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

September 21, 2017

Dear Connecticut Green Bank Board of Directors:

We have a special meeting of the Board of Directors scheduled on Thursday, September 28, 2017 from 3:00 to 4:00 p.m. in the Colonel Albert Pope Board Room of the Connecticut Green Bank at 845 Brook Street, Rocky Hill, CT 06067.

On the agenda we have the following items:

- **Consent Agenda** – approval of the meeting minutes for the July 21, 2017.

- **Staff Transaction Recommendations** – we have several exciting transactions to bring to you for review, including:

    a. **Commercial, Industrial, and Institutional Sector** – several C-PACE transactions (i.e., Oxford and Woodbridge) as well as proposed revised guidelines that include new construction, and our partnership with the Connecticut Energy Efficiency Fund, Avangrid, and Eversource Energy on the Small Business Energy Advantage program.

    b. **Finance** – building on our lessons learned on Clean Renewable Energy Bonds (CREBs) from the Meriden hydro project, the team will present how CREBs will be used to deploy solar PV at Connecticut State Colleges and Universities (CSCU) to lower energy costs through a power purchase agreement structure. The success of these projects, and the contracts standardized as part of the process, may support clean energy improvements at state facilities through "Lead by Example".

    c. **Residential Sector** – as a follow-up to our strategic retreat, a pilot EV program in partnership with CARA (Connecticut Automobile Retailer Association), local installers and lenders, and DEEP, which will use an IRB through our Smart-E Loan program to help previously owned EV's stay in Connecticut.

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

We look forward to seeing you next week.

Sincerely,

Bryan Garcia
President and CEO

AGENDA

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

Thursday, September 28, 2017
3:00-4:00 p.m.

Staff Invited: George Bellas, Craig Connolly, Mackey Dykes, Brian Farnen, Bryan Garcia, Ben Healey, Dale Hedman, Bert Hunter, Kerry O'Neill, and Eric Shrago

1. Call to order

2. Public Comments – 5 minutes

3. Consent Agenda* – 5 minutes

4. Staff Transaction Recommendations – 50 minutes

   a. Commercial, Industrial, and Institutional Sector Program & Transaction Recommendation – 20 minutes

      i. Oxford - C-PACE Transaction* – 5 minutes
      ii. Woodbridge – C-PACE Transaction* - 5 minutes
      iii. Private Capital for Small Business Energy Advantage Program* - 10 minutes

   b. Finance Transaction Recommendation* – 15 minutes

      i. Clean Renewable Energy Bonds for CSCU Solar Projects* – 15 minutes

   c. Residential Sector Program Recommendation* – 15 minutes

      i. Smart-E Loan with IRB's for EV Cars Pilot* – 15 minutes

5. Adjourn

*Denotes item requiring Board action

Join the meeting online at https://global.gotomeeting.com/join/334080077

Or call in using your telephone:
Dial (872) 240-3212
Access Code: 334-080-077

Next Regular Meeting: Friday, October 20, 2017 from 9:00-11:00 a.m.
Connecticut Green Bank, 845 Brook Street, Rocky Hill, CT

RESOLUTIONS

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

Thursday, September 28, 2017
3:00-4:00 p.m.

Staff Invited: George Bellas, Craig Connolly, Mackey Dykes, Brian Farnen, Bryan Garcia, Ben Healey, Dale Hedman, Bert Hunter, Kerry O'Neill, and Eric Shrago

1. Call to order

2. Public Comments – 5 minutes

3. Consent Agenda – 5 minutes

Resolution #1

Motion to approve the minutes of the Board of Directors Meeting for July 21, 2017.

4. Staff Transaction Recommendations – 50 minutes

   a. Commercial, Industrial, and Institutional Sector Program & Transaction Recommendation – 30 minutes

      i. Oxford - C-PACE Transaction* – 5 minutes

Resolution #2

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

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

WHEREAS, the Green Bank seeks to provide a **$486,157** construction and (potentially) term loan under the C-PACE program to Oxford Town Center, LLC., the building owner of 300 Oxford Road, Oxford, Connecticut (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

WHEREAS, the Green Bank may also provide a short-term unsecured loan (the "Feasibility Study Loan") from a portion of the Loan amount, to finance the feasibility study or energy audit required by the C-PACE authorizing statute, and such Feasibility Study Loan would become part of the Loan and be repaid to the Green Bank upon the execution of the Loan documents.

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan and, if applicable, a Feasibility Study Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Board dated September 21, 2017, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

ii. Woodbridge – C-PACE Transaction* - 5 minutes

Resolution #3

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

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

WHEREAS, the Green Bank seeks to provide a **$302,667** construction and (potentially) term loan under the C-PACE program to The Jewish Federation of Greater New Haven, Inc., the building owner of 360 Amity Road, Woodbridge, Connecticut (the "Loan"), to finance the construction of specified clean energy measures in line with the State's Comprehensive Energy Strategy and the Green Bank's Strategic Plan; and

WHEREAS, the Green Bank may also provide a short-term unsecured loan (the "Feasibility Study Loan") from a portion of the Loan amount, to finance the feasibility study or energy audit required by the C-PACE authorizing statute, and such Feasibility Study Loan would become part of the Loan and be repaid to the Green Bank upon the execution of the Loan documents.

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank is authorized to execute and deliver the Loan and, if applicable, a Feasibility Study Loan in an amount not to be greater than one hundred ten percent of the Loan amount with terms and conditions consistent with the memorandum submitted to the Board of Directors dated September 21, 2017, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from the date of authorization by the Board of Directors;

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

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

iii. Private Capital for Small Business Energy Advantage Program* - 10 minutes

Resolution #4

WHEREAS, pursuant to Conn. Gen. Stat. Section 16-24n the Connecticut Green Bank (“Green Bank”) has a mandate to develop programs to finance clean energy investment for small business, industrial, and municipal customers in the State;

WHEREAS, recapitalizing the Small Business Energy Advantage (“SBEA”) program with private sector capital is a recognized priority in the Green Bank’s Comprehensive Plan and is a goal of the CT Energy Efficiency Board and Green Bank Joint Committee;

WHEREAS, The Connecticut Light and Power Company d/b/a Eversource Energy and The United Illuminated Company (together, the “Utilities”) have requested the Green Bank’s assistance sourcing low cost private sector capital;

WHEREAS, the Green Bank released a Request for Proposals for Small Business Energy Advantage Program Alternative Financing Solutions (the “RFP”) on November 14, 2016;

WHEREAS, JP Morgan Chase responded to the RFP with a comprehensive and flexible solution offering the lowest cost capital to recapitalize the SBEA program;

WHEREAS, Green Bank staff has selected JP Morgan Chase’s proposal to recapitalize the SBEA program and now recommends that the Green Bank support the recapitalized SBEA facility by creating and managing a special purpose vehicle (the “SPV”) for the new fund structure, committing $3 million in an equity contribution to the fund structure (the “Equity Contribution”), and providing up to $750,000 of capital for short-term liquidity purposes (the “Liquidity Capital”), and;

WHEREAS, the Utilities will continue to make funding available from the Connecticut Energy Efficiency Fund ("CEEF") to reimburse interest expenses, loan losses, and administrative costs associated with the recapitalized SBEA program.

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank, is authorized to execute and deliver agreements to establish the Equity Contribution, Liquidity Capital, and SPV with terms and conditions consistent within the memorandum submitted to the Board dated September 21, 2017, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 270 days from the date of authorization by the Board; 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 legal instruments.

b. Finance Transaction Recommendation – 15 minutes

   i. Clean Renewable Energy Bonds for CSCU Solar Projects – 15 minutes

Resolution #5

WHEREAS, the Connecticut State College and University ("CSCU") system has signed Power Purchase Agreements with General Electric, Inc. for a portfolio of behind-the-meter solar installations at various CSCU campuses across the state (the "Portfolio");

WHEREAS, Banc of America Public Capital Corp ("BAPCC") has extensive energy and tax credit bond financing expertise, has indicated interest in financing the Portfolio via New Clean Renewable Energy Bonds ("CREBs") and received a reduced interest rate through the Public Utilities Regulatory Authority.

WHEREAS, the Connecticut Green Bank ("Green Bank") would be considered a Qualified Issuer and Qualified Owner under CREBs, and each of the projects within the Portfolio would qualify as a Qualified Renewable Energy Facility (as all of those terms are defined under regulations issued by the Internal Revenue Service);

WHEREAS, Green Bank staff recommends that the Green Bank Board of Directors ("Board") approve of financing the Portfolio using a combination of ratepayer capital and CREBs proceeds, in an amount not to exceed $~~7,700~~10,550,000, as a strategic selection and award because of the special capabilities of BAPCC to provide capital at attractive rates for tax credit bond financing, the uniqueness of the Portfolio, and the strategic innovation associated with securing the Green Bank's CREBs allocation.

NOW, therefore be it:

RESOLVED, that the Green Bank Board hereby approves an appropriation and bond authorization of not more than $~~6,930~~9,350,000 to finance the Portfolio, including costs associated with ownership of the Project (as required under CREBs regulations), as a strategic selection and award pursuant to Green Bank Operating Procedures Section XII;

RESOLVED, that the Green Bank may provide ratepayer capital, in the form of equity to finance the Portfolio as required for the successful structuring of the CREBs issuance, in an amount not to exceed $~~770~~1,200,000;

RESOLVED, that the President of the Green Bank and any other duly authorized officer is authorized to proceed with the prerequisites to the issuance of CREBs in an amount not to exceed $~~6,930~~9,350,000 with terms and conditions consistent with the memorandum submitted to the Board dated September 27~~1~~, 2017, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 405 days from the date of authorization by the Board, provided that staff will submit for Board approval all resolutions required to approve all relevant documentation (such as an indenture of trust) required for the actual issuance of bonds;

RESOLVED, that the Green Bank Board hereby declares the Green Bank's official intent that payment of Portfolio construction and financing costs may be made from temporary advances of other available funds of the Green Bank, and that the Green Bank reasonably expects to reimburse such advances from the proceeds of the CREBs financing in an amount not to exceed $~~6,930~~9,350,000; 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 legal instruments.

c. Residential Sector Program Recommendation – 15 minutes

    i. Smart-E Loan with IRB's for EV Cars Pilot – 15 minutes

Resolution #6

WHEREAS, the Connecticut Green Bank (the "Green Bank") is established and authorized pursuant to Conn. Gen. Stat. Section 16-245n to, among other things, develop programs to finance and otherwise support clean energy investment in residential projects per the definition of clean energy in Conn. Gen. Stat. Section 16-245n(a);

WHEREAS, in July of 2017, the Connecticut Department of Energy and Environmental Protection ("DEEP") released the Draft Comprehensive Energy Strategy ("CES") for Connecticut that includes a focus on electric vehicles and their use to increase zero emission vehicle-miles-traveled in the state;

WHEREAS, in June of 2017, the Green Bank Board of Directors (the "Board") approved the FY18 budget that included $500,000 allocated to a new consumer EV program; and

WHEREAS, in May of 2013, Green Bank launched the Smart-E Loan program, statewide as of November 2013, with currently 11 local lenders providing low cost and long-term financing for measures that are consistent with the state energy policy and the implementation of the CES.

NOW, therefore be it:

RESOLVED, that the Green Bank Board of Directors (the "Board") approves a pilot interest rate buydown program to be known as Smart-E for EVs Pilot Loan Program, as more particularly described in that certain memorandum and attached program guidelines submitted to the Board dated September 21, 2017. The budget of the Smart-E for EVs Pilot Loan Program will be $500,000, consistent with the Board approved FY18 budget.

5. Adjourn

*Denotes item requiring Board action

Join the meeting online at https://global.gotomeeting.com/join/334080077

Or call in using your telephone:
Dial (872) 240-3212
Access Code: 334-080-077

Next Regular Meeting: Friday, October 20, 2017 from 9:00-11:00 a.m.
Connecticut Green Bank, 845 Brook Street, Rocky Hill, CT

CONNECTICUT GREEN BANK[SM]

Board of Directors Meeting

September 28, 2017

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

1. **<u>Meeting Minutes</u>*** – approval of meeting minutes of July 21, 2017

Board of Directors

Agenda Item #4a

Staff Transaction Recommendations

CI&I Sector Programs

Board of Directors

Agenda Item #4ai

Staff Transaction Recommendations

CI&I Sector Programs

C-PACE (Oxford)

300 Oxford Road, Oxford Ratepayer Payback

CONNECTICUT GREEN BANK

- **$486,157** for a solar PV system & structural roof upgrades
- Projected savings are **15,713 MMBtu** versus **$486,157** of ratepayer funds at risk.

REDACTED

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

300 Oxford Road, Oxford Terms and Conditions

- **$486,157** construction loan at 5% and term loan set at a fixed 5.5% over the 15-year term
- **$486,157** loan against the property
  - ❑ Property valued at **REDACTED**
  - ❑ Loan-to-value ratio equals **REDACTED**; Lien-to-value ratio equals **REDACTED**
- DSCR > **REDACTED**

300 Oxford Road, Oxford
The Five W's

- **What?** Receive approval for a $486,157 construction and term loan under the C-PACE program to Oxford Towne Center LLC to finance the construction of specified energy upgrade
- **When?** Project to commence 2017
- **Why?** Allow Green Bank to finance this C-PACE transaction, continue to build momentum in the market, and potentially provide term financing for this project until Green Bank sells it along with its other loan positions in C-PACE transactions.
- **Who?** Oxford Towne Center LLC, the property owner of 300 Oxford Road, Oxford CT
- **Where?** 300 Oxford Road, Oxford CT

300 Oxford Road, Oxford Project Tear Sheet

REDACTED

300 Oxford Road, Oxford
Key Financial Metrics

REDACTED

Board of Directors

Agenda Item #4aii

Staff Transaction Recommendations

CI&I Sector Programs

C-PACE (Woodbridge)

360 Amity Road, Woodbridge Ratepayer Payback

- **$302,667** for a roof upgrade to support solar PV financed via PPA
- Projected savings are **26,713 MMBtu** (savings from PPA) versus **$302,667** of ratepayer funds at risk.

