at the PURA program [website](#) and on each of the EDCs’ dedicated program websites (Eversource [Residential](#); United Illuminating [Residential](#)). The tariff rates and current application data for the RRES Program are shown below.⁴¹

Table 1: 2022 RRES Application Data

	Total Applications	Total Application MW	Approved Applications	Approved MW	Deployed MW⁴²
Eversource	9,962	79.57	8,794	70.18	22.1
UI	1,973	13.82	1,709	11.81	2.83

Table 2: 2023 RRES Tariff Rates

	Buy-All Rate (Energy + RECs) (\$/kWh)	Netting Rate (RECs only) (\$/kWh)
Eversource	0.2943	0.0318
UI	0.2943	0
Low-Income Adder	0.025	
Distressed Municipality Adder	0.0125	

Residential Solar Investment Program (RSIP)

Initially authorized in 1998 under Conn. Gen. Stat. §16-243h, traditional net metering provided customers with monthly kWh credits for excess solar photovoltaic (PV) generation provided to the electric grid.



Later, in 2011, the General Assembly created the Residential Solar Investment Program (RSIP) to provide financial incentives beyond traditional net metering to residential homeowners installing solar PV systems and directed RSIP to be administered by the Connecticut Green Bank (CGB). The program was updated⁴³ in 2019 to increase the threshold of deployment signaling the end of the program from 300 MW to 350 MW, with the caveat that the program would not extend beyond December 31, 2022 if 350 MW was not reached by that time.

However, on November 17, 2020, CGB filed a brief in Docket No. 17-12-03RE09, PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Clean and Renewable Energy Resource Analysis and Program Reviews, stating they had approved 350 MW of projects and already deployed 312.8 MW of the 350 threshold.⁴⁴ Further, in an exception to the draft decision filed January 21, 2022, the CGB stated that as of December 31, 2021, 348 MW had been deployed, with the legislative target of 350 MW expected to be achieved by January 31, 2022.⁴⁵

To aid in the transition to the new program (i.e., the RRES Program) authorized in Conn. Gen. Stat. §16-244z, PURA ruled on October 15, 2020, that RECs may continue to be aggregated for all residential solar PV systems that CGB provides an incentive for prior to January 1, 2022.⁴⁶

As a result of this ruling, the CGB continued to provide incentives in support of the residential solar PV market through 2021, including providing limited incentives to projects above the 350 MW RSIP cap. The CGB termed this separate incentive program RSIP-E.

The RRES Program, the successor program to RSIP and traditional net metering, was established through the February 10, 2021 [Decision](#) in Docket No. 20-07-01, as discussed on page 15 of this report. The RRES Program, became available to all of the EDCs' residential customers starting January 1, 2022.

RSIP Project Deployment by Year

	Eversource	UI	TOTAL
Completed Year	Count of Project Number	Count of Project Number	Total Count of Project Number
2012	213	29	242
2013	890	147	1,037
2014	1,215	260	1,475
2015	6,975	1,184	8,159
2016	5,371	1,691	7,062
2017	2,661	1,499	4,160
2018	3,502	1,909	5,411
2019	4,650	2,487	7,137
2020	4,649	1,788	6,437
2021	3,467	1,010	4,477
2022	377	245	622
Grand Total	33,970	12,249	46,219

RSIP MW Deployment by Year

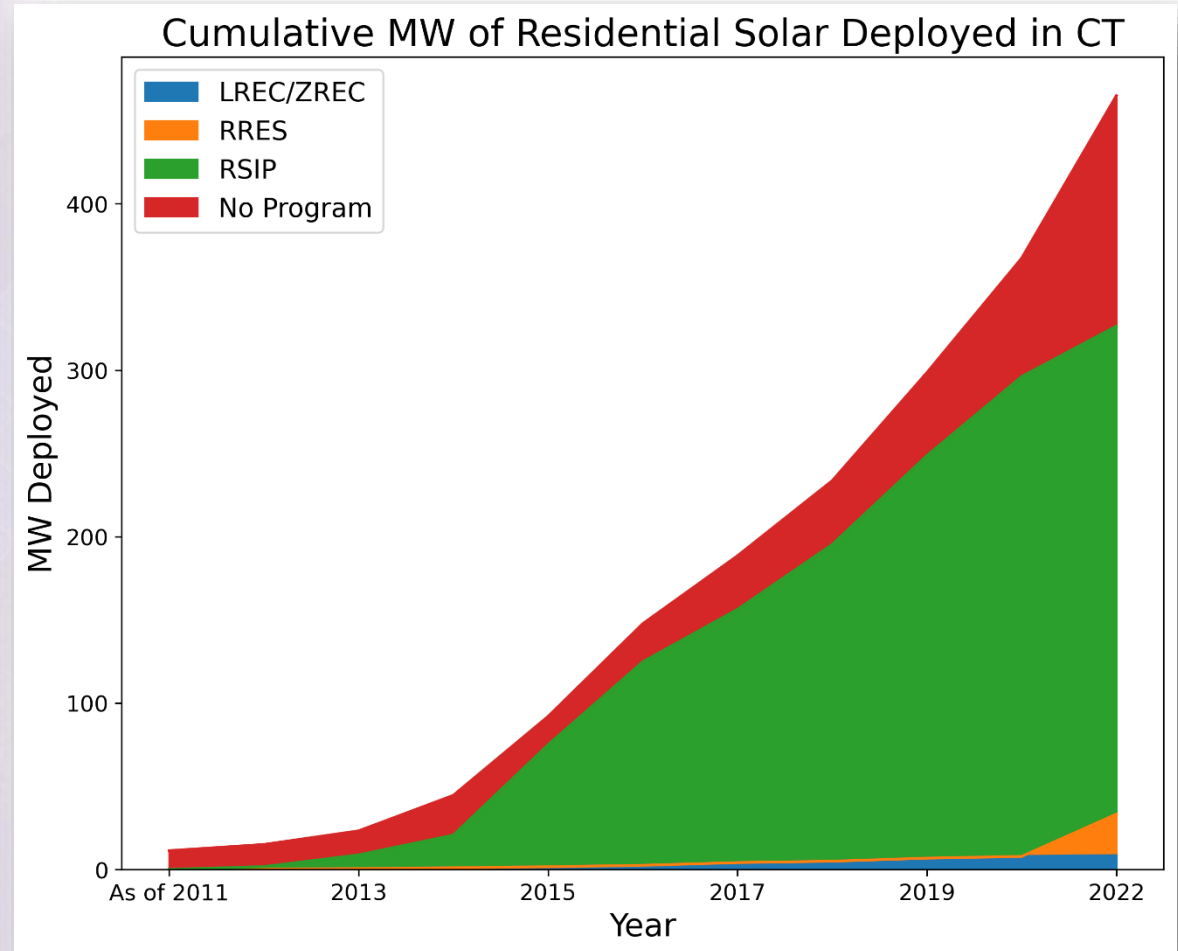
	Eversource	UI	TOTAL
Completed Year	Sum of PV System Inverter Nameplate Rating (MW-AC)	Sum of PV System Inverter Nameplate Rating (MW-AC)	Total Sum of PV System Inverter Nameplate Rating (MW-AC)
2012	1.315	0.190	1.506
2013	5.811	0.910	6.720
2014	9.870	1.507	11.378
2015	46.406	7.256	53.662
2016	37.980	11.000	48.979
2017	19.844	10.004	29.848
2018	25.829	12.343	38.172
2019	35.120	16.436	51.556
2020	34.966	11.472	46.438
2021	29.062	6.899	35.961
2022	3.269	1.651	4.920
Grand Total	249.473	79.668	329.140

Combined Solar Program Metrics

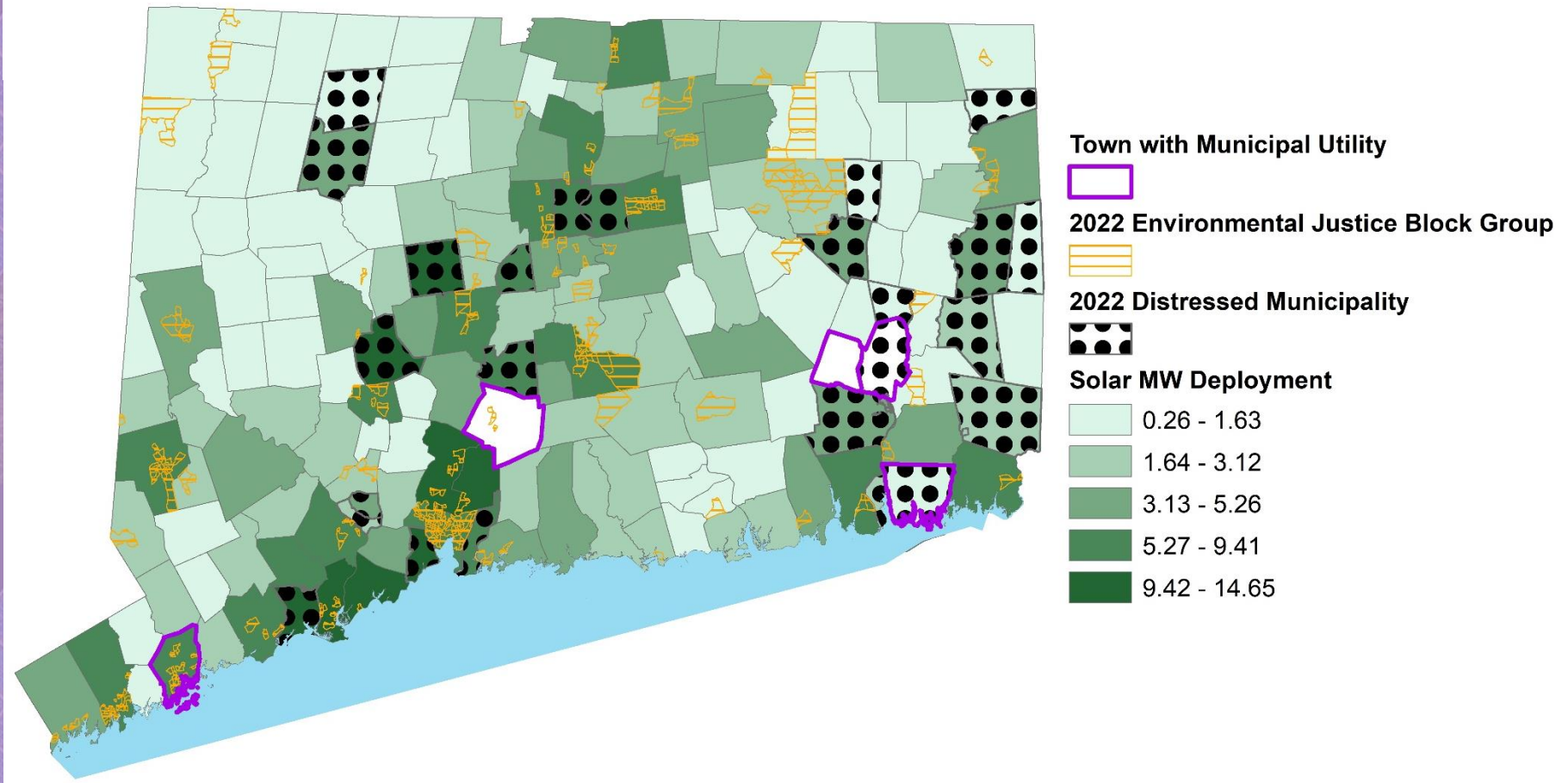
The plot to the right shows the deployment of residential solar through state residential solar programs, including RSIP and RRES, through 2022. Notably, 2022 is the first year of deployment via the RRES Program. Also, over the past several years, there is an increasing trend in residential solar deployment outside of programs offered by the state, indicated in red.

However, the data here, particularly the “No Program” data, is approximate. The value is calculated by using the total solar deployment from the EDCs’ response to Interrogatory CAE-55 and subtracting the RSIP, RRES, and LREC/ZREC data from interrogatory CAE-33. If data is attributed to different years from the different sources, the “No Program” value may be slightly higher or lower than what is represented.

Lastly, for 2022 the end date through which data is captured varies slightly for the various data sources.⁴⁷

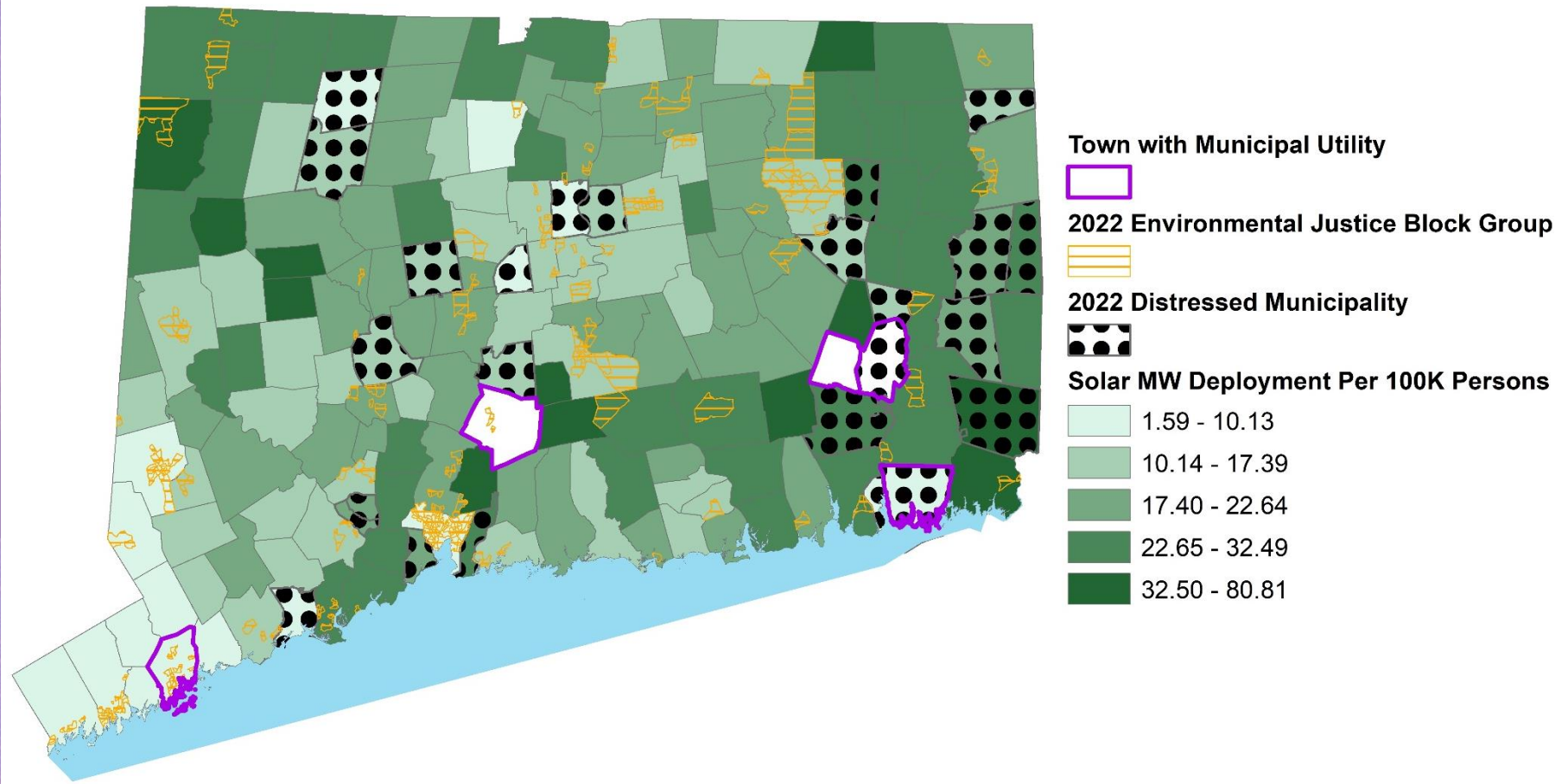


MW of Total Installed Residential Solar Capacity by Town



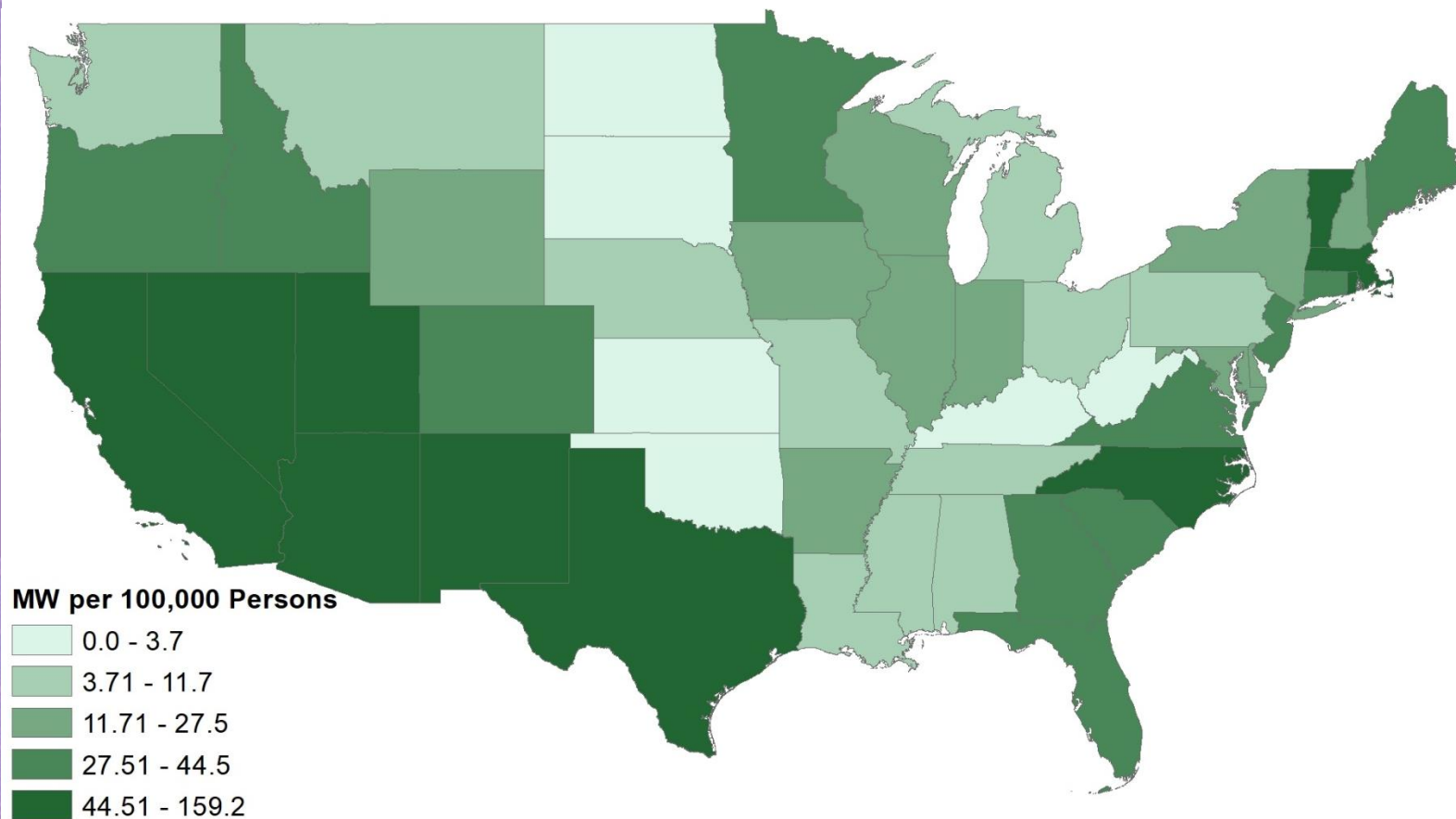
This map displays the 2022 Connecticut environmental justice (EJ) communities as defined by section 22a-20a of the General Statutes of Connecticut.^{48,49} The map⁵⁰ also reflects the total residential solar deployment by town through most of 2022, and is not normalized by each town's population.⁵¹ In general, higher deployment is evident in towns with higher populations and/or in towns surrounding urban areas (i.e., New Haven, Bridgeport, Hartford). Additionally, some towns have municipal utilities: Bozrah, Groton, Norwich, Norwalk, Wallingford.^{52,53} The highest deployment is in Bridgeport, with over 14.5 MW deployed, followed by North Haven at approximately 14 MW deployed.

