

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



April 20, 2018

Dear Board of Directors:

We have a meeting scheduled for next week for Friday, April 27, 2018 from 9:00-11:00 a.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 April 3, 2018, approval of time extension request from a prior-approved fuel cell project, progress to targets through Q3 for FY 2018, and the February 2018 financial statements. As you can see, we are ahead of our FY 2018 targets.
- **Investment Business** – we have a C-PACE transaction for your review and approval. There may be a second transaction. If so, materials will be provided by COB, Tuesday, April 24, 2018.
- **Incentive Business** – we will provide an update on the SHREC securitization along with a request to create a working line of credit to help the Green Bank manage its cash flow. The team is working on memos for these items, which will be distributed by the COB, Monday, April 23, 2018.
- **Nonprofit Organization** – we will present our work on the Green and Healthy Homes Initiative, discuss the staff transitions from the Green Bank to the Nonprofit, and have a conversation on the business plan assumptions that were of interest to many of the board members.
- **Other Business** – if we have any other business items, we can raise them.

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

Until then, have a great EARTH DAY! And don't forget, for those interested, Nancy Nicolescu from the Office of State Ethics will be with us on Friday at 11:00 a.m. (immediately following the Board Meeting) to conduct an onsite Ethics Training for our 2018 compliance. This is optional.

We look forward to seeing you next week.

Sincerely,

A handwritten signature in blue ink, appearing to read "B. Garcia", with a long horizontal flourish extending to the right.

Bryan Garcia
President and CEO



AGENDA

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

Friday, April 27, 2018
9:00-11:00 a.m.

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

1. Call to order
2. Public Comments – 5 minutes
3. Consent Agenda – 5 minutes
4. Investment Business – Clean Energy Finance – 15 minutes
 - a. C-PACE Transaction – South Windsor
 - b. C-PACE Transaction – Fairfield (Tentative)
5. Incentive Business – RSIP/SHREC – 20 minutes
 - a. SHREC Update
 - b. Revolver
6. Non-Profit Organization – Underserved Markets – 60 minutes
 - a. Green and Healthy Homes Initiative
 - b. Staff Transitions
 - c. Business Plan – Assumptions
7. Other Business – 5 minutes
8. Adjourn

Next Regular Meeting: Friday, June 22, 2018 from 9:00 -11:00 a.m.
Connecticut Green Bank, 845 Brook Street, Rocky Hill, CT



RESOLUTIONS

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

Friday, April 27, 2018
9:00-11:00 a.m.

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

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 April 3, 2018.

Resolution #2

WHEREAS, the Green Bank Board of Directors (“Board”) has previously approved a loan to support FCE’s development of a 3.7 megawatt high efficiency fuel cell project in Danbury, Connecticut (the “Term Loan”), as recommended and requested in the due diligence memorandum dated March 10, 2017 with terms and conditions for the Term Loan contained in the draft term sheet which accompanied the memorandum (the “Term Sheet”);

WHEREAS, staff set forth in the project qualification memo dated January 26, 2018 a request for the Board to approve, and the Board as of that date did approve, updates to the previously-approved Term Sheet, to set a new deadline for advance of May 1, 2018, and the ability to sell off all, or a portion, of the Term Loan to 3rd party investors and the ability to guaranty all (for a fee or additional consideration), or a portion, of the amount of the Term Loan sold subject to subsequent Board approval on the terms and conditions thereof; and

WHEREAS, staff has set forth in the project qualification memo dated April 27, 2018 a request for the Board to approve an additional extension of the deadline for advance from May 1, 2018 to December 31, 2018.

NOW, therefore be it:

RESOLVED, that the Green Bank Board of Directors hereby approves the new deadline for advance of the Term Loan be extended to December 31, 2018.

4. Investment Business – Clean Energy Finance – 15 minutes

a. C-PACE Transaction – South Windsor

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 **\$3,115,000** construction and (potentially) term loan under the C-PACE program to Ticket Network Campus Realty LLC., the building owner of 83 Gerber Road, South Windsor, 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 April 20, 2018, 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.

b. C-PACE Transaction – Fairfield (Tentative)

Resolution #4

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

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

WHEREAS, the Green Bank seeks to provide a **\$512,632** construction and (potentially) term loan under the C-PACE program to Lake Hills Shopping Center, LLC, the building owner of 2264 Black Rock Turnpike, Fairfield, 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 April 24, 2018, 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.

5. Incentive Business – RSIP/SHREC – 30 minutes
 - a. SHREC Warehouse

Resolution #5

WHEREAS, Connecticut Green Bank ("Green Bank") staff has submitted to the Green Bank Board of Directors ("Board") a proposal for Green Bank to enter into an agreement with Webster Bank and Liberty Bank ("Webster-Liberty") for a \$16,000,000 secured revolving line of credit ("SHREC Revolving Credit Facility") whereby the SHREC Revolving Credit Facility would

be used for a period of up to one year in order to bridge Green Bank's short-term liquidity and working capital needs prior to funding anticipated from the permanent asset backed securitization ("ABS") financing of Tranche 1 and Tranche 2 of the Solar Home Renewable Energy Credit ("SHREC") program;

WHEREAS, along with a general repayment obligation by the Green Bank, Webster-Liberty would be secured by a first priority security interest in, and an absolute assignment of all cash flows associated with Tranche 1 and Tranche 2 of the SHREC program and, in the event of a payment default under the SHREC Revolving Credit Facility, such additional Tranches of SHRECs as required by the Lenders together with all commercially necessary rights thereunder (the "SHREC Collateral"); and

WHEREAS, Green Bank staff recommends that the Board approve the proposed SHREC Revolving Credit Facility, generally in accordance with the terms of the summary term sheet presented to the Board on April 27, 2018.

NOW, therefore be it:

RESOLVED, that the Board approves Green Bank to enter into the SHREC Revolving Credit Facility with Webster-Liberty substantially as set forth in the memorandum to the Board dated April 27, 2018;

RESOLVED, that the Board approves Green Bank to establish a bankruptcy remote special purpose entity 100% owned by Green Bank, if required by the lenders to secure their interest in the SHREC Collateral;

RESOLVED, that the President, Chief Investment Officer and General Counsel of Green Bank; and any other duly authorized officer of Green Bank, is authorized to execute and deliver on behalf of Green Bank any of the definitive agreements related to the SHREC Revolving Credit Facility and to establish the SPV and any other agreement, contract, legal instrument or document as he or she shall deem necessary or appropriate and in the interests of Green Bank and the ratepayers in order to carry out the intent and accomplish the purpose of the foregoing resolutions; and

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

Resolution #6

WHEREAS, Connecticut Green Bank ("Green Bank") staff has submitted to the Green Bank Board of Directors ("Board") a proposal for Green Bank to proceed with an agreement with the Royal Bank of Canada ("RBC") whereby RBC would structure, arrange and secure funding in accordance with a proposed permanent asset backed securitization ("ABS") financing of Tranche 1 and Tranche 2 of the Solar Home Renewable Energy Credit ("SHREC") program as described in the Confidential Memorandum to the Board of Directors dated April 27, 2018;

WHEREAS, RBC was selected pursuant to a Request for Proposal process as set for in the Operating Procedures of the Green Bank; and

WHEREAS, any bond or note issuance associated with the SHREC ABS financing will be subject to definitive documentation which will require approval by the Board.

NOW, therefore be it:

RESOLVED, that the Board approves Green Bank to enter into a Professional Services Agreement with RBC for the purpose of having RBC structure, arrange and secure funding in accordance with a proposed permanent ABS financing of Tranche 1 and Tranche 2 of the SHREC program substantially as set forth in the Confidential Memorandum to the Board of Directors dated April 27, 2018;

RESOLVED, that the President, Chief Investment Officer and General Counsel of Green Bank; and any other duly authorized officer of Green Bank, is authorized to execute and deliver on behalf of Green Bank any of the definitive agreements related to the SHREC Revolving Credit Facility and to establish the SPV and any other agreement, contract, legal instrument or document as he or she shall deem necessary or appropriate and in the interests of Green Bank and the ratepayers in order to carry out the intent and accomplish the purpose of the foregoing resolutions; and

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

b. Revolver

Resolution #7

WHEREAS, Connecticut Green Bank ("Green Bank") staff has submitted to the Green Bank Board of Directors ("Board") a proposal for Green Bank to enter into an agreement with Union Savings Bank ("USB") for a \$5,000,000 secured revolving line of credit ("Revolving Credit Facility") whereby the Revolving Credit Facility would be used in order to meet the Green Bank's short-term liquidity and working capital needs for period of up to one year;

WHEREAS, along with a general repayment obligation by the Green Bank, USB would be secured by a first priority security interest in, and an absolute assignment of all cash flows associated with, the CT Solar Lease 1 Notes portfolio (the "Collateral"); and

WHEREAS, Green Bank staff recommends that the Board approve the proposed Revolving Credit Facility, generally in accordance with the terms of the summary term sheet presented to the Board on April 27, 2018.

NOW, therefore be it:

RESOLVED, that the Board approves Green Bank to enter into the Revolving Credit Facility with USB and approves of USB as a strategic selection to be the sole source provider of the Revolving Credit Facility;

RESOLVED, that the Board directs the Vice President Finance and Administration and the Chief Investment Officer of Green Bank to determine procedures for use of the Revolving Credit Facility, including as part of such procedures the consent of the Chair of the Board or, in the Chair's absence, the consent of the Vice Chair of the Board (such procedures to be agreed

by the President and Chief Executive Officer, the Chair of the Board and the Vice Chair of the Board and advised to the entire Board prior to any use of the Revolving Credit Facility);

RESOLVED, that the President, Chief Investment Officer and General Counsel of Green Bank; and any other duly authorized officer of Green Bank, is authorized to execute and deliver on behalf of Green Bank any of the definitive agreements related to the Revolving Credit Facility and any other agreement, contract, legal instrument or document as he or she shall deem necessary or appropriate and in the interests of Green Bank and the ratepayers in order to carry out the intent and accomplish the purpose of the foregoing resolutions; and

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

6. Non-Profit Organization – Underserved Markets – 60 minutes
 - a. Green and Healthy Homes Initiative

Resolution #8

WHEREAS, the Connecticut Green Bank (“Green Bank”) actively seeks to support the goal of supporting affordable and healthy buildings in low-to-moderate income and distressed communities across the state, as articulated in an organizational goal in its Comprehensive Plan.

WHEREAS, the Connecticut Green and Healthy Homes Project involves the following state agencies and organizations that are aligned in their common goals related to health, housing and energy: Connecticut Green Bank, Department of Public Health, Green & Healthy Homes Initiative, Department of Social Services, Department of Energy & Environmental Protection, Department of Housing, Department of Children and Families, Office of Early Childhood, Office of Chief State’s Attorney, United Illuminating, and Eversource.

WHEREAS, Green and Healthy Homes Initiative (GHHI) has proposed a scope of work for research and project design for Phase II of the Project for \$200,000 to support the Green Bank’s efforts to accelerate energy efficiency and clean energy generation across Connecticut; and

WHEREAS, Project partners are securing foundation and other grant funding in addition to Department of Energy Solar Energy Technologies Office grant funds to cover the full cost of GHHI’s engagement.

WHEREAS, the proposed scope of work as a strategic selection and award pursuant to Green Bank Operating Procedures Section XII pursuant to the rationale in the memorandum to the Board of Directors dated March 27, 2018 setting forth GHHI’s unique opportunity and approach to developing an integrated model to address health, housing, and energy needs in the Connecticut Green and Healthy Homes Project;

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 accept the GHHI proposal, and in so doing obligate the Green Bank in a total amount not to exceed \$200,000 with terms and conditions consistent with the memorandum submitted to the Board of Directors dated March 27, 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 March 27, 2018; 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. Staff Transitions

Resolution #9

WHEREAS, on December 15, 2017, the Board of Directors of the Green Bank approved of a budget mitigation strategy consistent with the Sustainability Pathway Strategy, including the need for staff to present a detailed business plan, budget, and transition plan for certain employees to a Nonprofit;

WHEREAS, on April 3, 2018, the Board of Directors of the Green Bank was presented by staff a detailed business plan to which the Board of Directors then authorized the President and any other duly authorized officers of the Green Bank to participate in the formation of an independent nonprofit non-stock corporation to further the purposes of the Green Bank, including achieving operating leverage and attracting mission-oriented investors for a set of products serving underserved market segments; and

WHEREAS, on April 27, 2018, the Board of Directors of the Green Bank was presented a staff transition plan for those individual staff members of the Green Bank transitioning to the Nonprofit.

NOW, therefore be it:

RESOLVED, that the Board of Directors of the Green Bank authorizes the President of the Green Bank and any other duly authorized officer of the Green Bank to ensure the orderly transition of individuals transitioning from the Green Bank to the Nonprofit, taking into consideration, but not limited to, the Advisory Opinion No. 2018-2 by the Office of State Ethics;

RESOLVED, that the Board of Directors of the Green Bank authorize the President of the Green Bank and any other duly authorized officer of the Green Bank to provide assistance to the Nonprofit to identify, analyze, and recommend benefits options for the staff transitioning from the Green Bank to the Nonprofit; and

RESOLVED, that the Board of Directors of the Green Bank directs the President of the Green Bank to notify the individuals that will be transitioning from the Green Bank to the Nonprofit of their last day with the Green Bank tentatively planned for June 30, 2018.

c. Business Plan – Assumptions

7. Other Business – 5 minutes

8. Adjourn

Next Regular Meeting: Friday, June 22, 2018 from 9:00 -11:00 a.m.
Connecticut Green Bank, 845 Brook Street, Rocky Hill, CT



CONNECTICUT
GREEN BANK SM

Board of Directors Meeting

April 27, 2018

Board of Directors

Agenda Item #1

Call to Order

Board of Directors
Agenda Item #2
Public Comments

Board of Directors
Agenda Item #3
Consent Agenda

Consent Agenda

Resolutions 1 and 2



1. **Meeting Minutes** – approval of meeting minutes of April 3, 2018

2. **Fuel Cell Transaction** – approval of extension for project located in Danbury, CT
 - **Q3 Progress to Targets** – ahead of FY 2018 progress to targets

 - **Financial Statements** – through February 2018

Board of Directors
Agenda Item #4a
Investment Business
C-PACE Transaction – South Windsor

83 Gerber Rd, South Windsor Ratepayer Payback



- **\$3,115,000** for a 1.375 MW roof mount solar PV system
- Projected savings are **101,772 MMBtu** versus **\$3,115,000** 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 South Windsor as it collects the C-PACE benefit assessment from the property owner.

83 Gerber Rd, South Windsor

Terms and Conditions



- **\$3,115,000** construction loan at 5% and term loan set at a fixed 6.00% over the 20-year term
- **\$3,115,000** loan against the property
 - ❑ Property valued at **REDACTED**
 - ❑ Loan-to-value ratio equals **REDACTED**; Lien-to-value ratio equals **REDACTED**
- DSCR > **REDACTED**

83 Gerber Rd, South Windsor

The Five W's



- **What?** Receive approval for a \$3,115,000 construction and (potentially) term loan under the C-PACE program to Ticket Network Campus Realty LLC to finance the construction of specified energy upgrade
- **When?** Project to commence 2018
- **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?** Ticket Network Campus Realty LLC, the property owner of 83 Gerber Road, South Windsor CT
- **Where?** 83 Gerber Road, South Windsor CT

83 Gerber Rd, South Windsor Project Tear Sheet



REDACTED

83 Gerber Rd, South Windsor

Key Financial Metrics



REDACTED

Board of Directors
Agenda Item #4b
Investment Business
C-PACE Transaction – Fairfield

2264 Black Rock Turnpike, Fairfield

Ratepayer Payback



- **\$512,632** for a 138kW solar PV system
- Projected savings are **11,425 MMBtu** versus **\$512,632** 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 Fairfield as it collects the C-PACE benefit assessment from the property owner.

2264 Black Rock Turnpike, Fairfield

Terms and Conditions



- **\$512,632** construction loan at 5% and term loan set at a fixed 6.05% over the 20-year term
- **\$512,632** loan against the property
 - ❑ Property valued at **REDACTED**
 - ❑ Loan-to-value ratio equals **REDACTED**; Lien-to-value ratio equals **REDACTED**
- DSCR > **REDACTED**

2264 Black Rock Turnpike, Fairfield



The Five W's

- **What?** Receive approval for a \$512,632 construction and (potentially) term loan under the C-PACE program to Lake Hills Shopping Center, LLC to finance the construction of specified energy upgrade
- **When?** Project to commence 2018
- **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?** Lake Hills Shopping Center, LLC, the property owner of 2264 Black Rock Turnpike, Fairfield CT
- **Where?** 2264 Black Rock Turnpike, Fairfield CT

2264 Black Rock Turnpike, Fairfield Project Tear Sheet



REDACTED

2264 Black Rock Turnpike, Fairfield
Key Financial Metrics



REDACTED

Board of Directors
Agenda Item #5a
Investment Business
SHREC Update

SHREC Monetization

Underlying Cash Flows



- **Tranche 1:**
 - ~6,700 systems with 660,000 MWh of generation remaining
 - \$50 per SHREC
- **Tranche 2:**
 - Currently at ~7,230 systems projected to generate 880,000 MWh over 15 years
 - \$49 per SHREC (illustrative)
- **\$76 million of nominal cash flows**

SHREC Monetization

Warehouse Proposal



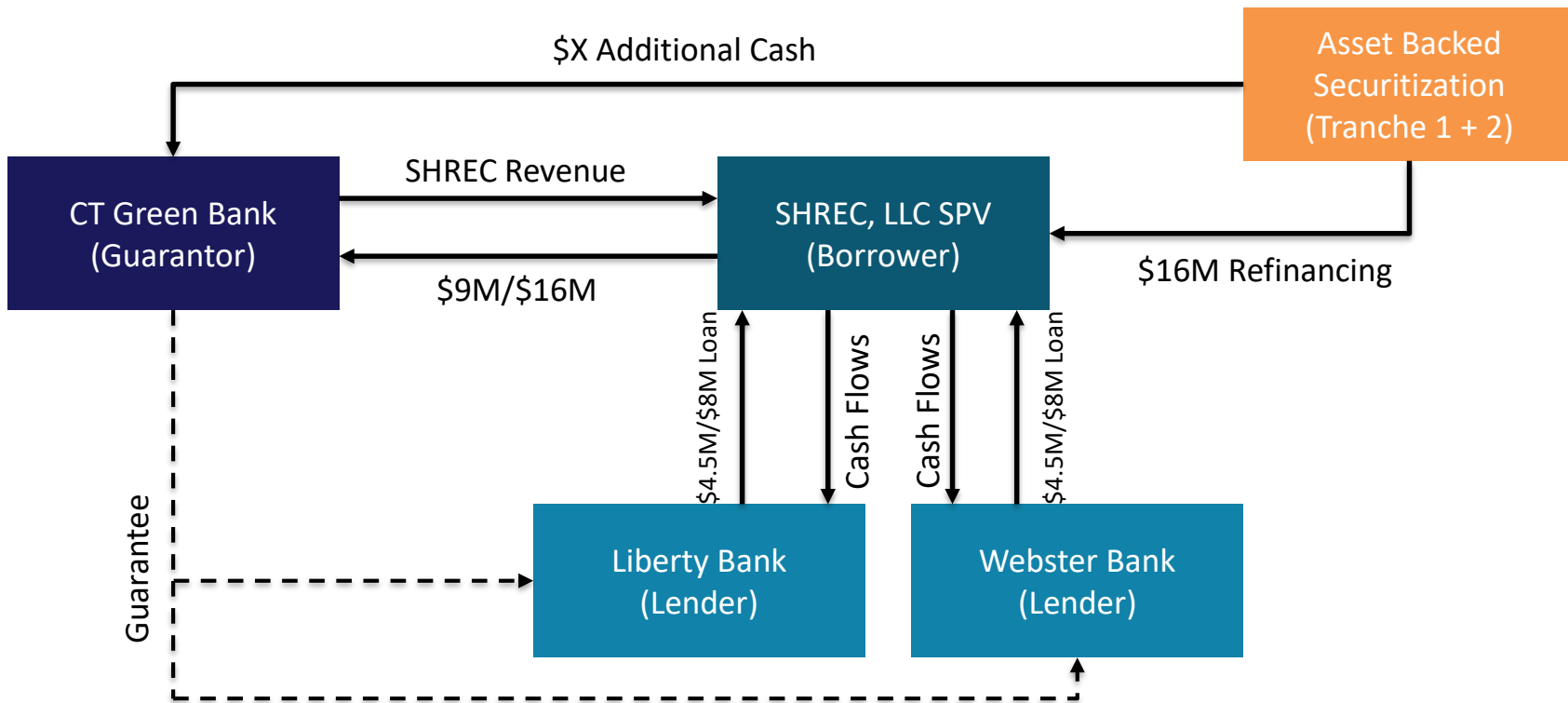
- Joint proposal from Liberty Bank and Webster Bank:
 - \$16 million facility meets short term liquidity needs
 - Secured by SHREC revenues & CGB Guaranty
 - Maturity – 12 months (only in use 5 months)
 - Prepayment penalties - None
 - Interest rate – [to be discussed]
 - Upfront fee – [to be discussed]
 - Unused fee – [to be discussed]