REDACTED

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

360 Amity Road, Woodbridge Terms and Conditions

CONNECTICUT GREEN BANK

- **$302,667** construction loan at 5% and term loan set at a fixed 6.25% over the 20-year term
- **$302,667** loan against the property
  - Property valued at **REDACTED**
  - Loan-to-value ratio equals **REDACTED**; Lien-to-value ratio equals **REDACTED**
- DSCR > **REDACTED**

360 Amity Road, Woodbridge
The Five W's

- **What?** Receive approval for a $302,667 construction and term loan under the C-PACE program to The Jewish Federation of Greater New Haven, Inc. to finance the construction of specified energy upgrade
- **When?** Project to commence 2017
- **Why?** Allow Green Bank to finance this C-PACE transaction, continue to build momentum in the market, and potentially provide term financing for this project until Green Bank sells it along with its other loan positions in C-PACE transactions.
- **Who?** The Jewish Federation of Greater New Haven, Inc., the property owner of 360 Amity Road, Woodbridge CT
- **Where?** 360 Amity Road, Woodbridge CT

360 Amity Road, Woodbridge Project Tear Sheet

REDACTED

360 Amity Road, Woodbridge
Key Financial Metrics

REDACTED

Board of Directors

Agenda Item #4aiii

Staff Transaction Recommendations

CI&I Sector Programs

Small Business Energy Advantage

SBEA Private Capital Goal

- In 2016 and 2017, pursuant to the goals established by the **Joint Committee** of the CT Energy Efficiency Board and the Connecticut Green Bank Board of Directors, Eversource and United Illuminating (the "CT Utilities") and CT Green Bank ("Green Bank") made progress toward one of the "Joint Goals" for the C&I Sector related to the Small Business Energy Advantage (SBEA) program:

"Identify and engage alternative capital sources to lower the cost of and increase opportunities for project financing"

SBEA Program Overview

- Available to commercial and industrial, including municipal and state, customers with an average 12-month peak electricity demand between 10kW and 200kW located in Eversource and UI distribution territory;
  - ≤**$100,000** for commercial and industrial customers and
  - ≤**$500,000** for municipal customers:
- 0% interest to the borrower;
- Up to 48 months in tenor;
- Repaid on the electric bill; and
- For eligible efficiency improvements (both electric and gas measures) including lighting upgrades, HVAC, refrigeration, and gas-saving measures

SBEA Capital Needs & Support

CONNECTICUT GREEN BANK

- Small Business Energy Advantage (SBEA) Program commenced in 2000 and benefits from enhancement/support from the Connecticut Energy Efficiency Fund (“CEEF”)
- Loans are currently funded by Utility capital in addition to some CEEF funds approved as loan capital in 2014
- Annual loan volume of approximately $25 - $30 million
- Required “steady state” financing facility of ~$55 million to be reached around year 5, assuming fixed annual loan volume of $28 million

CT Energy Efficiency Fund

Credit Enhancements & Support

- The Conservation & Load Management ("C&LM") Plan set up under Connecticut General Statutes § 16-245m and § 16-32f provides for certain credit enhancements and support to the SBEA program from the Connecticut Energy Efficiency Fund ("CEEF"). These include:
  - Loan loss reimbursement of <u>all losses</u> incurred as part of the SBEA program
  - Interest rate buy-down to 0% so SBEA customers face interest-free loans
  - Recovery of administrative expense
- CEEF is funded by a surcharge on electricity rate payers in CT, along with the Regional Greenhouse Gas Initiative ("RGGI"), and the Independent System Operator-New England's ("ISO-NE") forward capacity market

2016-2018 CEEF Budget

	2016 ES CT Electric Revenues	2016 UI Revenues	2016 Combined Total	2017 ES CT Electric Revenues	2017 UI Revenues	2017 Combined Total	2018 ES CT Electric Revenues	2018 UI Revenues	2018 Combined Total
Collections (Mill Rate)	$66.7	$15.9	$82.6	$66.8	$15.7	$82.5	$65.8	$15.5	$81.4
ISO New England	$9.7	$2.7	$12.4	$20.2	$5.2	$25.4	$20.4	$4.5	$24.9
RGGI	$16.7	$4.2	$20.8	$17.1	$4.3	$21.4	$17.5	$4.4	$21.9
CAM (Net of Gross Receipts Tax)	$62.0	$14.8	$76.9	$62.1	$14.6	$76.7	$61.2	$14.5	$75.7
TOTAL (Energy Efficiency Revenues)	$155.1	$37.6	$192.7	$166.2	$39.8	$206.0	$164.9	$39.0	$203.9

* In millions.

Natural Gas Energy Efficiency Revenues	2016 Conservation Adjustment Mechanism	2017 Conservation Adjustment Mechanism	2018 Conservation Adjustment Mechanism
Eversource CT Gas Revenues	$20.4	$24.2	$26.9
Connecticut Natural Gas Revenues	$15.9	$16.6	$17.3
Southern Connecticut Gas Revenues	$11.4	$14.1	$14.7
Total Energy-Efficiency Revenues	$47.7	$54.9	$59.0

* In millions.

SBEA Program Overview

- Pursuant to Joint Goal – CGB and the Utilities:
  - Explored options for funding the SBEA Program with private capital
    - RFP for private capital conducted November 2016
  - Overarching objectives:
    - Obtain lower cost of capital
    - Retain similar origination (unsecured loans, utility bill payment history) and servicing processes (on-bill repayment).
    - Retain CEEF support:
      - interest rate buy-downs (customers loans at 0%) and
      - loan loss reimbursement

JP Morgan / CGB Facility Terms

CONNECTICUT GREEN BANK

JP Morgan was selected via RFP process

Features	Terms
Facility term	1 year with ability to renew annually
Facility size	$30m ($27m from JPM, **$3m from Green Bank**) ***Note*: CGB is "1st Money In"**
Cost of capital	• JPM line of credit: [REDACTED] • **Green Bank equity: [REDACTED]**
Undrawn fee	[REDACTED]
Upfront fee	[REDACTED]
IRB	Estimated and **pre-funded for full term** of underlying loans (applicable to JPM capital only)
LLR	No LLR requirement (due to Green Bank's first loss equity contribution sized at 10% of facility)
Event of default (loan losses)	2.5% losses triggers event of default on facility

**As of September 5, 2017*

Green Bank Role

The Green Bank will play a critical role in the recapitalized SBEA structure including:

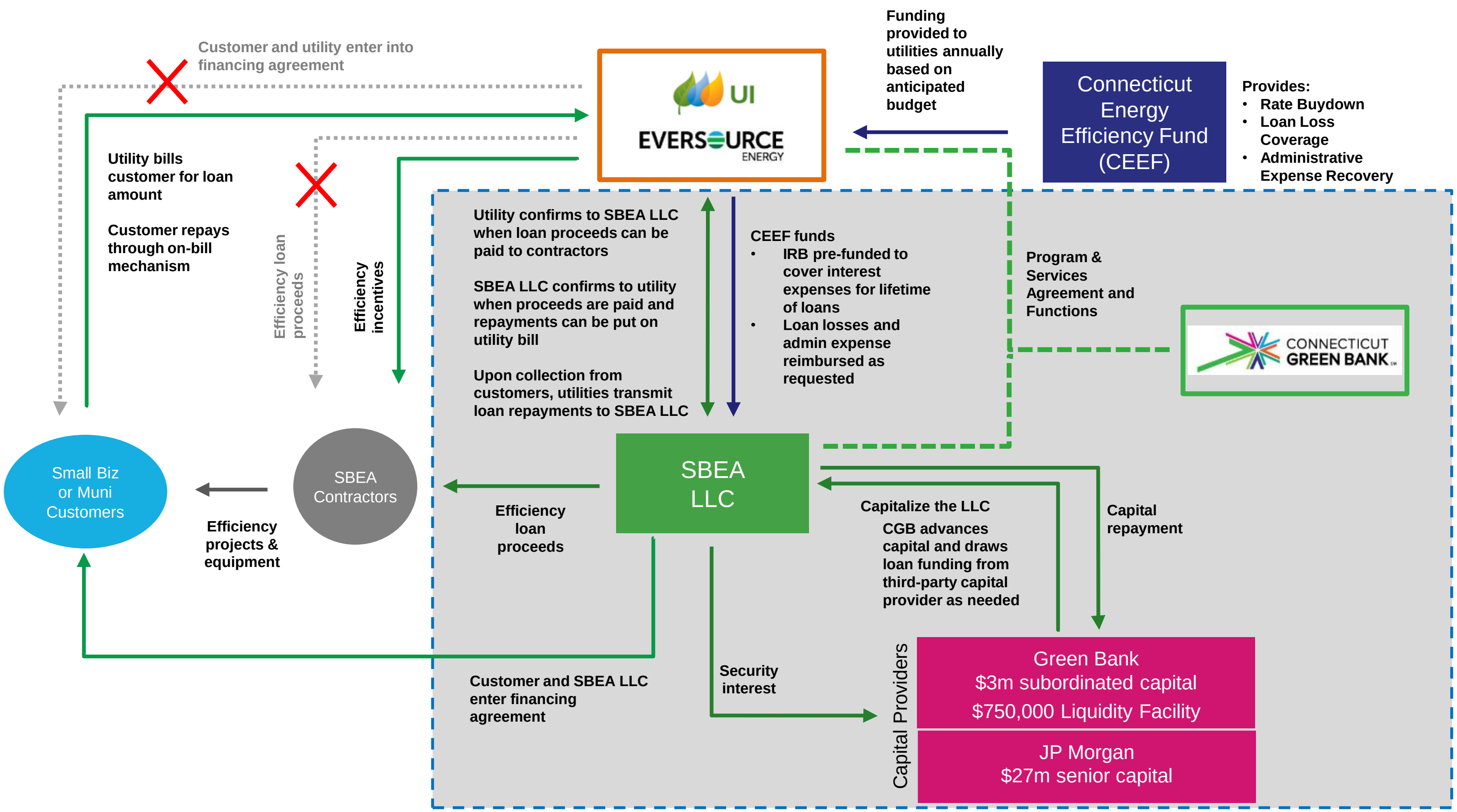
1. **$3 million of equity** into a newly created SPV structure, plus **up to $750,000 for liquidity purposes**
   - JPM specifically requires $3 million to **not** be **debt**
   - CGB can recover a "capital charge" (i.e. interest)
   - CGB is "first money in"
   - **At "steady state" CGB equity would rise to ~$5.5m in ~3-4 years (+$750k liquidity facility)**

2. SPV management and administration
   - Cash flow management
     - SBEA loan disbursements
     - JPM line of credit draw requests
     - CEEF funding requests for loan loss recovery

3. Capital facility management – ensuring that future capital sourcing requirements are met as the SBEA program evolves

4. Continued CEEF funding for loan loss recovery and IRBs (no losses expected)

SBEA Recapitalized Structure

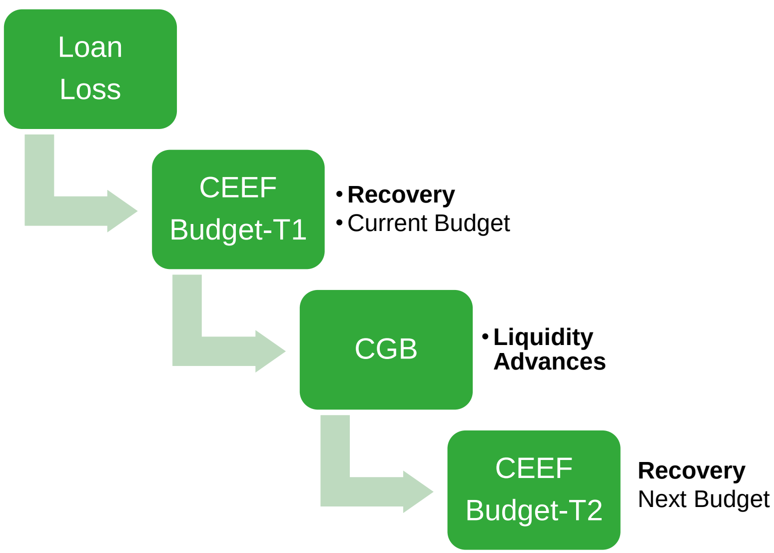


CGB Risk Analysis

CONNECTICUT GREEN BANK

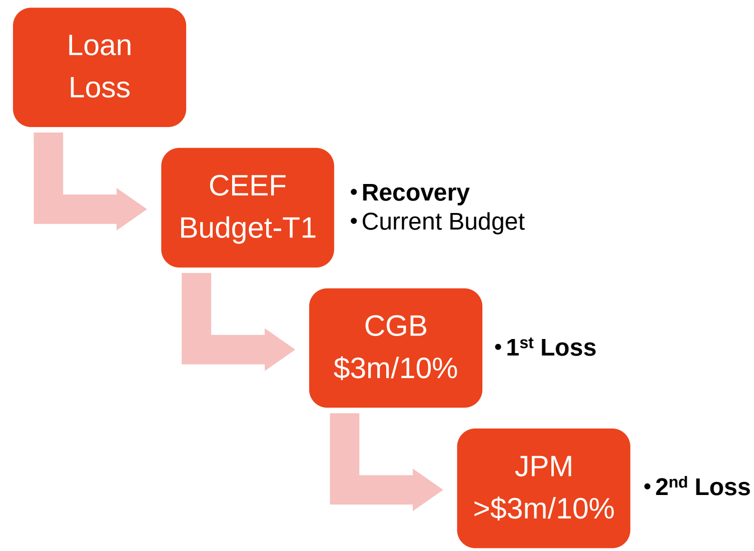
Normal Operations

(No CGB Losses Anticipated)



CEEF "FAILURE"[1]

(CGB Max Loss [greater of] $3m or 10% of portfolio[2])



[1] Such as a "raid" on the CEEF with understanding that CEEF will not be restored
[2] Plus portion of $750,000 liquidity facility outstanding

SBEA Private Capital Facility Conclusion

Staff recommends approval of this facility as in line with the Green Bank's clean energy mandate:

- Meets objectives outlined our Comprehensive Plan
- Strengthens the Green Bank's support of the C I & I sector
- Solves a cost of capital issue for the CEEF
- Solves a capital constraint issue for the Utilities and C I & I customers
- Fulfills goal established by the EEB-CGB Joint Committee to "Identify and engage alternative capital sources to lower the cost of and increase opportunities for project financing"
- Establishes a financing facility that is flexible, expandable
- Offers the possibility for low cost & "green" commercial paper in the future
- Leverages CGB liquidity – not expected to result in CGB capital loss

Board of Directors

Agenda Item #4b

Staff Transaction Recommendations

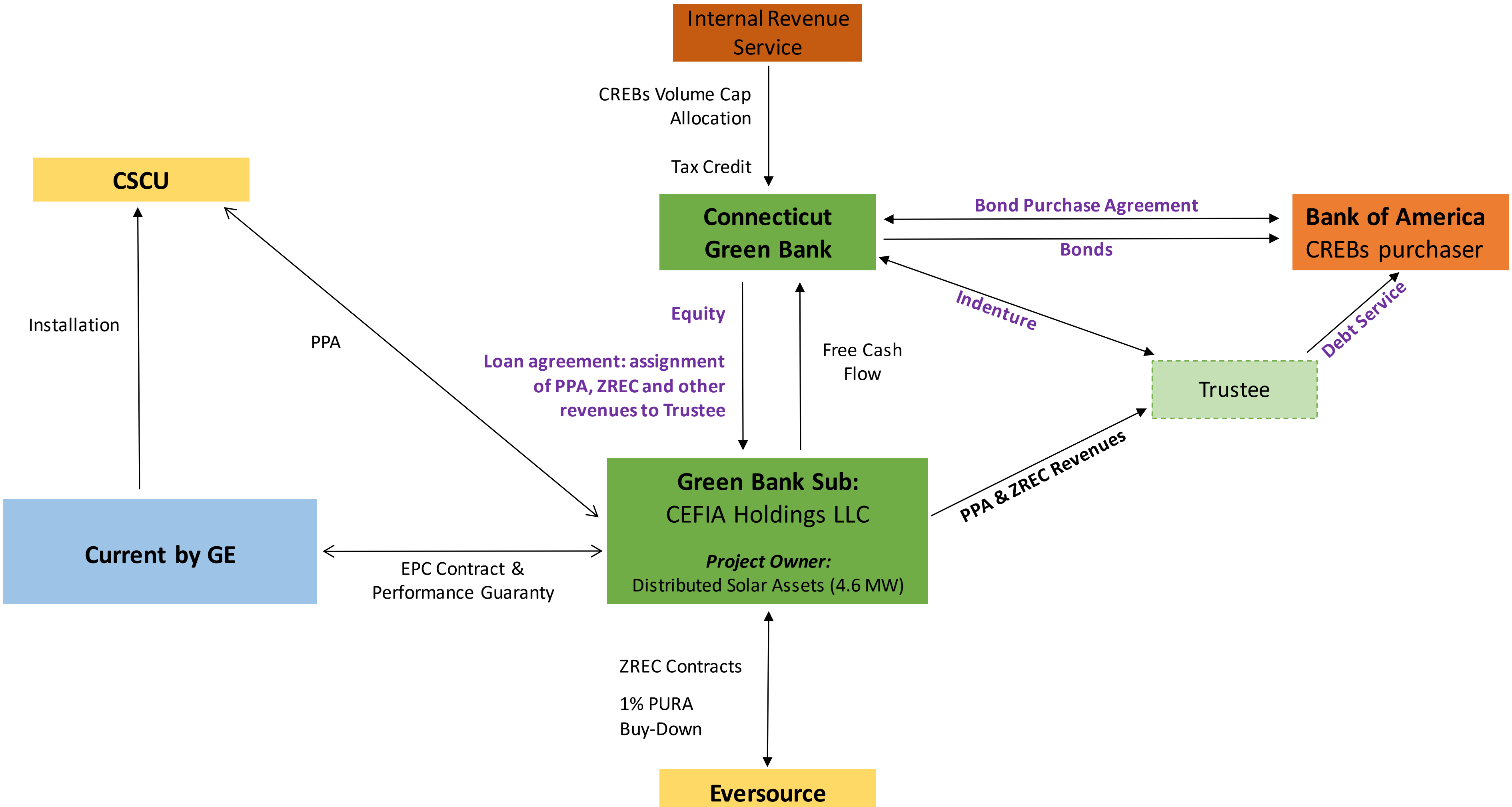
Finance

CREBs for CSCU Solar
Opportunity

- **<u>Connecticut State College and University System</u>** – PPAs signed with GE for nearly 5 MW of solar
- **<u>Attractive Pricing</u>** – Annual savings to CSCU projected to be ~$240,000
- **<u>Financing Strategy</u>** – Clean Renewable Energy Bonds to be purchased by Bank of America ($9.5MM in anticipated capital costs, about 88% to be financed with CREBs)