MW of Total Installed Residential Solar Capacity by Town Per 100k Persons



The above map displays residential solar deployment per capita⁵⁴ (multiplied by 100,000) and reflects the total deployment by town through most of 2022. There are a few distressed municipalities and municipalities with many 2022 EJ Block groups in the lowest deployment per capita tier, but of that group, two of the distressed municipalities are in towns that also have municipal utilities. Notably, North Haven, which has the second highest total deployment in MW, also has the second most deployment per capita in the state at approximately 58 MW per 100,000 persons. The towns with the first and third highest per capita deployment are the much smaller (in terms of population) towns of Middlefield and Morris.

MW of Solar Capacity per Capita Installed by State



State	Solar MW Capacity Installed ⁵⁵	Solar MW Capacity Deployed as of 2022 Q2 per 100,000 Persons ⁵⁶ (Rank)	Solar MW Capacity Deployed Between 2018-2022 Q3 ⁵⁷ per 100,000 Persons (Rank)	5-Yr. Projected Growth ⁵⁸ (MW per 100,000 Persons) (Rank)
Connecticut	1137	31.53 (6 th)	20.41 (6 th)	28.04 (6 th)
Maine	559	40.74 (5 th)	41.33 (2 nd)	130.08 (1 st)
Massachusetts	3986	57.07 (2 nd)	26.41 (4 th)	26.72 (8 th)
New Hampshire	184	13.25 (8 th)	8.59 (8 th)	45.43 (3 rd)
New Jersey	4097	44.21 (4 th)	20.45 (5 th)	25.39 (9 th)
New York	3804	19.18 (7 th)	13.97 (7 th)	41.91 (4 th)
Pennsylvania	955	7.37 (9 th)	4.91 (9 th)	31.61 (5 th)
Rhode Island	600	54.76 (3 rd)	51.05 (1 st)	57.96 (2 nd)
Vermont	407	63.05 (1 st)	28.44 (3 rd)	27.42 (7 th)

Non-Residential Renewable Energy Solutions (NRES) Program

The Non-Residential Renewable Energy Solutions (NRES) Program is a statewide, six-year non-residential solar program administered by the EDCs in their respective service territories. The NRES Program is a combined successor program to the state's Low and Zero Emissions Renewable Energy Credit (LREC/ZREC) and Virtual Net Metering (VNM) programs for non-residential customers, and was established pursuant to Conn. Gen. Statutes § 16-244z of the General Statutes of Connecticut in a [Decision](#) dated June 30, 2021 in Docket No. 20-07-01, PURA Implementation of Section 3 of Public Act 19-35, Renewable Energy Tariffs and Procurement Plans (Non-Residential Tariff Decision).

Zero-emission NRES projects less than or equal to 200 kilowatts (kW) are awarded incentive agreements on a first-come, first-served basis, while zero-emission projects greater than 200 kW and less than or equal to 5,000 kW, or 5 MW, are awarded incentive agreements through a competitive solicitation process subject to price caps for the medium and large zero-emission project categories. Further, all low-emission projects less than or equal to 5 MW are awarded incentive agreements through a competitive solicitation process also subject to price caps.

Approved NRES projects are eligible to sell energy and renewable energy certificates (RECs) to the EDCs for a 20-year term under one of two tariff rate structures: (1) Buy-All; or (2) Netting. Under the Buy-All tariff, the project is provided fixed compensation for all energy and RECs produced over the 20-year term. Alternatively, under the Netting tariff, the qualified project is effectively compensated for all energy produced at the retail electric rate at the time of generation (see RRES Program above for additional information) and for the RECs created at a fixed rate over a 20-year term.





Additionally, under the Buy-All tariff, compensation is provided to the customer of record in the form of either monetary on-bill credits or quarterly cash payments. Under the Netting tariff, conversely, a customer's energy consumption, and monthly energy bill, are reduced by the energy produced and used onsite. Further, under the Netting tariff, the EDCs provide customers with monetary on-bill credits for any energy exported to the electric grid by the eligible project and not consumed on site. Last, under the Netting tariff, all REC payments are made to either the customer of record or a third-party beneficiary on a quarterly basis.

Finally, the 2023 rules and documents for the NRES Program were reviewed and [approved](#) by PURA in Docket No. 22-08-03, Annual Non-Residential Renewable Energy Solutions Program Review – Year 2.

While there are not currently any deployments for the NRES Program, relevant plots and analytics will be incorporated in future reports. The below tables provide insight into the administration of the NRES Program.⁵⁹

NRES Buy-all Price Caps	
Category	Price Cap
Small Zero Emissions	\$200.97/MWh
Medium Zero Emissions	\$190/MWh
Large Zero Emissions	\$159/MWh
Low Emissions	\$159/MWh

Table 3: 2023 NRES Project Size Categories

Category	New Project Size (AC)
Low Emission Projects	≤ 5,000 kW
Large Zero Emission Projects	≥1000 kW ≤ 5,000 kW
Medium Zero Emission Projects	>200 kW < 1000 kW
Small Zero Emission Projects	≤ 200 kW

	Size Categories	Total Executed Agreements	Available MW	MW of Executed Agreements
Eversource	Small Zero Emission	69	10	9.95
	Medium Zero Emission	28	12	12.77
	Large Zero Emission	10	18	17.21
	Low Emission	7	8	6.19
UI	Small Zero Emission	16	2.5	2.41
	Medium Zero Emission ⁶⁰	10	3	4.23
	Large Zero Emission	1	4.5	2.00
	Low Emission	0	2	0.00
Total		141	60	53.65

Low Emission Renewable Energy Credit (LREC) and Zero Emission Renewable Energy Credit (ZREC) Program

The Low Emission Renewable Energy Credit (LREC) and Zero Emission Renewable Energy Credit (ZREC) Program required the EDCs to enter into 15-year contracts to purchase renewable energy credits (RECs)⁶¹ from qualifying projects in Connecticut at a fixed price for 15 years. Like the NRES Program, LREC/ZREC projects were required to meet the eligibility requirements and larger projects were selected competitively, with smaller projects provided an administratively set incentive rate. If the EDCs selected a project, the “Seller” is required to execute a Contract or Service Agreement, which defines the term of the contract, price, and all the other requirements of the Seller and Buyer.⁶² Notably, these projects were also eligible for traditional net metering, explained on page 31 of this report.

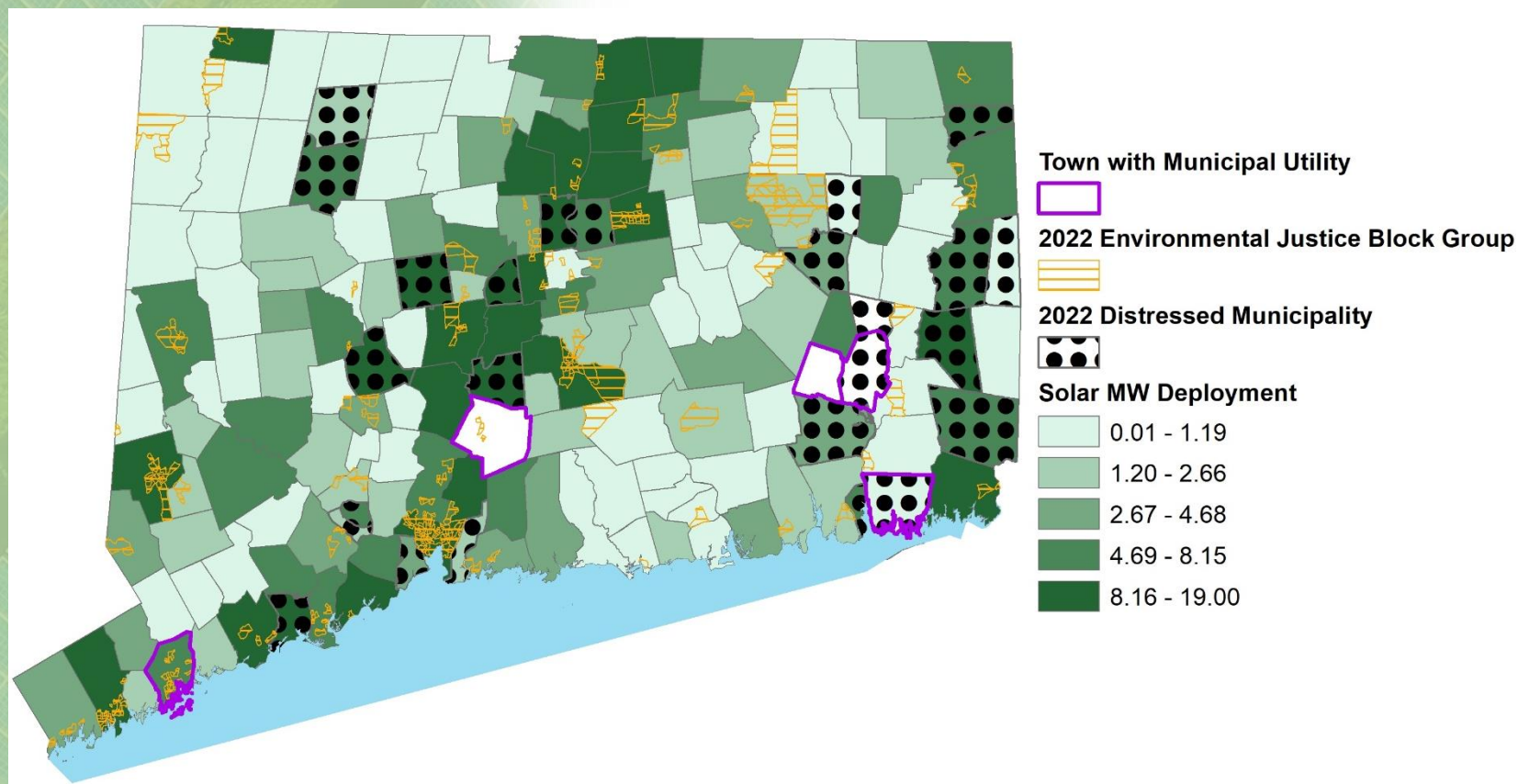
Budget and Procurement Process

The budget for the program was split 80%/20% between Eversource and UI, respectively, for each procurement year. According to the 80/20 split, for Years 6-10 of the program (2017-2021), \$6.4M was allotted for Eversource and \$1.6M was allotted for UI. Additionally, any applicable funds from terminated LREC or ZREC projects that resulted in adjustments to the Maximum Annual Quantity (MAQ)⁶³ are added to the budget. Thus, the budget divides as follows: 50% to LREC projects; and 50% to ZREC projects, divided evenly among Small, Medium, and Large ZRECs.

UI Years 6-10 Budgets						
Solicitation	Issue Date	% of Budget	LREC	Large ZREC	Medium ZREC	Small ZREC*
Overall Statutory Budget Per Category			\$800,000	\$266,667	\$266,667	\$266,667
The RFP budgets will be at least what is noted above, plus any applicable funds from terminated projects or projects that resulted in MAQ adjustments.						
*Pursuant to PURA's Decision on Motion No. 3 in Dkt. 10-08-10, the Year 7 and 8 Small ZREC budgets were combined into one Year 7 Small ZREC budget. Therefore, the Year 7 Small ZREC budget was \$2.13M						

Eversource Years 6-10 Budgets						
Solicitation	Issue Date	% of Budget	LREC	Large ZREC	Medium ZREC	Small ZREC*
Overall Statutory Budget Per Category			\$3,200,000	\$1,066,667	\$1,066,667	\$1,066,667
The RFP budgets will be at least what is noted above, plus any applicable funds from terminated projects or projects that resulted in MAQ adjustments.						
*Pursuant to PURA's Decision on Motion No. 3 in Dkt. 10-08-10, the Year 7 and 8 Small ZREC budgets were combined into one Year 7 Small ZREC budget. Therefore, the Year 7 Small ZREC budget was \$2.13M						

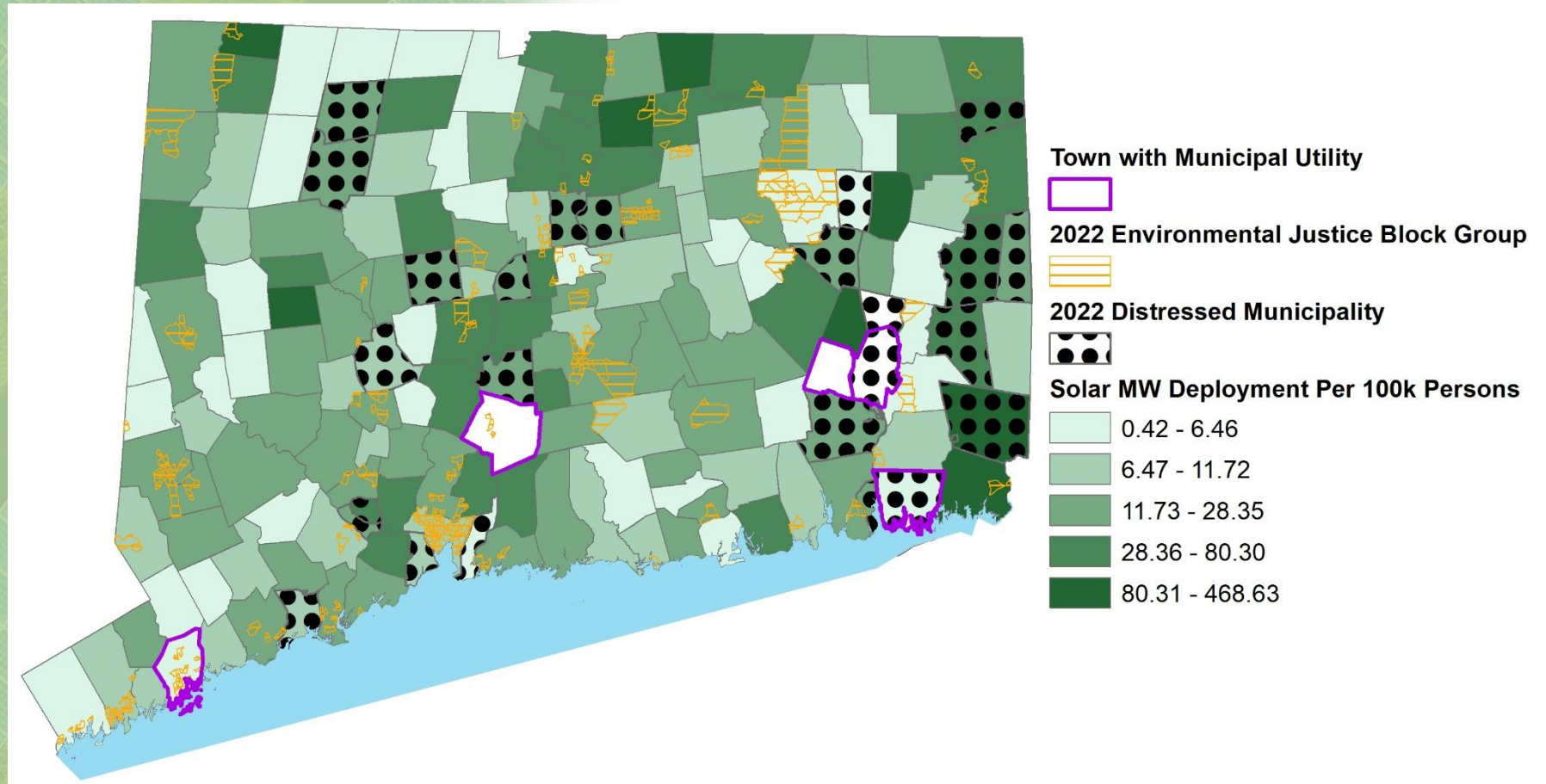
Solar Capacity (MW) Deployment by Town via LREC/ZREC/VNM Programs



This map displays the 2022 Connecticut environmental justice (EJ) communities as defined by section 22a-20a of the General Statutes of Connecticut.^{64,65,66} In terms of total MW deployment by town, there is a significant amount of deployment running north and south through the center of the state, around Hartford and New Haven. However, as seen on the next page, the deployment is more dispersed when looking at deployment per capita in each town.

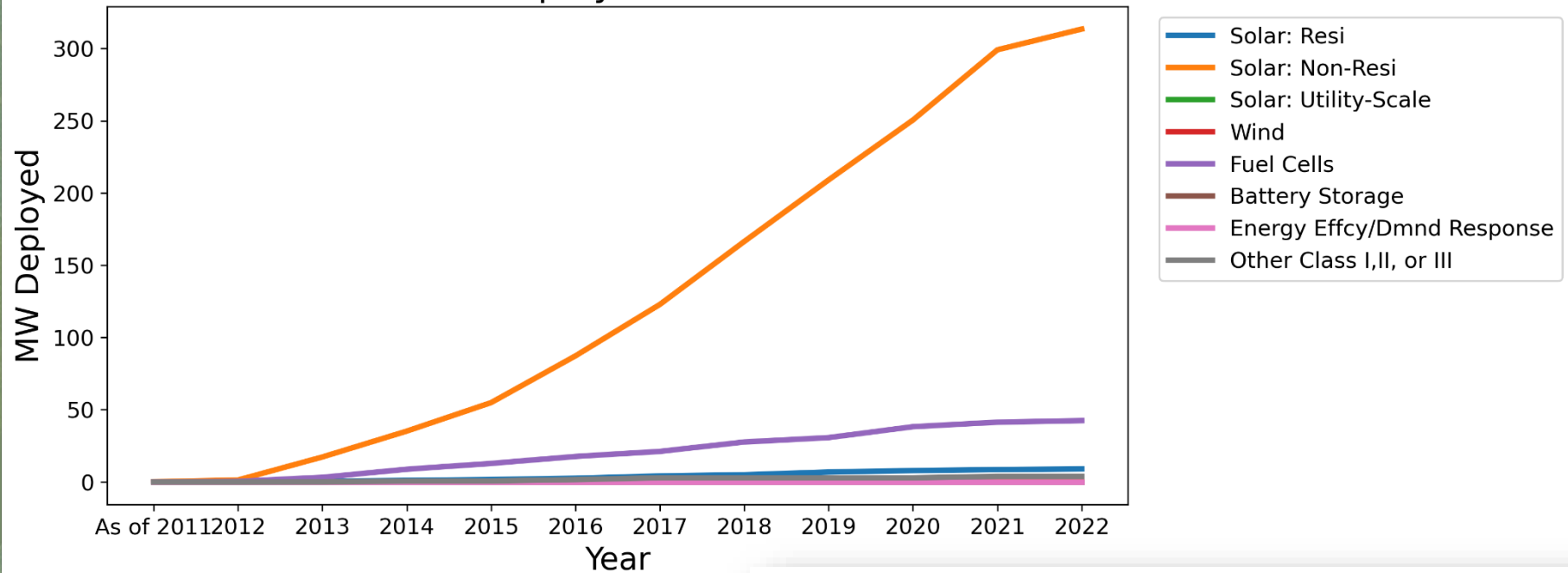
The data used to aggregate deployment by town is from the EDC Compliance filings on November 15, 2022, in response to Interrogatory CAE-30 in Docket No. 17-12-03RE09. In subsequent years, when NRES projects begin to be deployed, the Authority anticipates plotting all LREC/ZREC, VNM, and NRES deployment together to understand the spatial deployment of commercial and industrial renewable energy systems.