- Strategic benefits:
 - Solidify banking relationships within the State
 - Improves Green Bank leverage vis-à-vis current and future asset-backed-securitizations
 - Protects against minimum liquidity covenants

SHREC Monetization

Webster – Liberty Warehouse Facility

Proposed Structure Diagram:



SHREC Monetization

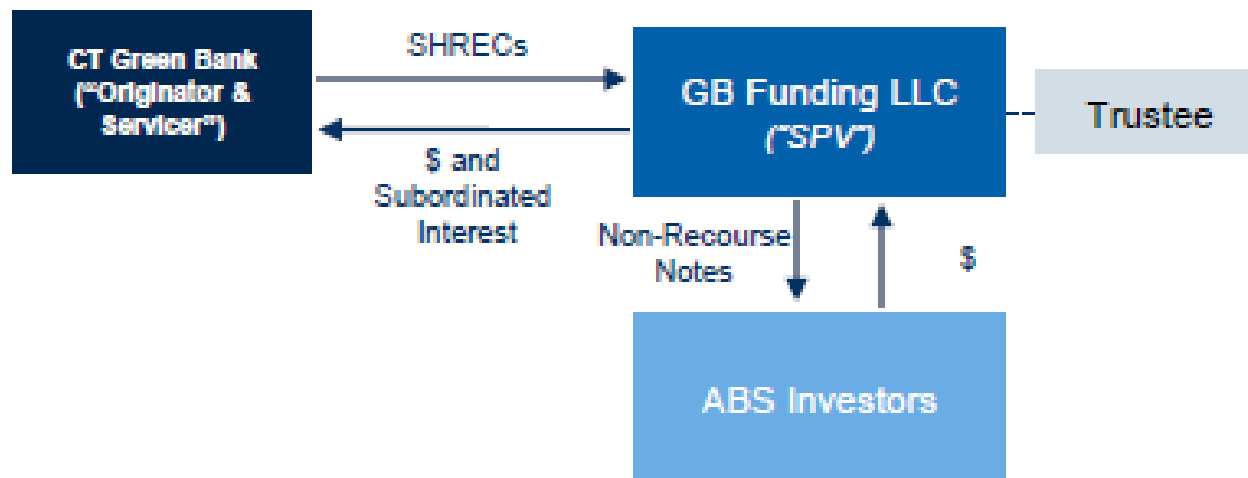
Royal Bank of Canada Proposal



- Non-recourse ABS notes
- Bankruptcy remote SPV
- Balance of high advance rate and low cost of capital
 - Maximum [TBD]% advance rate for Class A, [TBD]% for Class B
 - Interest rate: [To Be Discussed]
 - Front End Fee: [To Be Discussed]
- Collateral: Solar Home Renewable Energy Credits from Tranche 1 and Tranche 2
- Rating from either S&P or Kroll
- Green Bank Rating by [TDB]

SHREC Monetization RBC ABS

Proposed Structure Diagram:



Board of Directors
Agenda Item #5b
Investment Business
Revolver

Revolving Credit Facility

Union Savings Bank Proposal



- Budget sweep led to an assessment of future liquidity needs:
 - Green Bank must maintain minimum cash balance of \$4 million under Solar Lease 2 and 3 facilities
 - Cash advances for C-PACE and CT Solar PPA transactions are difficult to predict from month to month
- Decision made to pursue revolving credit facility:
 - Address liquidity concerns
 - Flexible way to manage transaction timelines
 - Effective cash flow management will increase market confidence in Green Bank's ability to close transactions

Revolving Credit Facility

Union Savings Bank Proposal

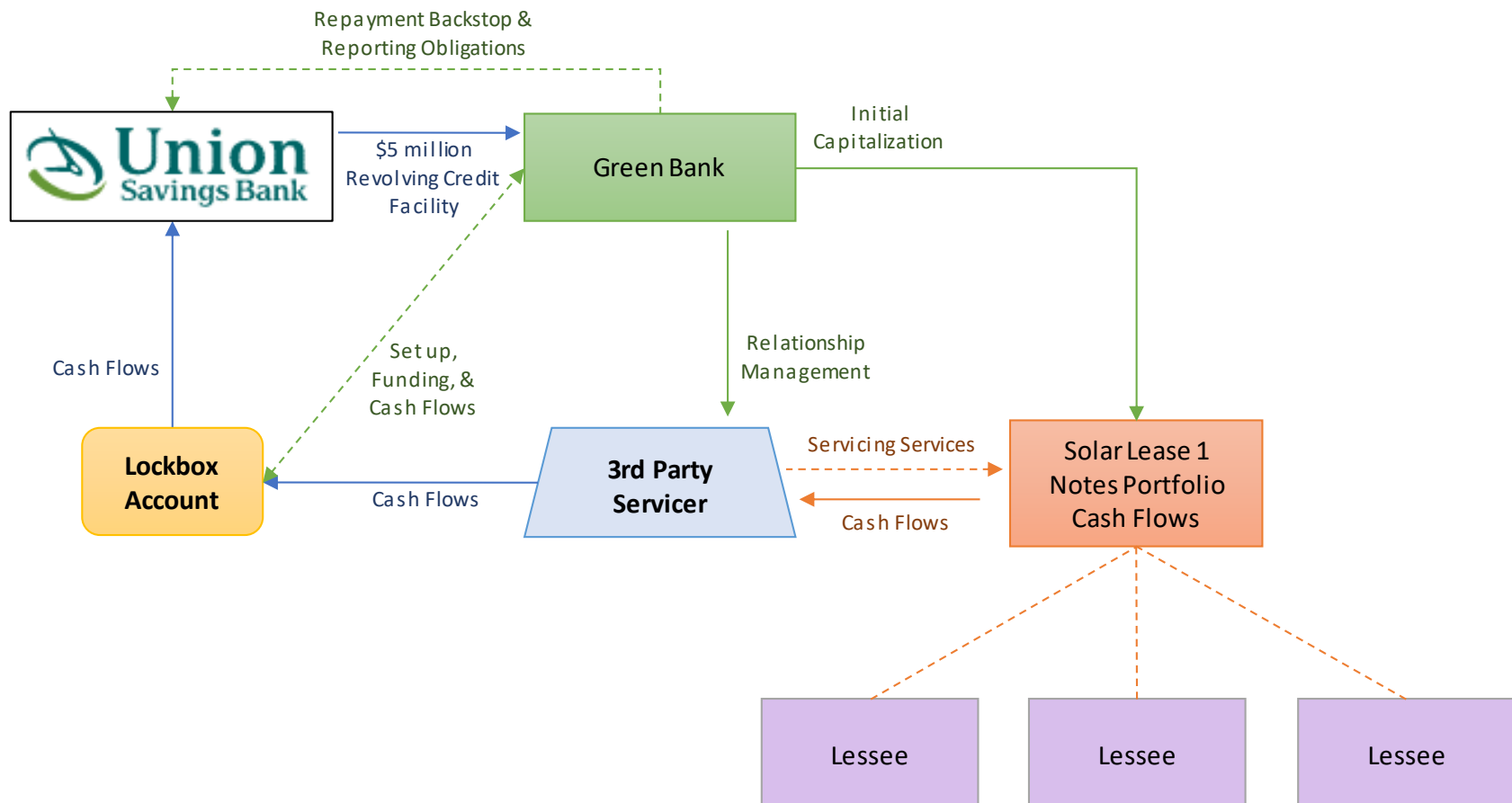


- Union Savings Bank (“USB”) alignment:
 - USB’s offering is well aligned with the Green Bank’s strategic outlook
 - There are timing constraints associated with upcoming cash flow needs

- USB offers an optimal form of liquidity facility:
 - Minimal upfront fees and no charges for undrawn capital
 - Drawn down capital at relatively attractive interest rate
 - Ensures funds are available (together with Liberty-Webster SHREC warehouse line) to pay the \$14M sweep
 - Access to \$5M in additional liquidity over the next year for short term purposes, or to ensure minimum cash balance maintained
 - Low repayment risk: cash flows from collateral exceed repayment obligation on the facility

Revolving Credit Facility Union Savings Bank Proposal

Proposed Structure Diagram:



Board of Directors
Agenda Item #6a
Nonprofit
Green and Healthy Homes Initiative

CT Green and Healthy Homes Project

Connecticut's Energy and Housing Needs



- The **average energy burden** for a Connecticut low income household is **11.8% of annual income, 30% higher than the national average** energy burden. The Energy Affordability Gap in Connecticut ranges from **\$1,250 to \$2,500/year**.
- The energy burden is higher for Connecticut's lowest income families can be as much as 58% of annual income on energy.
- The **average energy burden for low-income households is 60% higher than the national average**.
- **Over 430,000 households are at <=80% AMI** (if below 60% SMI, then eligible for free energy efficiency program)
 - 25% of customers seeking Home Energy Solutions services are deferred due to health and safety issues
 - 25% are older adults living alone
 - 16% have a child younger than 6 years
 - 12% are non-elderly disabled

CT Green and Healthy Homes Project

Connecticut's Health Outcomes Related to Poor Housing Conditions



- The state had **over 21,700 annual asthma-related hospitalizations**, and over **\$102 million in Medicaid claims related to asthma**.
- Statewide, falls are the leading injury-related cause of mortality for older adults, and the fourth leading cause across all ages. **Falls were involved in over 42,000 hospitalizations statewide over 5 years.**
- Over **2,100 children under the age of six are diagnosed with elevated blood lead levels in Connecticut**. Just under 75% of these children were diagnosed with blood lead levels of 5-9 mg/dL.

The GHI Model: “No Wrong Door”

Aligning services and funding, braiding relevant resources, coordinating service delivery to produce results



Philanthropy



Government



Private-sector



System

- Single intake system
- Comprehensive assessment
- Coordinate services
- Integrated interventions
- Cross-trained workers
- Shared data

Outcomes

- Lead-hazard reduction
- Asthma-trigger control
- Household injury prevention
- Energy efficiency
- Weatherization
- Housing rehabilitation

Vision for Health + Energy + Housing Collaboration in CT

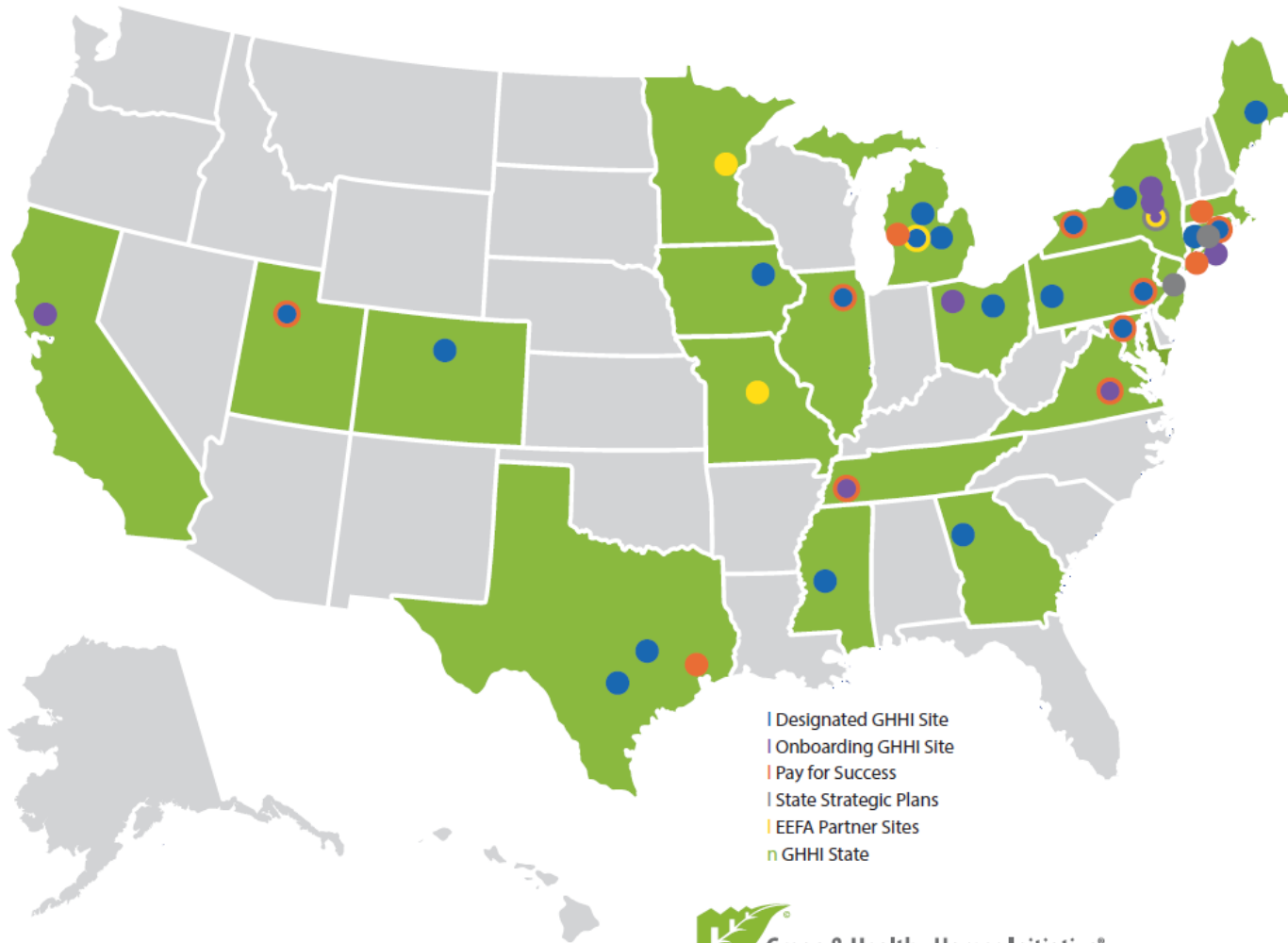
- Solve the funding gaps for health and safety remediation
- Break down silos – on the funding side and the delivery side

And do this *sustainably* – so we can solve the problem *at scale* all across the state

GHHI National Footprint



GHHI at Work: Building a National Movement



- | Designated GHHI Site
- | Onboarding GHHI Site
- | Pay for Success
- | State Strategic Plans
- | EEFA Partner Sites
- | GHHI State



CT Green and Healthy Homes Project Strong Agency / Partner Buy-In



CT Green and Healthy Homes Project

GHHI to assist with Sustainable Funding



Connecticut Energy Efficiency Fund Home Energy Solutions Program is a strong framework for housing health and safety interventions in low income households, sustainably supported through a mix of public, philanthropic and private capital investment:

- **Health Insurance Value-based and Performance-based Payments**
- **Funding medically-necessary housing interventions through CHIP & Medicaid**
- **Hospital Community Benefits Investment**
- **Public/Philanthropic Investment (leveraged to attract private capital)**
- **Federal Funds: Fannie Mae, USDA Rural Development Housing Preservation, Maternal/Child Health Block Grant Funds**

CT Green and Healthy Homes Project

Phase II: GHHI SOW for Project Design and Implementation Strategy for Pilots



Project Design –

- Investigation of sustainable funding via Medicaid other reimbursement avenues; development of a project design report.

Medicaid Data Analysis and Report –

- Preparation of medical cost savings and aggregate state return on investment projections associated with home interventions leading to reductions in the treatment of asthma and injuries related to trips and falls.

Project Work Plan –

- In collaboration with the partners and key stakeholders, propose integrated service delivery model, processes and costs; identify any workforce development and training areas, assist in the selection of project sites for Phase III.

Stakeholder Convenings, Philanthropic Engagement and Project Management –

- Work with project partners to hold additional stakeholder convenings; overall project management for the partners for Phase II.

Cost – \$200,000 to be covered by foundation grants

CT Green and Healthy Homes Project

Strategic Selection Criteria for GHHI



Uniqueness:

- GHHI is the nation's leader in addressing issues in health, safety, housing, and energy with a mature model and proven (ROI)

Strategic Importance:

- This project supports the Green Bank's fourth organizational goal, as identified in the Comprehensive Plan – Fiscal Years 2017 and 2018, and has been prioritized by partner agencies.

Urgency and Timelines:

- Participating state agencies will need to make any budget requests for FY19 related to the pilot implementation phase (Phase III) of the project in the next few months..
- GHHI and DPH have an executed data sharing agreement in place that would be difficult to replace in a timely manner, given the timing of the next budget cycle.
- Acting now allows the program to build off of funding while it exists, and the momentum of current partnerships in place.

Special Capabilities:

- GHHI has pioneered the model of unlocking funding from the health sector and has worked with states to obtain necessary waivers from the Center for Medicaid Services. GHHI has also pioneered using pay for success models and social impact bonds for healthy housing interventions that lead to better asthma health outcomes, lower energy burdens, and savings in public health expenditures.

Strategic Selection of GHHI Resolutions



RESOLVED, that the President of the Green Bank and any other duly authorized officer of the Green Bank, is authorized to accept the GHHI proposal, and in so doing obligate the Green Bank in a total amount not to exceed \$200,000 with terms and conditions consistent with the memorandum submitted to the Board of Directors dated March 27, 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 March 27, 2018; 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.

Board of Directors
Agenda Item #6b
Nonprofit
Staff Transitions

Nonprofit Organization Relationship to Green Bank



4 program-specific PSAs and an MOU for shared services

Product or Program Area	Nonprofit Role
Multifamily Suite of Products	Outsourced program administration
Residential 1-4 Low-Income Programs	<p>PosiGen partnership and investment / asset management support</p> <p>Support for other low-income initiatives such as CT Green and Healthy Homes Project and DOE's Clean Energy Low Income Communities Accelerator</p>
Smart-E Loan Program	Outsourced program administration
Commercial Solar Fund	<p>Administrative support for the existing Green Bank Commercial Solar fund</p> <p>Outsourced program administration for a new fund being raised in the Nonprofit</p>

Nonprofit Organization Savings to Green Bank



Due to a lower overhead rate, the Nonprofit will provide the Green Bank with significant savings over a 6-year period:

Period	Annual Salary + Benefits	Overhead Rate	Annual Savings
Current	\$1,626,394	78%	
Years 1-3*	\$1,276,318	40%	\$350,076
Years 4-6**	\$638,159	40%	Almost \$1M

* Savings the first year are \$298, 236 and savings years 2 and three are estimated at \$350,076, since in Year 1, the compensation of 1 staff member will take place at the Green Bank as she will transition to the nonprofit on July 1, 2019.

** Half the level of prior 2 years.

Nonprofit Organization Staff Transition Plan



- **Ethics** – received a favorable determination by the Connecticut Citizen's Ethics Advisory Board to ensure the orderly transition of individuals transitioning from the Green Bank to the Nonprofit (April 19, 2018);
- **Benefits Assistance** – the VP of Human Resources of the Green Bank to provide assistance in identifying, analyzing and recommending benefits for the Nonprofit (April-June 2018);
- **Approval of Contracts for Services** – Green Bank Board approves of the professional services agreements and memorandum of understanding between the Green Bank and the Nonprofit to support various products and programs to advance the mission of the Green Bank (first/second week of June 2018);
- **Hiring Notice** – official notification of hiring by the Nonprofit of the staff transitioning from the Green Bank to the Nonprofit, including offer of salary and benefits and starting date of employment of July 1, 2018 (second week of June 2018);
- **Notification of End of Service** – official notification of staff that are transitioning from the Green Bank to the Nonprofit of the end of their service as a Green Bank employee, including their last date of employment of June 30, 2018 (second week of June 2018); and
- **Contract for Services** – execution of a professional services agreement between the Green Bank and the Nonprofit to support various products and programs to advance the mission of the Green Bank (July 3, 2018).