CHART REDACTED

CREBs for CSCU Solar
Structure



CREBs for CSCU Solar

Key CREBs Terms

- **Total Amount Financed** – $8.5MM (expected Green Bank balance sheet contribution not-to-exceed $1.2MM)
- **Term** – 20 years
- **Interest Rate** – Anticipated net effective rate including PURA subsidy = 1.43%
- **Security** – No use of Special Capital Reserve Fund
- **Guarantees** – GE production guaranty to backstop Green Bank pledge of revenues with respect to performance risk

CREBs for CSCU Solar

Key CREBs Terms (continued)

CHART REDACTED

CREBs for CSCU Solar

Resolutions

RESOLVED, that the Green Bank Board hereby approves an appropriation and bond authorization of not more than $9,350,000 to finance the Portfolio, including costs associated with ownership of the Project (as required under CREBs regulations), as a strategic selection and award pursuant to Green Bank Operating Procedures Section XII

RESOLVED, that the Green Bank may provide ratepayer capital, in the form of equity to finance the Portfolio as required for the successful structuring of the CREBs issuance, in an amount not to exceed $1,200,000

RESOLVED, that the President of the Green Bank and any other duly authorized officer is authorized to proceed with the prerequisites to the issuance of CREBs in an amount not to exceed $9,350,000 with terms and conditions consistent with the memorandum submitted to the Board dated September 27, 2017, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 405 days from the date of authorization by the Board, provided that staff will submit for Board approval all resolutions required to approve all relevant documentation (such as an indenture of trust) required for the actual issuance of bonds

RESOLVED, that the Green Bank Board hereby declares the Green Bank's official intent that payment of Portfolio construction and financing costs may be made from temporary advances of other available funds of the Green Bank, and that the Green Bank reasonably expects to reimburse such advances from the proceeds of the CREBs financing in an amount not to exceed $9,350,000

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 legal instruments

Board of Directors

Agenda Item #4c

Staff Transaction Recommendations

Residential Sector Programs

Board of Directors

Agenda Item #4ci – Residential Sector Program Recommendation

Smart-E for Electric Vehicle Pilot Loan Program

Smart-E for Electric Vehicle Pilot Program

CONNECTICUT GREEN BANK

Background:

- DEEP and Connecticut Automotive Retailers Association (CARA) partnered to create the CHEAPR Incentive program for electric vehicles (EVs) to support ~150,000 vehicle goal by 2020, but sustainable funding a challenge
- Uptake of EVs low in state – 700 – 900 EVs / year
- Green Bank partnered with DEEP and CARA in 2017 to promote deep discount on Leaf offered by Nissan North America
- Working with CARA and DEEP, uncovered an opportunity to promote more owned EVs on the road in CT at an affordable price
  - Majority of EVs are leased – 75-80%
  - EVs coming off lease are sent to auction – no pre-owned financing – and sold to major EV markets (CA #1, NY #2)

Smart-E for Electric Vehicle Pilot Program

CONNECTICUT GREEN BANK

smart-e loan

nutmeg state financial CREDIT UNION

CAR CONNECTICUT AUTOMOTIVE RETAILERS ASSOCIATION

Program Goals:

- Increase accessibility and affordability of EVs, particularly pre-owned models
  - Open up EVs to LMI consumers, 1st time buyers with lower price point and financing
- Keep more "second-owner" EVs *in CT*, by capturing at lot coming off lease
- Test how a financing offer with an Interest Rate Buydown (IRB) might be used down the road to transition CHEAPR grant program into financing program
  - Upfront cost relative to internal combustion engine vehicle is primary consumer barrier at present, despite very low EV costs per-mile
- Support purchase of 370-450 EVs with $500,000 pilot program budget
  - Estimated purchase price of $18,000 - $25,000
  - Estimated portfolio averages: 5 year loan, rate of 3.49% - 3.99% (risk-based pricing) bought down to 0.99% → average IRB or $1,100 - $1,770

Smart-E for Electric Vehicle Pilot Program

CONNECTICUT GREEN BANK

smart-e loan

nutmeg state financial CREDIT UNION

CAR CONNECTICUT AUTOMOTIVE RETAILERS ASSOCIATION

Program Goals:

- Gain direct experience with this critical new market and cross-marketing opportunities
  - Dealers get a **compelling sales proposition** to buy an EV or market to existing EV customers with the Smart-E EV Bundle (EV charger, solar, storage for 0.99% loan at 5, 7, 10 years)
  - Installers **cross-promote** Smart-E EV home bundle (EV charger, solar, storage) and EVs
  - Smart-E credit unions cross promote Bundle and EV car loan
  - Green Bank promotes **targeted campaigns**, **experiential marketing** (e.g. ride-and-drives, “loaner” vehicles)

Smart-E for Electric Vehicle Pilot Program

How it Works:

- Partner with Smart-E Credit Unions, already active in car loan business, to extend Smart-E product to include car loans for EV
- Lenders agree to a below market Not-to-Exceed rate sheet (risk-based pricing) for new and pre-owned vehicles from which interest rate is bought down
  - 3 Years – 2.49%
  - 4 Years – 2.99%
  - 5 Years – 3.49%
  - 6 Years – 3.99%
- Maximum of $40,000 financed and maximum 6-year term
- Lenders pay dealer origination fees (2% of loan amount, inclusive of add-on’s)
- Lenders paid IRBs monthly based on loans made on Eligible Vehicles – new or pre-owned – aligned to DEEP CHEAPR list and eligible models from prior model years

Smart-E for Electric Vehicle Pilot Program

RESOLVED, that the Green Bank Board of Directors (the “Board”) approves a pilot interest rate buydown program to be known as Smart-E for EVs Pilot Loan Program, as more particularly described in that certain memorandum and attached program guidelines submitted to the Board dated September 21, 2017. The budget of the Smart-E for EVs Pilot Loan Program will be $500,000, consistent with the Board approved FY18 budget.

Board of Directors

Agenda Item #5 – Adjourn

CONNECTICUT GREEN BANK
Board of Directors
Draft Minutes
Friday, July 21, 2017

1. **Call to Order**

Catherine Smith, Chairperson of the Green Bank, called the meeting to order at 9:02 a.m. Board members participating: Rob Klee, John Harrity, Matt Ranelli (by phone), Reed Hundt (by phone), Betsy Crum, Gina McCarthy (by phone), and Bettina Bronisz

Members Absent: Tom Flynn and Kevin Walsh

Others Attending: Corey Wurster, Olivia Headen, Matt Macunas, Emily Casserino, Sneha Jayaraj, Barbara Waters, Selya Price, Karthik Soora, Shi Yi, Diego Hentschel (by phone), Kris Holz (by phone), and Carla Rodriguez (by phone)

Staff Attending: Brian Farnen, Bryan Garcia, George Bellas, Dale Hedman, Kerry O'Neill, Mackey Dykes, Eric Shrago, Bert Hunter, Ben Healey (by phone), Anthony Clark, Cheryl Samuels, Jane Murphy, and Craig Connolly

2. **Public Comments**

There were no public comments.

3. **Consent Agenda**

Upon a motion by John Harrity, and seconded by, Commissioner Klee, the Consent Agenda passed unanimously.

a. **Approval of Meeting Minutes for June 23, 2017**

Resolution #1

Motion to approve the minutes of the Board of Directors Meeting for June 23, 2017.

b. Comprehensive Plan Revisions (FY 2017 and FY 2018)

Resolution #2

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

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

WHEREAS, the Budget and Operations Committee reviewed the Comprehensive Plan for FY 2017 and FY 2018 at a meeting on June 7, 2016 and recommended the approval to the Board of Directors; and the Board of Directors subsequently reviewed and approved on July 22, 2016;

WHEREAS, Article V of the Green Bank Operating Procedures requires the Green Bank Board of Directors (the "Board") to adopt an Annual Plan for each forthcoming fiscal year;

WHEREAS, the Board of Directors reviewed and approved the FY 2018 targets and budget on June 23, 2017, which together with the Comprehensive Plan, are effectively the Annual Plan;

WHEREAS, the staff of the Connecticut Green Bank have revised in a redline draft version the Comprehensive Plan for FY 2017 and FY 2018 to include recently approved budget and targets for FY 2018 for the review and approval by the Board of Directors;

NOW, therefore be it:

RESOLVED, that the Board approves of the revised Comprehensive Plan for FY 2017 and FY 2018 as presented to the Board on July 21, 2017, and subject to nonmaterial modifications made by the officers as described above.

c. Board of Directors and Committees Report for FY 2017

Resolution #3

WHEREAS, in July of 2011, the Connecticut General Assembly passed Public Act 11-80 (the Act), "AN ACT CONCERNING THE ESTABLISHMENT OF THE DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION AND PLANNING FOR CONNECTICUT'S ENERGY FUTURE," which created the Connecticut Green Bank (the "Green Bank") and vests the power in a Board of Directors comprised of eleven voting and two non-voting members; and

WHEREAS, the structure of the Board of Directors is governed by the bylaws of the Connecticut Green Bank, including, but not limited to, its powers, meetings, committees, and other matters.
NOW, therefore be it:

RESOLVED, that Board has reviewed and approved the Overview of Compliance Reporting and the Board of Directors and Committees for FY 2017 memo dated July 21, 2017 prepared by staff, which provides a summary report of the FY 2017 governance of the Board of Directors and its Committees of the Connecticut Green Bank.

d. Bridgeport Microgrid Contract Extension

Resolution #4

NOW, therefore be it:

RESOLVED, that the Board of Directors authorizes the President of the Green Bank and any other duly authorized officer of the Green Bank to execute and deliver a sub-debt loan in the amount of up to $502,860, at any time throughout the extended draw period deadline of January 1, 2018, as stated herein, and to be funded from the CHP Pilot program budget, and with terms and conditions consistent with the memorandum and term sheet submitted to the Deployment Committee dated February 23, 2015 and as revised by the memorandum to the Board of Directors dated June 17, 2016; 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.

e. Financial Statements for May 2017

f. Request for Approvals for PSA's Over $75,000 in FY 2017

4. **Board of Directors Strategic Discussions – Evaluation Framework and Social Impacts**

Bryan Garcia provided an update on the Evaluation Framework. He stated that they have been spending a lot of time this year determining the societal benefits, including economic development and environmental protection. He stated that they have been working with Commissioner Smith and her team. He stated that they have updated a 2009 report, which compares commercial solar vs residential solar, regarding jobs that are created. He stated that they have created a calculator that plugs into the data collection warehouse.

Bryan Garcia stated that they are working with Commissioner Klee and the Environmental Protection Agency on the clean energy deployed and environmental protection. He stated that they are working with the EPA tool, called Avert to simplify the model. He stated that its outputs serve as inputs into another area, public health, which they are working on with the Connecticut Department of Public Health (DPH) as well. He stated that it will be put into a model for public health in terms of cleaning the air. He stated that they will come back to the Board in October with that methodology. John Harrity questioned if there is a component of the cost. Eric Shrago stated yes, costs associated with health concerns. He stated that they are using EPA identified costs. He stated that they are working with DPH on implementing.

Bryan Garcia stated that they are working to develop a process to understand the consumer experience. He stated that they have real data behind the perceptions of the consumer for the Posigen product. He stated that they are looking to develop similar tools for C-PACE, Smart E, Multi – Family affordable housing. He stated that this will help them to understand how the products are doing and improve on the processes. He stated that they actually collect a lot of data and want to develop a process to use the data and make it available.

Eric Shrago stated that they will finalize the internal data dictionaries and protocols to touch on privacy. He stated that they will bring that to the ACG over the next year. He stated that they are currently working within the guidelines. He stated that they need to formalize it. Commissioner Klee questioned if customers agree to share some information. Bryan Garcia stated yes, they sign off on the data release form. Commissioner Smith questioned if it is a requirement. Brian Farnen stated it's an attachment to the agreements. He stated that the utilities signed off on it. The agreement is used for all financing products.

Matt Ranelli questioned if they can include a metric of distribution of those benefits to the LMI community. Eric Shrago stated that they can look at projects and census, and begin mapping those specific benefits. He stated that the Cobra model is advanced. He stated that that is tracking where more polluted air is going to blow. He stated that they can model based off of county level at this point. Kerry O'Neill stated that per Green and Healthy Homes, 46% of Asthma spend is concentrated in 5 cities. She stated that they can maybe bridge some of that statewide. Bryan Garcia stated that in the CAFR, they will disclose that the renewable energy credits are helping to create a compliance mechanism for the Class I RPS that is providing environmental benefits.

Bryan Garcia discussed the Comprehensive Plan. He stated that they are in year two of the two-year plan. He stated that they collect a lot of data. If the Board wants independent evaluations of programs, it can be done. He stated that they're making all of the information available on the website. He discussed the website, as well as the Strategy and Impact pages. He stated that there is access on Open CT to historical transactions down to checkbook level detail. He stated that everything that the Green Bank pays out is on Open CT and that this is the greatest form of transparency.

Eric Shrago discussed the Kevala software. He stated that it is a mapping solution on energy and how it is visualized geographically. He stated that they've worked to map all of the projects of the Green Bank. He stated that they've worked with DEEP and the utilities looking at Kevala to map their infrastructure. Commissioner Smith questioned if it is real time data. Eric stated no, it's not. He stated that it is using generation estimates right now, not actuals. Bryan Garcia stated that the goal is to get this onto the webpage. Matt Ranelli questioned if the Green Bank owns the data. Eric stated that they do.

Dale Hedman discussed the Locus software. He explained that it contains energy information on all commercial SL2 and SL3, as well as all other PV systems that are in the RSIP Program. He stated that the data is gathered on a five-minute basis. He stated that it comes from a number of different meters. He stated that they are unique in this space. He stated that they have been able to currently use four or five different meters to provide the information to the platform. He stated that all of the meters are revenue grade. Bryan Garcia stated that they are working on battery installation to store the power and displace it later. Commissioner Klee questioned why they needed both Locus and Kevala. Bryan stated that Locus is real time data. He stated that Kevala stores the data. Bettina questioned what the cost was. Dale stated that Locus was just under $500,000. Commissioner Smith stated that this is powerful and will help. Bert Hunter stated that if systems are not producing to their potential this can be a proactive response. Dale stated that they would be able to see that trend and suggest correction action. Dale stated that they've been working with the utilities with what they have now. Locus is coming up with an improved notion of this. He stated that they can go in and pick out by zip code, done by installer, done by third party provider. Bettina Bronisz questioned if it can be done by Legislative District. Dale stated not as of yet, but with the correct information, it can be done.

5. <u>Committee Updates and Recommendations</u>

a. Audit, Compliance, and Governance Committee

i. Review and consider Revisions to Internal Control Procedures

George Bellas provided an overview of the Accounting Internal Control Policies. He stated that Accounting uses these procedures to safeguard the liquid assets of the company. He stated that they review the set of policies with the Audit Committee annually. He discussed the three revisions they are proposing. They would like to substitute Brian Farnen as a second approver instead of Bryan Garcia. Mobile device reimbursement will be for only the monthly service charges, and not for the device itself. Lastly, Fixed Assets and Depreciation, they would like to reflect an increase in the threshold requiring capitalization of equipment from $500 to $1000. He advised that the Audit Committee recommended these to the Board for approval.

Upon a motion by Bettina Bronisz, and seconded by Commissioner Klee, the approval was unanimous.

<u>Resolution #5</u>

WHEREAS, on July 11, 2017, the Audit, Compliance and Governance Committee recommended that the Board of Directors (the "Board") approve the proposed revisions to Internal Accounting Control Procedures as presented.