Solar Capacity (MW) Deployment per 100k Persons by Town via LREC/ZREC/VNM Programs

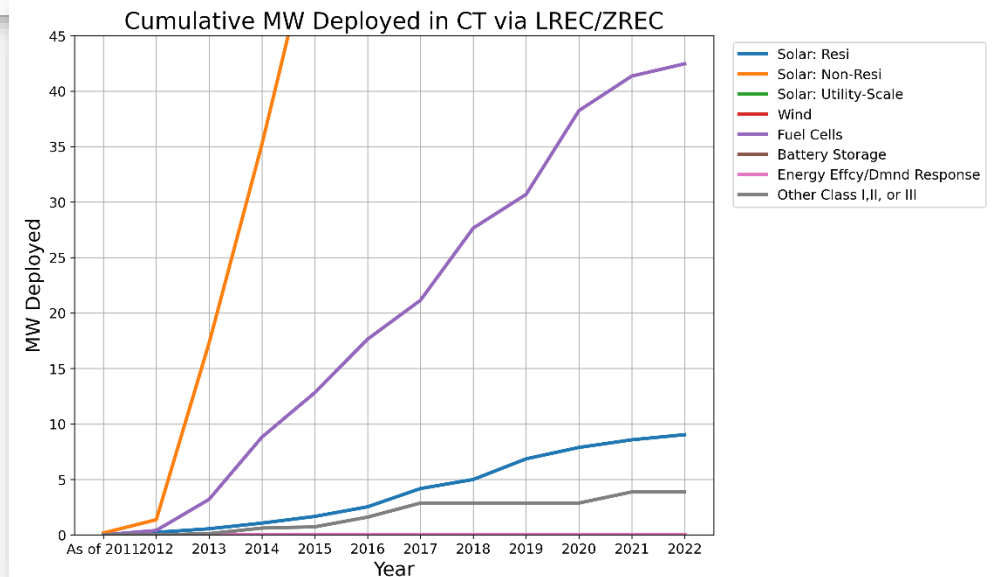


When looking at the deployment in each town per capita (multiplied by 100,000), the density of deployment around the Farmington River area is reduced, due to many towns in the area having relatively high populations. There are some towns in the Southeast of the state with significant deployment levels, including North Stonington which also has the most per capita residential solar deployment. In terms of deployment via the LREC/ZREC/VNM programs, the town with the most deployment per capita is Hampton, at over 450 MW per 100,000 persons, followed by Franklin, CT, at over 330 MW per 100,000 persons, and North Stonington is fifth at over 135 MW per 100,000 persons.

Cumulative MW Deployed in CT via LREC/ZREC



The non-residential deployment data on this page is through September 2022. It is noteworthy to consider the above data in the context of the lingering impacts of the COVID-19 pandemic, high inflation, and supply chain issues in 2022.⁶⁷ Further, 2022 was the first year of the NRES program, the successor program to LREC/ZREC, and while no projects are deployed as of the drafting of this report, per Table 2 in the NRES Section earlier in the report, over 53 MW of capacity has executed contracts.



LREC/ZREC Program ⁶⁸		As of 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Categories.														
LREC	Annual Deployment in MWs (AC)	-	-	1.300	6.400	5.650	5.363	9.733	15.998	3.601	19.298	13.912	19.089	100.343
	No. Projects In-Service	0	0	2	14	8	11	13	16	6	17	13	14	114
	No. Projects In-Service in VNM	0	0	0	0	0	1	7	2	2	8	3	1	24
	Annual Deployment in MWs (AC) in VNM	-	-	-	-	-	0.750	11.080	1.920	1.998	10.544	3.999	2.000	32.291
Large ZREC	Annual Deployment in MWs (AC)	-	-	2.083	9.147	8.327	11.192	12.764	20.476	14.966	18.690	14.917	11.830	124.391
	No. Projects In-Service	0	0	5	16	12	18	21	29	23	28	23	13	188
	No. Projects In-Service in VNM	0	0	0	0	0	6	7	9	4	7	9	2	44
	Annual Deployment in MWs (AC) in VNM	-	-	-	-	-	5.302	5.999	8.944	4.000	5.996	8.989	2.000	41.230
Medium ZREC	Annual Deployment in MWs (AC)	-	0.250	5.216	9.155	6.488	9.429	6.609	10.136	13.779	8.228	9.346	2.422	81.058
	No. Projects In-Service	0	1	27	50	35	52	41	61	64	42	49	12	434
	No. Projects In-Service in VNM	0	0	1	0	0	2	1	0	0	0	0	0	4
	Annual Deployment in MWs (AC) in VNM	-	-	0.100	-	-	0.401	0.442	-	-	-	-	-	0.943
Small ZREC	Annual Deployment in MWs (AC)	0.053	0.057	1.617	4.272	7.229	7.235	8.830	9.146	11.598	8.231	8.031	4.091	70.389
	No. Projects In-Service	2	2	67	104	153	176	212	208	253	156	150	78	1561
	No. Projects In-Service in VNM	0	0	0	0	1	1	0	0	0	0	0	0	2
	Annual Deployment in MWs (AC) in VNM	-	-	-	-	0.056	0.060	-	-	-	-	-	-	0.116

The largest overlap between VNM and LREC/ZREC occurs for the Large ZREC category, followed by the LREC, Medium ZREC, and Small ZREC categories, respectively.

The table shows the deployment levels in MW (AC) of installed and in-service projects for the LREC/ZREC Program.

Data in the Table from the Eversource Compliance filing dated November 15, 2022, in response to CAE-39, and the UI response to CAE-74.

The below table shows the deployment in MWh by technology type across the different categories of the LREC/ZREC Program. The data for the Table comes from the EDC compliance filing dated November 15, 2022. The relevant data from the compliance filing is from the file containing the EDCs' updated responses to Interrogatory CAE-40 from Docket No. 17-12-03RE09.

LREC/ZREC Program		As of 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Categories	Technology Type													
LREC	Fuel Cells Deployed in MWs (AC)	0	0	1.3	6.4	5.65	5.363	3.237	8.09	2.6	7.687	2.887	1.628	44.842
	Solar Deployed in MWs (AC)	0	0	0	0	0	0	6.496	7.908	1.001	11.611	9.925	17.461	54.402
	Other Resources Deployed in MWs (AC)	0	0	0	0	0	0	1.2	0	0	0	0	0	1.2
Large ZREC	Fuel Cells Deployed in MWs (AC)	0	0	0	0	0	0	0	0	0	0	0	0	0
	Solar Deployed in MWs (AC)	0	0	2.083	8.647	8.327	10.309	12.764	20.476	14.966	18.723	13.917	11.83	122.042
	Other Resources Deployed in MWs (AC)	0	0	0	0.5	0	0.883	0	0	0	0	1	0	2.383
Medium ZREC	Fuel Cells Deployed in MWs (AC)	0	0	0	0	0	0	0	0	0	0	0	0	0
	Solar Deployed in MWs (AC)	0	0.25	5.216	9.043	6.488	9.317	6.389	10.136	13.779	8.228	8.647	2.422	79.915
	Other Resources Deployed in MWs (AC)	0	0	0	0.112	0	0.112	0.22	0	0	0	0	0	0.444
Small ZREC	Fuel Cells Deployed in MWs (AC)	0	0	0	0	0	0	0	0	0	0	0	0	0
	Solar Deployed in MWs (AC)	0.053	0.057	1.617	4.256	7.181	7.235	8.83	9.147	11.598	8.231	8.031	4.091	70.327
	Other Resources Deployed in MWs (AC)	0	0	0	0.016	0	0	0	0	0	0	0	0	0.016

Virtual Net Metering (VNM) Program

Virtual net metering (VNM) is the process of combining the electric meter readings and billings between a host and a beneficial account related to the host account.^{69,70} Pursuant to Conn. Gen. Stat. § 16-244u(5), the VNM Program allows Customer Hosts (those customers who operate behind-the-meter generation)⁷¹ to assign surplus production from their eligible generator to other metered accounts, called beneficial accounts, that are not physically connected to the Customer Host's generator.⁷²

The combining of electric meter readings and billings includes any VNM credits for state, agricultural, or municipal (SAM) Customer Hosts and is accomplished via the EDCs' billing process. The VNM credits, which are applied monthly as credits to the electric bill of the beneficial account, are equal to the generation of service charges and a declining percentage of the transmission and distribution charges (80% in the first year, 60% in year two, and 40% in year three onwards).^{73,74}

Annual VNM Credits

In layman's terms, the customer host gets paid at the same rate the host would have been charged by the electric company for the generation used onsite and at a fixed rate for any excess energy generated.

The maximum aggregated annual compensation under the VNM Program is \$4 million for UI and \$16 million for Eversource. However, Municipal Hosts who submitted an interconnection and VNM application on or before April 13, 2016 were allocated an additional \$6 million (\$1.2M UI, \$4.8M Eversource). An additional allocation of \$3 million (\$0.6M UI, \$2.4M Eversource) is available for Agricultural Customer Hosts utilizing an anaerobic digestion Class I renewable energy source. The Individual Customer Host annual cap is based on estimated kWh production and rates in effect at the time of application. When an Individual Customer Host annual cap is reached in a calendar year, net energy billing continues, and all excess kWh produced is compensated under the applicable power purchase rate for the remainder of the year (i.e., at the wholesale power rate).

Net Exported kWh

The amount of excess kWh delivered by the Customer Host to the electric distribution system is the net exported kWh. The net exported kWh is equal to the total kWh exported by the Customer Host to the distribution system less the total kWh imported by the Customer Host from the distribution system over a monthly billing period.

The VNM Credit is determined monthly using this formula:

$$VNM\ Credit = (Net\ Exported\ kWh) * ([SS\ or\ LRS] + [%\ T\ \&\ D\ rates\ of\ Customer\ Host])$$

Where SS is standard service, LRS is last resort service, and % T & D is percentage of transmission and distribution charges.

The VNM credit is then allocated to the beneficial accounts.⁷⁵ Municipal & State Beneficial Accounts can have up to 5 Municipal or State accounts, respectively, plus up to 5 respective non-Municipal or non-State Critical Facilities connected to the Microgrid. Agricultural Beneficial Accounts can have up to 10, consisting of Agricultural, Municipal, or non-commercial Critical Facilities connected to the Microgrid.



Current Status of VNM Program

The table below provides information on the current availability status of the VNM project. More information on the program eligibility, application process, queuing and program caps can be found in *Appendix 1: Program Eligibility*.

VNM Program	Statutory Authority (Conn. Gen. Stat.)	PURA Dockets	Renewable Energy Source(s)		Municipal Sector	State Sector	Agriculture Sector	Agriculture Anaerobic Digester Sector
Eversource	16-244u(5) and (6)	DN 13-08-14; DN 15-09-08	Class I (All) and Class III (Municipal & State)	Amount Subscribed	Fully Subscribed	Fully Subscribed	Fully Subscribed	Fully Subscribed
				No. Applications in Queue	33	0	11	0
				Total Deployed in MWs	40.765	10.999	17.726	0.550
UI	16-244u(5) and (6)	DN 13-08-14; DN 15-09-08	Class I (All) and Class III (Municipal & State)	Amount Subscribed	Fully Subscribed	\$284.6k Cap Space Available	\$98.8k Cap Space Available	\$600k Cap Space Available
				No. Applications in Queue	3.34	0	0	
				Total Deployed in MWs	4.65	0	2	

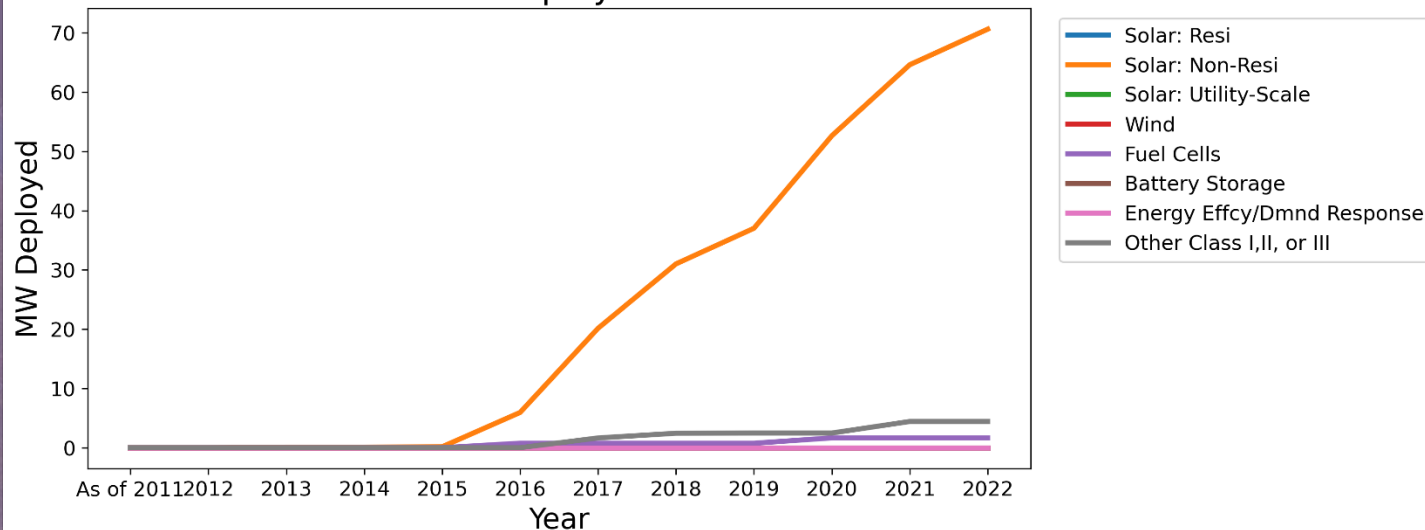
The above Table, and the Table on the next page were both created from the data filed in the EDCs compliance filing, dated November 15, 2022. The specific data inside of the compliance filing which was used to create the Table are the EDC responses to Interrogatory CAE-42. While some capacity for new projects under this program is available in UI's service territory, the VNM Program has largely been sunsetted and succeeded, along with the LREC/ZREC program, by the NRES Program. However, as seen in the plot on the next page, deployment of subscribed projects continued through 2022.

VNM Program		Municipal Sector	State Sector	Agriculture Sector	Agriculture Anaerobic Digester Sector
Eversource	Total Annual Cap	\$11,200,000.00	\$3,543,334.00	\$6,056,666.00	\$2,400,000.00
	Cap Subscribed	\$11,200,000.00	\$3,543,334.00	\$6,056,666.00	\$2,400,000.00
	No. Projects Subscribed	40	12	19	4
	No. Applications Waiting List	33	0	11	0
	Total MW Deployed (Fuel Cells)	0.75	0	0	0
	Total MW Deployed (Solar)	38.373	9.999	17.726	0
	Total MW Deployed (Other)	1.642	1	0	0.55
UI	Total Annual Cap	\$2,597,412.66	\$1,600,000.00	\$800,000.00	\$600,000.00
	Cap Subscribed	\$2,597,412.66	\$1,315,395.00	\$701,209.66	\$0.00
	No. Projects Subscribed ⁷⁶	7.66	2.89	2.00	0
	No. Projects Provisional ⁷⁷	1.34			
	No. Applications Waiting List ⁷⁸	2	0.11	0	0
	Total MW Deployed (Fuel Cells)	0.90	0	0	0
	Total MW Deployed (Solar)	2.52	0	2	0
	Total MW Deployed (Other)	1.23	0	0	0

The VNM program is largely comprised of non-residential solar PV, as is evident from the plot below.

Plots based on data submitted in response to Interrogatory CAE-33 in Docket No. 17-12-03RE09 on December 3, 2021.

Cumulative MW Deployed in CT via VNM



Shared Clean Energy Facility (SCEF) Program and SCEF Pilot Program

Pursuant to Conn. Gen. Stat. § 16-244z(a)(1)(C), and established in 2020, the Shared Clean Energy Facility (SCEF) Program is a 6-year competitive procurement effort focused on broadening clean energy participation in Connecticut.



More specifically, the goal of the SCEF Program is to provide savings to specific categories of customers, particularly customers with low- to moderate-income (LMI), low-income service organizations, and customers who reside in environmental justice communities. Typically, residents or businesses can choose to invest in, or lease, a renewable energy system on the rooftops of their homes or businesses. However, some Connecticut residents and businesses, especially LMI customers, may not be able to invest in or lease an individual installation for a variety of reasons (e.g., high installation costs, unsuitable rooftop orientation, shaded property, or because they rent a property instead of owning one).

Customer subscription to SCEF projects helps overcome such barriers to clean energy installation, thereby expanding consumer access to renewable energy. A SCEF enables multiple customers to benefit directly from a facility's energy production. Participating SCEF customers, or subscribers, then receive clean energy savings in the form of a fixed monthly payment on their utility bill.

The EDCs administer the SCEF Program, in coordination with DEEP. Specifically, the subscription management, identification, and enrollment of customers/subscribers, as well as project selection through an annual, competitive solicitation, is managed by the EDCs. The Authority reviews the program requirements, price caps, and bid preferences each year to ensure the program's effectiveness.

The SCEF owner is responsible for the financing and construction of the project that delivers and REC's to the EDCs. In turn, the SCEF owner receives direct payment for the energy production of the project on a quarterly basis over a 20-year term.

The Program allocated 25 MW of new clean power generation per year for the first three program years and 50 MW per year for the subsequent three program years, for a total of 225 MW over the program's 6 years of procurement. The MW allocation is split 80/20 between Eversource and UI.

The SCEF project requirements and tariff design, including the program timeline, project eligibility requirements, and the EDCs' solicitation and bid selection process were approved by PURA through the December 18, 2019 [Decision](#) in Docket No. 19-07-01.⁷⁹ Additionally, the 2023 Program documents and manual were reviewed and [approved](#) by PURA in Docket No. 22-08-04, [Annual Review of Statewide Shared Clean Energy Facility Program Requirements – Year 4](#).

SCEF Pilot Program

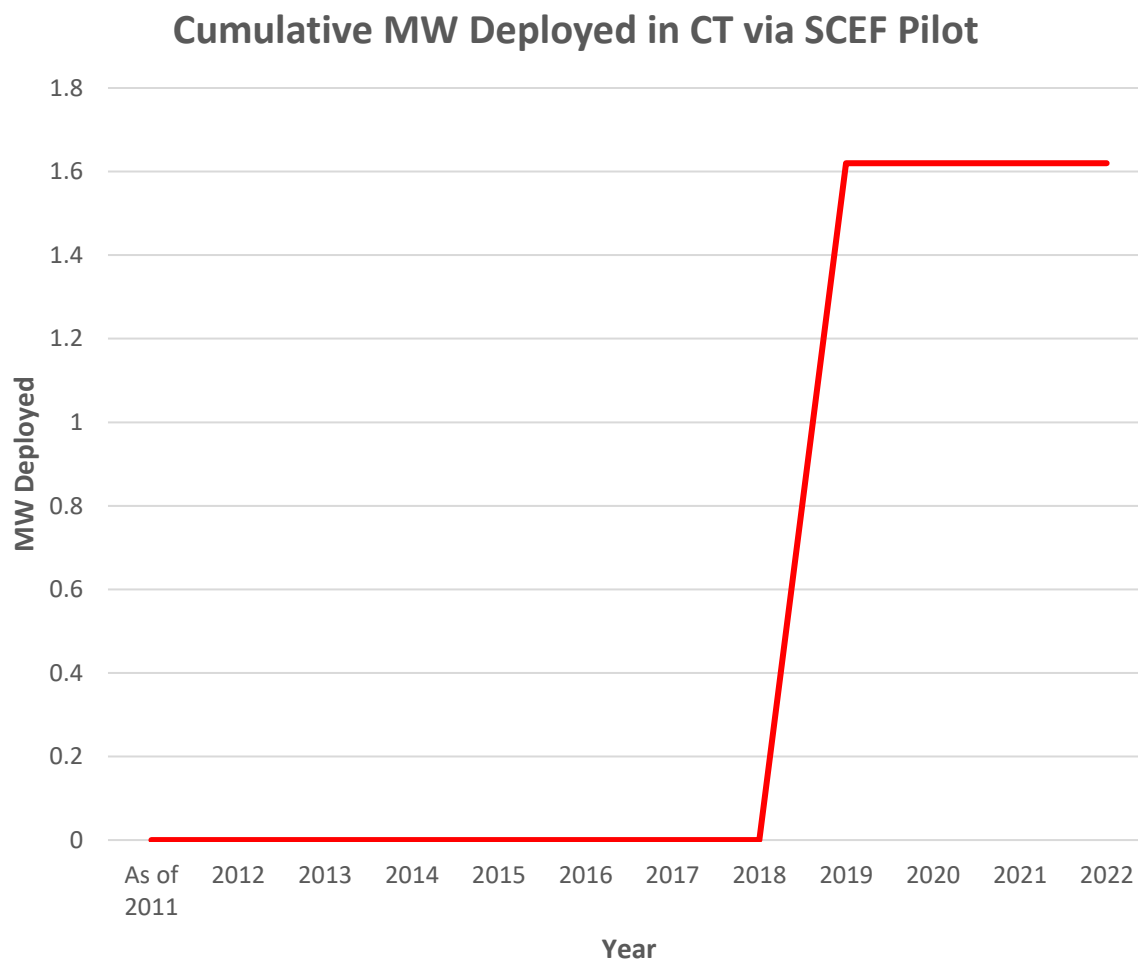
In a Final Decision⁸⁰ dated November 8, 2017, PURA approved DEEP's selection of three solar projects for a two-year SCEF Pilot Program with the EDCs.