Nonprofit Organization Staff Transition Plan



Discussion of Staff Considerations

- Payroll and employee benefits – currently researching:
 - Payroll processing
 - Medical, dental and vision insurance
 - Short term / long term disability
 - Retirement benefits (such as 401(k) or 403(b) – whichever applies)
 - Life insurance
 - Long term care
 - Workers compensation
 - Flexible Spending Accounts (FSA)
 - Health Savings Accounts (HSA)
 - Pre-tax commuter benefits
- Unused vacation payout
- Compensation
- Seniority

Nonprofit Organization Timeline



Q1

- Initial Capital Raising Outreach and Legal Analysis / Review

April

- Receive Green Bank Board approval for participation in enabling an independent Nonprofit
- Develop governance docs; file Nonprofit organization incorporation in CT

May

- File 501(c)(3) application with IRS
- Ongoing capital raising
- Draft and complete PSAs and MOU between the Green Bank and the Nonprofit

June

- Board approves PSAs and MOU between the Green Bank and the Nonprofit and for re-grant of DEEP grants
- Nonprofit officially notices the staff transitioning from the Green Bank of an offer of employment starting on July 1, 2018
- Green Bank staff transitioning to the Nonprofit are officially notified of termination of employment on June 30, 2018

July

- July 1, 2018: Transferred staff begin employment at Nonprofit (July 2 first day of work)
- July 3, 2018: The Green Bank and the Nonprofit execute the PSAs, MOU and investment grant agreements; funds are wired to the Nonprofit based on contracts executed, including \$6.5 million DEEP grant funds

Nonprofit Organization Staff Transitions



RESOLVED, that the Board of Directors of the Green Bank authorizes the President of the Green Bank and any other duly authorized officer of the Green Bank to ensure the orderly transition of individuals transitioning from the Green Bank to the Nonprofit, taking into consideration, but not limited to, the Advisory Opinion No. 2018-2 by the Office of State Ethics;

RESOLVED, that the Board of Directors of the Green Bank authorize the President of the Green Bank and any other duly authorized officer of the Green Bank to provide assistance to the Nonprofit to identify, analyze, and recommend benefits options for the staff transitioning from the Green Bank to the Nonprofit; and

RESOLVED, that the Board of Directors of the Green Bank directs the President of the Green Bank to notify the individuals that will be transitioning from the Green Bank to the Nonprofit of their last day with the Green Bank tentatively planned for Saturday, June 30, 2018.

Board of Directors
Agenda Item #6c
Nonprofit
Business Plan – Assumptions

Nonprofit Organization Business Lines



- **The goal of the Nonprofit is to be self-sustaining and will have 2 business lines:**
 - **Investing business – earning a margin off invested assets**
 - Single Family Project Finance with Implementer
 - Multifamily and Community Facility Term Lending
 - Commercial Solar Fund
 - Flexible Project Finance
 - **Smart-E Loan Program – fee-for-service business designed to be break even, supported by program administration fees and ultimately contractor origination fees at scale**

- **Origination strategy:**
 - Contractor channels such as solar, fuel cell developers
 - Portfolio owners and multifamily housing and nonprofit program partners
 - Government partners (municipalities, housing authorities, state agencies)
 - 46 – Other green banks, NRDC initiatives (EEFA, CEP, SPARCC, etc.)

Nonprofit Organization



Growth Assumptions – Single Family Project Finance with Implementer

■ Assumptions

- Year 1: back leverage of \$42MM
- Year 2+: 100 systems added per month, modest annual growth rate
- 75% of portfolio eligible for CRA investment: drives spread that can be earned

■ Partners

- PosiGen and a Solar Loan Financier
- Assumptions grounded in Green Bank deep knowledge of capital needs of PosiGen and business model analysis of Solar Loan Financier expanding credit universe

■ Other Factors

- This business line anchors the business model in the short term, providing immediate net interest income and jump starting the balance sheet
- Positive feedback from CRA lenders and impact investors / foundations

Nonprofit Organization

Growth Assumptions – Term Lending



Includes Multifamily, Community Facility and Project Finance Term Lending

■ **Assumptions**

- Year 1: Origination of \$9MM, based on current CT multifamily pipeline enhanced by ability to do holistic projects (health and safety and other capital needs)
- Year 2+: \$18MM per year
- 100% of multifamily/community facility portfolio eligible for CRA investment

■ **Partners**

- CT Housing Coalition, DOH, CHFA, UHAB, New Ecology, Elevate Energy, BlocPower, NRDC Initiatives (EEFA, SPARCC, CEP), other green banks

■ **Other Factors**

- Opportunistic project finance opportunities (e.g. small hydro, fuel cells) would contribute to origination activity and help achieve a blended rate of 6%

Nonprofit Organization

Growth Assumptions – Commercial Solar Fund



■ Assumptions

- Year 1: 3 MW solar installed per quarter; \$19MM back leverage of sponsor equity or back leverage by end of year
- Year 2+: Increasing .5 MW per quarter, portfolio of \$38MM at end of year 2, \$56MM at end of year 3, \$75MM at end of year 4
- Assumptions based on 30 MW of Green Bank activity over past 18 months (5 MW/quarter)
- 75% of portfolio eligible for CRA investment

■ Partners

- Regional independent developer base, other green banks

■ Other Factors

- Demonstrated ability to underwrite housing authorities, community assets, NFPs

Nonprofit Organization



Growth Assumptions – Smart-E Loan Program (Fee-for-Service)

Smart-E will only expand with contracts in place and is therefore designed to be neutral to the organization’s financials

■ Assumptions

- Year 1: CT loan growth 5% over FY18, 1 small program added
- Year 2+: 2 small programs added in year 2 and 2 large programs in year 3
- Loans on platform grow from 470 in year 1 with 11 lenders and 105 active contractors to 4,500 loan in year 4 with 40+ lenders and 450 active contractors
- 1.99% contractor origination fee assumed on \$13,000 average loan amount, other program expenses covered by program administration fee

■ Partners

- Other green banks, cities in NRDC initiatives

Nonprofit Organization



Financials – Pro Forma Balance Sheet (Figures in '000s)

	FY19 Year End	FY20 Year End	FY21 Year End	FY22 Year End
Assets				
Cash / Cash Equivalents				
Loans				
Single Family				
Multifamily				
Commercial Solar PPAs				
Total Investment Assets				
<u>Total Assets</u>				
Liabilities				
Senior Debt Capital				
Subordinate Debt Capital				
<u>Total Liabilities</u>				
Net Assets				
Equity-Equivalent PRIs				
Grants				
Retained Earnings				
<u>Total Net Assets</u>				
<u>Liabilities + Net Assets</u>				

In Directors' Packages Only

Nonprofit Organization

Financials – Pro Forma P&L



Pro Forma Sources of Revenue and Expenses (Figures in '000s)

	FY19	FY20	FY21	FY22
Revenue				
Net Interest Income				
Green Bank Contract				
Operating Grants				
Smart-E Contracts				
Solar Development Fees				
Total Revenue				
Less: Op Ex				
Operating Income				
Less: Provision for Loan Loss				
Net Income				

In Directors' Packages Only

Nonprofit Organization



Financials – Balance Sheet, Revenues & Non-Interest Expenses

■ Balance Sheet:

- Key to sustainability is **building a balance sheet:**
 - **Recurrent revenue streams** based on businesses known to us
 - **Layers of funding sources** from foundations, CRA lenders, other lenders & investors

■ Revenue sources:

- Net interest income from investments in investing business
- Contract with Green Bank to administer Green Bank programs in Connecticut
- Startup grants from foundations in years 1-3
- Additional contracts with public entities to administer Smart-E
- Fees from commercial solar development

■ Non-Interest Expenses:

- Personnel is largest expense with an overhead rate estimate of 40% (vs. 78%)
- Other expenses related to business development and marketing, origination, and administration of products
- Connecticut operations are majority of expenses initially
- **Investment business staffing / other expenses can scale w/pace of origination activity**
- **Smart-E Loan Program would only expand/add expenses if contract was in place**

Nonprofit Organization



Capitalization Strategy and Sensitivity Analysis

- **Capital Stack** – a layer of grants, equity-equivalent, and PRI/MRI investment leveraged with subordinate and senior capital

- **Sensitivity analysis** – for investment business only, since Smart-E designed to be breakeven
 - Looked at 2 scenarios for scale of investing activity, regional scale and Connecticut-only scale, and looked at a range of loss rate and cost of senior capital scenarios
 - Only regional scale scenario can be self-sustaining within a reasonable timeframe
 - Drivers are higher origination volume from operating regionally, more favorable cost of senior capital at the larger scale
 - Regional scenario is also more robust – can withstand higher senior capital interest rates and more adverse loan loss scenarios

Nonprofit Organization

Financials – Sensitivity Analysis



Break-Even Values for Cost of Capital and Loan Loss Rates

FY 2021 Year End (Year 3)

Net Interest Revenue
Alone Covers OpEx for
Investment Business

SCENARIO 1 (Regional expansion)

Full projected commercial solar,
single-family project finance and
term lending origination

Senior Debt Capital @ ■■■

Loan Loss @ ■■■

Loan Loss Rate (@ ■■■ Capital)

■■■

Senior Capital Rate (@ ■■■ Loan
Loss)

■■■

SCENARIO 2 (Connecticut Only)

40% of commercial solar
origination

50% of projected single-family
project finance origination

28% of term lending origination

Senior Debt Capital @ ■■■

Loan Loss @ ■■■

Loan Loss Rate (@ ■■■ Capital)

■■■

Senior Capital Rate (@ ■■■ Loan
Loss)

■■■

Board of Directors
Agenda Item #7
Other Business

Board of Directors
Agenda Item #8
Adjourn

CONNECTICUT GREEN BANK
Board of Directors
Draft Minutes
Tuesday, April 3, 2018

A regular meeting of the Board of Directors of the **Connecticut Green Bank (the “Green Bank”)** was held on April 3, 2018 at the office of the Green Bank, 845 Brook Street, Rocky Hill, CT, in the Colonel Albert Pope board room.

1. Call to Order

Catherine Smith, Chairperson of the Green Bank, called the meeting to order at 9:30 AM a.m. Board members participating: Rob Klee, Betsy Crum (by phone), John Harrity, Matt Ranelli, Gina McCarthy (by phone), Bettina Bronisz, and Eric Brown.

Members Absent: Tom Flynn and Kevin Walsh

Others Attending: Guy West, Ray Casella

Staff Attending: Bryan Garcia, Mackey Dykes, Brian Farnen, Kerry O’Neill, Eric Shrago, George Bellas, Bert Hunter, Benjamin Healey, Cheryl Samuels, Kim Stevenson, Dale Hedman, Jane Murphy, Alex Kovtunencko, Madeline Priest, John D’Agostino, Emily Basham, Mariana Trief (by phone) and Fiona Stewart.

2. Public Comments

There were no public comments.

3. Consent Agenda

Commissioner Smith reviewed Consent Agenda and asked for a motion to approve.

Upon a motion made by John Harrity, and seconded by Eric Brown, the Consent Agenda was unanimously approved.

Resolution #1

Motion to approve the minutes of the Board of Directors Meeting for February 15, 2018.

Resolution #2

WHEREAS, pursuant to Conn. Gen. Stat. 16a-40g (the “Act”) the Connecticut Green Bank (“Green Bank”) is directed to, amongst other things, establish a commercial

sustainable energy program for Connecticut, known as Commercial Property Assessed Clean Energy (“C-PACE”);

WHEREAS, pursuant to the C-PACE program, the Green Bank Board of Directors (the “Board”) had previously approved and authorized the President of the Green Bank to execute financing agreement for the C-PACE project described in the Memo submitted to the Board on March 27, 2018 (the “Finance Agreement”);

WHEREAS, the Finance Agreement were authorized to be consistent with the terms, conditions, and memorandums submitted to the Board and s executed no later than 120 days from the date of Board approval; and

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

NOW, therefore be it:

RESOLVED, that the Board extends authorization of the Finance Agreement to no later than 120 days from April 3, 2018 and consistent in every other manner with the original Board authorization for the Finance Agreement.

4. Investment Business

Bryan Garcia requested George Bellas provide an update on monthly cash flows at a high level before diving into the Investment Business.

George Bellas provided an update on monthly cash flows at a high level. The materials provided are how we are doing with regard to the Green Bank’s incentive business and investment business. The Green Bank closed the cash books on Friday, so a schedule has been put together, and he welcomed any questions. At high-level, the Green Bank is continuing to go along as projects close to provide our cash balances. Our total is \$16 million today, \$15.979 to be exact. The detailed reports are broken out by the incentive business and the investment business. With respect to investments, the Green Bank is a little behind, but it is not a bad thing. The investments have been focused on CPACE area, continuing to invest funds in projects. The Green Bank is continuing to pay the EPPBs and PBI and collect all the principle interest payments on CPACE and non-CPACE. Looking ahead, June is a significant milestone where the Green Bank has \$14 million payment due to the state. These funds will be provided through the SHREC securitization process currently underway, which will provide a big inflow of cash projected at \$18 million, of which \$14 million will go to state. George suggested going over securitization.

Commissioner Smith noted that was an agenda item and will be reviewed later.

Bryan Garcia recognized George Bellas, Jane Murphy, and accounting team for 4th CAFR award. Additional recognition is due to the Audit, Compliance and Governance

Committee chaired by Matt Ranelli, including Tom Flynn and formerly John Harrity, and supported by Brian Farnen. George Bellas noted that the CAFR award is significant because it can provide some comfort to prospective investment partners as to the quality of the financial reporting by the Green Bank.. John Harrity remarked “they don’t just hand these out at end of every school year”. It’s truly is mark of excellence.

Bryan Garcia set the context as we go through each of the three lines of the sustainability plan approved by the Board of Directors on December 15, 2017. On the investment side, a large part is shifting the Green Bank strategy from a focus on leveraging funds to achieving sustainability of the organization, earning more of the returns as we go. As discussed in December, the Green Bank are focused on breaking even in 4-7 year period, done so in 2 areas: using ratepayer resources in projects and products that deliver a weighted average of 5% return with a 10-year maturity generating principal and interest revenues, while also working to decrease our personnel and non-personnel expenses. The Green Bank made some significant reductions of expenses in December of 2017 for FY 2018 that will transfer over to FY 2019.

Mackey Dykes presented the proposed 6th version of the CPACE guidelines The Green Bank is implementing a new process for review of the guidelines: through the deployment committee, the board, public committee and back to board, if necessary. The main potential issue that could get attention is around how we govern the SIR test, savings to investment ratio. The expected SIR has to be greater than one. The Green Bank developed the SIR test, which states that the expected energy savings plus other expected project revenue has to outweigh costs, including interest and fees. The Green Bank also developed project technical standards that requires a third-party engineer validate the work of the contractor and developer. The Green Bank believes this adds a necessary check for capital providers who have the incentive to do greatest loan possible. The only thing that governs the long size is the savings, so the Green Bank wants third party review. In the early days of the program, Green Bank went out through RFP process and selected Sustainable Real Estate Solutions (“SRS”) as the technical administrator. The contractor, developer, building owner, lender, or whoever put the project together came to the Green Bank with technical information and the Green Bank worked with the technical administrator to verify it. The Green Bank would then approve, assuming the project met all other statutory requirements. This process worked and provided confidence to market. It worked because the Green Bank was the only one in the state doing CPACE lending at the time and the process worked well. The Green Bank grew with SRS and helped grow their business model. But this process started to change when the CPACE platform opened to third-party capital providers, although, the Green Bank still has to approve projects. The key thing was to make sure the expected energy savings exceeds costs. To structure this open platform, the Green Bank laid out a couple options: use our technical administrator and we’ll charge a fee, or you can propose another process or third-party engineer/technical reviewer to review your project. That reviewer would produce an independent verification of the SIR and return a report that the third-party capital provider would return to the Green Bank. At the time of opening up to third party capital providers, Greenworks Lending (“GWL”) was really the only active 3rd party lender. GWL proposed to Green Bank that they would separately

contract with Celtic Energy (“Celtic”), instead of coming to the Green Bank for technical review. The project data would go to Celtic to review the SIR and return a report and a letter stamped with engineering seal, which GWL would then submit to the Green Bank for approval.

Commissioner Smith questioned if the Green Bank approved the form and the vendor GWL was using.

Mackey Dykes confirmed that, yes, the CPACE team reviewed process and documentation with Celtic. He explained that there was no program framework for the Green Bank to decide what is acceptable for third part reviewers generally. The structure where there is choice to use what the Green Bank has or propose an alternative worked early on, but now that interest in the market has grown, there is a need to develop a standardized structure and framework for what’s allowed. In looking at how CPACE is governed in other states and counties, there are a couple different directions.

These are the options discussed with the Deployment Committee:

- Continue forward with broader open market approach, allow for independently-sourced technical providers, and then lender can go to all approved to get independent review done. The technical reviewer would return agreed-upon letter to the Green Bank as part of approval package
- The Green Bank would also accept Investor Confidence Project’s IREE certification along with a letter validating SIR is greater than 1.,

Mackey Dykes discussed the pros and cons to more open market approach. It promotes competition, quality of service, constant price discovery, and ability to scale as the market grows. The cons are potential reductions in quality around SIR test, a key component of program.

John Harrity asked what is meant by “constant price discovery”.

Mackey Dykes clarified that opposed to the Green Bank doing an RFP where pricing is submitted through a proposal, the pricing in the market is developed through constantly negotiating deals with all providers, a more dynamic view of the market.

Commissioner Smith asked if the Green Bank could structure the RFP to provide more sensitivity on pricing and not lock in pricing. Mackey Dykes confirmed the approach with leaving it to the providers to determine cost.

Bettina Bronisz asked if the pre-selection is done by the Green Bank. Mackey Dykes said companies would have to meet a minimum set of qualifications or standards. The Green Bank could accept firms that meet that minimum standard.

Commissioner Smith asked if the national certification company mentioned previously, IREE, conducts similar prequalification of firms.

Mackey Dykes said that the IREE reviews energy efficiency projects nationally, though not CPACE specific. He confirmed that they prequalify firms to do independent review. He continued the discussion with naming another con to the open-market option is that capital providers want to lend as much as possible. They could potentially form shop and find reviewers that are willing to skirt edges estimating savings and reviewers who want to grow business might be willing to do that.

Mackey Dykes stated the other option would be to go back to more centralized model. CGB would source one technical administrator, third party lenders come to us with technical data and we work with technical administrator to make sure SIR is met. He discussed the pro would be to that the Green Bank would make sure no corners are cut and maintain trust, whereas the con is losing the open market aspect to it and competition, as well as it is not as quickly scalable. He explained that more resources would be required at the Green Bank to manage process and manage pipeline through technical review phase.

Since there was no quorum for the Deployment Committee, there was no official recommendation however the unofficial recommendation landed somewhere between the two of these options. Mackey Dykes asked Matt Ranelli to share his concerns with full market approach.

Matt Ranelli shared his reservation distilled down to the fact that the SIR is critically important measure for projects. He stated that many commercial businesses do not know a lot about it and are banking on saving money. The SIR is the Green Bank proxy for that calculation to ensure the savings will be more than the investment. He said that the constituency may not understand on any deeper level than that; and if SIR is gone and money is not saved, companies will be rightfully disappointed. The SIR is an important article of faith in the program by which they judge projects. In all likelihood, there might be financing available outside the CPACE environment but added benefit of CPACE is capital provider has secured investment by securing on property. The CPACE benefit assessment lien is enormously powerful and that power was given to us at the Green Bank with the only caveat is to be good shepherds of that right and to not hand out to just anyone. Our obligation is to be careful how SIR is implemented. Generally, the Green Bank is in favor of opening up markets and not centralizing, but this is analogized through Rob's agency (DEEP). He discussed the risks of greed and profit and if either of those begin through this opening, any fraud or malfeasance is going to come back on the Green Bank. If the Green Bank is going to do open market, then there needs to be control. Two things he expressed interest in are that the first mortgage holder has right to know if the SIR is not done by the Green Bank technical administrator The second control would be to make clear any sort of sign off the Green Bank has. That the Green Bank should reserve the right to say no to option 3 on a project by project basis, either too complicated, too big or too close to SIR, would have to go through the Green Bank technical reviewer at the cost of the project. The Green Bank should have ability to step in and take closer look. He liked the Investor Ready Energy Efficiency Program and indicated should drive market that way.