NOW, therefore be it:

RESOLVED, that the Board hereby approves the proposed revisions to Internal Control Procedures outlined in the Memo dated July 21, 2017 (along with attachments) which was submitted to the Board.

6. <u>Sector Updates and Progress to Targets for FY 2017</u>

Bryan Garcia provided an overview on the Sectors and the progress to targets for FY 2017. He stated that there are a lot of dynamic things happening this year in clean energy. He stated that a lot of third party models are being very challenged. He stated that recently Direct Energy Solar announced that they were pulling out of the residential space. He stated that the local installers are seeing steady growth.

<u>Resolution #6</u>

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

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

WHEREAS, on July 22, 2016, the Board of Directors of the Connecticut Green Bank approved a Comprehensive Plan for FY 2017 and FY 2018, including an annual budget and targets for FY 2017.

NOW, therefore be it:

RESOLVED, that Board has reviewed and approved the Program Performance towards Targets for FY 2017 memos dated July 21, 2017, which provide an overview of the performance of the Infrastructure, Residential, Commercial, Industrial, and Institutional sectors with respect to their FY 2017 targets.

a. Infrastructure Program Sector

Selya Price discussed the Infrastructure Program Sector. She stated that in the RSIP they have 170 Megawatts approved, with 145 Megawatts completed. The Target is 300 Megawatts.

Selya Price discussed the SHREC. She stated that the MPA had been approved and executed. She stated that they are able to sell SHRECs to utility companies. She stated that the SHREC aggregation process has been approved and they are implementing it. Dale Hedman stated that they have over 8,000 Megawatt hours in REC's that will be SHREC. He stated that the first invoice for the first quarter will be the in neighborhood of $400,000. He stated that 40,000 of non SHREC Recs includes C&I.

Selya Price discussed the AD Project. She stated that they achieved commercial operation. She stated that they are producing clean energy and recycling food waste.

Selya Price provided an overview on Sunshot Projects. She stated that they finished two rooftop solar challenges and the Sunshot Prize Competition.

Selya price went on to discuss the soft costs. She stated that the soft cost percentage was increasing. She stated that they are stabilizing soft costs at about 50%. She stated that they are continuing that work through a smaller SolSmart project. Reed Hundt questioned if the 50% was installers costs. Selya stated that it is installed costs and that it can impact what the customer is paying, which can impact the installer. She stated that they are not clear on how the soft costs are actually divvied up. Commissioner Smith stated that that is a big number. She stated that they need to determine what the right level should be over time. Selya discussed a grant through the DOE to help continue LMI research and strategy. She stated that the goal is to reduce soft costs significantly. Reed stated that they should look to find a quantitative number and how the 50% can continue to go down. Selya stated that installed costs have been stable around $3.5 per watt, and they continue to work on that. She stated that there are a lot of different solutions to reach that. Matt Ranelli questioned if they have a finer breakdown of the of the soft costs. Selya stated that they have more fine grain data. She stated that the permitting process is a major cost, as well as, customer acquisition. She stated that those costs vary widely. She stated that this has been an increasing trend on a national basis. Commissioner Smith suggested educating the installers on different ways to get customers.

Selya Price discussed the targets and the progress. She stated that most of this has been RSIP capacity and targets. She stated that the revised target was 49 Megawatts, 47.4% of that was RSIP. She stated that the biggest factor was Solar City. She stated that in Fiscal 2015 and Fiscal 2016 they represented 39% of the market captured by the RSIP. She stated that in Fiscal 2017 Solar City dropped to 2% of RSIP. She stated that that was the biggest factor in the decline. Commissioner Klee questioned if the local installers had a better year than previously. Selya stated yes, they did. Bryan Garcia stated that they are seeing a shift in third party ownership to loans. He stated that they will provide that data. Dale Hedman stated that as a result of companies leaving the market or revising their business plans, they are seeing an uptick in local installers establishing their own companies.

John Harrity stated that the Green Bank is built around the idea of creative financing. He stated that they need to have a handle on what is happening. Bert Hunter stated that they need to step back and reassess the market from a financial products point of view. He also suggested that the Green Bank study the impact of Solar City selling RECs into other markets which might result in CT rooftops supporting the RPS goals of other states.

b. Residential Program Sector

Kerry O'Neill discussed the Residential Sector. She stated that they exceeded their targets for the first time ever. She stated that cumulatively, for all programs they broke $100 million. She stated that for Smart-E Loan Program they have been able to get six of the eleven lenders to come on to the credit-challenged term sheet. She stated that they now have all of the Credit Unions on it. She stated that they also got those same six lenders to agree to unsecured loans for 15 to 20 year terms, for qualified borrowers. She stated that investments and expansion has been focused in the LMI markets. She stated they will help their contractors to reach those segments with the research they've done.

Kerry O'Neill stated that they launched a partnership with Department of Public Health and Green and Healthy Home Initiative to research sustainable funding streams for the CT health sector, to support health and safety. She stated that this is just the beginning of a multiyear effort. Betsey Crum stated that it is difficult, but very important work.

Kerry O'Neill stated that Smart-E blew away the targets in the fourth quarter. She stated that PosiGen has ramped up. She stated that they are delivering on their LMI mandate. In the single-family area, they are engaging contractors and doing community outreach. She stated that in the multifamily area they need to continue to work through strategic partnerships and continue to align programs with the utilities. She stated that distressed properties are coming the Green Bank as a lender of last resort. Matt Ranelli stated that they should take advantage of the competitiveness. Commissioner Smith agreed, and stated that this should be a discussion for another meeting.

c. Commercial, Industrial, and Institutional Program Sector

Mackey Dykes discussed the Commercial, Industrial, and Institutional Sector. He stated that C-PACE has now supplied more than $100m in financing for project in Connecticut.

He stated that they are the biggest C-PACE Program in the country, outside of California. He stated that they are attracting more lenders in CT.

Mackey Dykes stated that the Commercial and Institutional Solar PPA performance has exceeded the goal for the fiscal year. For C-PACE, they are short of the targets, but they are the closest that they've ever come before. He stated that they had a strong year, in which to build FY 18.

He stated that they are working with DEEP and the Attorney General's Office to unlock the state college and university network as well as state facilities for solar with the use of a template PPA that can be utilized across all facilities.

Mackey Dykes stated that C-PACE was a bit short of it's targets. He stated that they need to focus on increasing the repeat contractors. He stated that 29% of them are repeat performers. He stated that 71% are what they call one and done. He stated that they need to figure out what the hurdles are to get them to come back. He stated that they did learn that they can't rely solely on the contractor base. He stated that they need to come up with better ways to engage directly with building owners.

Commissioner Smith mentioned the July 27th announcement of Pratt and Whitney and working with their supply line.

Upon a motion by, Bettina Bronisz, and seconded by Commissioner Klee, the Board voted unanimously to approve Resolution #6.

7. <u>Staff Transaction Recommendations and Updates</u>

a. Commercial, Industrial, and Institutional Sector Program Recommendations

i. C-PACE Transaction (Putnam) – Cargill Falls

Ben Healey provided an update on the Cargill Falls C-PACE project. He explained that this is a partnership with DOH. He stated that they are doing the hydro portion of the project. He stated that they are close to closing on the CHAMP money. He stated that the hydro portion is near completion, with the larger turbine already online. He stated that the smaller turbine unit will be coming online later in the Fall. He stated that they are requesting to use some of the Bank of America money to replenish a Green Bank bridge loan. Bettina Bronisz questioned if there was a penalty. Ben Healey stated that there was no penalty, but they will be responsible for the accrued interest.

Upon a motion by Betsey Crum, and seconded by Bettina Bronisz the Board voted unanimously to approve.

<u>Resolution #7</u>

WHEREAS, the Board previously approved a C-PACE benefit assessment with a not-to-exceed amount of $4,700,000 to Historic Cargill Falls Mill, LLC ("HCFM"), the property owner of 58 Pomfret Street, Putnam, CT 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; and

WHEREAS, Enhanced Capital Connecticut Fund V ("Enhanced Capital") acquired $1,200,000 of the original Green Bank's investment (the "Senior Benefit Assessment"), leaving the Green Bank with a total $3,500,000 exposure at the time (the "Subordinated Benefit Assessment"); and

WHEREAS, both the Senior Benefit Assessment and the Subordinated Benefit Assessment have accrued interest to date under the terms of the existing financing agreement with HCFM (the "Financing Agreement"), for a total combined balance of approximately $5,000,000;

WHEREAS, the Green Bank is currently negotiating a loan facility with Bank of America ("BofA") that is expected to close in 2017 and for which C-PACE projects will be an eligible use of funds; and

WHEREAS, the Green Bank now seeks to refinance the Financing Agreement.

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank, is authorized to execute and deliver an amended Financing Agreement in a total amount not to exceed the sum total of the Senior Benefit Assessment and the Subordinated Benefit Assessment plus any and all interest accrued, with terms and conditions consistent with the memorandum submitted to the Board dated July 14, 2017, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 120 days from July 21, 2017;

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank, is authorized to apply BofA funds to the Project so as to fully replace Enhanced Capital's position in the existing capital stack;

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

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

8. <u>Other Business</u>

a. Nissan Leaf Promotion (Update)

Matt Macunas provided an overview of the Nissan Leaf promotion. He stated that they have 102 unique registrations for the Nissan Leaf offer. He stated that they do not have final sales numbers as of yet.

b. Other Business

Brian Farnen provided an overview on new legislation for 2017 as well as bills that did not pass. He stated that they feel that the Green Bank is in a good spot regarding the state budget. He stated that they do expect some impact.

Bryan Garcia discussed the retirement of Norma Glover and the article in the Hartford Courant.

9. <u>Adjourn</u>

Upon a motion by Bettina Bronisz, and seconded by, John Harrity, the meeting was adjourned at 11:03 a.m.

Respectfully Submitted,

____
Catherine Smith, Chairperson

300 Oxford Road: A C-PACE Project in Oxford, CT

<table>
<tr><th>Address</th><td colspan="4">300 Oxford Road, Oxford CT 06478</td></tr>
<tr><th>Owner</th><td colspan="4">Oxford Towne Center, LLC</td></tr>
<tr><th>Proposed Assessment</th><td colspan="4">$486,157</td></tr>
<tr><th>Term (years)</th><td colspan="4">15</td></tr>
<tr><th>Term Remaining (months)</th><td colspan="4">Pending construction completion</td></tr>
<tr><th>Annual Interest Rate[1]</th><td colspan="4">5.5%</td></tr>
<tr><th>Annual C-PACE Assessment</th><td colspan="4">$48,258</td></tr>
<tr><th>Savings-to-Investment Ratio</th><td colspan="4">1.73</td></tr>
<tr><th>Average DSCR</th><td colspan="4">[redacted]</td></tr>
<tr><th>Lien-to-Value</th><td colspan="4">[redacted]</td></tr>
<tr><th>Loan-to-Value</th><td colspan="4">[redacted]</td></tr>
<tr><th rowspan="3">Projected Energy Savings (mmBTU)</th><td></td><td>EE</td><td>RE</td><td>Total</td></tr>
<tr><td>Per year</td><td></td><td>785</td><td>785</td></tr>
<tr><td>Over EUL</td><td></td><td>15,713</td><td>15,713</td></tr>
<tr><th rowspan="2">Estimated Cost Savings (incl. ZRECs and tax benefits)</th><td>Per year</td><td></td><td>$61,864</td><td>$61,864</td></tr>
<tr><td>Over EUL</td><td></td><td>$1,237,284</td><td>$1,237,284</td></tr>
<tr><th>Objective Function</th><td colspan="4">32.32 kBTU / ratepayer dollar at risk</td></tr>
<tr><th>Location</th><td colspan="4">Oxford</td></tr>
<tr><th>Type of Building</th><td colspan="4">Retail</td></tr>
<tr><th>Year of Build</th><td colspan="4">2016</td></tr>
<tr><th>Building Size (sf)</th><td colspan="4">89,933[2]</td></tr>
<tr><th>Year Acquired by Owner</th><td colspan="4">2000</td></tr>
<tr><th>As-Complete Appraised Value</th><td colspan="4"></td></tr>
<tr><th>Mortgage Lender Consent</th><td colspan="4">[redacted]</td></tr>
<tr><th>Proposed Project Description</th><td colspan="4">198 kW Solar PV Roof Mount</td></tr>
<tr><th>Est. Date of Construction Completion</th><td colspan="4">Pending closing</td></tr>
<tr><th>Current Status</th><td colspan="4">Awaiting Board of Directors Approval</td></tr>
<tr><th>Energy Contractor</th><td colspan="4">[redacted]</td></tr>
<tr><th>Notes</th><td colspan="4"></td></tr>
</table>

[1] Nominal rate unadjusted for actual/360 calculation

[2] Primary building, does not include 2 PAD buildings to be split off in a subdivision.

360 Amity Road: A C-PACE Project in Woodbridge, CT

<table>
<tr><td>Address</td><td colspan="4">360 Amity Road</td></tr>
<tr><td>Owner</td><td colspan="4">The Jewish Federation of Greater New Haven, Inc.</td></tr>
<tr><td>Proposed Assessment</td><td colspan="4">$302,667</td></tr>
<tr><td>Term (years)</td><td colspan="4">20</td></tr>
<tr><td>Term Remaining (months)</td><td colspan="4">Pending construction completion</td></tr>
<tr><td>Annual Interest Rate</td><td colspan="4">6.25%</td></tr>
<tr><td>Annual C-PACE Assessment</td><td colspan="4">$27,091</td></tr>
<tr><td>Savings-to-Investment Ratio</td><td colspan="4">1.23x</td></tr>
<tr><td>Average DSCR</td><td colspan="4">[redacted]</td></tr>
<tr><td>Lien-to-Value</td><td colspan="4">[redacted]</td></tr>
<tr><td>Loan-to-Value</td><td colspan="4">[redacted]</td></tr>
<tr><td rowspan="3">Projected Energy Savings (mmBTU)</td><td></td><td>EE</td><td>RE</td><td>Total</td></tr>
<tr><td>Per year</td><td></td><td>1,397</td><td>1,397</td></tr>
<tr><td>Over term</td><td></td><td>26,713</td><td>26,713</td></tr>
<tr><td rowspan="2">Estimated Cost Savings (incl. ZRECs and tax benefits)</td><td>Per year</td><td></td><td>$25,792</td><td>$25,792</td></tr>
<tr><td>Over term</td><td></td><td>$657,859</td><td>$657,859</td></tr>
<tr><td>Objective Function</td><td colspan="4">88.26 kBTU / ratepayer dollar at risk</td></tr>
<tr><td>Location</td><td colspan="4">Woodbridge</td></tr>
<tr><td>Type of Building</td><td colspan="4">Not-for-Profit Recreational</td></tr>
<tr><td>Year of Build</td><td colspan="4">Building 1, 1993; Building 2, 1998</td></tr>
<tr><td>Building Size (sf)</td><td colspan="4">118,484</td></tr>
<tr><td>Year Acquired by Owner</td><td colspan="4">1990</td></tr>
<tr><td>As-Complete Appraised Value</td><td colspan="4">[redacted]</td></tr>
<tr><td>Mortgage Lender Consent</td><td colspan="4">[redacted]</td></tr>
<tr><td>Proposed Project Description</td><td colspan="4">Roof upgrade to support a 322 kW Solar PV installation financed via a PPA</td></tr>
<tr><td>Est. Date of Construction Completion</td><td colspan="4">Pending closing</td></tr>
<tr><td>Current Status</td><td colspan="4">Awaiting Approval</td></tr>
<tr><td>Energy Contractor</td><td colspan="4">[redacted]</td></tr>
<tr><td>Notes</td><td colspan="4">[redacted]</td></tr>
</table>

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Small Business Energy Advantage

Recapitalization with Private Sector Funds

Due Diligence Package

September 21, 2017

Document Purpose: This document contains background information and due diligence on the recapitalization of the Small Business Energy Advantage program and the organizations involved, including Eversource Energy, United Illuminating, JP Morgan Chase, the Connecticut Green Bank, and the CT Energy Efficiency Board. This information 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 discourse under the Connecticut Freedom of Information Act. If such information is included in this package, it will be noted as confidential.