The selected projects consist of a 2.0 MW facility by CHIP Fund 5 and a 1.62 MW facility by Clean Energy Collective located in Eversource territory, and a 1.6 MW facility by US Solar Corporation located in UI territory. Currently, only the 1.62 MW facility in the Eversource territory is in service under the SCEF Pilot Program.⁸¹

The RFP issued by DEEP to select pilot projects was conducted pursuant to Conn. Gen. Stat. §16-244x. The statute directed DEEP to: (1) establish a billing credit for subscribers of a SCEF; (2) establish consumer protections for subscribers and potential subscribers of such facility; and (3) select, pursuant to a competitive RFP process,

SCEF projects with an aggregate total nameplate capacity rating of no more than 6 MW, including no more than 2 MW in the aggregate in the service territory of UI, and no more than 4 MW in the aggregate in the service territory of Eversource.

Additional information on the SCEF Pilot Program can be found on DEEP's [website](#).



Current Status of SCEF Program

Eversource and UI issued the Year 1 request for proposal (RFP) on April 30, 2020 to solicit bids for projects that will result in on-bill credits to qualified customers. The Year 2 RFP was issued on April 30, 2021, and the year 3 RFP was issued on January 21, 2022. Subsequent solicitations will occur annually in January with selected projects eligible to generate in July of the following year. Once projects are operational and are generating electricity, project developers will receive payments for generation for up to 20 years. While there are not currently any deployments for the SCEF Program, relevant plots and analytics will be incorporated in future reports. However, a plot showing SCEF application and project selection information is included in the LREC/ZREC section of the report. Last, data for the Year 3 solicitation of the SCEF Program is included on the next page.

More information and resources on the SCEF Program are available on [Eversource's](#) dedicated program webpage and on DEEP's [website](#). Further, the tables on the following page highlight key information on the SCEF Program, including Program price caps and bid preferences, as well as the results of Eversource's and UI's year 3 solicitation.

Table 1: 2023 SCEF Program Tariffs

Year 4 Price Cap		Bid Preferences ⁸²	
Solar Canopies	All Other Projects	Solar Canopies	Landfills/Brownfields
\$0.15543/kWh	\$0.135/kWh	30%	20%

Table 2: Eversource Year 3 SCEF Solicitation Summary

Total MW Selected⁸³	59.97
Total In-Service MWs	-
Unallocated MWs	0.027
Total Projected 20-Year Payments to Subscriber Organizations	\$ 226,005,040.29
Total Projected 20-Year Payments to Subscribers	\$ 60,411,378.50

Table 3: UI Year 3 SCEF Solicitation Summary

Total MW Selected⁸⁴	11.875
Total In-Service MWs	-
Allocated, but Unused MW	-
Unallocated MW	3.125
Total Projected 20-Year Payments to Subscriber Organizations	\$ 186,533,891.88
Total Projected 20-Year Payments to Subscribers	\$ 34,880,537.00



Energy Storage Solutions (ESS) Program

Effective beginning January 1, 2022 through December 31, 2030, the Energy Storage Solutions (ESS) Program incentivizes and supports the deployment of electric storage devices statewide. The program was developed pursuant to [Public Act 21-53](#), which establishes a program goal of 580 MW deployment of energy storage by year-end 2030. The program is administered by the Connecticut Green Bank (CGB) along with the EDCs.

The ESS Program was established through the [Decision](#) dated July 28, 2021 in Docket No. 17-12-03RE03, PURA Investigation Into Distribution System Planning Of The Electric Distribution Companies – Electric Storage. The Decision further authorized three-year Program cycles with interim goals of 100 MW energy storage deployment by 2025, and 300 MW energy storage deployment by 2028. The Program Manual and documents for 2023 were reviewed and [approved](#) in Docket No. 22-08-05, Annual Review of The Electric Storage Program – Year 2.

Participants in the ESS Program can receive an upfront incentive, which requires participation in passive dispatch. During passive dispatch, projects discharge stored energy back into the electric grid at set times each day to provide benefits to the electric grid, including peak shaving and the deferral of distribution system upgrades. Projects can also receive a performance-based incentive for participation in active dispatch events, which are called by the EDCs under rules approved by PURA to reduce stress on the electric grid during periods of peak energy use, resulting in financial savings for all ratepayers. Program incentives vary by project type (commercial and industrial versus residential projects) and Program tranche, where incentives change once each tranche's capacity is fully committed. Table 1 on the next page shows the tranches for each project type.

More information and resources on the ESS Program are available on PURA's [website](#) and on the dedicated ESS Program [website](#).



Table 1: ESS Program MW Deployment Targets

Customer Class	2022-2024 Tranche 1	2025-2027 Tranche 2	2028-2030 Tranche 3	Total
Residential	50 MW	100 MW	140 MW	290 MW
Commercial and Industrial	50 MW	100 MW	140 MW	290 MW
Total	100 MW	200 MW	280 MW	580 MW

The megawatt capacity and deployment targets for each customer class and Program tranche are shown above in Table 1, while the varying incentives for the ESS Program are shown below in tables 2 through 4.

Table 2: Residential Customer Upfront Incentives (Tranche 1)

Incentive Step	Installed Capacity (MW)	Baseline (\$/kWh)	Underserved Community (\$/kWh)	Low-Income (\$/kWh)
1	10	\$200	\$300	\$400
2	15	\$170	\$255	\$340
3	25	\$130	\$195	\$260

Table 3: Commercial and Industrial Customer Upfront Incentives (Tranche 1)

Installed Capacity (MW)	Small Commercial (\$/kWh)	Large Commercial (\$/kWh)	Industrial (\$/kWh)
50	\$200	\$175	\$100

Table 4: All Customer Classes Performance-Based Incentives (Tranche 1)

Years 1-5		Years 6-10	
Summer (\$/kW)	Winter (\$/kW)	Summer (\$/kW)	Winter (\$/kW)
\$200	\$25	\$115	\$15
\$225 annually		\$130 annually	

Tables 5 through 7, below, highlight the application deployment data for the ESS Program, as well as the progress the Program is making towards its deployment goals. While the ESS Program is not presently on track to achieve its residential deployment target, commercial deployment is currently exceeding the expected application pace and is on track to meet or exceed its deployment goal.

Table 5: Progress Made Toward ESS Program Goal as of June 30, 2022

Customer Type	Applications Submitted (kW)	Applications Approved (kW)	Application Complete (kW)	Total (kW)	Program Goals (2022-2024) (kW)	Percent of Capacity Approved Relative to 2024 Goal	Percent of Capacity Submitted or Approved Relative to 2024 Goal
Residential	768	185	0	953	50,000	0.37%	1.91%
C&I	60,111	2,626	0	62,737	50,000	5.25%	125.47%

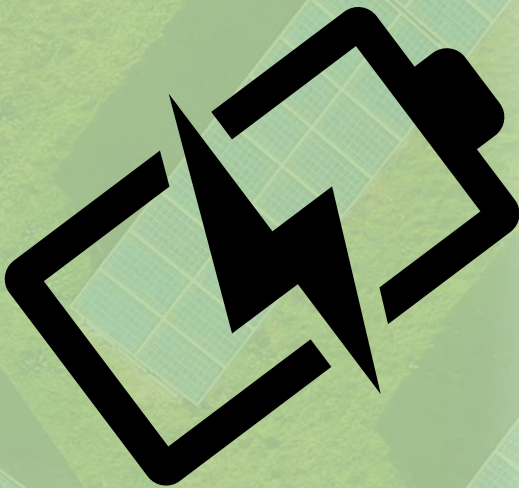


**Table 6: C&I
Project Submissions as of June 30, 2022**

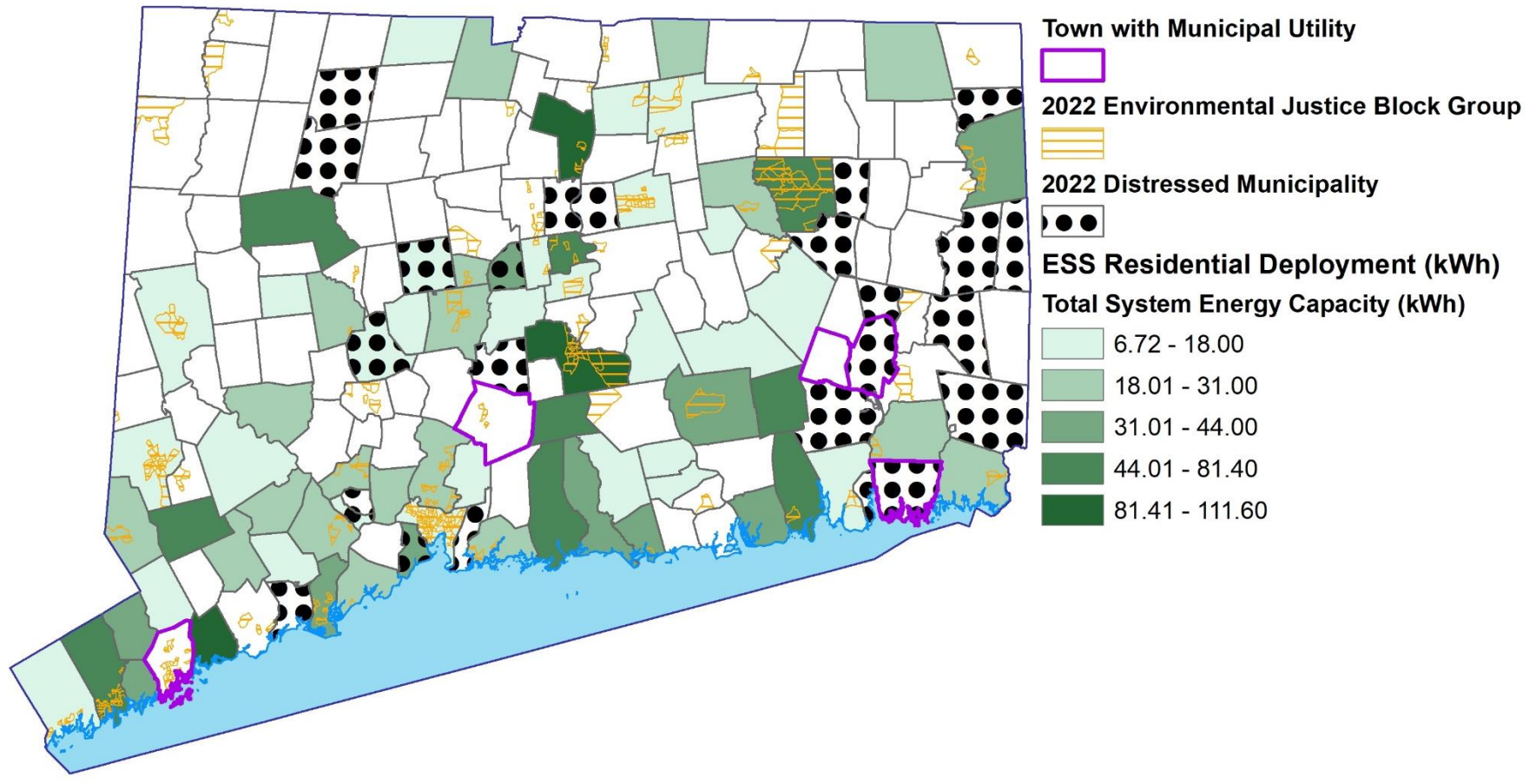
	Projects	Total System Power Rating (kW)	Total System Energy Capacity (kWh)	Forward Capacity Market Participation
Large C&I	14	34,197	88,681	5
Submitted	13	32,856	85,999	5
Approved	1	1,341	2,682	0
Medium C&I	12	16,373	49,380	2
Submitted	11	15,088	46,811	2
Approved	1	1,285	2,570	0
Small C&I	9	12,167	38,524	5
Submitted	9	12,167	38,524	5
Grand Total	35	62,737	176,586	12

Table 7: Residential Project Application Data as of June 30, 2022

	Projects	Total System Power Rating (kW)	Total System Energy Capacity (kWh)	Projects Paired with Solar PV	Low Income	Underserved Community
Application Submitted	76	768.58	1874.5	76	N/A	6
Eversource	64	679.42	1639.1	64	N/A	4
UI	12	89.16	235.42	12	N/A	2
Approved	21	184.5	384	21	1	1
Eversource	19	171	357	19	1	1
UI	2	13.5	27	2	N/A	N/A
Grand Total	97	953.08	2258.5	97	1	7

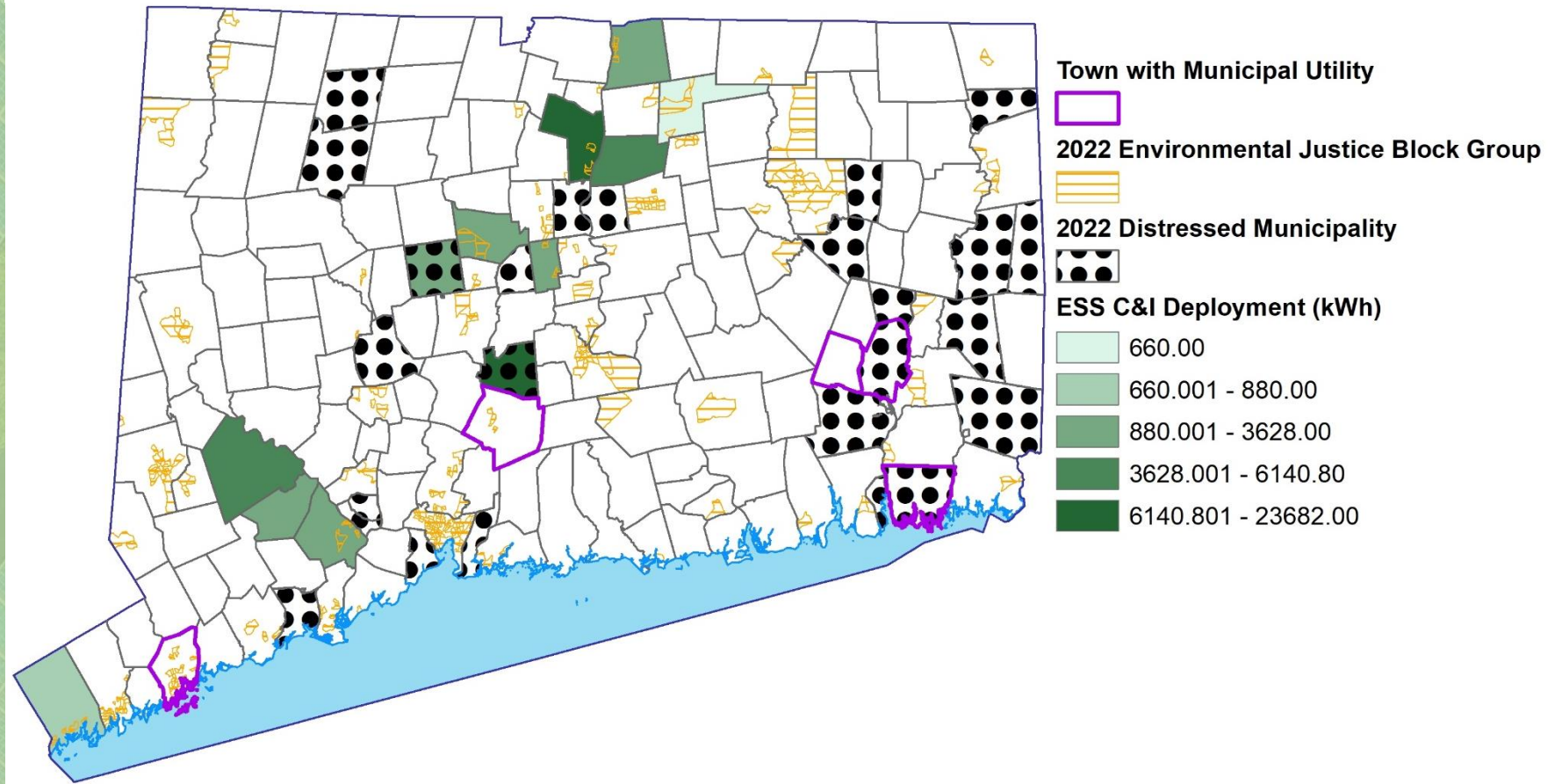


Total Approved Residential Battery Storage Capacity by Town



In year one of deployment of battery storage via the ESS program, systems have been approved and deployed throughout many towns in Connecticut.⁸⁵ However, as can be seen in the above Figure, a majority of 2022 distressed municipalities have yet to have a residential battery system approved for installation. Through the annual review process held in Docket No. XX-08-05 each year, where XX stands for the calendar year, the Authority will work with stakeholders to ensure progress towards target deployment levels of 40% in low-income and underserved communities.

Total Approved C&I Battery Storage Capacity by Town



During the first year of ESS deployment, 15 commercial and industrial customer projects were approved for deployment across 12 towns with a total system energy capacity approaching 74,000 kWh.⁸⁶ Notably, two of twelve projects approved are in distressed municipalities. As the program deployment grows over the years, the Authority will closely monitor the distribution of projects across towns in Connecticut to identify any trends and to ensure an fair and equitable distribution of program incentives.

Electric Vehicle Charging Program

Effective beginning January 1, 2022 through December 31, 2030, the Electric Vehicle (EV) Charging Program supports the statewide installation of EV charging infrastructure to meet the State's commitment to the [multi-state zero emission vehicle Memorandum of Understanding \(MOU\) for light-duty vehicles](#). The Program was designed with a focus on equity and inclusion. The EV Charging Program is administered by the EDCs.

The [Decision](#) dated July 14, 2021 in Docket No. 17-12-03RE04, [PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Zero Emission Vehicles](#), outlines a statewide EV Charging Program that establishes deployment targets, as shown in Table 1, and provides a combination of incentives to help reach those targets for infrastructure for electric vehicle supply equipment (EVSE), including direct current fast charging (DCFC) stations and accompanying rate design offerings, in an effort to support a self-sustaining EV market. The Program design includes EV charging incentives for residential and commercial customers, as well as managed charging components. The program rules and documents for 2023 were reviewed and [approved](#) in Docket No. 22-08-06, [Annual Review of The Electric Vehicle Charging Program – Year 2](#).



For residential customers, upfront incentives are available for networked Level 2 chargers and any necessary electrical wiring upgrades; see Table 3. Upfront incentives are distributed once the residential customer has demonstrated all of the Program eligibility requirements, such as proof of charger installation. Additionally, to receive the full incentives offered by the EV Charging Program, residential customers must participate in a managed charging program. Managed charging is designed to lower costs for all ratepayers by avoiding high-cost and carbon-intensive electricity sources by shifting EV charging to off-peak times, such as overnight. Participants receive ongoing incentives when they adjust their EV charging time to align with an EDC-proposed schedule. Customers can participate in the managed charging program if they received a networked Level 2 charger rebate or if their EV includes telematics compatible with the program. Participants

receive incentives when they adjust their EV charging time to align with an EDC-proposed schedule. Ultimately, participating in the EV Charging Program can help offset the cost of customers' EV charging infrastructure and usage over time.