Brian Farnen suggested that we can add to these additional conditions to the resolution.

Mackey Dykes agreed with Matt Ranelli's suggestion not to do full market approach. He stated that there are other concerns with fully centralized model. Since the Green Bank has already opened the door allowing Celtic, the Green Bank seeks to correct the position in market that one lender got a deal. He explained that this hybrid model has been successful. The Green Bank is the 2nd most successful CPACE program in country in terms of deal volume, second to California who has larger program. Many of the top ten CPACE programs have some sort of open market process. Where the Deployment Committee discussion landed was to keep our technical review as an option. The Green Bank would also maintain option to propose working with another technical reviewer and we have a minimum set of qualifications to consider. If those minimum qualifications are met, the Green Bank would do exhaustive review and go through the process with any new reviewers. Anyone that is approved, the Green Bank would make them available for all capital providers to use. The Green Bank is not throwing the door open with a full RFQ, but instead it would be more deliberate. The Green Bank will conduct random project audits to make sure review are done in accordance with guidelines. Additionally, the Green Bank will make sure eligibility is reviewed periodically.

Commissioner Smith raised the question "Do you have 100% confidence that IRE certification is as strong as what we've done?"

Mackey Dykes confirmed, yes, in fact the reason their program is not as fast-growing is because protocols are tougher making the economics harder to reach for smaller projects.

Bettina Bronisz asked for more explanation of the IREE certification and how firms qualify.

Mackey Dykes explained that it is similar to what we do in CT for CPACE, They have protocols which are guidelines for how to develop energy efficiency projects, train contractors how to do that, certify set of contractors that meet protocols. They require a third party independent review through engineering firms to check. Then go to GBCI to request certification, they review and give approvals.

Bettina Bronisz questioned if that process is sufficient to weed out the bad actors.

Mackey Dykes responded that it is still an open market approach some of the incentive still there and it is possible bad actors will come, but GBCI will begin doing process of checks on watching watchers, providing independent review of reviews, which is still not perfect but very robust.

Bettina Bronisz asked do we know who bad actors are in the market.

Mackey Dykes answered the Green Bank has not seen any yet.

Bettina questioned if this is proactive and protective.

Brian Farnen jumped in to say the Green Bank are learning lessons from other states too, which Mackey Dykes confirmed that it is protective against greed and capital providers.

Eric Brown questioned what the goals that were pushing the Green Bank away from status quo and if we were preparing for scaling. He commented that the hybrid structure seems to be beneficial between all the reviews, audits and annual recertification. He also questioned if there were after-affect consequences for bad actors in terms of their license like with LEP program, since the safety net put in place seems to be all upfront, and if there were any options here when savings aren't true to have it structured in a way so that someone is on the hook, whether it be the certifier or contractor for the after-affect recuperations of not meeting promise.

Mackey Dykes answered that the changes from the status quo are from the fact that the Green Bank is currently structured in a gray area by not having a transparent process for reviewing other technical reviewers and who is allowed. He explained that the Green Bank gets questions more and more from capital providers that want to use their people, particularly since one capital provider has been allowed to use a third party technical reviewer.

Eric Brown stated that given his background, he was sensitive to that.

In response to Eric Brown's second question, Mackey Dykes stated that the problem is not just that an inaccurate technical review can lead to non-performance of project. Therefore, adding a guarantee to the SIR is equivalent to a performance guarantee and that can raise costs significantly. more cost, posing additional risk, doing more than validating risk, but whether it will play out. There are also conditions outside the scope of the SIR, for example, the building use profile has changed such as the company can hire more people and using building differently. Also, price escalation of electricity costs is an assumption that might not always bare out. The Green Bank is looking for some sort of platform to do review of projects on the evaluation, measurement, and verification ("EMV") front, but if we pose a requirement to perform, then projects become more expensive.

John Harrity raised the question if guidance will be provided to companies who technically qualify, but not have done this time of work before to ensure that they are not wasting time putting a project or review together only to have it ultimately rejected by the Green Bank. and not wasting open up to people who haven't done this type of work before, even if technically qualifies, a lot of time to put project together and then they should get guidance to navigate process. It wouldn't be great to spend time putting project together and then be rejected.

Mackey Dykes responded that there have been a few different business models out there. The current Green Bank technical administrator is not sitting back and waiting to review, but is actively working with contractors, specifically less sophisticated contractors, helping to do estimates as opposed to do in response. Certainly, some guidance is what

the market needs, but then other companies, like solar companies, that do not want guidance. This allows for different business models and gives the Green Bank flexibility in process. That is the Green Bank's role.

Commissioner Klee commented that as the chair of Deployment Committee, he wanted to thank everyone for getting into weeds. In response to Eric Brown's point, the choice in process that is being recommended is codifying what the Green Bank has been doing and also allow others to do what GWL did, but with centralized control and understanding not fully open market. The Deployment Committee did think about LEP program and infrastructure around that, but the Green Bank does not have licensing board or review board to review those who are not doing well in program. That could be included in further iterations of the program down the road. But that this is a good step, and since the Deployment Committee did not have quorum, they are not formally recommending.

Bettina Bronisz stated that this approach might be a barrier for other firms that want to get into this business in the future, where if there are other engineering firms interested in participating and the Green Bank closes the door now, then closing business and opportunities. She said that the Green Bank should be sensitive to any minority-owned and women-owned businesses.

Commissioner Smith responded that it is open and that they would just have to meet requirements. Also, she stated that the Green Bank need to be clear with qualifications. Commissioner Smith commented that she liked the idea of having the current firm be on-call for projects that raise any speculation. The quality of work in these firms are all about the people in them and that changes all the time. She asked if there were any questions from anyone on the phone.

Matt Ranelli asked if the Green Bank could think about small fee for option 3 because we would have to work to discipline provider. It would make sense to think about fee attached to this option and that the funds be reserved for associated administrative expenses.

Brian Farnen stated that the Green Bank will take all comments raised as internal guidance, specifically including an additional mortgage holder disclosure if using third party and the Green Bank reserves right to use our technical review process for more complex projects.

Commissioner Klee motioned to move the resolution, seconded by Matt Ranelli. Commissioner Smith asked if there are any other questions.

Eric Brown asked if the other third-party reviewer, Celtic Energy, is subject to checks and annual recertification.

Mackey Dykes confirmed that they are, which Eric Brown agreed with.

With a motion to move by Commissioner Klee, seconded by Matt Ranelli and no other outstanding questions, Commissioner Smith asked for a vote. Unanimous approval by the board with modifications to the resolution, no opposed, no abstentions.

Resolution #3

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

WHEREAS, the Authorizing Statute charges the Green Bank to develop program guidelines (the “Program Guidelines”) governing, among other things, the (i) terms and conditions under which state and third-party financing may be made available to C-PACE, and (ii) standards to ensure that the energy cost savings of energy improvements financed through C-PACE over the useful life of such improvements exceed the costs of such improvements;

WHEREAS, the Green Bank staff seeks to update the Program Guidelines and seeks Board approval of the Program Guidelines in light of structural changes included therein, including but not limited to, how projects must demonstrate compliance with the savings to investment test.

NOW, therefore be it:

RESOLVED, the Green Bank Board of Directors (the “Board”) approves the C-PACE Program Guidelines submitted to the Board on March 29, 2018 with the following additional modifications to be incorporated into the Program Guidelines (i) that additional mortgage holder disclosures are required if a capital provider is using a third party technical review process and (ii) the Green Bank shall reserve the right and ability to use the Green Bank’s own technical review process for more complex C-PACE projects.

5. Non-Profit Organization

Bryan Garcia outlined the goals of the nonprofit: allow products serving underserved market segments to continue to serve and offer benefits in CT, achieve operating leverage by reducing personnel costs, and access new capital providers. In December, the Board directed staff to create the business plan for presentation by the end of Q1 of 2018.

Commissioner Smith complimented the team on the write up for the nonprofit.

Bert Hunter provided a brisk walk through of the nonprofit progress and acknowledged the many staff and external help that was provided.

Bert Hunter noted that the Green Bank has used several outside advisors, including Scott Murphy of Shipman and Goodwin and Ray Casella, also from Shipman and Goodwin. Brian Farnen introduced Mr. Casella to the Board and offered a bit about his background as an expert in nonprofit structuring and governance. Bert Hunter also noted that staff consulted with our auditors, Blum Shapiro, who assisted with matters related to independence of the Non-Profit from the Green Bank as well as “component unit” issues under GASB. Finally, Bert Hunter mentioned the Green Bank had connected with Forsyth Street to assist with overall strategy and focus on the investments.

Bert Hunter referred the Board to slide 23 that describes which programs are moving to the nonprofit and the rationale. In the Multifamily product sphere, he discussed that more investment is needed to crack the nut in this market and resources at the Green Bank are severely constrained because of sweeps. The scale that the Green Bank needs to attract additional investment is under pressure. He explained that the team has discovered that mission-oriented investors are quite open to partnering with the Green Bank through a separate nonprofit entity than they were before when subject to sweeps. When the Green Bank reaches a greater scale, it can be more competitive with private capital found in the market. He commented that “We’ve seen this in the commercial space, we’ve done an amazing job with commercial solar. For us the volume is off the charts, but it’s not enough to get notice in sourcing tax equity.”

Bert Hunter continued with the Solar for All initiative and discussed how through the Green Bank partnership with PosiGen, they are really turning a corner in terms of attracting additional investment and allowing them to scale and expand to additional markets. He explained that the Smart-E loan program is not sustainable in CGB, losing on the order of a half million dollars per year. This loss will continue as the program moves to the non-profit but has a chance of lowering this loss as the program is adopted by other areas in addition to Connecticut.

In terms of structure and governance, Bert Hunter commented that it is essential to maintain a mission that is compatible with the Green Bank and establish the new entity as a charitable organization to qualify for tax exempt status which it will be necessary to apply with the IRS for that status. He discussed that independence is critical with respect to sweeps, but with a mission that is fully complementary to the Green Bank, lenders could approach financing with the nonprofit as a way to avoid their concerns about financial sweeps that might arise in the future. Even though the nonprofit would be under its own board control, the Green Bank would be represented, but not as a majority so the nonprofit could be independent. He stated that the nonprofit would be a non-member Connecticut non-stock corporation with a self-perpetuating board. He explained the Green Bank had to decide between this structure and a board named by a member-owner. He explained that this is a complication with member-owner form of governance since it does not achieve independence from the Green Bank.

Bettina Bronisz questioned how the state would control the nonprofit board since the state named the Green Bank board.

Commissioner Smith asked how the nonprofit board would be appointed.

Brian Farnen clarified that the Green Bank's Board is not approving of the nonprofit's bylaws or operating procedures, but just approving that it can operationalize and enable one. The nonprofit board would likely consist of an initial 5 members, of which the Green Bank Board would name 2 members. What is currently envisioned is that the incorporator would set up the initial board of directors as Brian Farnen, Bert Hunter, Kerry O'Neill, Benjamin Healey, and the fifth would be an independent representative most likely from a funding source such as a foundation. At that point, the nonprofit would consider bringing on additional board members based on other funders.

Bettina Bronisz questioned whether the state would have to approve formation.

Brian Farnen responded that they would not.

Commissioner Smith asked whether having staff on the board would count as an independent structure.

Brian Farnen responded that it is a line for careful consideration. He stated that the Green Bank has consulted outside legal and accounting input in this regard. In a minority board position with other funding streams besides the Green Bank funds, this would be seen as independent and would not roll up in the Green Bank's financials.

George Bellas mentioned that the Green Bank engaged independent accounting firm Blum Shapiro to provide guidance on whether the non-profit must be included in the Green Bank's CAFR as a component unit since it is important that the non-profit be structured to be independent from the Green Bank. Blum Shapiro provided staff with a memo based on their research. The memo details guidance from the GASB as to when a non-profit entity would be required to be included in the Green Bank's financial statements. He stated that the memo was included in the board package. In order for the non-profit to be considered independent of the Green Bank, the Green Bank cannot control the organizational operations of the entity, cannot benefit financially, cannot have an equity interest, or incur a financial burden e.g. guarantee the entity's debt. He remarked that staff thought it was important to request guidance from Blum Shapiro at this time.

Brian Farnen said that there are additional protections that will be covered later in the presentation.

Commissioner Smith questioned that if they are nominating two nonprofit board members, but two others are former employees, is that enough distance because four out of five members sound like controlling.

Ray Casella clarified that anyone can name the initial board, which is the incorporators' job. They do not look at the initial incorporators as constituting control, they are simply setting the board. He explained that if the board turned out to have all Green Bank

employees, then yes, that would constitute control. However, once the board is set the nonprofit is responsible for appointing members with no input from Green Bank.

Commissioner Klee contributed that two of three members suggested would have been just recently Green Bank employees and that is not a good perception. Those members are also co-located here. He commented that it is not always about the letter of law but appearance.

Commissioner Smith agreed that was her point as well. She stated that to be cautious, the Green Bank might want to consider other people, maybe third parties to try to make sure balance for initial board.

Bettina Bronisz agreed.

Commissioner Klee agreed but is not opposed to the initial board because the nonprofit needs to get ramped up quickly.

Brian Farnen added that the initial board member structure and business plan has been vetted from legal, ethics and accounting perspective. He understands the concern about perception issues, however he would be hesitant for having complete third party membership of the board because of the opportunity for this organization to go off in another direction. He stated "We want mission alignment. Main area for mission alignment is that the Green Bank will have certain power because the non-profit will have a financial incentive to meet goals we set up as they relate to the professional service agreements we enter into with the nonprofit."

Commissioner Smith suggested to put issue aside to think about further.

Continuing the conversation on, Bert Hunter referred to the slide 25 for details on the overall structure and how the nonprofit is organized. The arrow represents the Green Bank's relationship into the Credit Committee and into the board as representation, not control. He indicated that the diagram shows some funds that come from the Green Bank that will be dedicated for use in CT and will be DEEP funds initially.

Commissioner Klee clarified the amount would be \$5 million.

Kerry O'Neill explained an additional \$1.5 million will be coming from a revolving loan fund to address health and safety issues in buildings.

Bert Hunter added that "we will have "go anywhere capital" that can be input to support the nonprofit activities."

Commissioner Smith thanked Commissioner Klee for the agency's contribution and noted that it sounds like there is foundation type support available. She also asked whether "go anywhere capital" referred to private sector providers.

Bert Hunter clarified that he was thinking in terms of other states, such as the State of Rhode Island (“RI”) who wants to do commercial solar. The nonprofit would be interested in assisting but would need assistance in terms of capital support. The state of RI would then put in funds specifically dedicated to RI, for instance.

Commissioner Smith asked whether the Green Bank sees this as a funding mechanism to support the current Smart-E program.

Bert Hunter responded that the team is looking at support for Smart-e from foundations but not in an investment sense, as a grant to help with development of the platform. Commissioner Smith questioned the contribution of for profit investors and whether it was against the mission of the nonprofit.

Bert Hunter clarified that tax equity partners are for-profit entities and they work with us as a quasi-state entity (which doesn’t make a profit per se). He stated that every co-investor that works with us are in profit-gaining activity. He explained that there is no conflict in terms of mission. There is alignment among various lenders that need to meet Community Reinvestment Act (“CRA”) requirements or nonprofit investment requirements.

Brian Farnen added that in terms of structure, the board presentation has been vetted by outside counsel, ethics, and accounting. Non-stock non-member structure, where the ultimate control will be with the board. He explained that having this set up as a nonprofit is important in the sense that they have adequate protection, that it is mission oriented. There are limitations in the nonprofit that are not found in for profit. Bylaws require super majority to make changes to the bylaws. Reality is that funding streams from the Green Bank and program-related investments from foundations will be restricted. The Green Bank will not be approving the governance docs, but instead enabling the entity to come into existence.

Eric Brown asked whether the nonprofit can adopt a number of bylaws.

Brian Farnen said that the nonprofit has budgetary constraints and won’t have time to set up new bylaws and governance. With the Green Bank’s Performance Service Agreements (PSAs) there will be certain requirements and clear metrics for the nonprofit to meet.

Bert Hunter explained the relationship of the nonprofit to the Green Bank, in terms of projects, will be contracted to operate these products henceforth, including Smart-E, multifamily products, Solar for All partnership with PosiGen, commercial solar PPA, and other flexible project finance offerings. These will be under separate PSAs.

Commissioner Smith asked about moving the existing book of business into the nonprofit.

Bert Hunter responded that the existing book stays with the Green Bank and only new origination will be assigned to the nonprofit. He also said it would be possible for the

Green Bank to co-invest with the non-profit if the Green Bank had funding available for this purpose.

Bettina Bronisz asked how existing staff is working.

Bert Hunter responded that under a Memorandum of Understanding (MOU), there are going to be shared services. Under the MOU there are going to be services back and forth; services that the Green Bank will draw from the nonprofit and services going to the nonprofit from the Green Bank, mainly in name of accounting services, Brian Farnen and Bert Hunter to provide counsel and investment advice, as well as software services, IT. Personnel, like payroll services, will be separate because the Green Bank personnel is tied in with the State. Sue Kaswan is helping lay the ground work for the benefits structure of staff moving to the non-profit.

Commissioner Smith asked whether new business generated would be going to the nonprofit's books. Bert Hunter responded that if the Green Bank wants to make available funds to be invested in nonprofit, if the investment met the new hurdle rate of 5% yield over 10 years then the Green Bank could be a co-investor. He then turned it over to Kerry O'Neill to talk about grant investors.

Kerry O'Neill reiterated the existing \$1.5 million for health and safety for multifamily projects and proposed additional \$5 million for low-to-moderate income activities, both grants provided by DEEP that would be re-granted to the nonprofit. The proposed additional \$5 million would likely be split between PosiGen and multifamily investing activities. Uses of funds would be laid out in the agreements between the Green Bank and the nonprofit.

Bert Hunter added that these funds provide important initial capital for the nonprofit. Initial reactions from investors have been positive because of that support. The funding that comes from the actual PSAs will pay for services and is also seen as important to investors – because of it the nonprofit is not burning through capital.

Commissioner Smith clarified that the Green Bank will pay the nonprofit a certain amount through the PSAs so the funds or grants to the nonprofit would not be impacted.

Bert Hunter confirmed and mentioned that support after three years shifts down for another three years.

Commissioner Smith recalled seeing more savings in modeling and asked if cash flow from projects was included.

George Bellas clarified that savings are derived from reductions in overhead.

Bryan Garcia added that those reductions will be seen in the Green Bank's FY 2019 budget.

Bert Hunter referred to slide 30 on how the Green Bank will invest funds, an estimated \$10 million in value of PSAs and MOU.

Kerry O'Neill reminded the board that these products that the non-profit will run for the Green Bank will continue to be Green Bank products, listed on the CT Green Bank website and not to feel like they are going away.

Bert Hunter reiterated that the MOU for shared services is a two-way street. There is a certain level of IP that the nonprofit will have license to use in addition to 8 staff transitions, 7 immediately and 1 later in the fiscal year. The Green Bank will come back to the Board at the end of April to get approval on staff transitions and in June will seek approval for PSAs and MOUS. The Green Bank will continue to talk internally to ensure smooth transitions.

Brian Farnen discussed the background into approaching the nonprofit and relationships in this way. He explained that forming a nonprofit, entering into contracts, transition of employees all raised issues under code of ethics. He commented that this idea of a spin out originally came up in the Board offsite in New Haven back in January 2017. He continued to explain that the "Jobs Ban" would be not triggered but in caution, the Green Bank will terminate transitioning members in advance of them starting at the nonprofit. There are one-year limitation on types of interactions these employees can have and the agreements cannot be opened in any way. He remarked if the Green Bank follows the road map, then it will be consistent with the Office of State Ethics informal opinion. The informal opinion is in the process of being presented to the Citizen's Ethics Advisory Board in April. The goal is that they confirm the informal opinion from the Office of State Ethics.

Bettina Bronisz asked whether any other quasi-public state agencies have formed nonprofits.

Brian Farnen confirmed that it had occurred previously. Since the Green Bank began the process, there are two other quasi-public state agencies that he was aware of seeking to go this route. One of the previously established examples was CT Innovations creation of a foundation – Connecticut Innovations Foundation.