Program Qualification Memo

To: Connecticut Green Bank Board of Directors

From: Bert Hunter, EVP & CIO, Clean Energy Finance; Mackey Dykes, Vice President, Commercial, Industrial and Institutional Programs; Anthony Clark, Senior Manager, Commercial, Industrial and Institutional Programs; Laura Fidao, Senior Manager, Clean Energy Finance

Cc: Bryan Garcia, President & CEO;

Date: September 21, 2017

Re: Recapitalization of Small Business Energy Advantage Program

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Background & Summary

The Small Business Energy Advantage ("SBEA") program is part of the Energize CT initiative and is jointly managed by The Connecticut Light and Power Company d/b/a Eversource Energy ("Eversource") and The United Illuminating Company ("UI", and together with Eversource, the "Utilities"). The program commenced in 2000 and includes a financing component that provides interest-free loans to commercial, industrial, and municipal customers in Eversource and UI territories undertaking energy efficiency retrofit projects. The general parameters for SBEA loans are: up to 4 years in term; up to $100,000 per electric meter for commercial and industrial customers or $500,000 for municipalities; and repaid on the customer's electric bill.

The program is currently generating annual loan volume of approximately $28 million.[1] The loans are funded through a mix of Eversource and UI balance sheet and funding from the Connecticut Energy Efficiency Fund ("CEEF"). In addition to providing a portion of the capital for the loans, CEEF funding is used to provide an interest-rate buy-down on the utilities' cost of capital (making customer-facing loans interest-free), reimbursement for all loan losses, and reimbursement for administrative expenses associated with running the SBEA program.

The Joint Committee of the CT Energy Efficiency Board ("EEB") and Connecticut Green Bank identified sourcing lower cost capital from the private sector as a priority initiative as a means to alleviate stress to utility balance sheets, reduce CEEF interest-rate buy-down expenses, and increase the loan volumes available to small business, municipal and state efficiency measures through the SBEA program. The Utilities and the Connecticut Green Bank (the "Green Bank") began deliberate work to source private sector capital in 2016 to achieve these goals while maintaining the current successful aspects of the program, including a streamlined process for participating customers and contractors. Continued Utility approval/underwriting of customer loans, on-bill repayment, simple customer agreements, maintaining existing loan term and size limits were all key features to be carried forward to expedite the transition to private capital at beneficial (e.g. low-cost and flexible) terms.

In this context, the Green Bank and Utilities jointly issued an RFP in November 2016. Prior to RFP release, the Green Bank spoke with a variety of market participants to gauge potential interest and requirements to source private sector capital in a manner that would benefit the SBEA program most efficiently. The RFP received responses from 5 capital providers (JP Morgan, Citibank, Webster Bank, Macquarie, M-Core) proposing up to $300 million in potential capacity for SBEA loans through several types of financing structures.

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[1] As of the end of the 2016 calendar year.

Following thorough assessment by the Green Bank, utilities, and EEB, a proposal from JP Morgan Chase was selected as the preferred option based on its flexibility and low cost of capital. The JP Morgan Chase ("JPM") proposal will provide a line of credit for SBEA loans with potential savings to CEEF of $7.3 million over the initial 5-year period and approximately $1.8 million of savings annually in a steady-state (conservatively assuming fixed loan volume demand of $28 million annually).

Proposed SBEA Facility Description

The proposed financing solution by JPM will result in a $30 million line of credit ($27 million directly from JPM and $3 million in an equity contribution to be provided by the Green Bank) with an initial draw period of 1-year and the ability to renew the facility annually thereafter. The Green Bank will create and manage a bankruptcy-remote special purpose vehicle ("SPV") to fund new SBEA loans which will contract directly with JPM via a Credit & Security Agreement. The Green Bank will govern the SPV via an Operating Agreement and provide $3 million to the SPV under an Equity Support Agreement.

CEEF reimbursement for loan losses and interest rate expenses remains a key component to the success of this program. To be protected in the event of a catastrophic "CEEF failure" (e.g. a significantly diminished or loss of ratepayer funds), JPM requested that the interest expense reimbursement be prefunded for the full term of the underlying loans upfront. JPM also requested a 10% loan loss buffer, which will be met in the form of the Green Bank's $3 million equity contribution within the capital stack.

Cost of capital:

Source	Interest Charge on Capital Drawn for SBEA Customer Loans	Closing Fees	Undrawn Fee
JPM	[redacted]	[redacted]	[redacted]
Green Bank	[redacted]	[redacted]	[redacted]

To maintain the streamlined operation of the SBEA program and minimize operational disruptions, the new facility will be set up to retain key customer-facing components of the existing SBEA program, including the current underwriting process based on historical bill payment status, on-bill repayment, and loan disbursements being made directly to the contractor.

Loan agreements will be signed between the customer and the SPV rather than with the Utilities as is the current practice, and loan disbursements will be made from the SPV directly to the contractor rather than from the Utilities to the contractor.

In negotiations with JPM, JPM expressed the commercial position that they reasonably expect to renew the facility annually unless there are any significant changes in credit and risk profile. While there is no written assurance of facility renewal, this commercial arrangement between banks and borrowers is not usual unless a longer-term commitment is secured. JPM's requirement for annual renewal, however, came about as a result of the decision by the Utilities to not seek a regulatory backstop in the event of "CEEF failure" (as described above). Given the dynamics of the up to 4-year Utility customer loan terms (meaning that a portion of the loans remains outstanding for up to four years) even under assumptions of fixed loan volume demand, the facility will grow over the initial four years until it reaches a steady-state in year 5. Under the terms with JPM, facility capacity can be increased at this annual renewal point without any additional charges, or on an as needed basis for an Amendment Fee not to exceed $3,000.

As facility capacity expands, the 10% subordinated capital requirement will also increase. At present the Green Bank is committing to the $3 million required for the first year, which will continue to be recycled into the facility in subsequent years as customer loans are repaid. Upon facility renewal and assuming the facility capacity grows, this 10% subordinated obligation will increase as well. The Green Bank may elect to increase its capital commitment at this point or could source capital from other private sector sources at a market rate.

Green Bank Role

The Green Bank role in this new financing structure will include:

1. Capital Facility Management
2. SPV Management and Administration (loans, cash management and capital facility)
3. Provision of $3 million in an equity contribution to fund customer loans and provide liquidity cushion

Capital Facility Management

The Green Bank will manage the recapitalized SBEA facility and meet any future capital sourcing requirements that arise as the SBEA program evolves. In the near term, such management is likely to include amending the facility size or extending the facility past JP Morgan's current proposed one-year commitment. In the longer term, such management may include securing a follow-on facility as loan volumes grow and supporting an even lower-cost solution such as a commercial paper (short term, low interest rate bond) facility.

SPV Management and Administration

The operational requirements of the SPV will be crucial to a smoothly running SBEA loan program. Key loan administration, cash management and capital facility administration duties will include:

- Issuing loan proceeds to contractors for approved SBEA projects;
- Requesting draws from JP Morgan into the SPV to cover new loan requests in a timely and cost-efficient manner. Draws from JP Morgan require three days' notice and must be at least $500,000 in increments of $100,000 thereafter. The SPV will maintain a buffer to ensure capital availability while minimizing undrawn fees;
- Handling loan repayments from the utilities which will be recycled into new loans and managed to support the aforementioned buffer requirement;
- Paying monthly interest, principal (if appropriate) and quarterly undrawn fees to JP Morgan; and
- Managing the interest rate buy-down prefunding account to ensure it meets JP Morgan requirements and are topped-up with CEEF funds as required.

The SPV will also provide administrative support, including loan tracking, working with the Utilities' Special Billing team to report delinquencies and defaults, request reimbursement from CEEF for loan losses, and any accounting reporting requirements for the SPV entity.

Provision of Capital into SPV for Funding and Liquidity

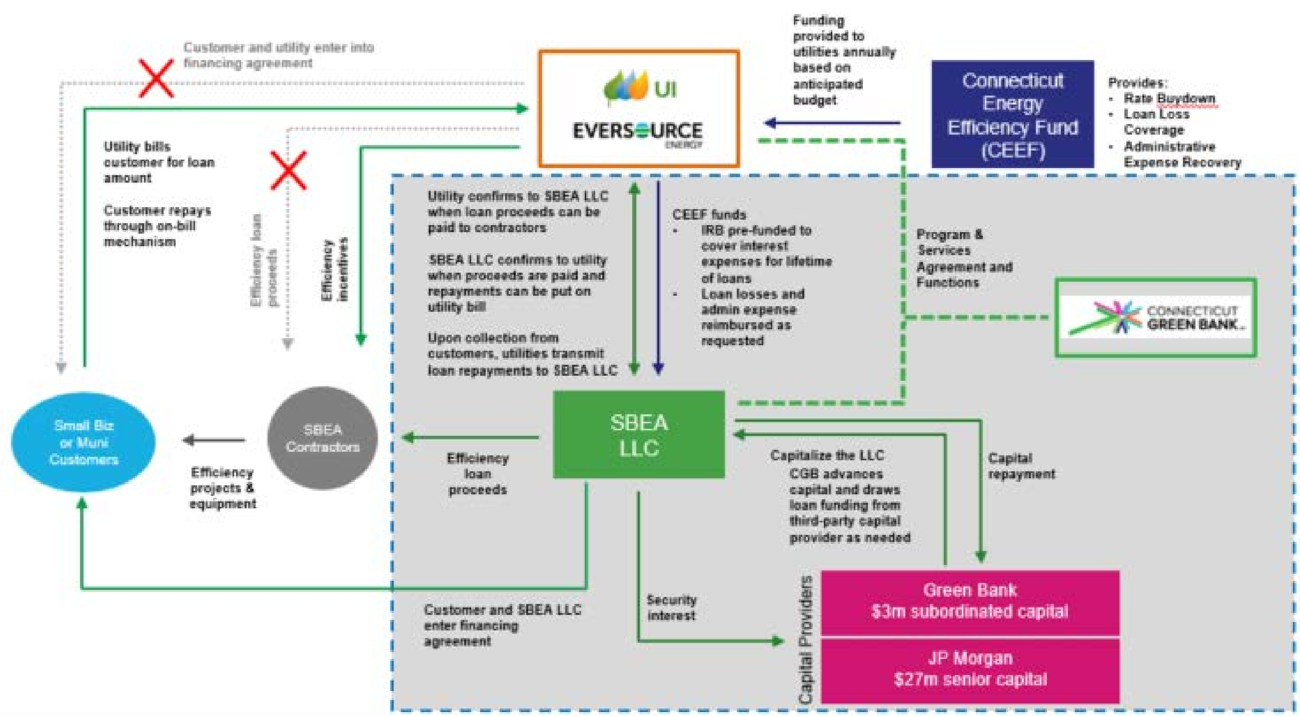
The Green Bank will invest $3 million into the SPV as an equity contribution to be used for funding SBEA customer loans. The Green Bank's capital contribution will be used as first-in capital for the SPV and will remain committed in the SBEA facility. The current proposed charge for the Green Bank's capital is [redacted].

Green Bank capital has been structured to address liquidity needs such as mitigating timing considerations with respect to CEEF funds to cover interest rate buydowns and loan losses and smoothing capital availability for customer loans against the size and increment requirements for draws from the JP Morgan facility.

Since such short-term liquidity capital needs could result in a capital requirement in excess of the $3 million specifically required pursuant to the JPM term sheet, **staff is requesting an additional $750,000 allocation for these purposes**. All uses of Green Bank capital will be compensated by CEEF at the same [redacted] noted above for the $3 million equity infusion for the SPV.

Figure 1 below depicts the overall structure of the proposed recapitalized SBEA program with new components of the proposed Green Bank arrangements depicted in the grey area.

Figure 1: Recapitalized SBEA structure. Area in grey represents new components to the structure.



CEEF Background and Operations

In 1998, the Connecticut General Assembly passed Public Act 98-28 which created the Connecticut Energy Efficiency Fund. Every three years the Utilities submit to the Department of Energy and Environmental Protection (DEEP) for approval and subsequently to the Public Utilities Regulatory Authority ("PURA"), for funding the Conservation and Load Management Plan ("C&LM Plan") in accordance with Connecticut General Statutes Section §16-245m. The C&LM Plan outlines their implementation plan for cost-effective electric and natural gas energy-efficiency programs and market transformation initiatives using CEEF funds. The C&LM Plan and CEEF spending is reviewed before submittal to DEEP by the Energy Efficiency Board ("EEB") which is an appointed group of 15 members from public and private entities. Utilities are thus incented, via regulatory oversight, to optimize the deployment of energy efficiency measures in their given service territories.

The C&LM Plan provides, in part, for certain credit enhancements and support to the SBEA Program from CEEF funding. CEEF is funded by: (1) a 3 mill rate charge on electricity rate payers in Connecticut, (2) the Conservation Adjustment Mechanism ("CAM", an additional charge from both electric and gas customers), (3) funds from the Regional Greenhouse Gas Initiative ("RGGI"), and (4) funds from the Independent System Operator New England's ("ISO-NE") forward capacity market. The estimated CEEF budget for 2016 through 2018 is illustrated in Figure 2 below.

Figure 2: 2016-2018 CEEF Budget from both Electric and Natural Gas Revenue Sources

	2016 ES CT Electric Revenues	2016 UI Revenues	2016 Combined Total	2017 ES CT Electric Revenues	2017 UI Revenues	2017 Combined Total	2018 ES CT Electric Revenues	2018 UI Revenues	2018 Combined Total
Collections (Mill Rate)	$66.7	$15.9	$82.6	$66.8	$15.7	$82.5	$65.8	$15.5	$81.4
ISO New England	$9.7	$2.7	$12.4	$20.2	$5.2	$25.4	$20.4	$4.5	$24.9
RGGI	$16.7	$4.2	$20.8	$17.1	$4.3	$21.4	$17.5	$4.4	$21.9
CAM (Net of Gross Receipts Tax)	$62.0	$14.8	$76.9	$62.1	$14.6	$76.7	$61.2	$14.5	$75.7
TOTAL (Energy Efficiency Revenues)	**$155.1**	**$37.6**	**$192.7**	**$166.2**	**$39.8**	**$206.0**	**$164.9**	**$39.0**	**$203.9**

* In millions.

Natural Gas Energy Efficiency Revenues	2016 Conservation Adjustment Mechanism	2017 Conservation Adjustment Mechanism	2018 Conservation Adjustment Mechanism
Eversource CT Gas Revenues	$20.4	$24.2	$26.9
Connecticut Natural Gas Revenues	$15.9	$16.6	$17.3
Southern Connecticut Gas Revenues	$11.4	$14.1	$14.7
Total Energy-Efficiency Revenues	**$47.7**	**$54.9**	**$59.0**

* In millions.

CEEF is a "virtual" fund (i.e. not held by a legal entity formed specifically for the purposes of the CEEF) which sits on the Utilities' balance sheets and is allocated to specific programs per the approved C&LM Plan. From 2013 through 2015, the Utilities have used an average of approximately $162,000 per year of CEEF funds for reimbursement of loan losses. Over this same period, they also received an average of $2.8m per year for the interest rate buy-down. The CEEF funding used for the SBEA program is a small percentage of the approximately $230 million average annual overall CEEF budget over this same period.

The Utilities budget annually in advance for the anticipated SBEA loan losses, interest rate expenses, and administrative costs. In the proposed recapitalized SBEA program, annual CEEF budget requirements will be estimated by the Green Bank and reviewed/approved by the Utilities. The three principal SBEA-related costs for the CEEF budget and their application in the proposed recapitalized SBEA program are described below.