For commercial customers, upfront incentives are designed to reduce the significant costs associated with EV charging station installation, including electric connection upgrades and supply infrastructure (e.g., Make-Ready Infrastructure); See Table 2. The chargers eligible for the commercial part of the Program include Level 2 Chargers located in multi-unit dwellings, public destinations, workplaces, inclusive of light-duty fleet applications, and DCFCs, which are often located along highways and other public sites. For charging sites located in underserved communities, as defined by the EV Charging Program, the make-ready incentives cover up to 100% of the costs associated with make-ready infrastructure upgrades. To qualify, commercial customers must meet the requirements of the EV Charging Program, including maintaining and servicing the charging station for at least 5 years.

More information and resources on the EV Charging Program are available at PURA's [website](#), Eversource's [commercial and residential program websites](#), and UI's [commercial](#) and [residential](#) program websites and EVConnecticut's [website on vehicle and charging incentives](#).

The plots and tables⁸⁷ on the following pages (apart from the U.S. Department of Energy tool on the next page) highlight the application data and incentive structures for commercial and residential EV Charging Program participants, broken down by incentive type, from Year 1 of the EV Charging Program.

The U.S. Department of Energy (DOE) has an online tool which allows for the spatial visualization of EV chargers installed in the US and Canada. The tool allows for filtering by state, and then more advanced filtering by charger type (e.g., DC Fast, Level 1, Level 2), charger port type, and charger network. The results can be mapped or downloaded in a tabular format. The tool is available [here](#).

The plots on this page are taken from the DOE tool as of February 21, 2022, with the larger image showing the DC Fast and Level 2 chargers deployed in the state, and the smaller figure depicting only the DC Fast chargers. In total, there are 76 DC Fast charger locations, of which 28 are locations with Tesla chargers and 48 are locations with non-Tesla DC Fast chargers. Notably, the chargers are densest around high traffic roads cities (e.g., Hartford, Bridgeport, Stamford) and interstate highways (I-95, I-91, I-84). However, there is a growing presence of chargers, particularly Level 2 chargers, more widely distributed throughout the state.

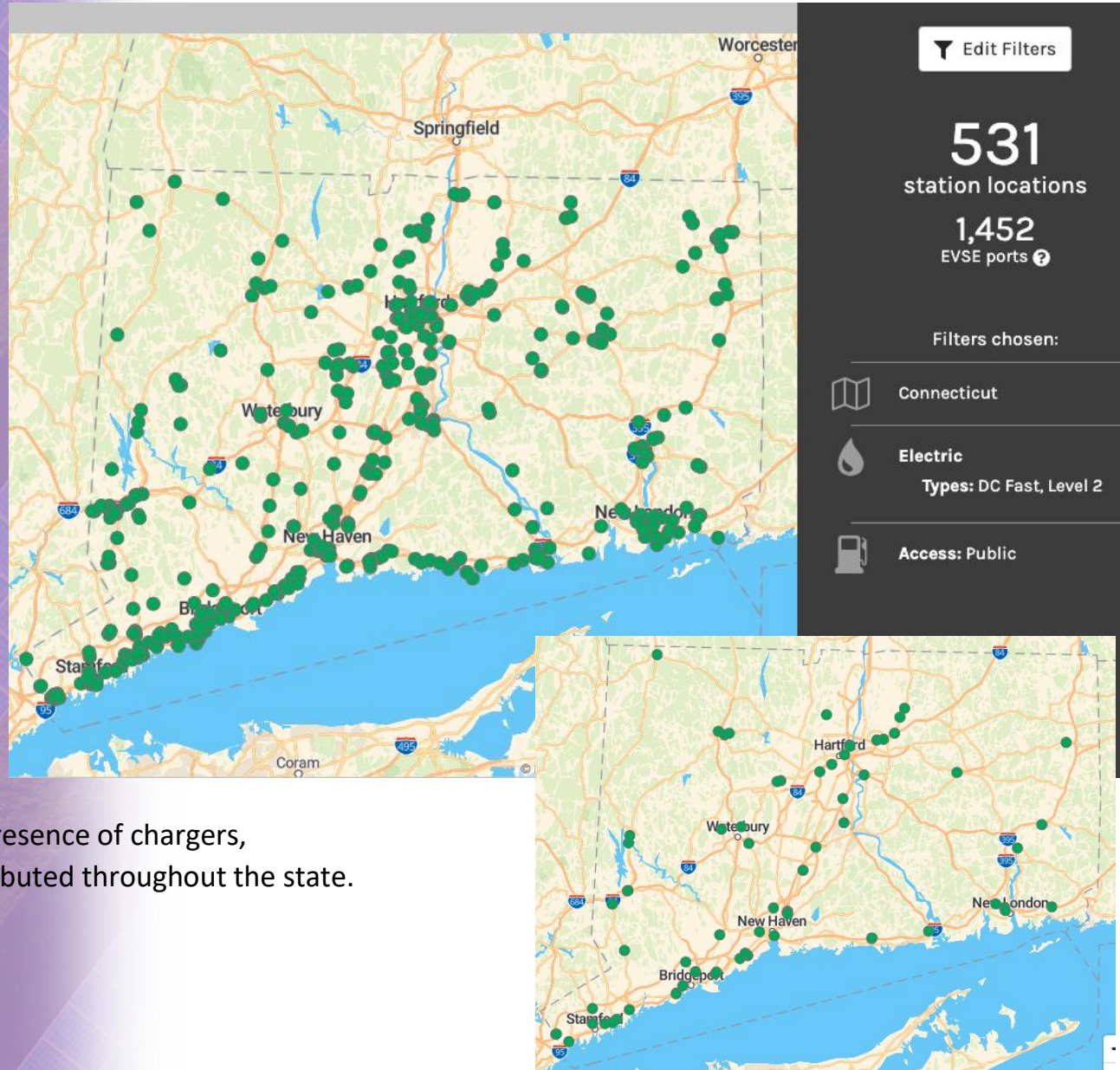


Table 1: EVSE Program Deployment Targets

Program Area	Number of Ports (Statewide)			
	2022-2024	2025-2027	2028-2030	Total
Residential Single-Family (Level 2)	15,000	17,500	17,500	50,000
Multi-Unit Dwellings (Level 2)	1,213	To be revisited	To be revisited	To be revisited
DCFC	137	172	172	550
Destination Charging (Level 2)	789	1,654	1,654	4,868
Workplace & Light-Duty Fleets (Level 2)	2,314	2,521	2,521	7,356

Table 2: EV Charging Program EVSE and Make-Ready Incentives

	Residential Single-Family (Level 2)	Multi-Unit Dwellings (Level 2)	Public Destination (Level 2)	Workplace & Light-Duty Fleets (Level 2)	DCFC
Incentive Structure					
EVSE and Make-Ready Incentives	Up to \$500 EVSE rebate + a portion of necessary electrical upgrades	Up to 50% of EVSE cost + Up to 100% make-ready installation (≥ 2 ports)	Up to 50% of EVSE cost + Up to 100% make-ready installation (≥ 4 ports)	Up to 50% of EVSE cost + Up to 100% make-ready installation (≥ 2 ports)	Up to 50% of EVSE cost + Up to 100% make-ready installation (≥ 2 ports)
Maximum Incentive per Site (Including make-ready costs covered by the Program)					
Baseline	-	\$20,000			\$150,000
Underserved Communities	-	\$40,000			\$250,000

The EV Charging Program established the residential and commercial EVSE and electrical upgrade incentives, as seen in Tables 2 and 3, in order to meet the established EV charger deployment targets, as seen in Table 1.



Table 3: 2022 Residential EV Charging Program Incentives

	Amount
<i>Upfront Incentives</i>	
New Networked Smart Charger Rebate	Up to \$500
Wiring Upgrade Rebate	Up to \$500
One-Time Managed Charging Enrollment Incentive (for eligible vehicles)	\$100
<i>Ongoing Incentives</i>	
Annual Managed Charging Incentive	Up to \$200

Table 4:
Residential Single-Family EVSE, Wiring & Enrollment
Incentive Data (as of November 30, 2022)

CATEGORY	UTILITY	PARTICIPANTS
New Level 2 Charger Only Incentive	Eversource	897 ⁸⁸
	UI	16
	Total	913
Wiring Upgrade Only Incentive	Eversource	N/A
	UI	29
	Total	29
Wiring Upgrade and New Level 2 Charger Incentives	Eversource	N/A
	UI	94
	Total	94
Existing Equipment Enrollment Incentive	Eversource	40
	UI	6
	Total	46
Vehicle Telematics Enrollment Incentive	Eversource	442
	UI	25
	Total	467
Advanced Metering Infrastructure (AMI) Enrollment Incentive	Eversource	N/A
	UI	8
	Total	8
STATEWIDE TOTAL		1,557

Table 5:
Residential Single-Family Managed Charging
Participation Data (as of September 22, 2022)

CATEGORY	UTILITY	PARTICIPANTS ENROLLED
Networked Level 2 Charger	Eversource	505
	UI	90
	Total	595
Vehicle Telematics	Eversource	196
	UI	40
	Total	236
Advanced Metering Infrastructure (AMI)	Eversource	N/A
	UI	7
	Total	7
Total		838

As of September 22, 2022, Eversource and UI distributed \$820,473 and \$92,264, respectively, in residential rebate incentives for the EV Charging Program.

The EV Charging Program received and approved 1,557 residential applications for a combination of Level 2 charger, wiring upgrade, and managed charging enrollment rebates, as shown in Table 4. As of September 22, 2022, the residential managed charging program enrolled 838 customers, as shown in Table 5. This number includes participants who received an EVSE and/or wiring upgrade rebate and subsequently enrolled in the managed charging program and those who did not get a rebate but enrolled with an existing Level 2 EVSE, their vehicle telematics, or through UI's Advanced Metering Infrastructure..



**Table 6: EDCs' Commercial EVSE
Incentive Data (as of August 1, 2022)**

Program Area	Utility	Average Total Incentive per Site	Average Incentive per Port
MUDs	Eversource	N/A	\$9,496
	UI	\$27,634	\$7,185
Destination	Eversource	N/A	\$6,262
	UI	\$27,601	\$13,801
Workplace	Eversource	N/A	\$5,305
	UI	\$44,513	\$8,560
DCFC	Eversource	N/A	\$70,972
	UI	\$134,091	\$57,467

Tables 6 and 7 highlight the most recently available commercial customer participation data by program area, including the average incentive per port. Eversource did not provide the data necessary to calculate an average incentive per site. Deployment in the program's first year exceeded expectations, reaching 100% and 93% of the three-year program cycle goal in the DCFC and MUDs program areas, respectively.

Table 7: EDCs' Commercial Port Deployment Data (as of November 30, 2022)

PROGRAM AREA	UTILITY	2022-2024 PORT DEPLOYMENT GOAL	ACTUAL PORTS APPROVED	PERCENT OF 2022-2024 PORT GOAL
Multi-Unit Dwellings (Level 2)	Eversource	970	972	100%
	UI	243	154	63%
	Total	1,213	1,126	93%
DCFC	Eversource	110	110	100%
	UI	27	26	100%
	Total	137	136	100%
Destination (Level 2)	Eversource	631	615	97%
	UI	158	46	29%
	Total	789	661	84%
Workplace & Light-Duty Fleets (Level 2)	Eversource	1,851	518	28%
	UI	463	54	12%
	Total	2,314	572	25%

DEEP Procurements (i.e., Public Policy Contracts / PPAs)

To further the state's policy objectives, the EDCs enter into Power Purchase Agreements (PPAs) in accordance with statutory directives. Since 2011, several pieces of legislation have been enacted that grant authority to conduct requests for proposals (RFPs) for certain renewable and/or clean energy generation.⁸⁹ DEEP, in consultation with the Office of Consumer Counsel (OCC), the Office of the Attorney General (AG) (in most procurement statutes), PURA, and the EDCs, typically run the RFPs to procure power and associated environmental attributes from various clean and renewable energy sources as directed by the relevant legislation.



An evaluation team is set up by members of DEEP staff, along with the EDCs, the OCC, the AG, and PURA to conduct a review, evaluation, and selection process of the bid proposals submitted under each RFP. The bid proposals then go through a 2-stage evaluation and review process by a selection team that does not include the EDCs. There is a standard of conduct that assures separation between the evaluation team and selection team. The final selection of projects that bid in is made by the DEEP Commissioner. Once project selections have been made, the EDCs are required to submit the PPAs to the Authority for regulatory approval and to obtain authorization for cost recovery.

Any processes required to capture and implement the terms and conditions that are set forth in the PPAs are established prior to fully implementing the PPAs. The EDCs track the projects and contracts, and conduct various other as-needed administrative activities that may arise under the terms and conditions of the PPAs. Payment for any of the products delivered is established in the PPA and may either be fixed price or formula-based, dependent on the solicitation rules under which the project was selected. However, the interconnection process is separate and apart from the PPAs and all requirements for delivery are the responsibility of the seller.

It is important to note that the EDCs currently sell the energy and RECs produced from the PPA projects back into the markets, and the revenue is used to offset costs. The net costs then flow to ratepayers through the non-bypassable federally mandated congestion charge (NBFMCC). For additional relevant materials, see the analysis completed in the [DEEP Integrated Resources Plan \(IRP\)](#) issued October 7, 2021, including price information available on pages 88-93 and in Appendix A6.

Past Procurements for Grid-Scale Renewable Resources

Between 2011 and the drafting of the 2020 Integrated Resources Plan (IRP), DEEP conducted nine procurements. Those nine procurements had resulted in the selection of a total of 10 MW of grid-scale solar, 1,108 MW of offshore wind, 34 MW of incremental energy efficiency to the energy efficiency programs, 52 MW of fuel cells, energy and environmental attributes from 10.9 million MWhs of nuclear power, and additional environmental attributes associated with 2.85 million MWhs of nuclear power.⁹⁰ By statute, DEEP has the authority to procure up to 110% of the total load associated with both CT EDCs from renewable and/or zero carbon sources. Per the Integrated Resources Plan (IRP), by 2020, DEEP had procured about 95% of the total load of both EDCs from renewable carbon sources. By 2025, contracted zero carbon sources will provide the equivalent of 91% of the EDCs load.⁹¹ Such procurements will help offset the statewide electric greenhouse gas emissions and are highlighted on page 10.

In 2022, DEEP published a Procurement Plan Update to the 2020 IRP, noting that since publication 1.2%, or 170 MWs, of solar and land-based wind energy projects, have been terminated. Additionally, DEEP notes that 10 other renewable energy project schedules and status remain in flux, but further notes that it will exercise its authority to evaluate potential selection projects that could replace any lost resources. The Procurement Plan Update also points to challenges with transmission interconnection for offshore wind which the Federal Energy Regulatory Commission (FERC) is addressing by evaluating reforms to the transmission planning process to streamline interconnection. Last, DEEP notes the federal Infrastructure Investment and Jobs Act (IIJA) was enacted in November 2021, and introduced various funding opportunities that were not anticipated in the 2020 IRP but could advance Connecticut towards its 2040 goal.⁹²



Procurement Status by Technology

DEEP solicitations have resulted in a number of projects executing long-term PPAs with the EDCs.

Since 2011, ten (10) procurements, including nine DEEP-run procurements and the Project 150 Procurement^{94,95} have been conducted resulting in a total of 17,590 projects in-service for a total deployment level 1,639.99 MWs of clean energy sources as of November 15, 2022.⁹⁶ The table on the right provides a summary and the table on the following page provides a comprehensive list of the clean energy procurements and current public policy contracts along with a summary of the number of projects, renewable energy source(s), duration of contract or tariff(s), and total current deployment levels for the PPAs under each procurement.

2022 DEEP Procurement by Technology

	Section 1(b)	Section 6	Section 8	Section 8 Amended	CEFRP	Zero Carbon	OSW	Total
Solar	59.161	20.000			84.041			163.202
Solar & Storage								
REC-only Biomass			24.196					24.196
Wind					53.327			53.327
Offshore Wind								0
Fuel Cells				10.002				10.002
REC-only Wind	5.000							5.000
Nuclear⁹³						1261.051 - 1368.981		1261.051 - 1368.981

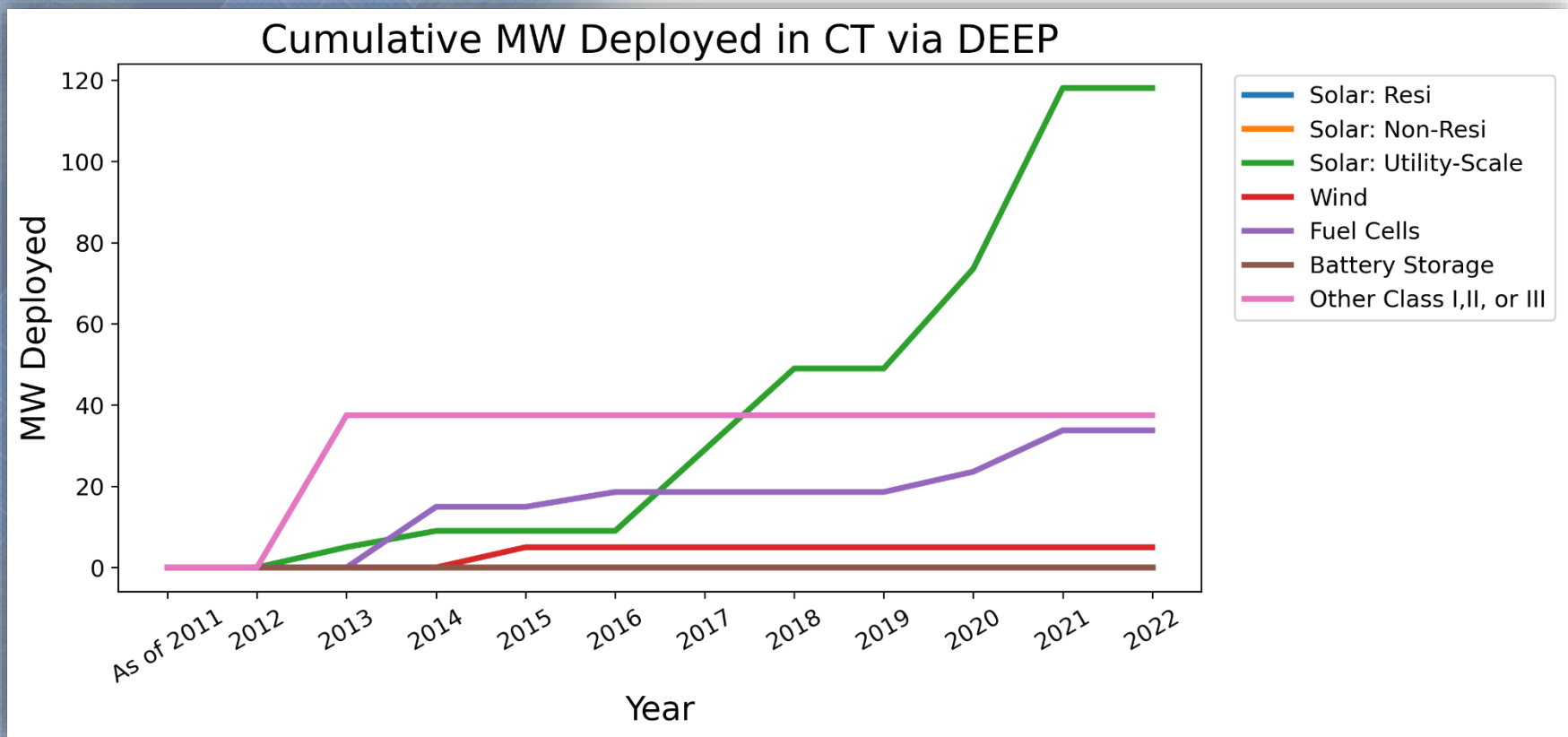


DEEP Cumulative PPA Deployment

Public Policy Contracts / PPAs ⁹⁷	Public Act(s)	PURA Docket Nos.	Renewable Energy Source(s)	Deployment Levels ⁹⁸	As of 2022
Project 150 ⁹⁹	Amended by Section 124, PA 07-242	07-04-27; 08-03-03	Biomass, Fuel Cells	Total Deployment in MWs (AC)	48.33
				No. of Projects In-Service	3
Section 127 ¹⁰⁰	PA 11-80, Section 127	12-05-13; 13-01-32; 13-06-27RE01	Solar, Wind, Fuel Cells	Total Deployment in MWs (AC)	19.98
				No. of Projects In-Service	4
Section 6	PA 13-303, Section 6	13-09-19	Solar	Total Deployment in MWs (AC)	20.00
				No. of Projects In-Service	1
Clean Energy RFP (Large-Scale PPAs)	PA 15-107(c)	17-01-10	Solar, Wind	Total Deployment in MWs (AC)	137.37
				No. of Projects In-Service	5
Section 8	PA 13-303, Section 8	14-02-02	Biomass	Total Deployment in MWs (AC)	24.20
				No. of Projects In-Service	3
Amended Section 8	PA 13-303, Section 8, Amended by PA 17-144, Section 10	18-06-37	Fuel Cells, Offshore Wind, Fuels Cells w/ CHP	Total Deployment in MWs (AC)	10.00
				No. of Projects In-Service	1
Small-Scale PPAs	PA 15-107, Section 1(b)	17-01-11	Solar, Wind	Total Deployment in MWs (AC)	103.56
				No. of Projects In-Service	17,555
Zero Carbon PPAs ¹⁰¹	PA 17-3, Section 1	18-05-04; 20-02-04	Nuclear, Solar, Offshore Wind, Solar w/ Storage	Total Deployment in MWs (AC)	1269.05
				No. of Projects In-Service	2
Section 3 ¹⁰²	PA 18-50, Section 3	18-07-02	Biomass	Total Deployment in MWs (AC)	7.50
				No. of Projects In-Service	1
Offshore Wind PPA (Vineyard Wind)	PA 19-71, Section 1	19-12-18	Offshore Wind	Total Deployment in MWs (AC)	0.00
				No. of Projects In-Service	0

The below plot shows the deployment of resources via DEEP PPAs and public policy contracts through September 2022. The plot is based on data submitted in response to Interrogatory CAE-33 in the EDCs compliance filings dated November 15, 2022.