Bryan Garcia added that SmartPower was co-created by Connecticut Innovations, as administrator of the Clean Energy Fund, along with other philanthropic foundations in the early 2000's.

Brian Farnen offered to dig up the exact quasi-public state agencies and send to Director Bronisz.

Commissioner Smith asked whether the subject of staff members on the nonprofit board went through office of ethics.

Brian Farnen confirmed that it had and that as many details as were available were presented to the state office of ethics.

Eric Brown suggested being proactive in terms of briefings to legislators or some interaction with the efficiency board and encouraged the Board to think about proactive steps to mitigate any opportunity for legislators or others to misconstrue.

Brian Farnen confirmed that the team will do that and have started this process with some legislative leaders already.

George Bellas discussed Blum Shapiro's research on GASB's guidance on maintaining the independence of the non-profit from the Green Bank for financial reporting purposes. An important consideration is control of the non-profit's board of directors through the appointment of a majority of its members. The current suggestion of two out of five members on the nonprofit board being either employees of the Green Bank or board members would not result in control of the non-profit. He cautioned that if the Green Bank appointed a majority of the board of the non-profit, it would be a concern.

Commissioner Smith asked for further clarification.

George Bellas reiterated that a combination of Green Bank board members and Green Bank employees totaling three out of the five members of the non-profit board would constitute control by the Green Bank of the non-profit.

Commissioner Smith suggested replacing one or two nonprofit board members with Green Bank board members and asked whether the Green Bank board members were considered a closer to the nonprofit than Green Bank staff.

Commissioner Smith stated that, upon review, the financials for the nonprofit looked very aggressive with very rapid business growth. She stated this seems risky and although the Green Bank and the Green Bank Board are not responsible, that they should want to make sure they are not sending something off that will not succeed.

Bert Hunter pivoted to review the nonprofit's financials, which were forecasted for two primary business lines. The main line would be the investment business which generates profit or net earnings by the nonprofits investment portfolio. He explained that this comes from net spread between the earnings on transactions plus cost of earning those transactions along the single family, multifamily and commercial solar programs. The team excluded flexible project financing from the forecast as staff had no firm basis for making estimates. He continued to explain how the second line would be the Smart-E Loan program, which would operate at a small loss, but it is not a big contributor or detractor to the forecast.

Commissioner Smith asked how the team made the decision on how rapidly something would grow.

Bert Hunter asked Kerry O'Neill to respond.

Kerry O'Neill outlined that origination would be similar to how the Green Bank team has approached these product lines to date and would utilize the best practices brought to and learned from the Green Bank over the past five years. She discussed that all the channels the team has built over the years such as contractors, program partners, municipal relationships, etc. will be used to develop the nonprofit and as they think outside of Connecticut, there are sister Green Banks that are interested. She said that will be an avenue they will investigate overtime.

Bert Hunter turned the conversation to the financials slides and the balance sheet in particular. He described that the idea here is that the nonprofit needs to get to sustainability and should be focused on the future on how cash flows would come in. The key is to focus on recurrent revenue streams. Initially providing 50% revenues and then growing to 66% into the third and fourth year of the forecast. He explained the decision behind the numbers came from current experience in the Green Bank. He remarked on the PosiGen relationship specifically and how the Green Bank interacts with them, how it has helped support PosiGen's growth in the Connecticut market and PosiGen's opportunity to grow beyond. He commented that the team knows the portfolio and it is secure because it is solar going on homes, something the Green Bank and the Green Bank board is familiar with through Solar Lease 2. He further discussed that they are comfortable from a growth perspective and a risk perspective in terms of losses and have incorporated that into the forecast.

Commissioner Smith questioned what the growth and revenue has been over the past three years and how aggressive are the projections. She also asked about the non-Connecticut business side and outsourcing to nonprofit business, how much would it own of our CT goal in their business. She commented that while the Green Bank and Green Bank board are not responsible for the financials of the nonprofit, by establishing the nonprofit "we are responsible for the success" and for the work done in Connecticut growth.

Ben Healey responded with an example with respect to PosiGen. He discussed that this morning, the Department of Treasury released updated guidance to the Federal Reserve on the CRA lending practices, which is always geographically bounded. Through nonprofit fundraising, staff is seeing how they can layer capital stacks and talking to CRA lenders. PosiGen, who wants to go to different states, would give the nonprofit broader access at much bigger scale and the nonprofit could lower Posigen's cost of capital. Previously, they would seek to secure capital for a concentrated area, which concentrates risk. The story of PosiGen, in light of what's happening at federal level, increases the sources of capital and will have a net spread of investments that ride together. Out of state growth with partners is not at the expense of CT growth. The industry needs this sort of intermediary. Connecticut can launch with homebased focus and ability to scale will bring reductions in cost.

Commissioner Smith is interested in hearing more about the assumptions behind the projects and would take topic offline. For this discussion, she is interested in what is driving the financial forecast, which looks like a rapid increase. She commented that we want to make sure we're setting the nonprofit entity up for success.

Ben Healey responded that all the numbers in the forecast are based on current projects in the pipeline. They have been able to do an actual growth analysis, with respect to PosiGen or commercial solar, on the amount of solar the Green Bank has been able to place versus real growth rates.

Bert Hunter added that the Green Bank has placed a large amount of debt with other providers – and in this respect, the forecast is attainable.

Commissioner Smith added that she wants to better understand this piece.

John Harrity commented with regard to the out of state business, saying if we just confine ourselves to Connecticut, it does not work.

Ben Healey agreed saying the path to sustainability is tougher. The capital they have been raising is inefficient and now needs to expand.

Commissioner Smith asked how they can ensure the mission at the Green Bank is not lost.

Bryan Garcia responded that the key part will be embodied in the Scope of Work between the Green Bank and the nonprofit with tangible deployment goals.

Commissioner Smith expressed the need for the Green Bank to figure out its goals and negotiate with a third party rather than trying to make both work at the same time.

Bert Hunter reminded the group that year one goals are Connecticut-centric.

Commissioner Smith responded that she is concerned about years four and five.

Bert Hunter turned the conversation to the Multifamily financials. This is based on \$2 million of loans per quarter, which is achievable based on pipeline identified right now. He is looking for a percentage increase in second year.

Kerry O'Neill added that the nonprofit is not constrained with Multifamily loan sizes. They can increase because these projects are not only focused on clean energy, but also health and safety and other capital improvements in the building.

Bert Hunter contributed that they assume 3 MW per quarter deployment in solar. By way of reference, they deployed 30 MW in the last 18 months, which is a run rate in excess of that is assumed in the forecast. There is nothing in the forecast, he stated, that is more aggressive than what has been achieved already.

Commissioner Smith said there was no context for the growth and what is presented in the Board materials.

Bert Hunter said they can provide those numbers, which will show that the forecast is not radical. Referring to the financials in the Board packages, which are confidential, they have not assumed a superior amount of growth in second and third year, in terms of commercial solar. It is not flat growth, but a slow increase, showing how to get to the targets. In handout slide 35 (confidential balance sheet), the portfolio grows \$70 million by year one. They will be in alignment with funding sources from CRA lenders, who are motivated lenders. The lower cost funds will lay the foundation for sustainability because they can incorporate net spread. Smart-E will be negative throughout at a \$100,000 drag per year. Smart-E could be a big winner for fee generation, but staff is not counting on that, so it is not included in the forecast. In terms of actual cost, the majority of what it takes to run the nonprofit is staff expenses. Then product administration is at 24%, business development at 15%, which maintains itself over time. Growth in operating expenses increase from 3.5% to 5%. Although the expenses in Smart-e expand significantly, this is due to anticipated revenues from other geographies being added in. If revenue is not there, then the non-profit will not add to the expense base for Smart-e.

John Harrity raised an overall issue saying the ethics and rules are all about a group of people forming the nonprofit in order to gain advantage. However, there is nothing in the rules discusses creating a disadvantage for employees. People that move to the nonprofit experience a downgrading of jobs. He expressed concerned about that because there is a big debate in government about cutting expenses through privatizing. He said that in principle, that is not what people who are concerned about workers are crazy about. He asked what it means that savings are in personnel, stating that they do not want to be in position where employees are paying the price for sweeps. He indicated he raised specific questions that were sent to Bryan Garcia.

Bert Hunter responded to this concern stating that unlike many other privatizing situations, these staff members are keeping their jobs and that they are passionate and motivated by the mission. They see this as an opportunity to do well. He said that the savings come down to the overhead rate that is assigned by the state. The Controller said in a report on State benefits that the State is paying more than the normal cost of benefits (normal cost is what it costs a company for benefits earned by employees for that period). What the Green Bank is doing is paying for unfunded liabilities in the past, which accounts for 40%. He said the Green Bank is currently at 80% of overhead including a SEBAC agreement-related charge required in current fiscal year.

George Bellas stated that about 58% of the employee fringe benefit charge on every dollar of compensation goes towards the retiree pension and health plan while the remainder of the employee fringe benefit charge ,about 20%, goes towards medical and dental plan premiums and payroll taxes.

John Harrity asked if the savings come from the downgrade in pension and healthcare.

Commissioner Smith remarked that the board was almost out of time and indicated they should have a detailed call on the financials as well as the staff impacts. She invited any board member who was interested in attending and otherwise will send out the notes from the call.

Bert Hunter pointed out the loan loss provision in the Profit/Loss, which is higher than what the Green Bank is experiencing right now and through the 4-year projections total \$5 million in provisions for losses. He said if they take this in combination with net assets built up over the same period, there is a \$15 million base for losses, which is very substantial for a nonprofit.

He reviewed the timeline with early April meeting seeking approval for establishing the nonprofit, then end of April meeting seeking for approval of staff transitions, and back in June for approval of MOUs and PSAs.

Commissioner Smith asked if there were any more questions or comments. Eric Brown requested to discuss offline on the nonprofit having their own system with respect to choosing vendors and contractors.

Gina McCarthy added that the Green Bank and the board needed to be highly transparent in this process in order that no one thinks they are trying to do anything outside of what they are doing, that they have the best intentions. She commented that the team should actively outreach to folks who will want to hear about it. She thanked the Green Bank team for thinking creatively and outside of the box to meet the mission of the Green Bank while reacting to the budget.

Commissioner Smith sought a motion to move.

Commissioner Klee moved and Matt Ranelli seconded. With no discussion, the board moved to vote. Seven in favor, zero opposed, with one abstention from John Harritty.

Resolution #4

RESOLVED, that the Board of Directors of the Connecticut Green Bank (Green Bank) authorize the President of the Green Bank and any other duly authorized officer of the Green Bank to participate in the formation of an independent non-profit non-stock corporation to further the purposes of the Green Bank, including by achieving operating leverage and attracting mission-oriented investors for a set of products serving underserved market segments.

Bryan Garcia noted that due to time limitations, the Resolution 5 related to the Green and Healthy Homes Initiative will be moved to the late April Board meeting.

6. Incentive Business

Commissioner Smith asked for a brief update on the SHREC program.

Bert Hunter discussed the updates to the SHREC program saying the Green Bank has a shortlist of investment banks, who are interested in providing funding. There are Connecticut banks interested in providing a warehouse of approximately \$20 million.

Commissioner Smith raised question of the timing on the June cash flow to the State and whether that means one way or another the Green Bank will meet it.

Bert Hunter confirmed and continued with that securitization will take place in the fall so currently trying to source independent investor banks, so the Green Bank can move forward. In terms of the previously selected independent engineer DNV, Dale is working with them on data collection. The team issued the Green Bond Rating RFP, which received nine respondents.

Bettina Bronisz questioned what that means.

Eric briefly explained that this Green Bond Rating relates to the environmental attributes being financed by the SHREC bonds to be sold..

7. Other Business

Bryan Garcia remarked that materials on legislative items and key policies in play are included in the Board packages.

Brian Farnen reminded the board members to file their statements of financial interest with the Office of State Ethics. He discussed the key policies the Green Bank is watching. The Governor's bill which is an "aircraft carrier" of an energy bill that has major impact on overall energy policy. Overall, it advances the State's clean energy policies in a positive way. There is a bill raised by a small group of towns to reject the property tax exemption for third-party owned residential solar photovoltaic systems. Brian also remarked that there a few bills related to quasi-public agencies. These bills seek to rein in the autonomy and reconsider governance of independent quasi-public agencies, likely spurred by other quasi-public controversies that have been in the news lately.

Bryan Garcia recognized Brian Farnen for his team's award of "Best Inhouse Counsel".

8. Adjourn

Upon a motion made by Bettina Bronisz and seconded by Commissioner Klee the meeting was adjourned at 11:35am.

Respectfully Submitted,

Catherine Smith, Chairperson

DRAFT



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Danbury Fuel Cell Project

A Fuel Cell Debt Credit Facility

Credit Facility Advance Date Extension

April 27, 2018



Document Purpose: This document contains background information and due diligence on a proposed credit facility for the FuelCell Energy, Inc. (NASDAQ: FCEL) fuel cell project located at 64 Triangle Street, Danbury, CT 06810. The information herein is provided to the Connecticut Green Bank Board of Directors for the purposes of reviewing and approving recommendations made by the staff of the Connecticut Green Bank.

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

Program Qualification Memo

To: Connecticut Green Bank Board of Directors
From: Chris Magalhaes, Associate Director, Clean Energy Finance; Bert Hunter, EVP & CIO
Cc: Bryan Garcia, President & CEO; Brian Farnen, General Counsel & CLO; Dale Hedman, Managing Director, Statutory & Infrastructure Programs; Ben Healey, Director, Clean Energy Finance
Date: April 27, 2018
Re: Danbury Fuel Cell Project – Credit Facility Advance Date Extension

Purpose

On January 26, 2018 the Connecticut Green Bank (“Green Bank”) Board of Directors (the “Board”) approved a revision to the timing restrictions on the Advance Date (as defined in the Term Sheet) of the \$5,000,000 Senior Secured Credit Facility (the “Credit Facility”) for the proposed 3.7 megawatt FuelCell Energy, Inc. (“FCE”) fuel cell project located at 64 Triangle Street, Danbury, CT 06810 (the “Project”). As noted in the memo associated with that Board approval, the deadline for the Advance Date was extended from December 31, 2017 to May 1, 2018 to account for:

- (i.) updated Project development timelines,
- (ii.) a strategic decision by FCE to wait and see if the federal Business Investment Tax Credit (“ITC”) would be reinstated for fuel cell technology, and
- (iii.) the impact to the Green Bank of the October 2017 budget approval by the Connecticut General Assembly (“CGA”) resulting in the reallocation of \$33 million, over the subsequent two years, of Green Bank funds to the General Fund.

Shortly after the approval of the Advance Date deadline extension by the Board on January 26, 2018, the Bipartisan Budget Act of 2018 was signed into law on February 9, 2018, reinstating the ability of owners of fuel cell projects to benefit from the ITC¹. Given the reinstatement of the ITC, and Green Bank’s confirmation with FCE that the Project remains eligible for the ITC, it is now FCE’s goal to reconfigure the ownership and capital placement structure associated with the Project in order to effectively monetize the ITC for the Project. Green Bank staff supports this restructuring, and the continued consideration of placing Green Bank debt with the Project even with the ITC monetization.

Accordingly, staff requests approval for a further extension of the Advance Date deadline, from May 1, 2018 to December 31, 2018, to allow Green Bank and FCE time to work together to restructure the Credit Facility in order to optimize for the monetization of the ITC.

¹ Fuel Cell & Hydrogen Energy Association, “Budget Deal Reinstates Fuel Cell Investment Tax Credit”, <https://fuelcellsworks.com/news/budget-deal-reinstates-fuel-cell-investment-tax-credit>, (April 18, 2018).

Resolutions

WHEREAS, the Green Bank Board of Directors (“Board”) has previously approved a loan to support FCE’s development of a 3.7 megawatt high efficiency fuel cell project in Danbury, Connecticut (the “Term Loan”), as recommended and requested in the due diligence memorandum dated March 10, 2017 with terms and conditions for the Term Loan contained in the draft term sheet which accompanied the memorandum (the “Term Sheet”); and

WHEREAS, staff set forth in the project qualification memo dated January 26, 2018 a request for the Board to approve, and the Board as of that date did approve, updates to the previously-approved Term Sheet, to set a new deadline for advance of May 1, 2018, and the ability to sell off all, or a portion, of the Term Loan to 3rd party investors and the ability to guaranty all (for a fee or additional consideration), or a portion, of the amount of the Term Loan sold subject to subsequent Board approval on the terms and conditions thereof;

Whereas, staff has set forth in the project qualification memo dated April 27, 2018 a request for the Board to approve an additional extension of the deadline for advance from May 1, 2018 to December 31, 2018.

NOW, therefore be it:

RESOLVED, that the Green Bank Board of Directors hereby approves the new deadline for advance of the Term Loan be extended to December 31, 2018.

Submitted by: Bryan Garcia, President and CEO; Bert Hunter, EVP and CIO; Ben Healey and Chris Magalhaes, Clean Energy Finance.



Memo

To: Connecticut Green Bank Board of Directors

From: Eric Shrago, Director of Operations

CC: Bryan Garcia, President and CEO

Date: April 20, 2018

Re: Q3 Progress to Targets

The following memo outlines Connecticut Green Bank (CGB) progress to combined Q1, Q2 and Q3 targets for Fiscal Year (FY) 2018 as of March 31, 2018, the end of the third quarter.

Statutory and Infrastructure Sector

The Statutory and Infrastructure sector is above its target for the first part of the year due to faster growth than anticipated in the Residential Solar Investment Program (RSIP). At this point in the year, we are 96% of the way to the Projects Target, 89% of the way to the Capital Target, and 94% of the way to the Capacity Target. Installed costs continue to decline to \$3.48/watt for the first three-quarters of the year, down from \$3.68/watt forecast.

As we stated last quarter, the Green Bank Anaerobic Digester and Combined Heat and Power programs are terminated and the Green Bank will review projects in this space as one off investment opportunities. We do not expect any projects to close this fiscal year.

Table 1. Statutory and Infrastructure Sector Q3 Progress to Targets

Product/Program	Projects			Capital Deployed			Capacity		
	Closed	Target	% to Target	Closed	Target	% to Target	Closed	Target	% to Target
Anaerobic Digesters Pilot	0	0	0%	\$0	\$0	0%	0.0	0.0	0%
RSIP	4,273	4,431	96%	\$121,299,122	\$136,300,000	89%	34.9	37.0	94%
Infrastructure Total	4,273	4,431	96%	\$121,299,122	\$136,300,000	89%	34.9	37.0	94%

Residential Sector

Smart-E targets performance to date has substantially exceeded targets. As of the third fiscal quarter, the program has achieved 111% of its revised Projects Target, 112% of its revised Capital Target, and 131% of its Capacity Target. This has been due to a larger than anticipated volume at the standard rates, now that there are no more special offers in the market. The limited time 0.99% promotion was a successful market transformation activity driving deeper savings, since it attracted many new contractors to the product who have stayed with the product now that it's back to standard rates. The team did significant contractor outreach from January to March to ensure that companies stayed engaged with Smart-E product by selling to a monthly loan amount and also worked with contractors and lenders to begin contractor-funded interest rate buydowns. Initial interest has been strongest from solar installers, but some HVAC and home performance firms are also exploring this.

The Smart-E EV pilot has seen 4 loans with an average IRB of \$2000, higher than projected since we've not seen any used car loans yet. We have found the dealer channel to be challenging to break into so far and are focusing on town energy task forces and outreach to used car dealers.

The Low-to-Moderate-Income (LMI) lease program offered through PosiGen is presently running on track to its targets. In the first 9 months of the fiscal year, PosiGen achieved 75% of its Projects Target, 74% of its Capital Target, and 82% of its Capacity Target and 69% of PosiGen sales were to LMI customers. We continue to see a high percentage uptake (70%) by PosiGen customers of the Energy Savings Agreement (ESA) offering representing further energy savings. Green Bank staff is working with PosiGen to launch a campaign in Hamden in April. An independent survey of PosiGen customers has been conducted that found high levels of satisfaction with the product and with their savings.

As was the case last year, the Multifamily Term lending programs expect to finance fewer projects that are larger in size than originally planned. However, there is a robust pipeline of projects pending closing in the next few months. Consistent with previous years, multifamily projects can take several years to mature to a point where they are ready to move forward with financing, making it difficult to accurately predict timing. So far, the multifamily team has achieved 42% of their Projects Target, 93% of their Capital Target, and 19% of their (solar) Capacity Target. The lower (solar) Capacity result is due to a drop-off in activity from one of the LIME Loan program's major solar contractors and a sluggish uptake and slow processing of the 2nd round of the Solarize SSHP program. Expected to close in the next 4 months are up to 14 additional projects (495 units) for \$6.4 million in energy financing (and total capital deployed of \$96 million), including 0.4 MW of solar.