- **Interest rate expense**:
    - **JPM capital**: Budget for JPM's portion of interest expenses will be estimated annually in advance based on expected loan volume and LIBOR for the year. On a quarterly basis, the SPV will request anticipated interest expenses associated with loan volumes to be funded using JPM capital in that upcoming quarter. The amounts actually required (based on actual loan volume and updates to LIBOR expectations) can be adjusted or topped up on a monthly basis via additional requests to draw funds from CEEF if needed. The prefunded interest expenses will sit in an account controlled by the SPV and will be disbursed to JPM on a monthly basis as interest expense is actually incurred.
    - **Green Bank capital**: Green Bank interest will be incurred and drawn from CEEF on a monthly basis. It will flow through the SPV to the Green Bank once requested from CEEF.
- **Loan losses**: Once a loan has been declared written off by the utilities, the full outstanding repayment requirement will be drawn from CEEF. Timing-wise these draws would be included in the monthly draw request to CEEF for interest expense.
- **Administrative costs**: Administrative expenses will be drawn from CEEF as part of the monthly draw request on an as-incurred basis.

In the event that the overall annual CEEF budget allocated to the SBEA program is not sufficient in any given year, the Green Bank will provide short-term liquidity capital (at the same [redacted] capital charge as the other Green Bank capital being used by this facility) so that operations can continue uninterrupted. Any deficit would then be included in and reimbursed to the Green Bank as part of the subsequent years' CEEF budget allocation process. The above mentioned operational details and cash flow requirements will be memorialized in a Funding Agreement to be signed between the SPV and utilities.

Strategic Plan

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

The proposed SBEA recapitalization is cleanly aligned with the first of the Green Bank's statutory purposes cited in the Comprehensive Plan to develop programs to finance clean energy investment in municipal and small business projects. Developing a recapitalization solution for the SBEA through a Utility / Green Bank Small Business Partnership is highlighted as a priority objective in the Public-Private Partnership section of the Comprehensive Plan and included as an area of strategic importance for the CI&I team. In addition, sourcing an alternate and lower cost source of capital for the SBEA program is one of the EEB / CGB Joint Committee's goals incorporated into our Comprehensive Plan.

Ratepayer Payback

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

Assuming SBEA program activity and project volume is similar to recent years, the lifetime energy savings for one year's worth of projects will be approximately 507 million kWh realized by placing approximately $3 million of Green Bank ratepayer funds at risk.

Ratepayer Fund Terms and Risks

What are the terms and maximum risk exposure of ratepayer funds for the program?

There are two pools of ratepayer funds incorporated into this proposal to recapitalize the SBEA program from both the Green Bank and CEEF.

Green Bank:

The Green Bank proposes an initial contribution of $3 million in an equity contribution to the recapitalized SBEA structure, at an annual capital charge of [redacted] on capital drawn down for SBEA customer loans. The Green Bank will also commit additional capital of up to $750,000 to be used for timeliness/liquidity purposes within the structure. Anticipated usage would be for instances where:

- Annual CEEF budget allocation made by the utilities falls short of the actual requirement which could result from unanticipated loan volume, increased LIBOR rates necessitating higher interest expenses on JPM's capital, or higher than expected losses, as examples. Green Bank will be fully reimbursed for any usage of its capital for these purposes as part of the subsequent years' CEEF budgeting process.
- Funding expected form the JPM committed capital is not available due to an urgent need (JPM requires three days' notice prior to draw requests being funded), in which case the Green Bank temporary funding would be reimbursed by the subsequent JPM draw request.

It is expected that that the Green Bank's $3 million be loaned out first and remain in circulation prior to JPM capital usage (given the nature of the subordinated position). As is common for lines of credit, interest will only be received for capital that has been drawn to finance SBEA customer loans.

This Green Bank capital will be backstopped by CEEF funds for any losses. Green Bank capital would only be at risk in the event that there is catastrophic failure of the CEEF (as explained above) which could impair the CEEF's ability to reimburse Green Bank for losses, interest expenses, or administrative expenses. If this were to occur, the Green Bank would expect that upon remediation of any CEEF failure (including the creation of any CEEF successor) the Green Bank would be reimbursed for outstanding costs.

CEEF:

The CEEF funds are currently being used to support the existing SBEA program and will continue to be used in a similar manner (interest rate expense, loan losses, and administrative expenses) under the recapitalized SBEA structure. The only differences will be the redirection of CEEF funds to the SPV and the requirement to prefund JPM's interest rate expenses which serves to bring part of the CEEF financial requirement forward in time.

The total CEEF usage over the first 5 years of the recapitalized SBEA program is estimated to be $20.4 million, compared to a requirement of $23.2 million under the 'business as usual' scenario where CEEF loans continued to be financed from the utilities' balance sheets. This results in a savings of $2.8 million over this 5-year time frame, and translates to approximately $1.7 million of savings annually once the facility reaches a 'steady state' around the fifth year (and is no longer subject to one-time costs associated with set-up or closing costs). This cost savings includes the funding for the interest expense prefunding required by JPM. It is worth noting that on a pure cost of capital basis, CEEF would save $7.3 million over the initial 5-year period, though steady-state savings are similar with or without the JPM prefunding requirement as the prefunding is not an additional cost to CEEF but rather a shifting in timing of the commitment.

The usage of CEEF funds within the SBEA program is specifically for the purpose of absorbing loan losses and thus it can be reasonable expected that CEEF funds will be used for this purpose and unrecoverable to ratepayers. Historical loan losses have been around 1% of annual loan volumes.

Financial Statements

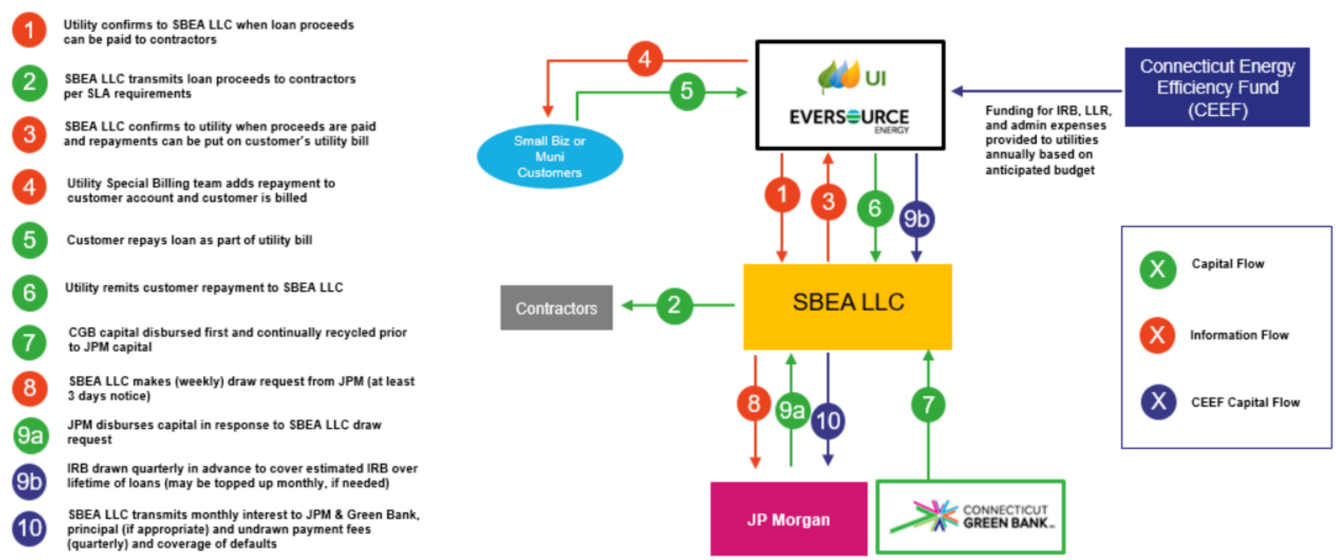
How is the program investment accounted for on the balance sheet and profit and loss statements?

Advances of funds to the SPV debt are accounted for by a reduction in the Green Bank Cash and Cash Equivalents Account (Current Asset on the Balance Sheet) and a corresponding increase in "Capital Contribution – [SBEA]" (Non-Current Asset on the Balance Sheet).

Capital Flow Diagrams

(Representative and Indicative of Final Structure)

Figure 3: SBEA Steady-State Operations and Cash-Flows of Recapitalized SBEA Program



Target Market

Who are the end-users of the engagement?

SBEA loans are available to small business, industrial, and municipal customer located in Eversource or UI territory within the State of Connecticut who have an average 12-month peak electricity demand between 10kW and 200kW. In recent years, UI has rationed loan funding to to municipal customers given constraints on their balance sheet. The proposed SBEA recapitalization will likely provide the most benefit to municipal customers whose projects are larger on average and, in UI territory, have been hampered by limited available loan funding.

Program Partners

Program partners include:

- JP Morgan Chase
- CT utilities: Eversource and UI

JP Morgan Chase

Description

One of the largest global financial services firms with assets of over $2.5 trillion and a significant global footprint in investment banking, asset management, retail and commercial banking, along with private wealth management.

Strategic Needs Addressed by the Proposed Program & Experience with Similar Programs

During the Green Bank's initial discussions with potential capital partners, JP Morgan was quick to display its interest in working with the Green Bank and utilities to come up with a solution that worked for the parties involved. JP Morgan's response to the RFP not only provided the lowest cost capital but also included a two-phased approach allowing for the evolution of the SBEA from an initial line of credit into a commercial paper facility, accessing capital at even lower interest rates.

Throughout the negotiation process on the term sheet and continued discussions with the utilities, EEB, and EEB C&I Committee, JPM has continued to display flexibility and willingness to work with all parties involved to provide a workable financing solution for the SBEA program.

JP Morgan's large balance sheet also means that the SBEA facility can continue to grow without capital constraints as demand for the interest-free loans rises, particularly amongst municipal customers who have been limited particularly by capital-constrained UI.

Leadership & Board of Directors

- Chairman & CEO: Jamie Dimon
- Chief Risk Officer: Ashley Bacon
- Chief Financial Officer: Marianne Lake
- General Counsel: Stacey Friedman
- Board of Directors: Linda Bamman, James Bell, Crandall Bowles, Stephen Burke, Todd Combs, James Crown, Jamie Dimon, Timothy Flynn, Laban Jackson Jr, Michael Neal, Lee Raymond, William Weldon

Competitive Selection and Award

- **Cost of Capital** – lowest cost capital solution
- **Special Capabilities** – proposed most flexible solution incorporating a line of credit and ability to evolve into a commercial paper facility once loan volumes reach critical mass.
- **Strategic Importance** – JPM displayed an eagerness to be involved in the financing of energy efficiency loans and acknowledged an interest in being involved in the first 'green' commercial paper facility should the recapitalized SBEA facility evolve in that manner
- **Timing –** JPM has displayed a willingness to move at the pace dictated by project partners, specifically the utilities

Financial Condition/Funding Sources & Stability

Financial highlights from JPM's annual report are as follows:

Financial Highlights

As of or for the year ended December 31, (in millions, except per share, ratio data and headcount)	2016	2015	2014
Reported basis[(a)]			
Total net revenue	$ 95,668	$ 93,543	$ 95,112
Total noninterest expense	55,771	59,014	61,274
Pre-provision profit	39,897	34,529	33,838
Provision for credit losses	5,361	3,827	3,139
Net income	$ 24,733	$ 24,442	$ 21,745
Per common share data			
Net income per share:			
Basic	$ 6.24	$ 6.05	$ 5.33
Diluted	6.19	6.00	5.29
Cash dividends declared	1.88	1.72	1.58
Book value	64.06	60.46	56.98
Tangible book value (TBVPS)[(b)]	51.44	48.13	44.60
Selected ratios			
Return on common equity	10%	11%	10%
Return on tangible common equity (ROTCE)[(b)]	13	13	13
Common equity Tier 1 capital ratio[(c)]	12.2	11.6	10.2
Tier 1 capital ratio[(c)]	14.0	13.3	11.4
Total capital ratio[(c)]	15.2	14.7	12.7
Selected balance sheet data (period-end)			
Loans	$ 894,765	$ 837,299	$ 757,336
Total assets	2,490,972	2,351,698	2,572,274
Deposits	1,375,179	1,279,715	1,363,427
Common stockholders' equity	228,122	221,505	211,664
Total stockholders' equity	254,190	247,573	231,727
Market data			
Closing share price	$ 86.29	$ 66.03	$ 62.58
Market capitalization	307,295	241,899	232,472
Common shares at period-end	3,561.2	3,663.5	3,714.8
Headcount	243,355	234,598	241,359

(a) Results are presented in accordance with accounting principles generally accepted in the United States of America, except where otherwise noted.
(b) TBVPS and ROTCE are each non-GAAP financial measures. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Financial Performance Measures on pages 48-50.
(c) The ratios presented are calculated under the Basel III Advanced Fully Phased-In Approach, and they are key regulatory capital measures. For further discussion, see "Capital Risk Management" on pages 76-85.

Risks and Mitigation Strategies

Credit Risk: Credit risk of underlying loan customers is fully borne by CEEF absorbing all loan losses. JP Morgan Chase as the senior lender within the recapitalized SBEA structure remains a low risk given the size of its balance sheet and long history of operating through a variety of extreme market events.

Origination Risk: The utilities originate and approve customer SBEA loans based on historic bill repayment history. The utilities have a light-touch underwriting process in place based on bill repayment history and have noted continued strong demand for the SBEA loans by customers. UI has had to cap loan volumes for its municipal customers given high demand and restricted balance sheet availability. It is anticipated that loan origination will continue to remain steady and is likely to continue to climb as the program is reinvigorated with private sector capital.

Political Risk: Political risk in the form of a raid by the State of Connecticut on CEEF funds for budgetary purposes is a viable concern for this program. JPM's request to prefund the interest expenses and requirement of a 10% loss buffer reduces their CEEF-related risks. Green Bank capital will be at risk in the event of CEEF failure though the Green Bank would make reasonable efforts for reimbursement or compensation from CEEF or a CEEF successor entity if possible.

Participation of JP Morgan Chase and Senior Lender(s): As long as the credit risk of the SBEA program remains as it is currently (i.e. fully backstopped by CEEF), we expect JPM to be able to renew the facility annually. JPM has also expressed an interest in evolving the SBEA facility via a commercial paper facility in the future once loan volumes can support this structure as evidence by the second-phase portion of their RFP response.

In the event that JPM did not want to renew the facility and the credit profile of the SBEA structure remains as is, the Green Bank has no reason to believe there would be issue finding an alternative capital provider given the strength of responses received during the RFP process. In the event that the credit profile of the SBEA structure does change, such as if the CEEF fund is no longer available to provide loan losses, the Green Bank expects that other capital providers (or even JPM) would be willing to provide capital under modified terms and conditions given the added risk. The utility on-bill repayment aspect of the SBEA loan program provides added confidence to capital providers given that utility bills are generally viewed as a required operating expense by small business, industrial, and municipal customers who would pay above other bills to keep the lights running.

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Resolutions

WHEREAS, pursuant to Conn. Gen. Stat. Section 16-24n the Connecticut Green Bank ("Green Bank") has a mandate to develop programs to finance clean energy investment for small business, industrial, and municipal customers in the State;

WHEREAS, recapitalizing the Small Business Energy Advantage ("SBEA") program with private sector capital is a recognized priority in the Green Bank's Comprehensive Plan and is a goal of the CT Energy Efficiency Board and Green Bank Joint Committee;

WHEREAS, The Connecticut Light and Power Company d/b/a Eversource Energy and The United Illuminated Company (together, the "Utilities") have requested the Green Bank's assistance sourcing low cost private sector capital;

WHEREAS, the Green Bank released a Request for Proposals for Small Business Energy Advantage Program Alternative Financing Solutions (the "RFP") on November 14, 2016;

WHEREAS, JP Morgan Chase responded to the RFP with a comprehensive and flexible solution offering the lowest cost capital to recapitalize the SBEA program;

WHEREAS, Green Bank staff has selected JP Morgan Chase's proposal to recapitalize the SBEA program and now recommends that the Green Bank support the recapitalized SBEA facility by creating and managing a special purpose vehicle (the "SPV") for the new fund structure, committing $3 million in an equity contribution to the fund structure (the "Equity Contribution"), and providing up to $750,000 of capital for short-term liquidity purposes (the "Liquidity Capital"); and

WHEREAS, the Utilities will continue to make funding available from the Connecticut Energy Efficiency Fund ("CEEF") to reimburse interest expenses, loan losses, and administrative costs associated with the recapitalized SBEA program.