While this plot shows the total deployment to date, the chart on the previous slide can be used to obtain information on the total selected project capacity by fuel type, which may not be deployed or operational yet.



Clean Energy Options Program (CEOP) and Voluntary Renewable Option (VRO) Program

The Voluntary Renewable Option¹⁰³ (VRO) Program is a modification and continuation of the Clean Energy Options Program (CEOP) that establishes rules for power generation supply offers that market renewable energy attributes that exceed the annual minimum requirement for renewable portfolio standards (RPS). In general terms, the VRO establishes rules for electricity supply offers that encompass renewable energy attributes beyond the minimum requirement.

The modified CEOP will continue to provide customers who remain with their utility's Standard Service (SS) generation supply an option to support renewable energy through the purchase of incremental renewable energy certificates (RECs). The Authority established universal standards for the REC-only and VRO offers, including that the certificates that support such offers may only originate from the ISO-NE, New York, or PJM control areas and that the certificates must reflect resources defined as Class I in Conn. Gen. Stat. § 16-1.

The Authority further modified the Disclosure Label required for all supplier offerings to better explain to consumers how certificates support renewable energy and how their generation is supplied. These changes further Connecticut's energy policies by reducing local greenhouse gas emissions and supporting local, sustainable, renewable energy sources, and they offer a more transparent process for customers purchasing offers with renewable energy attributes that exceed the statutory requirements.

CEOP Background

PURA established the CEOP, pursuant to Conn. Gen. Stat. § 16-244c, in 2005 to allow consumers to support renewable energy above the minimum RPS.¹⁰⁴ At the time of CEOP's inception, customers had limited options for supporting renewable resources in excess of the RPS. CEOP allowed customers, whether they received supply from SS or a third-party supplier, to participate in a REC-only program that was applied as an adder to their bill. The Authority modified and extended the program over time.¹⁰⁵

CEOP to VRO

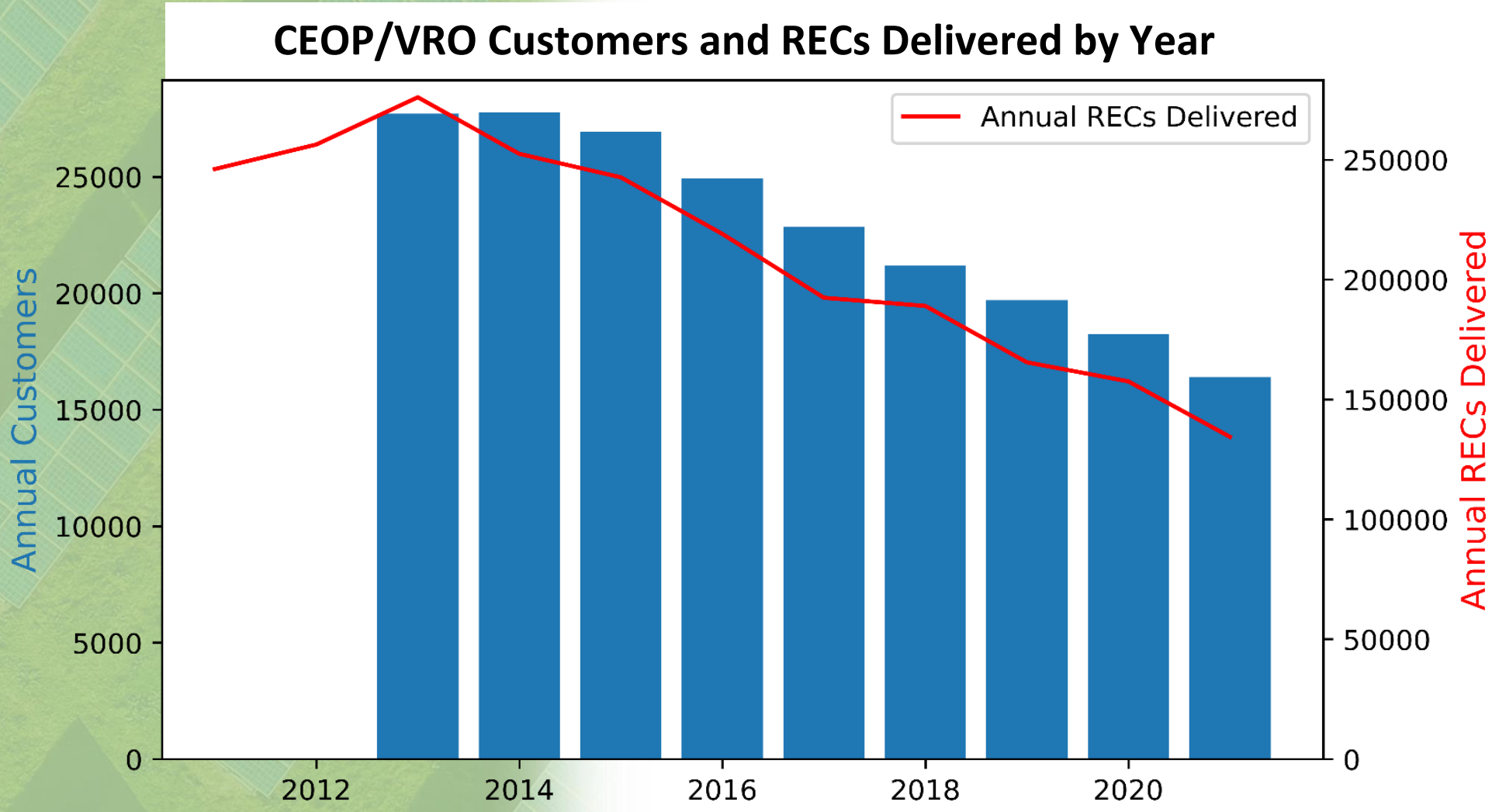
Since 2005, nationwide REC markets have emerged and matured, and suppliers began marketing offers that exceeded Connecticut's RPS. Some supplier offers now include energy plus the RECs claimed by suppliers in excess of the RPS, creating a bundled product, commonly referred to as a voluntary renewable offer. Over time, the number of suppliers offering voluntary renewable offers has increased.

Due to the presence of voluntary renewable offers in the market, in 2016 the Authority announced it would develop and implement a new program in place of CEOP to advance Connecticut's voluntary renewable market and established a proceeding to do so.¹⁰⁶ Although the Authority indicated it was ending CEOP at the time, it continued the program pending approval of a successor program. See, Motion No. 5 Rulings, in Docket No. 16-12-29, dated [July 11, 2018](#) and [October 2, 2019](#). As noted above, the successor program to the CEOP is the VRO Program, which was approved through the Decision dated October 21, 2022 in Docket No. 16-12-29, PURA Development of Voluntary Renewable Options Program.

Key Elements of VRO Program

- The VRO Program commenced January 2021
- Only 3 REC-only suppliers until 2025 (Sterling Planet; Community Power; 3 Degrees)
- 2 options for REC-only suppliers – 50% or 100% option
- PURA will monitor the program and participation through compliance filings under Docket No. 16-10-22 and under each individual CEOP supplier license dockets
- Current CEOP suppliers with existing customer contracts will be allowed to continue until January 2022
- Any new REC-only contracts entered into with customer as of January 1, 2021 must meet the new VRO program standards as revised in the VRO Decision
- RECs may originate only from ISO-NE, New York, and/or PJM control areas

The below plot shows annual RECs delivered and annual customer enrollment in the CEOP/VRO Program. Complete data for 2022 was not available at the time of creation of the report.¹⁰⁷ Also note, customer enrollment data in the CEOP Program was not available for all utilities for 2011 and 2012.



Renewable Portfolio Standards (RPS)

The RPS was designed and implemented at the beginning of electric deregulation to bring online renewable energy resources supporting state policy goals not otherwise supported in the regional markets.

Each year, electric suppliers in Connecticut must comply with the RPS¹⁰⁸ by procuring and properly settling the necessary amount of renewable energy certificates (RECs)¹⁰⁹ to meet the percentage targets for each RPS Class^{110,111,112}, meaning that they must obtain environmental attributes on a one-to-one basis for the specified percentage of their retail load supplied from renewable resources within a calendar year, commonly referred to as the RPS compliance year.

Connecticut has adopted an RPS requirement for Class I energy which progressively increases the required number of Class I RECs procured from 17% of a supplier's retail offering in 2018 to 40% by 2030, more than doubling the State's commitment to Class I renewable resources over such time period.

In lieu of procuring and settling RECs, a load serving entity (LSE) can make an Alternative Compliance Payment (ACP) to satisfy all or a portion of their annual RPS obligation. In addition, an LSE can bank RECs for future use. However, banked RECs will expire if not timely applied to a future RPS Compliance Year.

The Connecticut RPS program is satisfied using the New England Power Pool (NEPOOL) Generation Information System (GIS) platform regarding the creation and settlement of all RECs.

Year	Class I	Class II or Class I (add'l)	Class III	Total
2018	17.0%	4.0%	4.0%	25.0%
2019	19.5%	4.0%	4.0%	27.5%
2020	21.0%	4.0%	4.0%	29.0%
2021	22.5%	4.0%	4.0%	30.5%
2022	24%	4.0%	5.0%	33.0%
2023	26%	4.0%	5.0%	35.0%
2024	28%	4.0%	5.0%	37.0%
2025	30%	4.0%	4.0%	38.0%
2026	32%	4.0%	4.0%	40.0%
2027	34%	4.0%	4.0%	42.0%
2028	36%	4.0%	4.0%	44.0%
2029	38%	4.0%	4.0%	46.0%
2030	40%	4.0%	4.0%	48.0%

Above table: Connecticut annual required percentages of Class I, Class II and Class III renewables sources for each RPS compliance year.

Demonstrating RPS Compliance

Load serving entities (LSEs) demonstrate compliance with the RPS requirements by filing exhibits and supporting documents in dockets initiated by PURA. For the 2021 Compliance Year, Docket 22-06-01 is where entities were required to demonstrate that an appropriate amount of their retail load was supplied by renewable resources.

Generation Month	REC Trading Period	REC Quarter
Jan. - March	July 15 - Sept. 15	First (1)
April - June	Oct. 15 - Dec. 15	Second (2)
July - Sept.	Jan. 15 - March 15	Third (3)
Oct. - Dec.	April 15 - June 15	Fourth (4)

There is a lag in REC creation. For instance, Q4 2021 RECs were created April 15, 2022 and it is permissible for RECs to be transacted and settled for the 2021 Compliance Year through June 15, 2022. To allow additional time for the administrative work to be completed before filing, the annual filing deadline for the 2021 Compliance Year was not until October 15, 2022. This lag period is typical, as the end dates for the trading periods to transfer/settle RECs are approximately six (6) to nine (9) months after the calendar period dates, as seen in the table below.

CT Banking Requirements for Excess RECs

Each LSE is allowed to bank excess Class I, II, and III RECs for up to two years. The number of banked RECs allowed in each class in any year cannot be more than 30% of the LSE's REC obligation in each respective class.¹¹³ The allowance of banked RECs became available with the 2009 RPS requirements, as the amended regulation became effective on December 22, 2009.

Alternative Compliance Payment (ACP) for Shortage of RECs

Any wholesale supplier of an EDC or any electric supplier that fails to meet the RPS requirements (shortage of RECs) for Class I is required to pay four cents per kilowatt hour (\$40 per MWh) and for Class II is required to pay two and one-half cents per kilowatt hour (\$25 per MWh), and such payment shall be refunded to ratepayers.¹¹⁴ Previously, the statutes set the ACP at \$55 per MWh for both Class I and II; however, this was amended in 2017 to be effective in 2021.¹¹⁵

Any excess amount remaining shall be applied to reduce the costs collected through the Non-Bypassable Federally Mandated Congestion Charge (NBFMCC). Any ACP required of the LSE shall be made to the EDCs in proportion to the load the LSE served in each EDC's territory.

See the next page for a chart that describes the amount for each ACP based on resource class and year.

Alternative Compliance Payment (ACP) for Shortage of RECs (Cont.)

Pursuant to Conn. Gen. Stat. § 16-243q(b) and Decisions in Docket Nos. 05-07-19 and 05-07-19RE02, any LSE that fails to meet the Class III requirements is subject to an ACP of \$31 per MWh, 25% of which shall go to the Clean Energy Fund (CEF) with the remainder being divided between the EDCs' Conservation and Load Management Funds in proportion to the load the LSE served in their respective territories.

Class I & II pursuant to Conn. Gen. Stat. §16-244c(h)(1).

Class III pursuant to Conn. Gen. Stat. §16-243q(b) and Decision in Docket No. 05-07-19.

Class I, II and III ACP (note, there is no change to Class III ACP):

Alternative Compliance Payments (ACPs) for Class I, II & III		
Up to Year 2017:	Class I	\$55 / REC
	Class II	\$55 / REC
	Class III	\$31 / REC
For Year 2018 up to 2020:	Class I	\$55 / REC
	Class II	\$25 / REC
	Class III	\$31 / REC
On or After Year 2021:	Class I	\$40 / REC
	Class II	\$25 / REC
	Class III	\$31 / REC



Report and Program Notes

This report will generally act as a framework for future annual reports; however, the Authority is committed to expanding and improving the type, quality, and presentation of the data included in this annual report, and will seek to make incremental improvements each year, to the extent possible. The Authority reserves the right to add, edit, or remove any part of the report, including the addition or removal of programs, as appropriate.

Appendix 1:

Additional Resources & Documents

RRES

Eversource

- [Program Website](#)
- [Program Manual](#)
 - Note, a more recent version may be available on the EDC website
- [Key Program Changes](#)

UI

- [Program Website](#)
- [Program Manual with Attachment on Key Program Changes](#)
 - Note, a more recent version may be available on the EDC website

NRES

Eversource

- [Key Program Resources](#)
- [Program Timelines](#)
- [Program Manual](#)
 - Note, a more recent version may be available on the EDC website

UI

- [Program Website](#)
- [Program Manual](#) with Attachments on Program Timeline and Key Links
 - Note, a more recent version may be available on the EDC website

ESS

- [Program Website](#)
- [Program Manual](#)
 - Note, a more recent version may be available on the EDC website
- [Annual Program Review](#)

EV Charging

- [Eversource Hyperlinks and Key Program Resources](#)
- [UI Commercial Website](#)
- [UI Residential Website](#)
- [Program Manual](#)
 - Note, a more recent version may be available on the EDC website
 - [UI version](#) with Program Timeline and Helpful links appended to the end

PPAs

DEEP Integrated Resources Plan, dated October 2021:

<https://portal.ct.gov/-/media/DEEP/energy/IRP/2020-IRP/2020-Connecticut-Integrated-Resources-Plan-10-7-2021.pdf>

DEEP draft Integrated Resources Plan, dated December 2020:

<https://portal.ct.gov/-/media/DEEP/energy/IRP/2020-IRP/2020-CT-DEEP-Draft-Integrated-Resources-Plan-in-Accordance-with-CGS-16a-3a.pdf>

Enabling legislation:

- P.A. 13-303, Section 6 – Class I resources up to 4% of the load of the CT EDCs
- P.A. 13-303, Section 8 – Energy and/or RECs from run-of-the-river hydropower, landfill methane gas, or biomass Class I resources up to 4% of CT's load, (100-150 MW of capacity up to 10 years)
- P.A. 13-303, Sections 6 and 7 and P.A. 15-107, Section 1(c) – 3 State RFP (CT, MA, and RI) solicitation for clean energy and transmission procuring large-scale projects that no state could procure if it acted unilaterally
- P.A. 13-303, Section 8 *Amended* by P.A. 17-144, Section 10 – CT Class I resources from offshore wind, fuel cell, and anaerobic digestion up to 3.27% of the load of the 2 CT EDCs
- P.A. 15-107, Section 1(b) and 1(c) – Small-scale 2-20 MW – Class I & III resources, passive demand response, and energy storage systems to reduce electric demand and improve the state's resiliency and grid reliability, especially during winter peak demand
- P.A. 17-3, Section 1 – Zero Carbon – solicited offers for zero carbon electricity generating resources that deliver power into the control area of the regional independent system operator, including, but not limited to, eligible nuclear power generating facility, eligible hydropower, zero carbon CT Class I renewable energy sources and energy storage systems that are co-located with qualifying zero carbon resources, in order to secure cost-effective zero carbon resources consistent with the state's greenhouse gas emissions reduction goals and other energy and environmental goals and policies up to the statutory maximum of 12,000,000 MWh per year.
- P.A. 19-71, Section 1 – Offshore Wind – to solicit offers from providers of energy derived from offshore wind facilities that are Class I renewable energy sources for up to 2,000 MW AC in the aggregate.

RSIP

CGB Website:

- <https://www.ctgreenbank.com/rsip-resources/>

CGB Memo on RSIP Program progress:

- <https://www.ctgreenbank.com/wp-content/uploads/2021/02/RSIP-Legislative-Report-2019-2020.pdf>

GoSolarCT Website:

- <https://www.gosolarct.com/rsip-status/>

SCEF

PURA Docket(s):

- Docket No. 19-07-01, Final Decision dated December 18, 2019.
- Docket No. 19-07-01RE01, Final Decision dated September 15, 2021.
- Docket No. 19-07-01RE02, Final Decision dated April 28, 2021.
- Docket No. 21-08-04, Final Decision dated November 17, 2021.
- Docket No. 22-08-04, Final Decision dated December 7, 2022.

EDCs' Email Addresses:

Eversource = SCEF@eversource.com

UI = SCEF@uinet.com

Eversource

- [Key Program Links](#)
- [Program Website](#)
- [Key Program Changes](#)
- [Program Manual](#)
- [Program Timeline](#)

UI

- [Program Website](#)
- [Program Manual](#) with Key Program Changes, Program Timeline, and Key Links Appended

LREC/ZREC

EDCs' Email Addresses:

Eversource = LREC.ZREC@eversource.com

UI = lrec.zrec@uinet.com

LREC/ZREC Websites:

Eversource

<https://www.eversource.com/content/ct-c/residential/save-money-energy/explore-alternatives/renewable-energy-credits/resources-administration>

United Illuminating

[LRECZREC Program Information and Documents - UI \(uinet.com\)](#)

Docket No. 11-12-06, Final Decisions dated April 4, 2012; May 20, 2014; January 21, 2015; December 16, 2015; April 25, 2018; December 16, 2015

Other significant legislation:

- Public Act 11-80 which authorized 5 years of LREC and up to 6 years of ZREC procurement;
- Public Act 16-196 which authorized LREC technology participation in Year 6 procurement with a 50/50 split of ZREC statutory budget of \$8M to LREC and ZREC technologies respectively, all under ZREC statute;
- Public Act 17-144 which authorized Year 7 procurement, same statutory budgets as year 6;
- Public Act 18-50 which authorized Year 8 procurement, same statutory budgets as year 6 with the exception of Small ZREC (combined year 7 and 8 small ZREC budgets in order to utilize funds before LREC/ZREC program expired at end of calendar year 2019);
- Public Act 19-35 which authorized year 9 and 10 procurements, same statutory budgets as year 6.