MFH # of Units	Closed
Affordable	1,520
Market Rate	-
Total	1,520

The Multifamily Pre-Development lending programs expect to finance the number of projects projected, with loan amounts that are larger than forecast. So far, the team has achieved 117% of our Projects Target and 141% of our Capital Target. Projects using the Navigator Pre-Development Loan program may be characterized as “barbell” in nature. They are comprised of either highly sophisticated passive house/net zero projects seeking or having received CHFA LIHTC commitments. Or the projects are physically and financially distressed because of outdated systems and high energy costs. In this case owners require significant technical assistance and pre-development funding to assist them in defining and financing the projects. The pre-development costs for both types of projects are substantial. In between are smaller targeted projects, including the first pre-development loans yielded by the Sherpa Loan program after having passed through two prior phases of evaluation and technical assistance.

The Multifamily Pre-development and Term lending projects closed year to date impact 1520 housing units, all of which serve low- and moderate-income residents.

Table 2. Residential Sector Q3 Progress to Targets

Product/Program	Projects			Capital Deployed			Capacity		
	Closed	Target	% to Target	Closed	Target	% to Target	Closed	Target	% to Target
Smart-E	1,501	1,352	111%	\$27,816,812	\$24,765,556	112%	3.4	2.6	131%
Low Income Loans/Leases	418	556	75%	\$10,975,769	\$14,805,838	74%	2.6	3.2	82%
Multi-Family Term	5	12	42%	\$7,037,368	\$7,550,000	93%	0.1	0.4	19%
Multi-Family Pre-Develop	7	6	117%	\$628,176	\$446,000	141%	0.0	0.0	0%
Resi Total	1,929	1,926	100%	\$46,458,125	\$47,567,394	98%	6.1	6.2	99%

Table 3. Smart-E Channel Breakout

Smart-E Loan Channel	Closed	% of Loans
Home Performance	142	9%
HVAC	866	58%
Solar	354	24%
EV	1	0%
Blank	138	9%
Total	1,501	100%

Commercial, Industrial, & Institutional Sector

The Commercial, Industrial, & Institutional Sector continues to see growth while the Green Bank staff continues to build a pipeline of projects. With 92% of the target met, the C-PACE program is on track to meet or exceed the project goal. The capital deployed progress is on target, with 79% of the goal met $\frac{3}{4}$ into the fiscal year. The discrepancy between the project and capital progress is due to continuing decline in average project size. Staff is optimistic about meeting the goal thanks to a strong pipeline and strong year for third-party lenders.

The Commercial Lease products, CT Solar Lease III and Onyx, are ahead of their joint Projects Target but behind their Capital and Capacity Targets. Thus far they achieved 64% of their Projects Target, 51% of their Capital Target, and 41% of their Capacity Target. Staff expects the pipeline will allow the products to achieve their targets for the year.

The Green Bank staff has continued to work with Eversource, UI, capital providers and the Energy Efficiency Board to move forward on the recapitalization of the Small Business Energy Advantage Program. In April 2018, the Green Bank, utilities and EEB agreed to issue a new RFP to solicit proposals from capital providers. Staff anticipates the proposal will be released by May 2018, a final proposal selected in June 2018, and the recapitalization to close in the 3rd Quarter.

Table 4. Commercial and Industrial Q3 Progress to Targets

Product/Program	Projects			Capital Deployed			Capacity		
	Closed	Target	% to Target	Closed	Target	% to Target	Closed	Target	% to Target
CPACE	47	51	92%	\$19,171,296	\$24,400,000	79%	5.0	6.4	79%
Commercial Lease	16	25	64%	\$7,630,240	\$15,000,000	51%	2.6	6.3	41%
CI&I Total	56	67	84%	\$23,851,316	\$34,000,000	70%	6.7	10.4	64%

Strategic Investments

The Green Bank staff continues to work on a strategic fuel cell project expected to close this year on target with forecasts.

CGB Total

Table 5. CGB Q3 Progress to Targets

Sector	Projects			Capital Deployed			Capacity		
	Closed	Target	% to Target	Closed	Target	% to Target	Closed	Target	% to Target
Infrastructure Sector	4,273	4,431	96%	\$121,299,122	\$136,300,000	89%	34.9	37.0	94%
Residential Sector	1,929	1,926	100%	\$46,458,125	\$47,567,394	98%	6.1	6.2	99%
Commercial, Industrial and Institutional Sector	56	67	84%	\$23,851,316	\$34,000,000	70%	6.7	10.4	64%
Other Strategic Investments	0	1	0%	\$0	\$15,000,000	0%	0.0	3.7	0%
CGB Total	5,449	5,566	98%	\$169,054,758	\$211,296,752	80%	41.3	48.6	85%

** excludes duplicates for RSIP records using residential financing product, residential low income (Posigen) records from RSIP and commercial solar lease records using CPACE*

83 Gerber Road: A C-PACE Project in South Windsor, CT

Address	83 Gerber Road, South Windsor, CT 06074			
Owner	Ticket Network Campus Realty LLC			
Proposed Assessment	\$3,115,000			
Term (years)	20			
Term Remaining (months)	Pending construction completion			
Annual Interest Rate¹	6.00%			
Annual C-PACE Assessment	\$271,343			
Savings-to-Investment Ratio	██████████			
Average DSCR	██████████			
Lien-to-Value	██████████			
Loan-to-Value	██████████			
Projected Energy Savings (mmBTU)		EE	RE	Total
	Per year		5,088	5,088
	Over term		101,772	101,772
Estimated Cost Savings (incl. ZRECs and tax benefits)	Per year		\$356,354	\$356,354
	Over term		\$7,127,091	\$7,127,091
Objective Function	32.67 kBTU / ratepayer dollar at risk			
Location	South Windsor			
Type of Building	Office			
Year of Build	1965			
Building Size (sf)	194,458			
Year Acquired by Owner	2011			
As-Complete Appraised Value²	██████████			
Mortgage Lender Consent	██			
Proposed Project Description	1.375 MW Rooftop Solar pv			
Est. Date of Construction Completion	Pending closing			
Current Status	Awaiting Board of Directors approval			
Energy Contractor	██			
Notes				

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CONFIDENTIAL TO THE BOARD

(ACTIVE RFP PROPOSALS UNDER NEGOTIATION)

Memo

To: Connecticut Green Bank Board of Directors

From: Bert Hunter, EVP and CIO and Mike Yu, Associate Director, Clean Energy Finance

CC: Bryan Garcia, President and CEO; Brian Farnen, General Counsel and CLO; Dale Hedman, Managing Director of Statutory & Infrastructure Programs; Ben Healey, Director of Clean Energy Finance, Eric Shrago, Director of Operations, George Bellas, Vice President of Finance and Administration

Date: April 27, 2018

Re: SHREC Securitization Update
Recommendation for Short-Term SHREC Warehouse Facility
Recommendation for Permanent Asset-backed Securitization (“ABS”) financing

In a memo to the Connecticut Green Bank (the “Green Bank”) Board of Directors dated March 27th 2018 (attached, Appendix C), staff provided an update on its Solar Home Renewable Energy Credit (“SHREC”) monetization efforts. Updates included:

- Revised Tranche 1 SHREC revenue projections based on estimates from Solar Anywhere.
- Selecting two investment banks, the Royal Bank of Canada and Credit Agricole, as finalists for underwriting the permanent asset backed securitization (“ABS”) financing of Tranche 1 and 2.
- Discussing potential bridge facilities (<12-18 months in duration) with local Connecticut banks that could be used as the warehouse facility that would eventually be refinanced with a term ABS issuance.
- Status of Independent Engineer review of SHREC systems and production methodology.

Since the March 27th memo, we have continued working on a second tranche (“Tranche 2”) of deals to submit to the utilities and have a near final list of approximately 7,230 systems. Generation projections for Tranche 2 based on P50¹ estimates from Solar Anywhere indicate approximately \$43.1M of gross SHREC revenue over the 15-year life of the tranche based on a price of \$49 per SHREC. Combined with the remaining revenue associated with Tranche 1 of \$32.5M, an ABS issuance in Q4 2018 backed by Tranche 1 and Tranche 2 would likely generate [REDACTED] of cash for the Green Bank.

¹ P50 is a statistical level of confidence suggesting that we expect to exceed the predicted solar resource/energy yield 50% of the time. P90 indicates we expect to exceed the yield 90% of time.



Short-Term SHREC Warehouse Facility Recommendation

While a securitization will provide a low cost, long term monetization option for SHRECs, to allow for the Green Bank to meet its significant obligations vis-à-vis the budget sweep of Green Bank funds coming up in June 2018, staff recommends utilizing a short-term warehouse facility that will provide bridge funding to the Green Bank until the securitization. Green Bank has received a joint proposal for \$16 million from two Connecticut banks whereby the two banks will jointly fund the facility and share 50/50 in draw requests, collateral (secured by Tranche 1 and Tranche 2 contracts) and a Green Bank guaranty (please see Confidential Appendix 1 for a high-level summary of key terms). In order to keep fees and cost of capital low, the warehouse facility was conservatively sized to meet the Green Bank’s short-term needs with the intent that the term ABS issuance in 6 to 7 months will maximize liquidity.

[Redacted]

[Redacted]

[Redacted]

Why two facilities when one will suffice?

The reasons are strategic, tactical and operational for why we prefer the Webster-Liberty-Union Savings solution when Green Bank could satisfy its liquidity requirement with the RBC warehouse facility without piecing two Connecticut bank facilities together.

Strategic

The strategic reason is the Green Bank was hobbled in its ability to secure financing by the budget sweeps. B of A pulled the \$10 million, 10-year, 1% LMI facility. [Redacted] pulled out of SHREC negotiations. [Redacted] – while interested in the SHREC warehouse – said they would join a Green Bank financing, but because of what the legislature did, they could not lead a facility.

In approaching Webster and Liberty about the warehouse funding facility, we explained that even though Green Bank could get sufficient funding from Wall Street, Green Bank wanted to offer Connecticut banks the opportunity to participate in a straightforward deal. In the warehouse facility we requested from them, the collateral is revenues tied to solar PV production (which both banks financed with us in Solar Lease 2) with the added benefit that the credit is backstopped not by homeowners, as in Solar Lease 2, but by two rated utilities: Eversource and UI. Also, compared to Solar Lease 2, this facility would be short-term (takeout via securitization). If we succeeded, the resulting facility would be a good partnership between the Green Bank and its local banks, in partnership with Wall Street. It would also represent good incremental loan business for them (\$400,000 in top line earnings) and helps the Green Bank solidify our banking ties in the State.

Tactics

Tactically, having a warehouse that is free from the term ABS issuer also gives the Green Bank more leverage vs the issuing bank. With a separate facility, the Green Bank would not be beholden by the issuing bank's short term facility – and can then approach the term market when we wish – to secure better terms for the term issuance. (Webster and Liberty have both expressed willingness to renew the facility after its initial year to accommodate future tranches.)

Operations

Operationally, having the \$5 million revolver is also a way of (1) having funds available to pay the State the \$14 million sweep in June with the \$9 million first Webster-Liberty draw, (2) being able to repay that \$5 million loan to zero once Tranche 2 is finalized at the end of June (or first few days of July) – when a draw of an additional \$7 million is permitted from Webster-Liberty, and (3) gives the Green Bank access to \$5 million in additional liquidity over the next year for short term purposes or if needed to ensure we don't violate our \$4 million minimum liquidity covenant under our US Bank solar fund agreements.

This “three-prong” approach: strengthens our position with Connecticut Banks and working with local lenders, enables us to fully meet our payment to the State in June so the Green Bank is seen as being able to manage through these unusual circumstances, and gives us operational flexibility and peace of mind that Green Bank will have \$5 million in liquidity to draw upon if needed.

Long Term Asset Backed Securitization Recommendation

Based on an assessment made by the SHREC Team² of the various proposals from seven financial institutions, Royal Bank of Canada's proposal was determined to offer the best value for the Green Bank's needs for an asset backed securitization of the SHREC receivables across Tranche 1 and Tranche 2 (Tranche 2 is closing in late June). Please see the high-level analysis of the final proposals (Confidential Appendix 2).

Staff requests approval by the Board of Directors to move forward with both (a) the warehouse funding facility (Confidential Appendix 1) and (b) the recommendation for the term ABS (Confidential Appendix 2).

Note: Once final documentation for each facility is agreed, Staff will revert back to the Board of Directors with its request for final approval.

Independent Engineering Partner RFP (Appendix D)

DNV GL (“DNV”) was selected as the winner by an internal review team for the IE RFP, has continued its diligence work as is on track to release its preliminary report the week of April 23rd.

² Mike Yu (Lead), Bert Hunter, Dale Hedman, Eric Shrago, George Bellas, Brian Farnen, Kris Holz

External Societal Benefits/Impact/Green Opinion RFP

On March 9, the Green Bank issued a Request for Proposal seeking an external opinion regarding the environmental and social impact of the projects associated with the SHREC securitization. Nine proposals were received by the due date of March 30th, and an internal review team has narrowed the field down to a shortlist of 3 firms. Additional diligence calls will be conducted over the next three weeks and a finalist selected in May.

SHREC Warehouse

Resolutions

WHEREAS, Connecticut Green Bank (“Green Bank”) staff has submitted to the Green Bank Board of Directors (“Board”) a proposal for Green Bank to enter into an agreement with Webster Bank and Liberty Bank (“Webster-Liberty”) for a \$16,000,000 secured revolving line of credit (“SHREC Revolving Credit Facility”) whereby the SHREC Revolving Credit Facility would be used for a period of up to one year in order to bridge Green Bank’s short-term liquidity and working capital needs prior to funding anticipated from the permanent asset backed securitization (“ABS”) financing of Tranche 1 and Tranche 2 of the Solar Home Renewable Energy Credit (“SHREC”) program;

WHEREAS, along with a general repayment obligation by the Green Bank, Webster-Liberty would be secured by a first priority security interest in, and an absolute assignment of all cash flows associated with Tranche 1 and Tranche 2 of the SHREC program and, in the event of a payment default under the SHREC Revolving Credit Facility, such additional Tranches of SHRECs as required by the Lenders together with all commercially necessary rights thereunder (the “SHREC Collateral”); and

WHEREAS, Green Bank staff recommends that the Board approve the proposed SHREC Revolving Credit Facility, generally in accordance with the terms of the summary term sheet presented to the Board on April 27, 2018.

NOW, therefore be it:

RESOLVED, that the Board approves Green Bank to enter into the SHREC Revolving Credit Facility with Webster-Liberty substantially as set forth in the memorandum to the Board dated April 27, 2018;

RESOLVED, that the Board approves Green Bank to establish a bankruptcy remote special purpose entity 100% owned by Green Bank, if required by the lenders to secure their interest in the SHREC Collateral;

RESOLVED, that the President, Chief Investment Officer and General Counsel of Green Bank; and any other duly authorized officer of Green Bank, is authorized to execute and deliver on behalf of Green Bank any of the definitive agreements related to the SHREC Revolving Credit Facility and to establish the SPV and any other agreement, contract, legal instrument or document as he or she shall deem necessary or appropriate and in the interests of Green Bank and the ratepayers in order to carry out the intent and accomplish the purpose of the foregoing resolutions; and

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

SHREC Permanent Asset-Backed Securitization

Resolutions

WHEREAS, Connecticut Green Bank (“Green Bank”) staff has submitted to the Green Bank Board of Directors (“Board”) a proposal for Green Bank to proceed with an agreement with the Royal Bank of Canada (“RBC”) whereby RBC would structure, arrange and secure funding in accordance with a proposed permanent asset backed securitization (“ABS”) financing of Tranche 1 and Tranche 2 of the Solar Home Renewable Energy Credit (“SHREC”) program as described in the Confidential Memorandum to the Board of Directors dated April 27, 2018;

WHEREAS, RBC was selected pursuant to a Request for Proposal process as set for in the Operating Procedures of the Green Bank; and

WHEREAS, any bond or note issuance associated with the SHREC ABS financing will be subject to definitive documentation which will require approval by the Board.

NOW, therefore be it:

RESOLVED, that the Board approves Green Bank to enter into a Professional Services Agreement with RBC for the purpose of having RBC structure, arrange and secure funding in accordance with a proposed permanent ABS financing of Tranche 1 and Tranche 2 of the SHREC program substantially as set forth in the Confidential Memorandum to the Board of Directors dated April 27, 2018;

RESOLVED, that the President, Chief Investment Officer and General Counsel of Green Bank; and any other duly authorized officer of Green Bank, is authorized to execute and deliver on behalf of Green Bank any of the definitive agreements related to the SHREC Revolving Credit Facility and to establish the SPV and any other agreement, contract, legal instrument or document as he or she shall deem necessary or appropriate and in the interests of Green Bank and the ratepayers in order to carry out the intent and accomplish the purpose of the foregoing resolutions; and

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

Appendix I – Term Sheet

Summary Term Sheet

Webster Bank & Liberty Bank

SHREC Revolving Line of Credit Facility

- 1. **Borrower:** Connecticut Green Bank (“CGB”) or a bankruptcy remote special purpose entity (“SPV”) to be formed by and 100% owned by CGB
- 2. **Guarantor** Connecticut Green Bank (if SPV is the Borrower)
- 3. **Amount and Loan Type:** Up to \$16,000,000 Revolving Line of Credit
- 4. **Purpose:** Provide for working capital on a bridge basis prior to receipt of funds from a permanent asset-backed securitization
- [REDACTED]
- [REDACTED]
- [REDACTED]
- 8. **Monthly payments:** Interest-only in arrears.
- 9. **Principal Amortization:** Principal is due at Maturity or through capital markets securitizations
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- 12. **Collateral:** An absolute assignment of the cash flows associated with Tranche 1 and Tranche 2 SHRECs (and in the event of default / failure of the permanent ABS, all future SHREC Tranches) and all commercially necessary rights thereunder, shall be provided to Lenders for the purpose of collateralizing the Loan.
- 13. **Prepayment Penalty:** None

Appendix I – Term Sheet

(Letter from Webster Bank & Liberty Bank)



April 23, 2018

Mr. Bert Hunter
EVP & Chief Investment Officer
Connecticut Green Bank
845 Brook Street, Rocky Hill, CT 06067

RE: \$16,000,000 Non-Restoring Line of Credit Facility

Mr. Hunter:

SHREC, LLC, (a to-be-formed entity wholly owned by the Connecticut Green Bank – hereinafter “Company” or “Borrower”) has applied to Webster Bank, National Association (“Webster”) and Liberty Bank (“Liberty” – each of Webster and Liberty a “Bank” and together the “Banks”) for up to \$16,000,000 of credit (the “Loan”). This letter provides an outline of the terms and conditions under which the Banks would consider providing the Loan to the Borrower. This term sheet is provided for discussion purposes only and is not a commitment. A commitment by the Banks is subject to satisfactory completion of due diligence, credit approval, completion of documentation (which may include material terms not in this letter), and the Banks’ satisfaction with the terms and conditions of all transactions and documentation related to the contemplated financing.

Borrower: SHREC, LLC – a to-be-formed special purpose vehicle and wholly owned subsidiary of the Connecticut Green Bank.