NOW, therefore be it:

RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank, is authorized to execute and deliver agreements to establish the Equity Contribution, Liquidity Capital, and SPV with terms and conditions consistent within the memorandum submitted to the Board dated September 21, 2017, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 270 days from the date of authorization by the Board; 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 legal instruments.

Submitted by: Bryan Garcia, President and CEO; Bert Hunter, EVP and CIO; Mackey Dykes, Vice President, Commercial, Industrial & Institutional Programs; Anthony Clark, Senior Manager, Commercial, Industrial & Institutional Programs; Laura Fidao, Senior Manager, Clean Energy Finance

JP Morgan Term Sheet

Terms and Conditions for Revolving Line of Credit Proposal

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

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Clean Renewable Energy Bonds

for

Connecticut State College and University System

Solar Projects

Investment Memorandum & Due Diligence Package

Revised September 27~~1~~, 2017 – Board of Directors

Document Purpose: This document contains background information and due diligence on the proposed issuance of Clean Renewable Energy Bonds (to be purchased by Banc of America Public Capital Corp.) to finance the installation of an initial ~~3.~~4.6 MW+ of solar for the Connecticut State College and University System, as developed by Current by GE. This information is provided to the 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.

Memo

To: Connecticut Green Bank Board of Directors

From: Ben Healey, Director, Clean Energy Finance

CC: Bryan Garcia, President and CEO; Bert Hunter, EVP and CIO; Brian Farnen, General Counsel and CLO; Mackey Dykes, VP of Commercial, Industrial, and Institutional Programs

Date: Revised September 27~~1~~, 2017

Re: Financing for ~~3.~~4.6 MW+ of Solar Installations for the Connecticut State College and University System via New Clean Renewable Energy Bonds

Investment Summary

Staff is bringing forward a proposal for the Connecticut Green Bank ("Green Bank") to finance and own an initial ~~3.~~4.6 MW+ of solar installations to provide clean energy at a discount to various campuses that are part of the Connecticut State College and University ("CSCU") system. Similar to the currently operational CT Solar Lease 3 ("SL3") program (and the CT Solar Lease 2 program before it) but employing for the second time a Federal bond program (explained below), the Green Bank would own and operate these assets on behalf of the customer, with repayment coming through Power Purchase Agreements ("PPAs") between the Green Bank and the CSCU. This approach is expected to provide immediate energy savings to the CSCU, anticipated to be upwards of $~~160~~240,000 annually, without any balance sheet implications for the CSCU or the State of Connecticut more broadly. As such, this strategy represents the first step in a scalable opportunity for State properties, with the Green Bank independently raising capital, financing, and owning renewable energy assets to help drive down operating costs for State buildings.

This initial portfolio consists of seven distinct projects, all developed by Current by GE (an arm of General Electric, Inc., "GE")[1] pursuant to a Request for Proposals process run by the CSCU, and totaling approximately $9.5~~7~~ million in capital costs. All of the projects have signed PPAs between GE and the CSCU as well as ZREC contracts with either Eversource or United Illuminating; both of these contracts would be assigned to the Green Bank under the proposed strategy.

In contrast to our financing strategy for SL2 and SL3 which have deployed dozens of MWs of solar for commercial businesses, not-for-profit organizations and municipal buildings including schools, the Green Bank does not plan to source a tax equity partner to invest in the CSCU solar portfolio. Rather, building on our experience with the recently completed hydroelectric project at Hanover Pond in Meriden, we would apply for an allocation of New Clean Renewable Energy Bonds ("CREBs") from the IRS to finance the majority of the capital costs associated with these

[1] GE Current is not an independent entity, therefore all Portfolio contracts will be signed with General Electric, Inc.

installations (with the remaining capital, as needed, coming from Green Bank equity). Using CREBs, the Green Bank can access 20-year capital at a net effective interest rate (excluding transaction costs) that should come in between 1-2.5%, depending on market conditions and final negotiations with the CREBs purchaser.

Based on our success with the Hanover Pond hydro project, staff recommends partnering with Banc of America Public Capital Corp. ("BAPCC") to purchase the CREBs, so as to streamline documentation, benefit from their experience working with the Green Bank on CREBs in Connecticut, and receive a reduced interest rate during the first ten years associated with the Public Utilities Regulatory Authority ("PURA") buy-down of 100 basis points to which BAPCC has unique access.

With the proposed use of CREBs – a long-term financing solution that leverages federally supported low-cost private capital for clean energy projects – the Green Bank expects to structure a model that can be replicated more broadly for State of Connecticut buildings so as to lower costs both during this time of intense budgetary pressures and well into the future.

Portfolio

The charts below lay out the relevant details for the seven projects contemplated to comprise this initial investment portfolio.

Updated:

CHART REDACTED

CREBs

As the Board of Directors (the "Board") will recall, CREBs may be used by certain entities – primarily in the public sector – to finance Qualified Renewable Energy Facilities ("QREFs"). The following summarizes the CREBs financing structure and main requirements:

- The CREBs program was created under the Energy Tax Incentives Act of 2005 and is administered by the Internal Revenue Service ("IRS"). Through CREBs, the federal government lowers the cost of debt by either a tax credit to bondholders in lieu of interest payments from the issuers or (as in the structure agreed to for this transaction) a direct subsidy to the issuer. When the subsidy goes directly to the issuer, the issuer receives from the U.S. Treasury the lesser of the actual taxable rate of the bonds or 70% of the Tax Credit Rate as of the Bond Sale Date.[2]

- Qualified issuers of CREBs include: (a) public power providers; (b) cooperative electric companies; (c) governmental bodies (including States, or any political subdivisions thereof, or Indian Tribal Governments); (d) clean renewable energy bond lenders; and (e) not-for-profit electric utilities that have received loans or loan guarantees under the Rural Electrification Act. The Green Bank qualifies as a "governmental body" and is eligible to issue CREBs.

- As contemplated for this transaction, the Green Bank would issue CREBs to fund this portfolio as a general obligation of the Green Bank. **In contrast to the Hanover Pond**

[2] Note: Budget Control Act of 2011 included automatic across-the-board spending reductions – referred to as sequestration. Federal subsidies on CREBs are not deemed to be exempt from sequestration.

hydro transaction and owing to BAPCC's familiarity with solar PV assets, there would be no backstop from the Special Capital Reserve Fund.

- QREFs generally include the following types of facilities operated to produce electricity: (a) wind facilities; (b) biomass facilities; (c) geothermal and *solar energy facilities*; (d) small irrigation power facilities; (e) landfill gas facilities and trash combustion facilities; (f) qualified hydroelectric facilities; and (g) marine and hydrokinetic renewable energy facilities

- CREBs require a federal allocation. The Green Bank is currently completing the required application and expects to submit it to the Internal Revenue Service as soon as an agreement in principle is reached with the CREBs purchaser, which staff expects to obtain shortly. The not-to-exceed amount of $~~6,300~~8,500,000 in federal allocation the Green Bank is requesting is well below the current Published Volume Cap Limit of $54,925,186.51 for the period commencing September 1, 2017.

Proposed Financing

Staff proposes to finance this portfolio via a combination of CREBs and Green Bank equity. The amount of Green Bank equity required is not expected to exceed 12~~0~~% of overall portfolio capital costs (approximately $~~7~~1,100,000), although the exact amount will be determined subject to required debt service coverage ratios (DSCRs). Accordingly, so as to avoid the need to return to the Board for approval, for minor adjustments to project costs and fluctuations in DSCRs, staff recommends approval at 110% of this amount, or $~~770~~1,200,000. With respect to the CREBs, financing expectations are as follows:

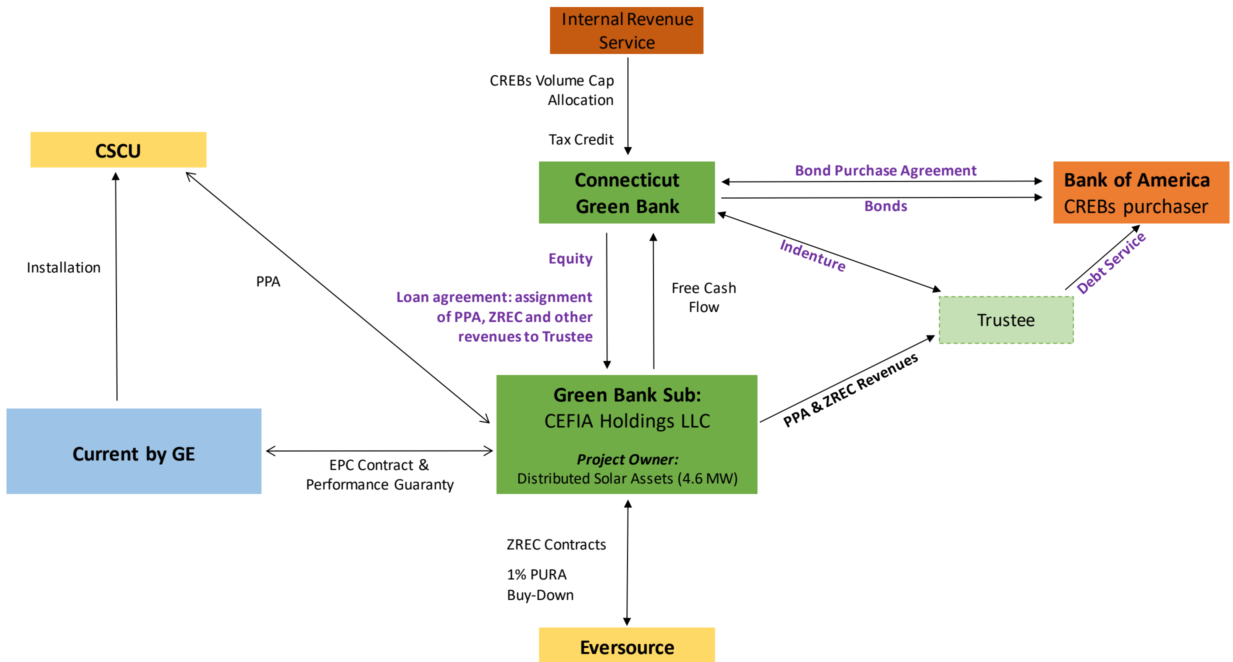
- BAPCC term investment is expected not to exceed $~~6,300~~8,500,000 (inclusive of issuance fees and other transaction costs) – but so as to avoid the need to return to the Board for approval, for minor adjustments to project costs, staff recommends approval at 110% of this amount, or $~~6,930~~9,350,000.

- Net effective interest rate is expected to range between 1-2.5%, depending on market conditions. The interest rate buy-down program from PURA will be applied during the first 10 years of the program, furthering lowering the net effective interest rate by 100 basis points during that period.

- Tenor of 20 years.

- Security to include a typical project finance collateral package (assignment of contracts, permits, revenues, warranties, security interest in all equipment, etc.) plus a Green Bank performance guaranty backstopped by GE.

Proposed Structure



Risk

The maximum ratepayer funding will not exceed $~~770~~1,200,000 which is the amount of the structure funded by Green Bank capital (in the form of equity investment by the Green Bank subsidiary – CEFIA Holdings LLC) with the balance of funding (approximately 88-90% of portfolio costs) funded by CREBs.

From a risk perspective, the investment's major risks are well mitigated:

- Credit risk – BAPCC is comfortable taking the credit of the CSCU without any Green Bank support or credit enhancement

- Technology risk – only Tier 1 equipment (both modules and inverters, inclusive of standard manufacturer warranties) will be accepted for these projects. The Green Bank will independently vet GE's engineering and require comprehensive commissioning protocols

- Performance risk – GE will provide a comprehensive performance guaranty across all of the systems in the portfolio. So while the Green Bank for the purposes of BAPCC credit approval must provide BAPCC with a performance guaranty, this GE performance guaranty will provide compensation to the Green Bank in the event of system underperformance and claims under our assurances to BAPCC.

    - In addition to the GE guaranty, BAPCC has indicated that it will require the Green Bank to pledge a certain percentage of annual debt service in the form of a further backstop, so as to cover a revenue shortfall due to underperformance if not remedied by GE. Staff is comfortable providing such a backstop so long as it is reasonably related to normal solar performance variation, as is currently contemplated, given that GE's guaranty will cover "tail risk" performance scenarios

Ratepayer Payback

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

The portfolio is projected to generate approximately ~~80~~112,000,000 kWh of electricity over 20 years. Given an investment of $~~7~~9.5 million in total, that translates to about 11.8~~5~~ kWh per ratepayer dollar at risk.

Capital Expended

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

Total capital expended would be approximately $9.5~~7~~ million (but potentially up to 110% of this amount), of which less than 12~~0~~% is projected to be Green Bank equity (vs. 88-90% of third-party debt via the CREBs issuance).

Financial Statements

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

The proposed financing will result in an increase in the Green Bank's Capital Assets (Noncurrent Assets) associated with the ownership of the solar portfolio. To balance this increase, there will be a decrease in Unrestricted Cash on the Green Bank's balance sheet (in the amount of about 10-12% of capital costs) and an increase in Long-Term Debt associated with the CREBs issuance.

Financial Metrics

The table below summarizes the basic assumptions underlying the financing of this portfolio. Again, the key takeaway is that the proposed use of CREBs will provide a very low cost of capital and require only a marginal equity contribution from the Green Bank.

Updated:

CHART REDACTED

Strategic Selection

Staff believes the issuance of CREBs for the CSCU solar portfolio and the selection of BAPCC as the financing partner fits well within the requirements for a Strategic Selection as defined in Section XII of the Green Bank's Operating Procedures:

- **Special Capabilities**: While BAPCC is not alone in its extensive energy and tax credit bond financing expertise, the firm does have a uniquely deep understanding of CREBs in the context of a Green Bank issuance, including base documentation already developed and ready for reuse for this issuance. Moreover, to reiterate, BAPCC has sole responsibility for administering PURA's interest rate buydown program, which staff anticipates will lower the cost of capital for this portfolio by 100 basis points during its first 10 years in operation.

- **Uniqueness**: This portfolio is the first of its kind with respect to State of Connecticut properties. The nature of the portfolio, including its proven technology and highly secure and contracted cash flows (PPA and ZREC), provides an excellent opportunity to further develop the CREBs structure so that it can be employed as a unique low-cost source of capital to scale these kinds of projects to benefit State buildings.

- **Strategic Importance**: Attracting a $~~6,300~~8,500,000 CREBs allocation from the U.S. Treasury and mobilizing this low-cost capital structure is a valuable opportunity for the Green Bank to demonstrate how an attractive PPA program can accelerate clean energy deployment while addressing State of Connecticut budget issues in a replicable fashion.

- **Urgency and Timelines**: The volume of CREBs available at the federal level is decreasing as other states and projects take advantage of the program. The Green Bank should secure another allocation while volume remains.

- **Multiphase Project**: There is a broad opportunity to scale this financing strategy with other State buildings once this initial portfolio has been placed in service.

Conclusion

Financing this portfolio through CREBs would represent both a culmination of multiple years of work, as well as a jumping-off point for a much bigger opportunity going forward. Over the last few years, staff have developed an understanding of the CREBs program, crafted documentation to take advantage of it and executed an initial successful financing (in the form of the Hanover Pond hydro transaction), negotiated standard PPA language with the CSCU (and had such approved by the Office of the Attorney General), and sourced a development partner with the capability to effectively execute solar installations at a portfolio scale. With the tools now in place, this financing should provide the foundation for looking at the State's buildings across the board and offering PPAs for a much broader pool of cost-effective projects. That is, this portfolio financing represents tremendous untapped potential, and staff looks forward to executing on that opportunity.

Resolutions

WHEREAS, the Connecticut State College and University ("CSCU") system has signed Power Purchase Agreements with General Electric, Inc. for a portfolio of behind-the-meter solar installations at various CSCU campuses across the state (the "Portfolio");

WHEREAS, Banc of America Public Capital Corp ("BAPCC") has extensive energy and tax credit bond financing expertise, has indicated interest in financing the Portfolio via New Clean Renewable Energy Bonds ("CREBs") and received a reduced interest rate through the Public Utilities Regulatory Authority.