VNM

PURA Docket(s):

- DN 13-08-14, Final Decisions dated July 21, 2014; October 15, 2014; May 27, 2015; March 23, 2016
- Docket No. 13-08-14RE01, Decision dated December 17, 2014; Reopened to address implementation for “stand alone” VNM facilities and Established calculation of VNM credits for all Customer Host facilities.
- Docket No. 13-08-14RE02, Decision dated December 2, 2015; Eliminated Unassigned VNM Credits that were carried to end of year. All VNM credits now allocated each month to beneficial accounts without carrying over to following months.
- Docket No. 15-09-08, Decision dated February 3, 2016; Agriculture ownership structure of VNM facility
- Docket No. 13-08-14RE03, Decision dated October 26, 2016; Commercial Operation time period and Agriculture Host documentation
- Docket No. 13-08-14RE04, Decision dated July 20, 2018; Added Agriculture Anaerobic Digesters located at Dairy Farms
- Docket No. 13-08-14RE05, Decision dated October 21, 2019; Increased Annual VNM Caps

Eversource

- [Program Timeline](#)
- [Program Website](#)

UI

- [Key Program Info and Links](#)

CEOP/VRO

PURA Docket(s):

Docket No. 16-12-29, PURA Development of Voluntary Renewable Options Program, Final Decision dated October 21, 2020.

CEOP Providers Contact Information:

- Sterling Planet –
- [Contact Us | Renewable Energy Benefits \(sterlingplanet.com\)](#)
- [Regional Energy Certificates for Your Home | Regional Green Power \(sterlingplanet.com\)](#)
- Community Power –
- [Connecticut - Clean Energy Options - Community Energy \(communityenergyinc.com\)](#)
- 3 Degrees –
- [Contact Us \(3degreesinc.com\)](#)

VRO Disclosure Label:

- [DisclosureLabelElectricSupplierTemplatepdf.pdf](#)

RPS

NEPOOL GIS website:

<https://www.nepoolgis.com>

Frequently asked questions, exhibits and guide to RPS Compliance can be found under the following link on PURA's website:

<https://portal.ct.gov/PURA/Electric/Information-for-Electric-Suppliers>

The following are links to PURA Annual RPS Compliance Exhibits A, B, C and D:

<https://portal.ct.gov/-/media/PURA/RPS/RPS-Exhibit-A-2020---Final.xlsx>

<https://portal.ct.gov/-/media/PURA/electric/Exhibits-B-C-and-D.xlsx>

A Review of Connecticut's Renewable Portfolio Standards:

<http://ceeep.rutgers.edu/wp-content/uploads/2013/11/CTRPSReview7202011.pdf>

List of RPS Compliance Dockets and final Decision dates:

- Year 2009 RPS - Docket No. 10-09-06, Final Decision dated October 31, 2012
- Year 2010 RPS - Docket No. 11-09-03, Final Decision dated November 21, 2013
- Year 2011 RPS - Docket No. 12-09-02, Final Decision dated June 4, 2013
- Year 2012 RPS - Docket No. 13-06-11, Final Decision dated February 11, 2015
- Year 2013 RPS - Docket No. 14-05-35, Final Decision dated December 23, 2015
- Year 2014 RPS - Docket No. 15-09-18, Final Decision dated September 28, 2016
- Year 2015 RPS - Docket No. 16-07-20, Final Decision dated November 8, 2017
- Year 2016 RPS - Docket No. 17-06-23, Final Decision dated January 23, 2019
- Year 2017 RPS - Docket No. 18-06-28, Final Decision dated July 1, 2020
- Year 2018 RPS - Docket No. 19-06-01, Final Decision dated March 3, 2021
- Year 2019 RPS - Docket No. 20-06-01, Final Decision dated May 19, 2021
- Year 2020 RPS - Docket No. 21-06-01, November 17, 2021
- Year 2021 RPS - Docket No. 22-06-01, Final Decision dated November 23, 2022



Program Costs

- For more information on the costs associated with the programs included in this report, See, Eversource and UI's response to Interrogatories CAE-60 and CAE-61.
- Eversource's responses are available [here](#), as; UI's response are available [here](#). You can read more about CT's energy profile from the U.S. Energy Information Administration (EIA) Connecticut [Energy Profile Analysis](#).

Appendix 2: Program Objectives

RRES Program:

The Authority established the following five (5) objectives to guide the development, implementation, and administration of the RRES Program.

1. The sustained, orderly development of the state's solar industry, ensuring at a minimum that Connecticut's annual historical deployment of residential solar is maintained (i.e., approximately 50-60 MW per year);
2. Achieve a 100% zero carbon electric grid by 2040, including by promoting additional annual deployment of residential renewable energy as needed;
3. Balance participant costs and benefits with non-participant costs and benefits and electric system costs and benefits;
4. Ensure program accessibility for customers, by providing customer protections both explicitly through resources and disclosure forms, and also through simplified program and tariff designs;
5. Encourage increased inclusivity overall, as well as program participation by low and moderate-income (LMI) customers and customers in environmental justice communities.

NRES Program:

The Authority established the following five (5) objectives to guide its development, implementation, and administration of the NRES Program.

1. Foster the sustained, orderly development of the state's Class I renewable energy industry;
2. Deploy the full megawatt capacity allowable under statute, to the extent possible (see Conn. Gen. Stat. § 16-244z(c)(1)(A));
3. Ensure least-cost outcomes through the annual solicitation process;
4. Enable program accessibility for customers through simplified program and tariff designs; and
5. Encourage increased inclusivity overall, as well as program participation by customers in underserved and environmental justice communities.

SCEF Program:

The Authority established the following three (3) objectives to guide its development, implementation, and administration of the SCEF Program.

1. Annually and cost-effectively allocate up to 25 megawatts to SCEFs, as defined in Conn. Gen. Stat. § 16-244x;
2. Provide savings to specific categories of customers, particularly customers with low- to moderate-income (LMI), low-income service organizations, and customers who reside in environmental justice communities; and
3. Lower or eliminate barriers to entry for Subscriber Organizations, if and when possible.

ESS Program:

The Authority adopted the following seven (7) objectives to guide the development and implementation of the ESS Program.

1. Provide positive net present value to all ratepayers, or a subset of ratepayers paying for the benefits that accrue to that subset of ratepayers;
2. Provide multiple types of benefits to the electric grid, including, but not limited to, customer, local, or community resilience, ancillary services, peak shaving, and avoiding or deferring distribution system upgrades or supporting the deployment of other distributed energy resources;
3. Foster the sustained, orderly development of a state-based electric energy storage industry;
4. Prioritize delivering increased resilience to: (1) low-to-moderate income (LMI) customers, customers in environmental justice or economically distressed communities, customers coded medical hardship, and public housing authorities as defined in Conn. Gen. Stat. § 8-39(b); (2) customers on the grid-edge who consistently experience more and/or longer than average outages during major storms; and (3) critical facilities as defined in Conn. Gen. Stat § 16-243y(a)(2);
5. Lower the barriers to entry, financial or otherwise, for electric storage deployment in Connecticut;
6. Maximize the long-term environmental benefits of electric storage by reducing emissions associated with fossil-based peaking generation; and
7. Maximize the benefits to ratepayers derived from the wholesale capacity market

EV Charging Program:

The Authority established the following four (4) objectives to guide the development, implementation, and administration of the EV Charging Program.

1. Enable Connecticut's commitment to the ten state Memorandum of Understanding (MOU): to collectively deploy 3.3 million ZEVs among the participating states by 2025, and the deployment of approximately 125,000-150,000 EVs in Connecticut by 2025;
2. Facilitate the seamless integration of new and emerging ZEV-related technologies, to realize the potential electric system benefits of ZEVs, along with the economic, health, and environmental benefits they provide;
3. Deploy and integrate ZEVs into Connecticut's electric grid (i.e., the distribution system infrastructure) as a key component of meeting the objectives of the Authority's Framework for an Equitable Modern Grid, namely:
 - a. Support (or remove barriers to) the growth of Connecticut's green economy;
 - b. Enable a cost-effective economy-wide transition to a decarbonized future;
 - c. Enhance customer access to a more resilient, reliable, and secure commodity; and d. Advance the ongoing energy affordability dialogue in the State, particularly in underserved communities; and
4. Achieve an equitable transition to wide-scale EV deployment across all communities in Connecticut

Appendix 3: Additional Tables

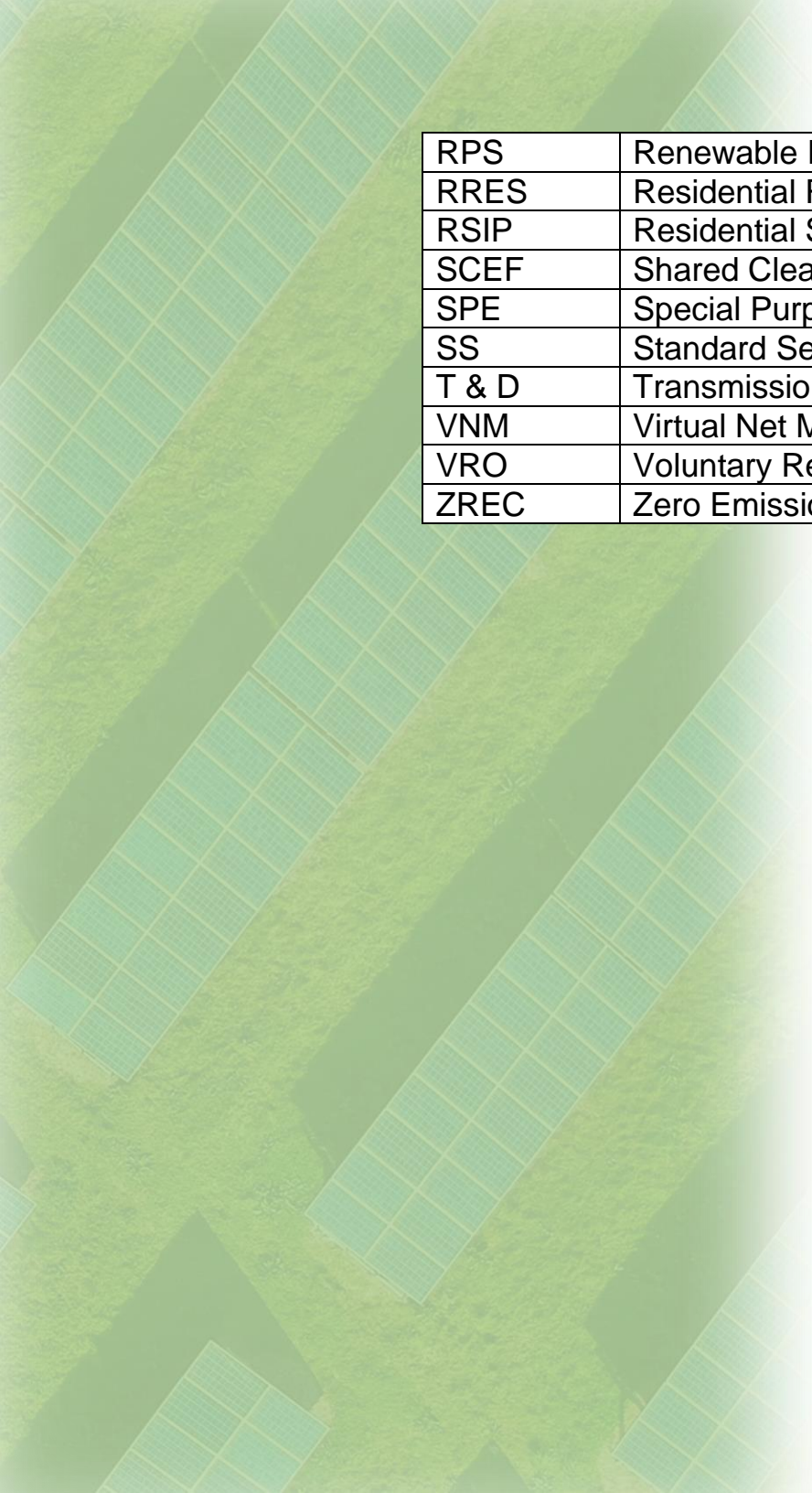
UI ¹¹⁶		As of 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total (2011-2022)
Solar Photovoltaic (AC)	Residential	0.00	0.19	0.91	1.52	7.27	11.04	10.12	12.47	16.56	11.58	6.97	6.33	84.96
	Non-Residential	0.05	0.31	3.19	3.33	2.51	7.9	5.68	5.91	8.53	5.48	6.17	4.28	53.34
	Utility	0	0	0	0	0	0	0	0	0	4.98	7.79	0	12.77
Wind		0	0	0	0	0	0	0	0	0	0	0	0	0.00
Fuel Cells		0	0	0.7	16.16	1.4	0.26	0.21	2.79	0.46	6.27	0	0.79	29.04
Battery Storage		0	0	0	0	0	0	0	0	0	0	0	0	0.00
Energy Efficiency/Demand Response		8.8	7	6	7.3	10.6	11.1	11.3	3.4	8.4	10.1	12.42	12.36	108.78
Other Class I, II, or III Resources		0	0	0	0	0	0	0	0.8	0.04	0	0.4	0	1.24

Eversource ¹¹⁷		As of 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total (2011-2022)
Solar Photovoltaic (PV)	Residential	11.14	3.32	6.96	18.71	40.37	41.84	27.36	30.44	41.84	47.15	67.08	47.28	383.49
	Non-Residential	14.25	3.18	14.6	14.75	18.3	24.24	33.57	37.26	40.58	39.89	26.85	11.37	278.84
	Utility	0	0	5	4	0	0	20	20	0	0	18.1	23.2	90.3
Wind		0.08	0.01	0	0.01	4.98	0	0	0	0	0	0	0	5.08
Fuel Cells		5	3	2.7	4.38	2.55	7.86	6.99	3.93	2.58	7.62	13.47	3.69	63.77
Battery Storage		0	0	0	0	0	0	0.02	0.46	1.65	1.73	4.71	3.51	12.08
Energy Efficiency/Demand Response		884.55	124.75	123.36	123.41	166.15	83.66	94.01	86.96	60.11	100.37	116.63	122.45	2086.41
Other Class I, II, or III Resources		129.54	0.62	42.81	1.34	3.64	5.2	2.91	0.18	1.21	0.63	1.59	0.33	190

The above tables highlight deployment data by energy type for each EDC, separated by year.

Appendix 4: Glossary of Acronyms

Acronym	Meaning
ACP	Alternative Compliance Payment
CEF	Clean Energy Fund
CEOP	Clean Energy Options Program
CGB	Connecticut Green Bank
CIEC	Connecticut Industrial Energy Consumers
C&LM	Conservation and Load Management
DEEP	Department of Energy and Environmental Protection
DER	Distributed Energy Resource
EDC	Electric Distribution Company
ESS	Energy Storage Solutions
EV	Electric Vehicle
FERC	Federal Energy Regulatory Commission
GIS	Generation Information System
kWh	Kilowatt hour
LMI	Low to moderate income
LREC	Low Emission Renewable Energy Credit
LRS	Last Resort Service
LSE	Load Serving Entity
MAQ	Maximum Annual Quantity
MW	Megawatts
NBFMCC	Non-Bypassable Federally Mandated Congestion Charge
NECEC	Northeast Clean Energy Council
NEPOOL	New England Power Pool
NRES	Non-Residential Renewable Energy Solutions
PPA	Purchase Power Agreement
PURA	Public Utilities Regulatory Authority
PURPA	Public Utility Regulatory Policies Act
REC	Renewable Energy Credit
RGGI	Regional Greenhouse Gas Initiative



RPS	Renewable Portfolio Standards
RRES	Residential Renewable Energy Solutions
RSIP	Residential Solar Incentive Program
SCEF	Shared Clean Energy Facility
SPE	Special Purpose Entity
SS	Standard Service
T & D	Transmission and Distribution
VNM	Virtual Net Metering
VRO	Voluntary Renewable Option Program
ZREC	Zero Emission Renewable Energy Credit

Appendix 5: Endnotes

¹ Excludes the Conservation and Load Management (C&LM) Plan. The C&LM plan was excluded to improve graph scale, as the deployed MW are higher than other programs.

² Residential solar PV ("Solar: Resi") is defined as solar deployed at a residential customer's site behind the utility meter. Non-Residential solar PV ("Solar: Non-Resi") is defined as solar deployed at a commercial or industrial customer's site behind the utility meter. Utility-scale solar PV ("Solar: Utility-Scale") is defined as solar connected directly to the distribution grid. Definitions from Docket No. 17-12-03RE09 CAE-1 Footnote 2, dated July 24, 2020.

³ The plots exclude the "Other" category of Class I, II and III renewable energy sources. Of the energy generated by the "Other" resource class, a large majority of the production is attributed to Public Act 05-01.

⁴ Plots based on data submitted in response to Interrogatories CAE-33 and CAE-35 in Docket No. 22-08-01 on November 15, 2022.

⁵ The Energy Efficiency value for 2022 for Eversource is the company goal for the year, as opposed to only data valid through September 30, 2022.

⁶ See, Eversource and UI Responses to CAE-33.

⁷ The storage values are AC behind the meter energy storage systems. The Company is uncertain if they are associated with a program.

⁸ General Statutes of Connecticut

⁹ For Public Acts related to each program, see the bottom of each relevant Statutory Authority section.

¹⁰ Or until the last month in 2022 where data was readily available.

¹¹ See, EDC Responses to CAE-33 and CAE-38 for all program data except for ESS and EV data, as well as ESS annual deployment data. The data is approximate and is subject to the conditions outlined in each EDC response. For EV and ESS annual deployment data reference EDC responses to CAE-64.

¹² Some residential solar deployments may be double counted with the LREC/ZREC Program or with Virtual Net Metering.

¹³ The number of projects deployed through the RSIP program as of October 2021 is 43,911, but this does not account for projects not deployed through RSIP.

¹⁴ See, EDC Compliance, dated November 14 and November 15, in Docket No. 22-08-02. Data for the RRES Program is through October 2022.

¹⁵ The VNM Program data excludes the subset of VNM deployment that is also counted in the LREC/ZREC Program.

¹⁶ UI customers enrolled data not available for 2011 and 2012.

¹⁷ See, EDC Compliance, CAE-38, dated November 14 and November 15, in Docket No. 22-08-02.

¹⁸ All ports installed as part of CT EV Charging Program authorized in PURA docket No. 17-12-03RE04

¹⁹ Assumes average capacity of port installed at 7.2 kW/port.

²⁰ Assumes average capacity of Level 2 port installed at 7.2 kW/port of and DCFC port installed at 172 kW/port.

²¹ See, EDC Compliance, dated November 14 and November 15, in Docket No. 22-08-02. Data for the MW deployment of RRES projects is through October 2022.

²² See, EDC Compliance, dated November 14 and November 15, in Docket No. 22-08-02. Data for the number of RRES projects is through October 2022.

²³ For the LREC/ZREC, NRES Program, and SCEF Programs, Annual Projects Deployed reflects the calendar year in which the Projects were energized.

²⁴ The VNM Program data excludes VNM projects that are also participating in the LREC/ZREC Program.

²⁵ For the CEOP/VRO Program, per the UI record retention policy, the Wholesale Power Group does not have the number of enrolled customers for the years 2011 and 2012 available at this time.