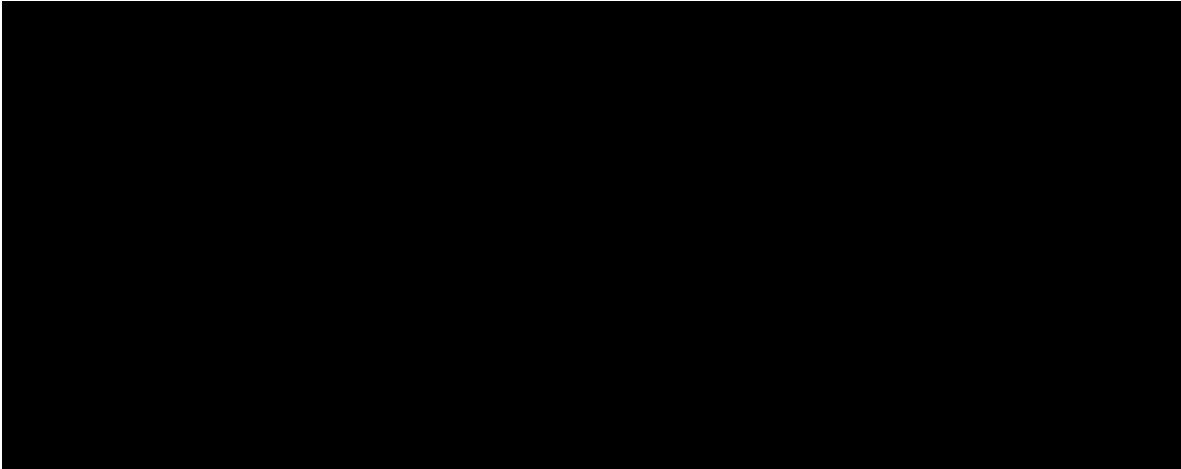
Guarantor: The Connecticut Green Bank (“Guarantor”)

Credit Facility: Non-Restoring Secured Line of Credit in an amount up to \$16,000,000

Use of Proceeds: Payments to the Guarantor to fund its obligations to the State of Connecticut under the currently approved state budget and other related expenses of the SHREC program.

Appendix I – Term Sheet

(Letter from Webster Bank & Liberty Bank)



Security: First priority lien on all assets of Borrower. Guarantor or Borrower shall collaterally assign (i) its rights in each SHREC MPA to the Banks; (ii) full and unconditional guarantee of payment from Connecticut Green Bank and any rights of payment guarantee under state statutes; and, (iii) assignment of the Guarantor's membership interest in the Borrower.



Deposit Accounts: The Borrower will maintain all of its primary operating accounts at the Banks, including the reserve account to be maintained pro rata at each Bank.

Loan Documents: The Loan Documents shall contain representations and warranties, conditions precedent to closing, affirmative and negative covenants, and events of default as are customary for loans of this size, type and purpose.

Financial Covenants: Financial covenants to be determined.

Financial Reporting Audited financial statements of the Borrower and Guarantor to be submitted within 120 days of each fiscal year end and tax returns within 15 days of filing. All financial statements will be prepared in accordance with GAAP consistently applied and accompanied by an unqualified statement from an independent certified public accountant (such independent certified public accountant shall be acceptable to the Banks).

Within 45 days after the close of the 1st, 2nd and 3rd fiscal quarters, unaudited financial statements of the Borrower and Guarantor.

All financial statements shall be accompanied by a covenant compliance certificate.

Expenses: The Borrower agrees to reimburse each Bank for its reasonable attorneys' fees and expenses.


Appendix I – Term Sheet

(Letter from Webster Bank & Liberty Bank)

We appreciate the opportunity to present this term sheet to you. If these terms and conditions are acceptable to you, please sign this letter in the space provided below and return a signed original to Webster and Liberty by April 26, 2018. Upon acceptance of this term sheet, a non-refundable fee of [REDACTED] shall be paid. The non-refundable fee will be credited towards the commitment fee upon closing of the transaction.

Sincerely,

WEBSTER BANK, NATIONAL ASSOCIATION

By: 
Lawrence Davis
Its Senior Vice President

LIBERTY BANK

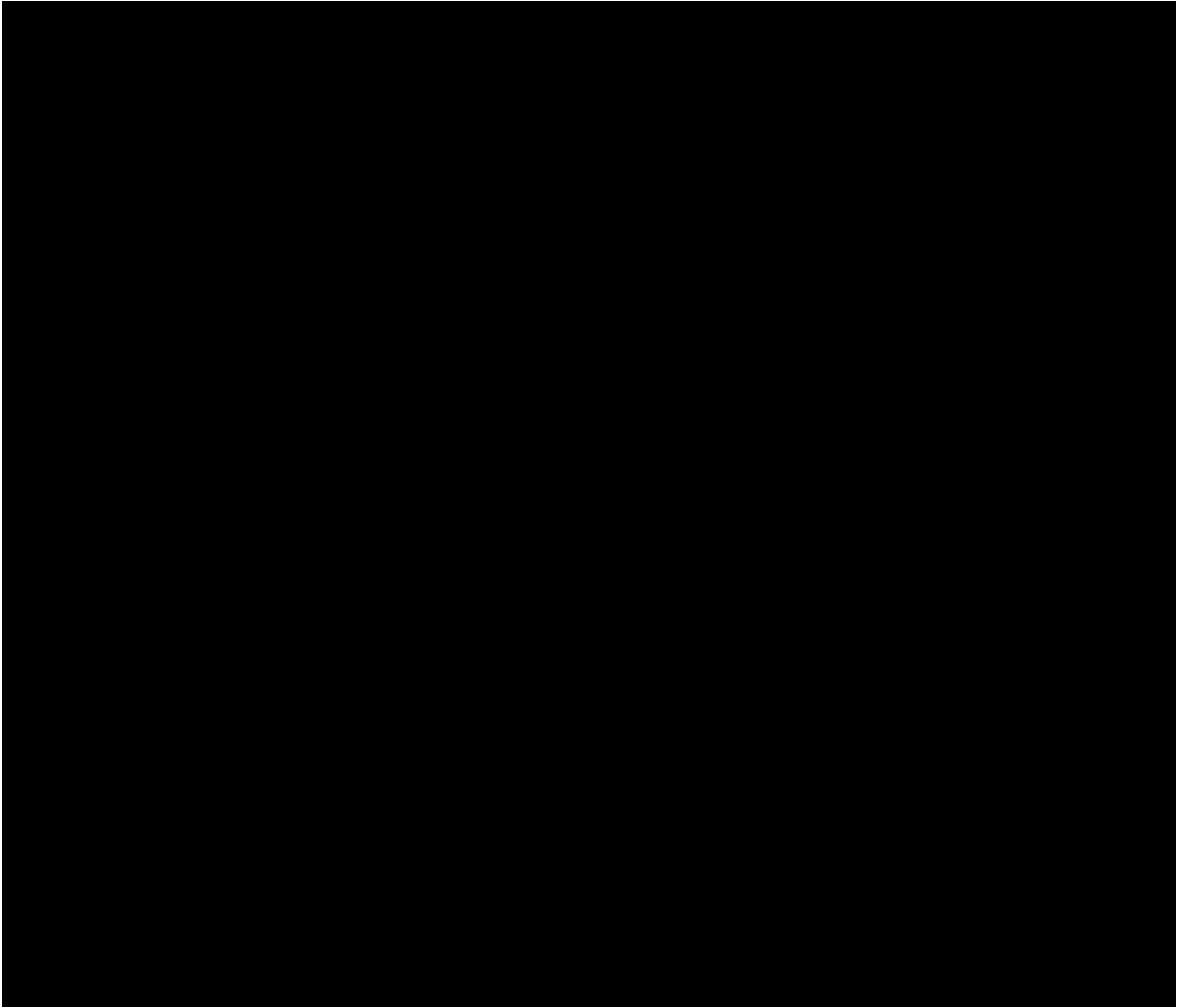
By: 
David Cantor
Its Senior Vice President

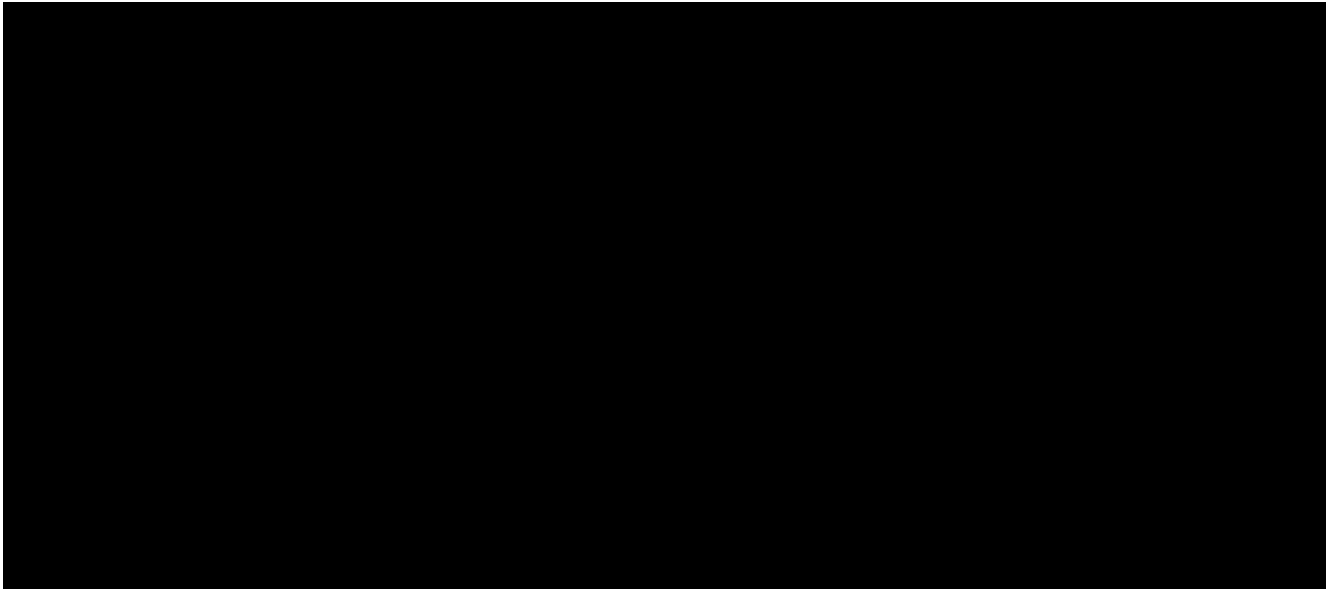
ACCEPTED AND AGREED:

CONNECTICUT GREEN BANK

By: _____
Bert Hunter
EVP and Chief Investment Officer

Appendix A – Warehouse Facility





STRICTLY PRIVATE AND CONFIDENTIAL

February 22, 2018

Connecticut Green Bank
845 Brook Street
Rocky Hill, CT 06067

Attention: Bryan Garcia, President and Chief Executive Office

This letter is provided to Connecticut Green Bank (“CTGB”), as a component of our response, to CTGB’s Request For Proposal For Solar Home Renewable Energy Credit (SHREC) Monetization (“RFP”). Details below are offered in response to the outline of requested cover letter information, contained in the RFP.

1. Name of Respondent:

RBC Capital Markets, LLC

2. Business Address:

Three World Financial Center
200 Vesey Street, 10th Floor
New York, NY 10281-8098

3. Respondents Main Contact:

Andrew Rosenbaum

Managing Director

Power, Utilities and Infrastructure Group

RBC Capital Markets, LLC

Work: 212-618-2765

Cell: 201-406-1717

E-mail: andrew.rosenbaum@rbccm.com

4. Acknowledgement of Standard Professional Services Agreement:

RBC Capital Markets, LLC (“RBC,” “us” or “our”) has reviewed a form of the Standard Professional Services Agreement (“SPSA”). Based on our initial review as of the date hereof, nothing has come to our attention, and we are not aware of any fact or circumstance, that would prevent our completion of the SPSA substantially in the form provided and subject to our ongoing review.

5. Review of RFP:

Based on our initial review of the RFP and associated attachments thereto, nothing has come to our attention that would cause us to believe that we could not comply with the requirements of the RFP nor accept all terms and conditions in the RFP, subject to our ongoing review.

Very truly yours,

RBC Capital Markets, LLC

By:

Andrew Rosenbaum

Managing Director

Power, Utilities & Infrastructure

RBC Capital Markets Response to Connecticut Green Bank RFP for Solar Home Renewable Energy Credit (SHREC)

February 2, 2018



STRICTLY PRIVATE AND CONFIDENTIAL



RBC Capital Markets

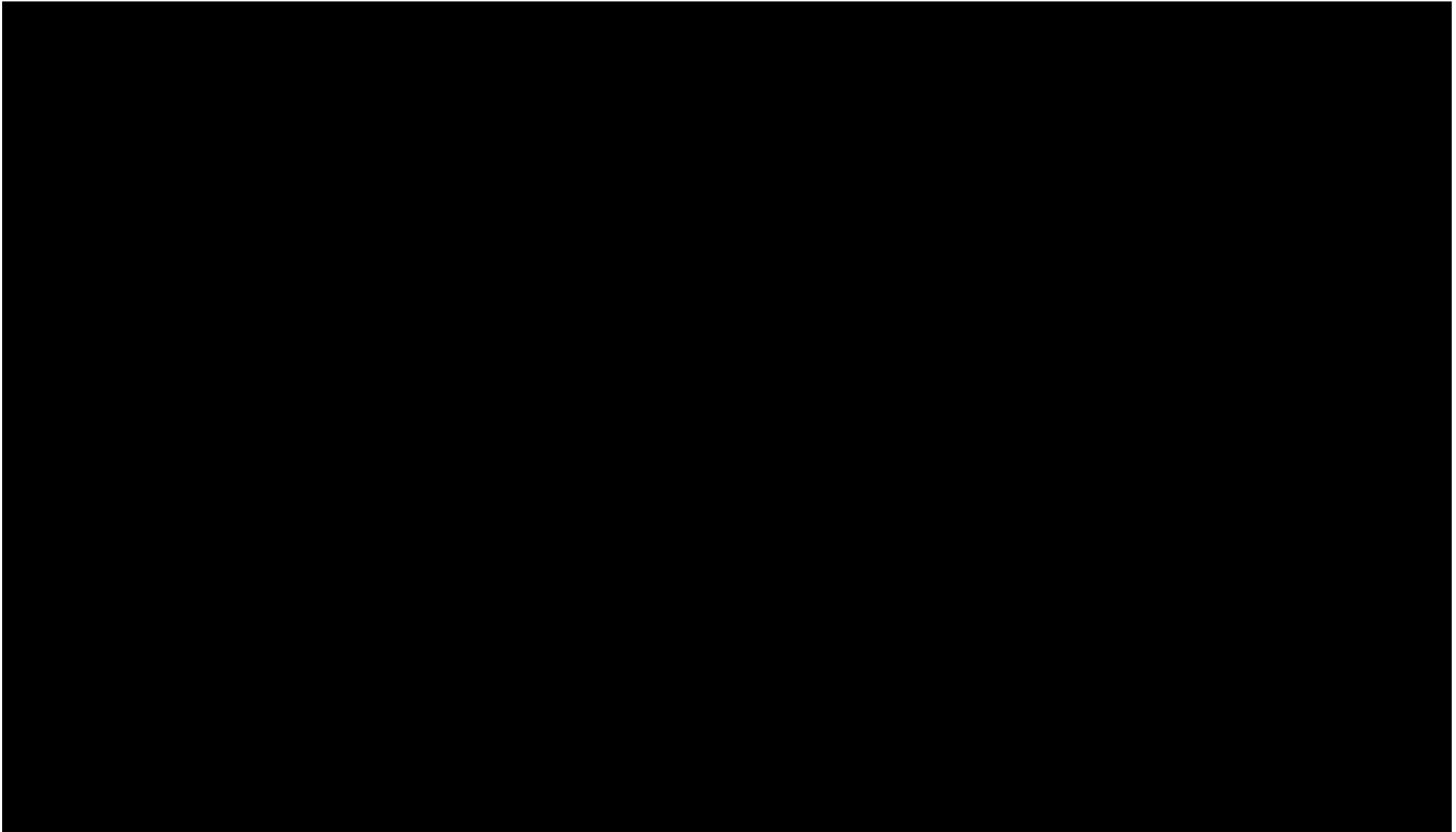
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	Page 34

2. Executive Summary

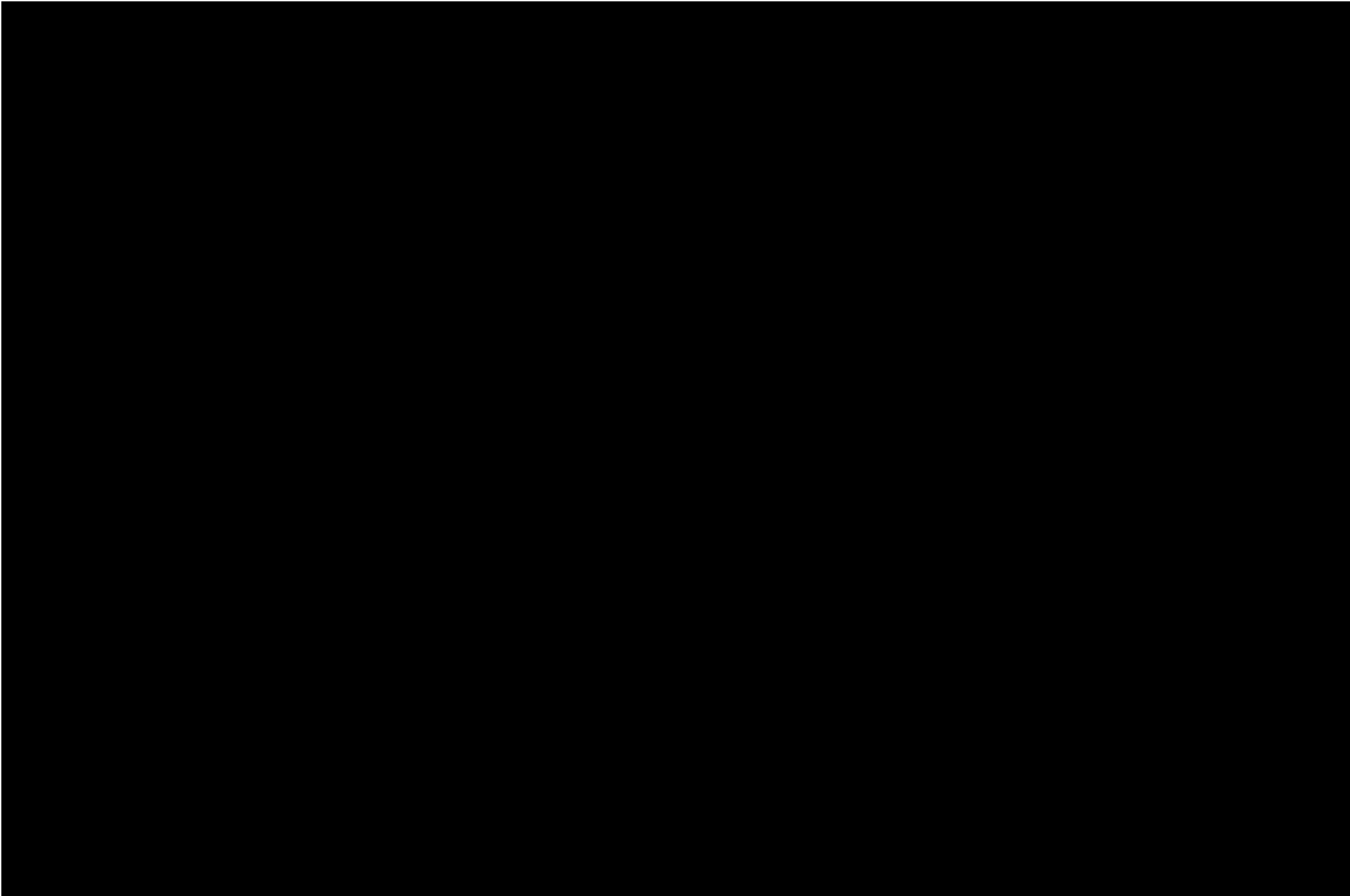
Executive Summary

RBC Capital Markets (“RBC”) is pleased to be responding to Connecticut Green Bank (“CTGB”) with respect to the RFP for Solar Home Renewable Energy Credit (“SHREC”) Monetization