WHEREAS, the Connecticut Green Bank ("Green Bank") would be considered a Qualified Issuer and Qualified Owner under CREBs, and each of the projects within the Portfolio would qualify as a Qualified Renewable Energy Facility (as all of those terms are defined under regulations issued by the Internal Revenue Service);

WHEREAS, Green Bank staff recommends that the Green Bank Board of Directors ("Board") approve of financing the Portfolio using a combination of ratepayer capital and CREBs proceeds, in an amount not to exceed $~~7,700~~10,550,000, as a strategic selection and award because of the special capabilities of BAPCC to provide capital at attractive rates for tax credit bond financing, the uniqueness of the Portfolio, and the strategic innovation associated with securing the Green Bank's CREBs allocation.

NOW, therefore be it:

RESOLVED, that the Green Bank Board hereby approves an appropriation and bond authorization of not more than $~~6,930~~9,350,000 to finance the Portfolio, including costs associated with ownership of the Project (as required under CREBs regulations), as a strategic selection and award pursuant to Green Bank Operating Procedures Section XII;

RESOLVED, that the Green Bank may provide ratepayer capital, in the form of equity to finance the Portfolio as required for the successful structuring of the CREBs issuance, in an amount not to exceed $~~770~~1,200,000;

RESOLVED, that the President of the Green Bank and any other duly authorized officer is authorized to proceed with the prerequisites to the issuance of CREBs in an amount not to exceed $~~6,930~~9,350,000 with terms and conditions consistent with the memorandum submitted to the Board dated September 27~~1~~, 2017, and as he or she shall deem to be in the interests of the Green Bank and the ratepayers no later than 405 days from the date of authorization by the Board, provided that staff will submit for Board approval all resolutions required to approve all relevant documentation (such as an indenture of trust) required for the actual issuance of bonds;

RESOLVED, that the Green Bank Board hereby declares the Green Bank's official intent that payment of Portfolio construction and financing costs may be made from temporary advances of other available funds of the Green Bank, and that the Green Bank reasonably expects to reimburse such advances from the proceeds of the CREBs financing in an amount not to exceed $~~6,930~~9,350,000; 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 legal instruments.

Submitted by: Bryan Garcia, President and CEO; Bert Hunter, EVP and CIO; Ben Healey, Director, Clean Energy Finance; Mackey Dykes, VP of Commercial, Industrial, and Institutional Programs.

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CONNECTICUT GREEN BANK

Memo

To: Connecticut Green Bank Board of Directors

From: Bert Hunter, EVP and CIO; Kerry O'Neill, Vice President, Residential Programs

CC: Bryan Garcia, President and CEO; Brian Farnen, General Counsel and CLO; Eric Shrago, Director of Operations; George Bellas, VP Finance and Administration

Date: September 21, 2017

Re: Smart-E for Electric Vehicles Pilot Loan Program Approval

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Purpose

The purpose of this memorandum is to request programmatic approval from the Connecticut Green Bank ("Green Bank") Board of Directors for a new ***Smart-E for Electric Vehicles Pilot Loan Program*** ("Pilot Program") using $500,000 of funding that was approved in the FY18 Budget for a new consumer electric vehicle program.

Program Goals

The Residential program and Finance teams have identified an opportunity to pilot a financing program with participating lenders and auto dealers to catalyze the rate of consumer adoption of electric vehicles ("EVs") in Connecticut.

The ***Smart-E for EVs Pilot Loan Program*** has been developed with the input of the Department of Energy and Environmental Protection ("DEEP"), the Connecticut Automotive Retailers Association ("CARA"), and Nutmeg Federal Credit Union, a Smart-E lender. Through its administration of the Connecticut Hydrogen and Electric Automobile Purchase Rebate ("CHEAPR") program, DEEP has substantial experience both in incenting EVs and in collaborating with CARA to expand the state's EV market. In 2017 the Green Bank coordinated with both parties on its promotion of a steep EV discount offered by Nissan North America, focusing a demand aggregation campaign at various groups including state residential solar PV customers and state employees.

This program would support DEEP's efforts to substantially increase the adoption and retention of EV vehicles in Connecticut. In October 2013, Connecticut, California, Maryland, Massachusetts, New York, Oregon, Rhode Island, and Vermont signed a memorandum of understanding ("MOU") committing to coordinated action to ensure the successful implementation of their state zero-emission vehicle ("ZEV") programs. ZEVs include pure battery electric vehicles ("BEVs"), plug-in hybrid electric vehicles ("PHEVs"), and hydrogen fuel cell electric vehicles ("FCEVs"). Collectively these states are committed to having at least 3.3 million ZEVs operating on their roadways by 2025. The MOU identifies joint cooperative actions the signatory states will undertake by 2025 and additional actions that individual jurisdictions are considering to build a robust market for ZEVs. Connecticut's portion of this commitment is approximately 150,000 EVs (there are approximately 5,000 ZEVs on the road today in Connecticut). In addition to this, the Governor's Council on Climate Change is in the process of evaluating and recommending a 2030 economy-wide GHG reduction target that puts the state on a clear pathway to meeting its Global Warming Solutions Act target of 80% below 2001 levels by 2050. At 36%, the transportation sector represents the largest portion of the state's overall carbon emissions and 67% of the state's smog-forming emissions. Developing a path to decarbonize the transportation sector is essential and has been a primary focus for the Council.

Market Gap & Opportunity

Together with CARA we have identified a market gap as well as an opportunity to support the market for the purchase of pre-owned EVs. Currently, there is no dealer or manufacturer financing available for dealerships to capture a car coming off lease at the lot and subsequently offer it for resale. These EVs are instead sent to auction and end up in the larger EV markets (CA #1, NY #2). A loan product for pre-owned EVs would help lower loan payment price points for consumers and also maintain their availability in CT at lower price points than new EVs. Together this makes EVs more accessible to a wider audience, including to 1st time car buyers and low to moderate income buyers.

In discussions with CARA and Nutmeg they indicated the overwhelming majority of new EVs are leased, 75-80%. Nutmeg, like other credit unions, offers the same rates for new or used vehicles - essentially treating them as the same loan type. (Note: rates are "risk-adjusted" meaning that qualified applicants with lower FICO scores are offered loans with higher interest rates than higher FICO applicants.) Thus, for maximum operational effectiveness with participating lenders, the Pilot Program would be open to both new or pre-owned EVs. This has the added benefit of supporting an attractive purchase financing option, which would also support more EVs that would stay in CT and contribute to achieving more vehicle miles traveled with zero mobile-source emissions.

With an EV loan option in place, the Green Bank can promote the benefits of owning an EV and owning a green home with an EV charger, solar PV and storage. A new Smart-E Bundle offer was launched in conjunction with Green Earth Energy and Ken Crowley at the 2017 Big E, which offers homeowners who have an EV (or purchased one in the past 5 years) a 0.99% loan for installing solar PV, storage, home charging stations and other eligible energy upgrade measures. CARA dealers, Smart-E lenders and solar installers are enthusiastic about the ability to cross promote the benefits of EVs and homes with solar and storage.

There are a variety of stakeholders that will want to promote the Smart-E bundle:

- Auto Dealerships are provided with a compelling sales proposition to entice more customers to buy an EV, or to market to existing EV customers the Smart-E solar/storage bundle, keeping customers in a successive EV model at trade-in. Dealers have identified that promoting solar, home chargers and storage as an important complementary selling point for persuading customers to opt for (or stay in) an EV.
- Solar installers want to promote EVs and the solar/charger/storage bundle, given the complementarity of the suite of technologies and what they view as an important emerging market they want to be involved in.
- Our larger credit union partners, already active in the Smart-E program, want to get in on a new market with EV loans. They can now cross market Smart-E EV customers with the bundle opportunity, and market their existing Smart-E customers with an EV opportunity.
- The Green Bank will have a new marketing opportunity, and will be able to leverage this as a financial product offering that works in conjunction with other initiatives such as municipal campaigns or experiential marketing (e.g., ride-and-drives or “loaner” vehicles). Additionally, this will give the Green Bank the opportunity to gain direct experience with this critical new market, and from that evolve future financing and marketing programs.

Pilot Program and Underwriting Guidelines

Program guidelines are described in Attachment A and apply to loans financing the purchase of qualified new or pre-owned EVs in Connecticut.

In summary, they include:

- Interest Rate Buydown paid to lender new and pre-owned Eligible EVs, buydown rate to be set by the Green Bank
- Lenders agree to a schedule of not to exceed rates by term
- Maximum of $40K financed and maximum of 6-year term (see averages below)

Pilot Program Budget

Staff proposes to use $500,000 for the Pilot Program, the amount that was previously approved by the Board in the FY18 budget to support a new consumer EV program.

A recent study conducted by the Western Connecticut Council of Governments[1] provided data on the state of the EV market to date, as the following tables indicate.

[1] Electric Vehicle and Charging Station Study prepared by WestCOG, 2017.

State of CT Registrations			
Model Year	# of EVs	Gas Price 2015 $'s / gallon	% Increase from prior year
2011	63	$3.75	
2012	514	$3.80	716%
2013	851	$3.62	66%
2014	722	$3.40	-15%
2015	821	$2.45	14%
Total	2971		

Top 5 Car Models Registered in CT for years 2011-2015	
Make/Model	# Registered
Toyota Prius Plug-in	773
Tesla Model S	763
Chevrolet Volt	601
Nissan Leaf S/sv/sl	267
BMW I3 Rex	120

MSRP of Top-Selling EV Models in CT for 2017		
Rank	Make/Model	MSRP
1	Tesla Model S	$ 68,000
2	Nissan Leaf	$ 34,200
3	Volkswagen E-Golf	$ 33,220
4	Ford Focus Bev	$ 33,120
5	Smart Fortwo Electric	$ 12,490
Average for EVs		$ 36,206

Using this data and input from CARA, staff expects that the Pilot Program budget could support 370-450 EV purchases, given a portfolio average IRB of $1,100 on the low end and $1,770 on the high end. Factors impacting the portfolio average IRB include the average loan amount, average term, and the rate to which the Green Bank is buying down.

Sample Car Loan Economics and Pilot Program Support		
	Low End Budget	High End Budget
Avg. EV Purchase Price	$ 18,000	$22,000
Avg. Smart-E Pre-Owned EV Loan Term	5	5
Avg. Lender Interest Rate	3.49%	3.49%
Smart-E for EV Promotional Rate	0.99%	0.99%
Avg. IRB Value	$1,101	$1,345
Avg. monthly loan payment at Promotional Rate	$307.61	$376.10
Pilot Program Budget	$500,000	$500,000
# of EV purchases supported	454	372

Conclusion

The Pilot Program is designed to:

- Increase the accessibility and affordability of EVs, particularly with pre-owned models,
- Keep more “second-owner” (pre-owned) EVs in CT, and
- Test how a financing offer with an IRB might be used down the road to transition the CHEAPR grant program into a financing program, and test the effectiveness of this approach. At present, DEEP and CARA firmly think the upfront purchase cost is the main barrier for EV uptake. But with declining battery costs, increasing OEM scale (and related price efficiencies) the value proposition paradigm could shift in a few years.

The Pilot Program will help inform the design of scalable programs that can effectively catalyze the rate of adoption of EVs purchased by drivers domiciled in the state.

Green Bank Staff asks the Board to approve this Pilot Program.

Resolutions

WHEREAS, the Connecticut Green Bank (the “Green Bank”) is established and authorized pursuant to Conn. Gen. Stat. Section 16-245n to, among other things, develop programs to finance and otherwise support clean energy investment in residential projects per the definition of clean energy in Conn. Gen. Stat. Section 16-245n(a);

WHEREAS, in July of 2017, the Connecticut Department of Energy and Environmental Protection (“DEEP”) released the Draft Comprehensive Energy Strategy (“CES”) for Connecticut that includes a focus on electric vehicles and their use to increase zero emission vehicle-miles-traveled in the state;

WHEREAS, in June of 2017, the Green Bank Board of Directors (the “Board”) approved the FY18 budget that included $500,000 allocated to a new consumer EV program; and

WHEREAS, in May of 2013, Green Bank launched the Smart-E Loan program, statewide as of November 2013, with currently 11 local lenders providing low cost and long-term financing for measures that are consistent with the state energy policy and the implementation of the CES.

NOW, therefore be it:

RESOLVED, that the Green Bank Board of Directors (the “Board”) approves a pilot interest rate buydown program to be known as Smart-E for EVs Pilot Loan Program, as more particularly described in that certain memorandum and attached program guidelines submitted to the Board dated September 21, 2017. The budget of the Smart-E for EVs Pilot Loan Program will be $500,000, consistent with the Board approved FY18 budget.

ATTACHMENT A

Smart-E for EVs Pilot Loan Program ("Pilot Program")

REQUIREMENTS & TERMS

Purpose of the Program:	To provide financing for the purchase of Eligible EVs for Consumer (non-commercial) Vehicle loans underwritten by individual Lenders through the Smart-E for EV Pilot Loan Program.
Parties	
Program	Smart-E for EV Pilot Loan Program
Borrower	Individual consumers purchasing new or pre-owned Eligible EVs
Lender	Credit unions and community banks
Sponsors	
Green Bank	Development, oversight, and approval of program design and modification; Interest Rate Buydown Provider; Program Administrator
Dealer	Green Bank approved dealers with proper state licensing, including members of the Connecticut Automotive Retailers Association
Interest Rate Buydown Program	
Interest Rate Buydown	Green Bank will offer an "interest rate buydown" on loans to finance Eligible EVs inclusive of typical dealer "time of sale" add-ons (such as extended warranty coverage) as well as EV rechargers (inclusive of their installation costs) in an amount to be set at the launch of the program and updated as needed with 30 days' notice. Lenders must obtain Green Bank approval for the rates that will be bought down in advance, but they may not be higher than the not-to-exceed rates listed below. It is expected that in return for access to the interest rate buydown program, Lenders will be offering a below market rate and will also cover any fees to dealers for financing originated via dealers. Green Bank will pay Lender monthly for all interest buydowns from loans closed the prior month. Calculation of interest rate buydown amounts will be the same as the Smart-E Loan Program.

LOAN REQUIREMENTS

Loan Product Details	Structure/Minimum Standards
Loan type	Car Loan (secured by vehicle)
Program Dealers	Program Dealers are defined as Dealers properly licensed in CT and selling Eligible EVs, including member dealers of the CT Automotive Retailers Association.
Eligible Electric Vehicles	(1) DEEP CHEAPR list, or (2) Pre-owned list of electric vehicles covering prior model years (3) Recommended by a Program Dealer and accepted by Green Bank.
Loan amounts	Program Range: up to $30,000 (maximum) Lenders can offer higher loan amounts (up to $40,000) subject to Green Bank approval.
Loan term	For all loan amounts: up to 72 months.
Loan rates	Not to exceed rates: 3 Years – 2.49% 4 Years – 2.99% 5 Years – 3.49% 6 Years – 3.99% Lending Institutions may offer rates below those shown. Fixed rate with no prepayment penalty.
Minimum FICO (credit score)	Judgment of Lending Institution (consistent with Lender's lending practice)
Other underwriting criteria	Judgment of Lending Institution (consistent with Lender's lending practice)
Application Processing and Reporting	
Application	Lender does not need to seek approval of Green Bank before closing. But Green Bank will only remit to Lender Interest Rate Buydown payments on a monthly basis for Eligible EVs. If Lender has questions on eligibility for certain EVs, Green Bank will provide an in-writing determination (e.g. for grey areas, EVs not on list of Eligible EVs).
Reporting	Lender will provide a monthly report to the Green Bank of closed loans under the Program that includes Borrower, EV make, VIN, amount of loan, interest rate, term, and interest rate buydown. Green Bank will use this to remit payment to Lender for interest rate buydowns for Eligible EVs.

LENDING INSTITUTIONS MAKE ALL FINAL UNDERWRITING DECISIONS. LOANS MAY BE APPROVED, DECLINED, OR SUBJECT TO FURTHER REVIEW IF UNDERWRITER DETERMINES THAT FICO SCORE OR OTHER FACTORS ARE INCONSISTENT WITH ACTUAL CREDIT PROFILE.