²⁶ The majority of DEEP Procurements are project selections which are subsequently split with approximately 80% of the approved capacity allocated to Eversource, and the other 20% allocated to UI. As such, the number of projects reported as deployed by each EDC annually in the chart is the number reported by each EDC (e.g., for P.A. 15-107, Section 1(c), in 2020, 1 projects was reported as put into service by each EDC, and the number reported in this chart is also 1 project put into service, as opposed to summing the values to 2). There are several exceptions. For Project 150, only 1 EDC reported projects in service, as such the number of projects put into service is listed as the number provided by that utility (3). P.A. 13-303, Section 8 for 2015 and for P.A. 15-107, Section 1(c) for 2021 had different numbers of projects reported as deployed for each EDC, and as such, the maximum number between the two utilities was reported in this chart. For P.A. 15-107, Section 1(b), the annual number of projects reported as deployed by UI match the number of L/T PPA projects reported as deployed from Eversource, so these projects were treated as single procurements split between the two utilities (e.g., if each utility reported 2 projects deployed in a year, 2 projects were

reported in this chart, as opposed to 4). However, for each year, this number was summed with the number of PDR projects reported as deployed by Eversource to arrive at the total annual project deployments across the EDCs. This is the same methodology as used in the Docket No. 17-12-03RE09 Decision.

²⁷ C&LM projects include weatherization audits, projects, etc. Not included are customer retail rebates (i.e., lighting, HVAC).

²⁸ 2011 for C&LM includes YTD from 2000. Includes both Active and Passive Demand Resources that are customer sited.

²⁹ UI: C&LM Plan quantifies Energy Savings resulting from implemented Energy Efficiency measures. MW Load Savings per year are included in place of Annual Deployment in MWs and No. Projects in Service is not relevant to this program. Eversource: C&LM projects include weatherization audits, projects, etc. Not included are customer retail rebates (i.e., lighting, HVAC). As such, number of projects shown is data from Eversource only.

³⁰ All projects in service are residential projects (See, Eversource response to CAE-38).

³¹ See, EDC Responses to CAE-33 and CAE-38 for all program data except for ESS and EV data, as well as ESS annual deployment data. The data is approximate and is subject to the conditions outlined in each EDC response. For EV and ESS annual deployment data reference EDC responses to CAE-64.

³² The Authority assumes the end dates largely match the EDC responses to CAE-63.

³³ ISO-NE data was used to generate the graph. The ISO-NE data can be found at [ISO New England - Energy, Load, and Demand Reports \(iso-ne.com\)](https://www.iso-ne.com/load-data-reports/annual-generation-load-data) under the data table labeled “Annual Generation and Load Data for ISO NE and the Six New England States.” Retail sales include data for customers within the service territory of the EDCs, as well as customers served by the other utilities in Connecticut.

³⁴ DEEP has developed a third model to calculate greenhouse gas emissions from the Connecticut power sector. This third model will be deployed in future DEEP reports. A description of DEEP’s new model can be found here: [ElectricSectorPublicMeetingPresentation-2021-1026-finalc.pdf](https://www.ctgreenbank.com/wp-content/uploads/2021/10/2021-10-26-finalc.pdf).

³⁵ The data in the graph comes from ISO-NE and can be found here [ISO New England - Energy, Load, and Demand Reports \(iso-ne.com\)](https://www.iso-ne.com/load-data-reports/annual-generation-load-data) under the data table labeled “Annual Generation and Load Data for ISO NE and the Six New England States.”

³⁶ See, [2018 DEEP Greenhouse Gas Emissions](#) Inventory, p. 5.

³⁷ For purposes of consistency, electricity generation from battery sources was excluded for all New England states when creating this graph. Like previous Connecticut-specific electricity generation graphs, the New England-wide electricity generation graph was created using EIA data ([US Electricity Profile 2021 - U.S. Energy Information Administration \(EIA\)](#)).

³⁸ The plots in this section are based on data submitted in CGB Response to CAE-82, pp. 12-13, 17. Additionally, the information found in the text of this section came from CGB Response to CAE-82, pp. 6-7, 9-10.

³⁹ See, Connecticut Clean Energy Industry Report, p. 7, [2021-CT-Clean-Energy-Industry-Report.pdf \(ctgreenbank.com\)](#).

⁴⁰ Plots based on data obtained from the 2021 Connecticut Clean Energy Industry Report. The most recently available report at the time this report was written, can be found here: <https://www.ctgreenbank.com/wp-content/uploads/2022/01/2021-CT-Clean-Energy-Industry-Report.pdf>.

⁴¹ See, EDC Compliance, dated November 14 and November 15, in Docket No. 22-08-02 for RRES application data.

⁴² Deployment data from CAE-64, through September 2022 for Eversource, and October 2022 for UI.

⁴³ The program was also updated substantively several other times, including in 2015 and 2016.

⁴⁴ See, Docket Nos. 17-12-03RE09 and 19-06-36, CGB Brief dated November 12, 2020, pp. 1-2.

⁴⁵ See, Docket No. 17-12-03RE09, CGB Exception dated January 21, 2022, pp. 1.

⁴⁶ See, Motion No. 18, dated September 17, 2020, CGB Residential Solar REC Aggregation.

⁴⁷ For 2022, the “No Program” solar data runs through 9/30/22 for Eversource and 11/10/22 for UI. The RSIP data is captured through 10/31/22. The RRES and LREC/ZREC data are captured through 9/30/22.

⁴⁸ EJ communities include: (a) Distressed municipalities as defined by the CT Department of Economic and Community Development (DECD); and (b) Census block groups that are not in distressed municipalities but in which 30% or more of the population lives below 200% of the federal poverty level (FPL).

⁴⁹ EJ community and distressed municipality shapefiles from CAE-76.

⁵⁰ Note, MW deployed in Georgetown, CT are assigned to the town of Wilton, CT, and MW deployed in Mystic, CT are assigned to Stonington, CT.

⁵¹ The installed values shown in the plot are the cumulative values between Eversource and UI. Data from CAE-55.

⁵² Towns with municipal utilities may have additional residential solar not captured in this plot. However, some municipal utility solar may be captured in cases where the CGB has agreements with municipal utilities to participate in RSIP.

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- ⁵³ Municipal utility service territories do not correspond precisely with town lines (e.g. there are homes that are provided service from a municipal utility but are not located in that municipality and vice versa).
- ⁵⁴ Town population data from [the Connecticut Department of Public Health \(2021 data\)](#)
- ⁵⁵ “Solar MW Capacity Installed” data is also from SEIA and is current through Q2 2022.
- ⁵⁶ Population data is from the [US Census Bureau](#) and is the estimated population by state as of July 2021.
- ⁵⁷ Data on deployment since 2018 from [CAE-80](#).
- ⁵⁸ Projected solar capacity growth is from [Solar Energy Industries Association \(SEIA\)](#) and may not reflect actual capacity growth over the next 5 years.
- ⁵⁹ Data in Tables on this slide from the Final Decision in Docket No. 22-08-03, dated November 9, 2022, pp.5,8.
- ⁶⁰ This value was updated based on EDC Written Exceptions, dated Feb. 10, 2023, p. 4.
- ⁶¹ Each time a renewable generation unit produces, the energy is considered “renewable.”
- LREC: Low emission RECs = e.g. Fuel Cells
 - ZREC: Zero emission RECs = e.g. Solar, Wind, Small Hydro
 - The environmental attributes of each megawatt hour of energy produced = 1 REC
 - ZREC resources may also be eligible as LREC projects in this program
- ⁶² Significant legislation associated with the LREC/ZREC Program can be found in *Appendix 2: Additional Resources & Documents*.
- ⁶³ Maximum number of LRECs or ZRECs that the EDC is obligated to purchase in any Contract Year under the Agreement.
- ⁶⁴ EJ communities include: (a) Distressed municipalities as defined by the CT Department of Economic and Community Development (DECD); and (b) Census block groups that are not in distressed municipalities but in which 30% or more of the population lives below 200% of the federal poverty level (FPL).
- ⁶⁵ EJ community and distressed municipality shapefiles from CAE-76.
- ⁶⁶ Municipal utility service territories do not correspond precisely with town lines (e.g. there are homes that are provided service from a municipal utility but are not located in that municipality and vice versa).
- ⁶⁷ Plots based on data submitted in response to Interrogatories CAE-33 in Docket No. 17-12-03RE09 on December 3, 2021.
- ⁶⁸ See, Eversource and UI Responses to CAE-39.
- ⁶⁹ Municipal or State Customer Hosts fully own, lease or must be under long term contractual arrangement for receipt of power from a VNM facility.
- ⁷⁰ Agricultural Customer Hosts fully own, or hold, an equity interest in a special purpose entity (SPE) that owns the VNM facility.
- ⁷¹ See, Appendix 1 for a definition of behind-the-meter generation.
- ⁷² A table of Final Decisions by PURA that enacted changes to the program over time can be found in *Appendix 2: Additional Resources and Documents*.
- ⁷³ VNM credits pursuant to Conn. Gen. Stat. § 16-244u(6) – “VNM metering credit means a credit equal to the retail cost per kilowatt hour (kWh) the customer host may have otherwise been charged for each kilowatt hour produced by a VNM facility that exceeds the total amount of kWhs used during an EDC monthly billing period.”
- ⁷⁴ PURA is currently contemplating limited modifications to the VNM program in Docket No. 13-08-14RE05 based on the petition filed as [Motion No. 5](#).
- ⁷⁵ Beneficial Account pursuant to Conn. Gen. Stat. § 16-244u – “means an in-state retail end user of an EDC designated by a customer host or an agricultural customer host in the EDC’s service area to receive VNM credits.”
- ⁷⁶ One project in the municipal sector was not able to receive its entire individual annual CAP award due to the sector CAP limits and was included in the count at the ratio of the actual CAP award to the applied for CAP
- ⁷⁷ The partial project from the previous footnote, and one more project in the municipal sector have been awarded Provisional Program VNM caps.
- ⁷⁸ Two projects in the municipal sector were not able to receive their entire individual CAP award due to sector CAP limits.
- ⁷⁹ More details on SCEF Program eligibility can be found in *Appendix 1: Program Eligibility*.
- ⁸⁰ Final Decision dated November 8, 2017, in Docket No. 17-06-28, [Application to Approve the Selected Projects Under the Shared Clean Energy Facility Pilot Program](#)
- ⁸¹ As shown in the plot, for SCEF (pilot and the full program) only the 1.62 MW facility from the pilot is currently deployed. Plot data from the EDCs’ response to CAE-33 as included in their compliance filings, dated November 15, 2022.
- ⁸² Data from Final Decision in Docket No. 22-08-04, dated December 7, 2022.

⁸³ Data from Eversource compliance filing in Docket No. 21-08-02, dated August 24, 2022.

⁸⁴ Data from UI compliance filing in Docket No. 21-08-04, dated July 8, 2022.

⁸⁵ Data for plot, and quantitative information in page text, from CGB response to Interrogatory CAE-81, dated December 30, 2022.

⁸⁶ Data for plot, and quantitative information in page text, from CGB response to Interrogatory CAE-81, dated December 30, 2022.

⁸⁷ Data for EV Tables 1-3,5, and 6 from Final Decision in Docket No. 22-08-06, dated December 14, 2022. Data for EV Tables 4 and 7 from Eversource and UI responses to Interrogatory CAE-67, dated January 12, 2023. Data for EV Table 2 from

⁸⁸ Eversource's reported Residential Single-Family incentives did not clarify whether their Level 2 Charger incentive number reported incentives provided for only Level 2 chargers or if it also included incentives awarded for applications for both Level 2 charger and wiring upgrade rebates. UI provided a more detailed breakdown in their reported totals..

⁸⁹ A list of the enabling legislation can be found in *Appendix 2: Additional Resources & Documents*.

⁹⁰ See, DEEP Response to CAE-79, p. 89.

⁹¹ See, DEEP Response to CAE-79, p. 89.

⁹² See, [DEEP Procurement Plan Update](#).

⁹³ Millstone purchase quantity, from the DEEP Procurement pursuant to P.A. 17-3, Section 1, is based on MWh/year; thus, due to refueling outages, the Contract Maximum Amount varies by year. Seabrook's Contract Maximum Amount of 184.874 is included for the applicable years.

⁹⁴ Project 150 was originally conducted by the Authority, formally known as the Department of Public Utility Control (DPUC), pursuant to Conn. Gen. Stat. §16-244c(j)(2), as amended by Section 124 of P.A. 07-242. By [Decision](#) dated October 20, 2004, in Docket No. 03-07-17, [DPUC Review of Long-Term Contracts](#), a 3-step review and selection process for the PPAs was created and led by the former DPUC, which included the Connecticut Clean Energy Fund and the EDCs. The other ten (10) selections were conducted by DEEP.

⁹⁵ The EDCs note in written exceptions that the Project 150 procurement was a Connecticut Clean Energy Fund procurement. EDC Written Exceptions, dated Feb. 10, 2023, p. 4. The Authority notes that for the purposes of this report, Project 150 is included in the DEEP procurements section.

⁹⁶ See, *Report and Program Notes* section of the report for footnote details. The data in the table came from Eversource and UI's Response to CAE-44.

⁹⁷ The data in the table came from Eversource and UI's Response to CAE-38.

⁹⁸ The majority of DEEP Procurements are project selections which are subsequently split with approximately 80% of the approved capacity allocated to Eversource, and the other 20% allocated to UI. As such, the number of projects reported as deployed by each EDC annually in the chart is the number reported by each EDC (e.g., for P.A. 15-107, Section 1(c), in 2020, 1 projects was reported as put into service by each EDC, and the number reported in this chart is also 1 project put into service, as opposed to summing the values to 2). There are several exceptions. For Project 150, only 1 EDC reported projects in service, as such the number of projects put into service is listed as the number provided by that utility (3). P.A. 13-303, Section 8 for 2015 and for P.A. 15-107, Section 1(c) for 2021 had different numbers of projects reported as deployed for each EDC, and as such, the maximum number between the two utilities was reported in this chart. For P.A. 15-107, Section 1(b), the annual number of projects reported as deployed by UI match the number of L/T PPA projects reported as deployed from Eversource, so these projects were treated as single procurements split between the two utilities (e.g., if each utility reported 2 projects deployed in a year, 2 projects were reported in this chart, as opposed to 4). However, for each year, this number was summed with the number of PDR projects reported as deployed by Eversource to arrive at the total annual project deployments across the EDCs. This is the same methodology as used in the Docket No. 17-12-03RE09 Decision.

⁹⁹ Connecticut Light & Power administers the Project 150 contracts. The Authority directed costs to be shared between UI and CL&P in accordance with the cost allocation agreement approved in the Decision in Docket No. 03-07-17RE03.

¹⁰⁰ Connecticut Light & Power administers the P.A. 11-80, Section 127 projects. The United Illuminating Company has a Cost Sharing Agreement (CSA) with CL&P that was approved by PURA.

¹⁰¹ The Millstone contract Buyer's Entitlement Percentage changes each year throughout the term and includes a Contract Maximum which is unique to this PPA. We included the Contract Maximum (MWh/hr) amount for 2021 from Exhibit C in the PPA.

¹⁰² P.A. 18-50, Section 3 is not applicable to The United Illuminating Company.

¹⁰³ Final [Decision](#) dated October 21, 2020, in Docket No. 16-12-29, [PURA Development of Voluntary Renewable Options Program](#).

¹⁰⁴ See, Decisions dated April 21 and October 20, 2004, and February 17 and April 21, 2005, in [Docket No. 03-07-16, Investigation of Alternative Transitional Standard Offer Services for United Illuminating and CL&P Customers](#).

¹⁰⁵ See, [Decision](#) dated September 27, 2007, in Docket No. 07-01-09, [DPUC Consideration of the Connecticut Clean Energy Options Program for 2008](#); See also, [Decision](#) dated March 30, 2011, in Docket No. 10-05-07, [PURA Review of the Connecticut Clean Energy Options Program](#).

¹⁰⁶ [Decision](#) dated December 21, 2016, in Docket No. 10-05-07RE01, [PURA Review of the Connecticut Clean Energy Options Program](#).

¹⁰⁷ Data from UI Compliance dated November 15, 2022, Document 1a-CAE-038, and Eversource Compliance dated November 15, 2022, Document 1a-CAE-038; pursuant to Order No. 1 and Section II.B.1.a. of the Final Decision in Docket No. 17-12-03RE09.

¹⁰⁸ Pursuant to Conn. Gen. Stat. §§ 16-245a, 16-244c(h)(1), and 16-243q.

¹⁰⁹ One (1) megawatt hour (MWh) of renewable energy = one REC

¹¹⁰ Class I: Solar, wind, fuel cell, geothermal, landfill methane gas, anaerobic digestion or other biogas derived from biological sources, run-of- river hydro, and sustainable biomass. Pursuant to Conn. Gen. Stat. §§ 16-1(a) (20).

¹¹¹ Class II: Trash-to-energy facility. Pursuant to Conn. Gen. Stat. §§ 16-1(a) (21).

¹¹² Class III: Combined heat and power systems, waste heat recovery and electric savings from conservation and load management programs or demand side management projects. Pursuant to Conn. Gen. Stat. §§ 16-1(a) (38). Note: After January 1, 2014, programs supported by ratepayers are not eligible for Class III.

¹¹³ Pursuant to Conn. Agencies Regs. 16-245a-1(e).

¹¹⁴ Pursuant to Conn. Gen. Stat. §§ 16-245(k) and 16-244c(h)(1).

¹¹⁵ Amended per sections 4 and 5 of P.A. 17-144.

¹¹⁶ See, UI Response to CAE-33.

¹¹⁷ See, Eversource Response to CAE-33.

Memo

To: Connecticut Green Bank Board of Directors

From: David Beech, Associate Manager, Clean Energy Finance; Bert Hunter, EVP and CIO

Cc: Bryan Garcia, President and CEO; Brian Farnen, General Counsel and CLO; Mackey Dykes, VP Financing Programs and Officer, Jane Murphy, EVP Finance & Administration

Date: March 14, 2023

Re: Raise Green Capital Solutions RFP – Program Update

Program Update

At the July 2021 meeting of the Connecticut Green Bank (“Green Bank”) Board of Directors (the “Board”), the Board authorized staff to enter into an agreement (the “Issuer Agreement”) with Raise Green, Inc. an entity registered with and approved by the Securities and Exchange Commission (the “SEC”) as a crowdfunding funding portal, to issue bonds in an amount not to exceed \$2,000,000 under the SEC’s Regulation Crowdfunding.

Since then, the Green Bank has issued 5 offerings of Green Liberty Notes. After the first two issuances successfully surpassed Green Bank’s goal of \$100,000, each successive raise has sold out, after receiving more than \$250,000. The last issuance, launched on January 9th, was the most successful to date, with investment reaching \$250,000 after just 5 days! Over 5 issuances, 247 investors have purchased \$1,054,735 of Green Liberty Notes to support the Green Bank’s fight against climate change. Of those investors, more than 50% live in Connecticut, and more than 50% invested \$1,000 or less.

Issuance	Date of Launch	Amount Raised	GLNs Interest Rate	SBEA Tranche Interest Rate
1	December 14 th , 2021	\$190,400	1%	3.26% (average 12/20/18 – 11/17/21)
2	April 13 th , 2022	\$114,335	1.5%	2.36% (3/17/22)
3	July 7 th , 2022	\$250,000	2.5%	4.88% (6/14/22)
4	September 29 th , 2022	\$250,000	3.5%	4.88% (6/14/22)
5	January 9 th , 2023	\$250,000	4.75%	6.39% (10/29/22 and 12/22/22)

Reinvestment

For the fifth issuance (launched on January 9th of this year), the Green Bank offered the option for investors in the first issuance (which was maturing on January 23rd) to automatically reinvest their principal and interest into the fifth issuance. In total 59 of the original 113 investors took advantage of this first of its kind opportunity.

Earned Media

The Washington Post
Democracy Dies in Darkness

Climate Environment Weather Climate Solutions Climate Lab Green Living

CLIMATE COACH

A new kind of bond is enlisting Americans in the fight against climate change

Like war bonds during WWI and WWII, Green Liberty Bonds are easy to buy and divvied up in small amounts.



Advice by [Michael J. Coren](#)
Climate Advice Columnist

Editorial Disclosure



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Invest in This Bond and Help Save the World. Here's How

by [Maurie Backman](#) | Published on March 3, 2023