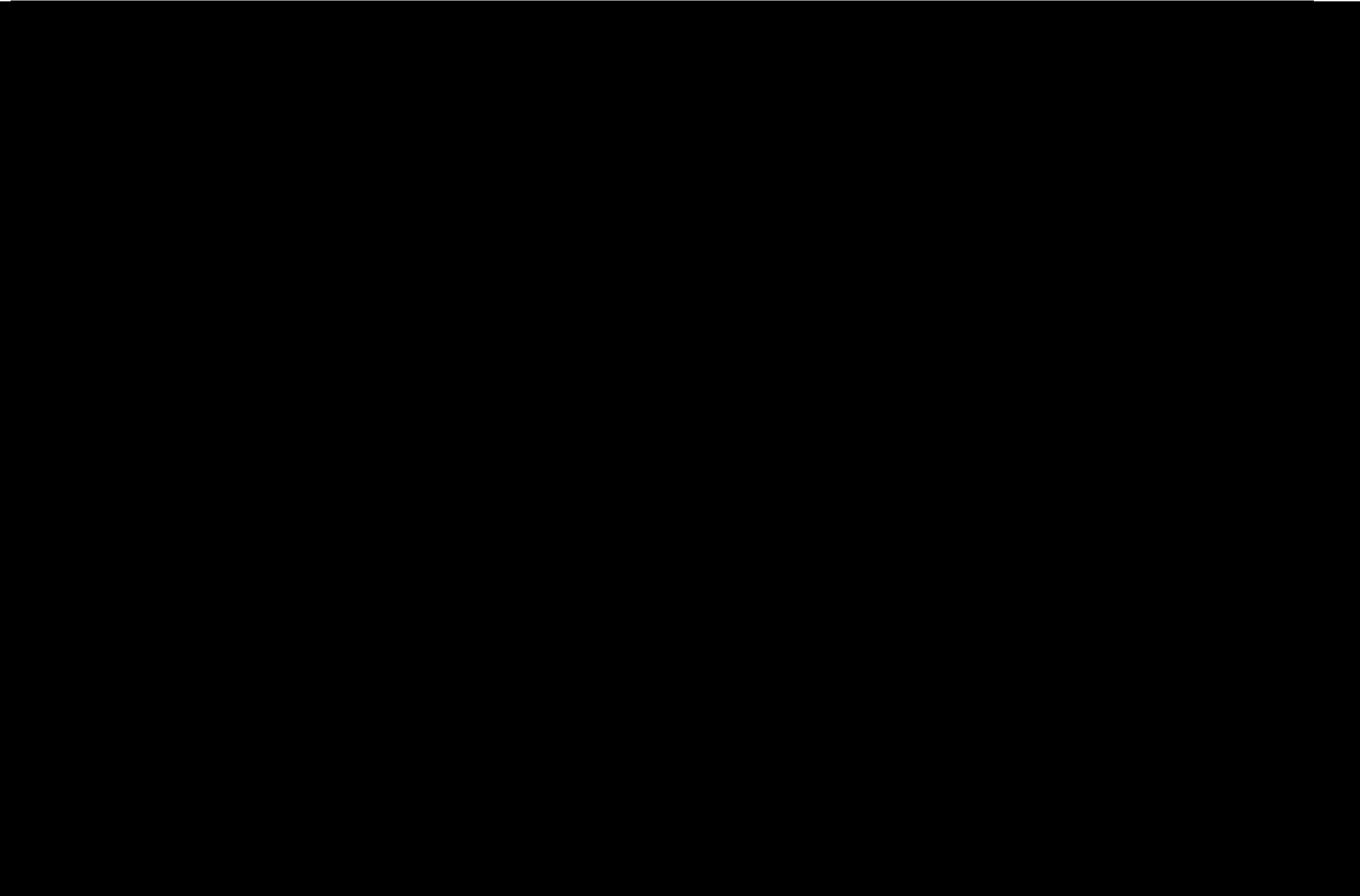


RBC looks forward to working with Connecticut Green Bank, designing and supporting an optimal capital solution, to monetize current and future contracted Solar Home Renewable Energy Credits

3. Key Structuring and Economic Terms



Warehouse Credit Facility – Indicative Terms & Conditions



Overview of SHREC Monetization Services

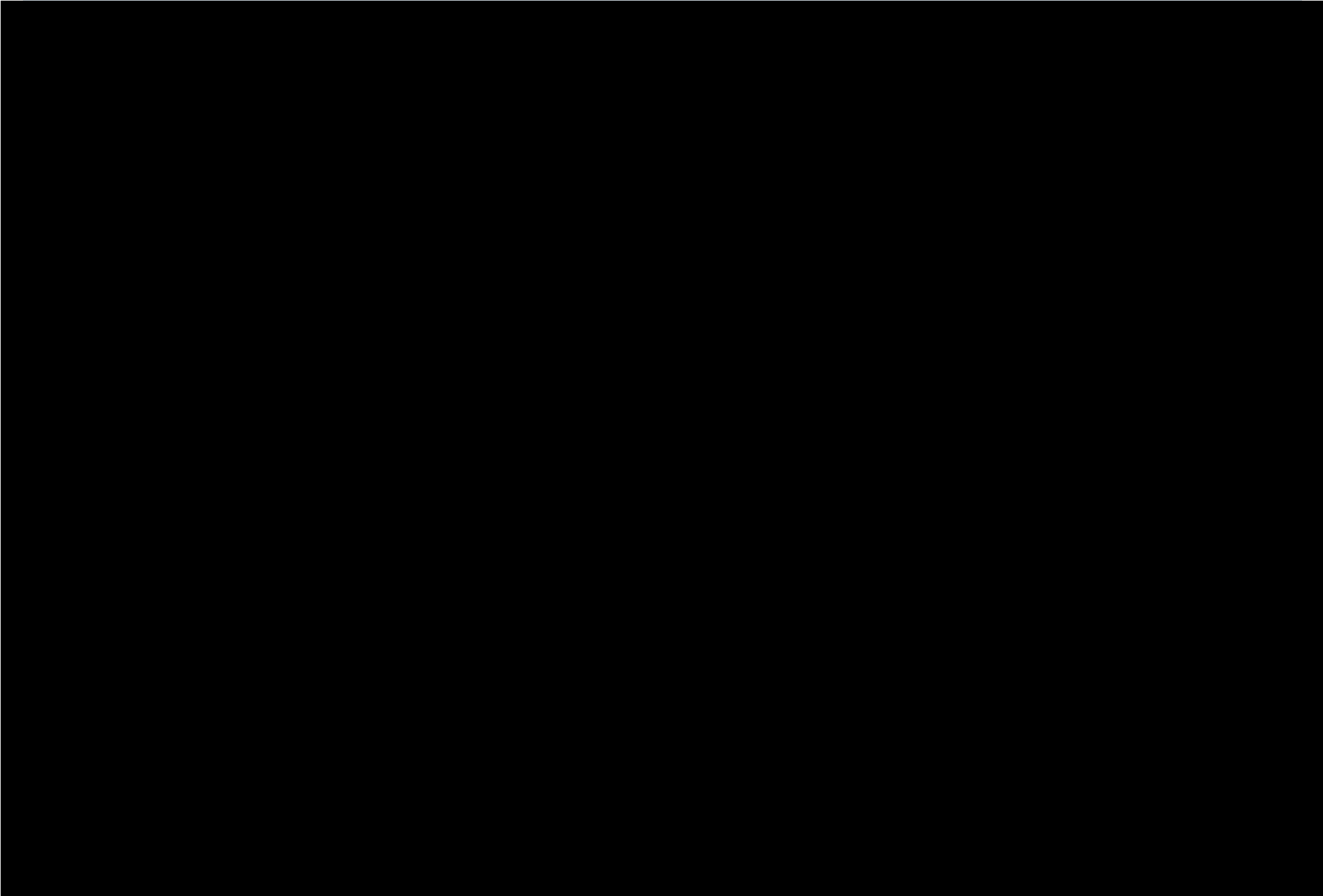
RBC is well positioned and qualified to provide the full scope of SHREC Monetization Services requested by CTGB

Platform Overview and Vantage Point

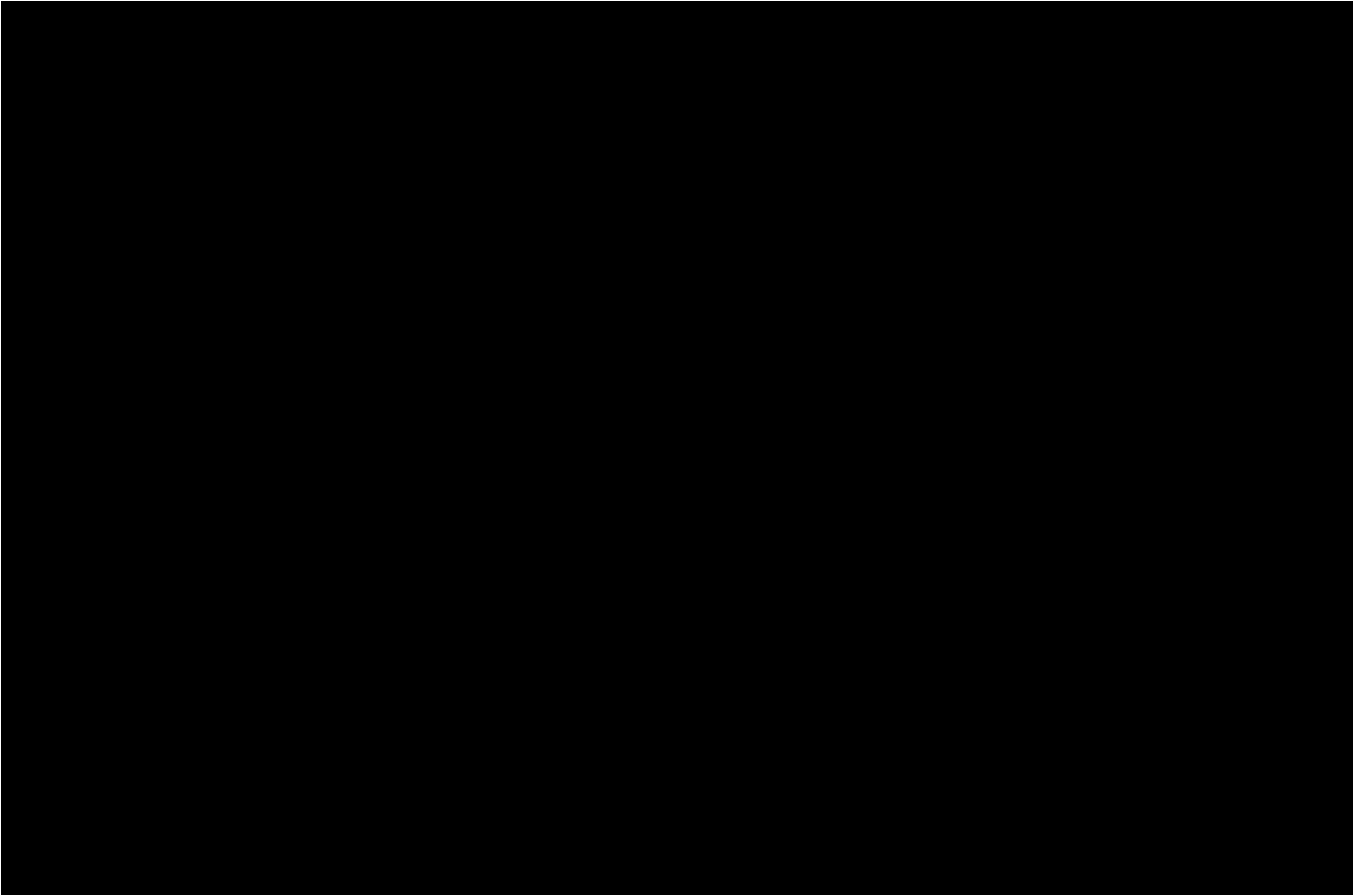
- RBC is active in all of the capital markets identified in CTGB's RFP, with access from multiple industry disciplines, providing the necessary experience and capabilities to offer SHREC program support
 - Robust Power & Utilities Group, with direct relevant renewable experience in project finance, tax equity, project bonds, commercial lending, syndicated loans, corporate bonds, hybrid equity, common equity and M&A, including wind, solar, hydro, distributed generation, and energy efficiency, as well as YieldCos and renewable / infra REITS
 - Broad, market leading, fixed income division, offering traditional and bespoke ABS / Securitization products, Private Placement Bond Funding for Projects and Pooled / Alternative Collateral
- With this breadth of platform, industry and product experience, RBC is uniquely positioned to represent CTGB - Capability to make and support recommendations across multiple product options, to effectively monetize SHREC assets

Investment Vehicle/Structures	Business Segment	Supporting Teams	Relevant Team Experience
Securitization	RBC Capital Markets – Fixed Income & Global Investment Banking	Securitization Team Power, Utilities & Infrastructure	<ul style="list-style-type: none"> • Over 60 ABS banking and market professionals with strong global coordination • Significant structuring and marketing expertise with an average of over 10+ years of banking experience • Consistent standings at the top of the league tables, including #4 in 2017

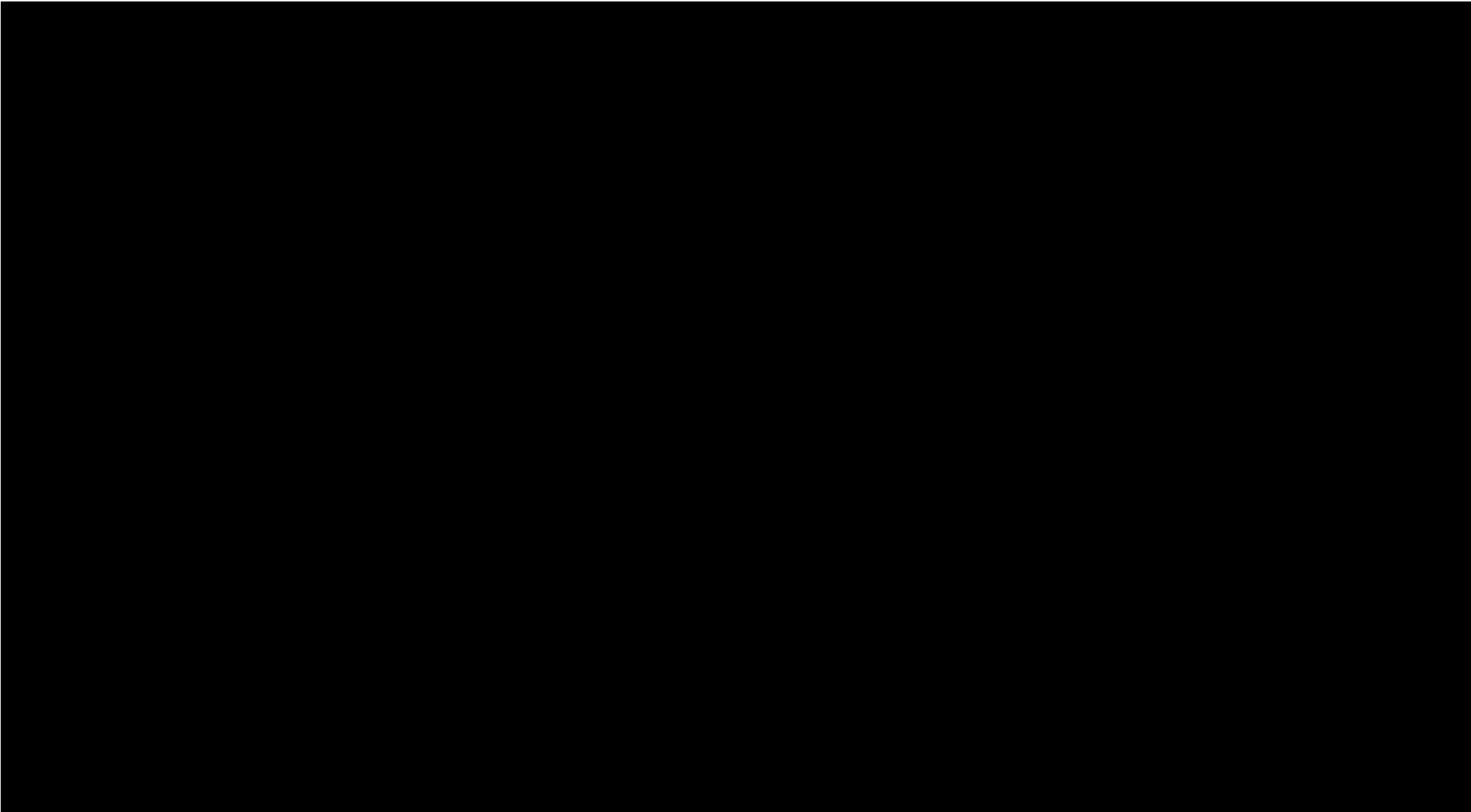
Proposed Financing Structure



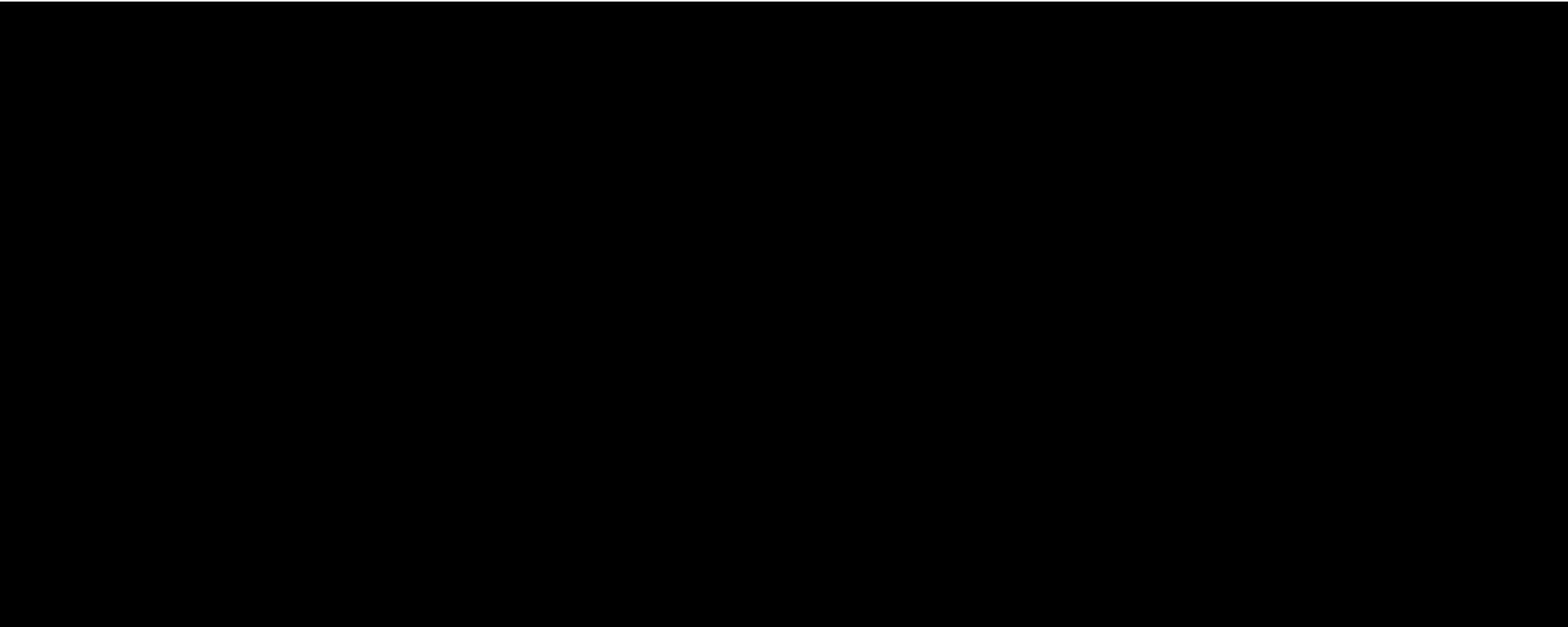
Term Structuring and Placement Timeline



Term Structuring and Placement Timeline (Cont'd.)



4. Capital Markets Strategy



5. RBC Capital Markets Qualifications

RBC Capital Markets: Capabilities

RBC Capabilities

- RBC is a Top 5 North American Bank by market capitalization and has been able to generate significant returns throughout the economic cycle by utilizing ongoing strategic investment in its businesses alongside prudent cost and risk management
- RBC is one of the highest rated global banks and a strong stable counterparty with Moody's rating of A1 and S&P rating of AA-
- RBC has over 7,200 employees supporting approximately 14,000 clients worldwide

RBC Capital Markets Provides a Comprehensive set of Products and Services

Fixed Income, Currencies and Commodities

Significant market maker with the ability to provide clients with liquidity and risk management services

- ABS / Securitization
- Credit
- Foreign Exchange
- Futures
- Index Swaps & Notes
- Metals - Base & Precious
- Oil, Gas, Power, Carbon
- Rates
- Trading, Financing & Structuring
- US Municipal Markets

Equities

Integrated team of global equity professionals who manage and advise on all aspects of the client trading strategy

- Convertibles
- Corporate Access
- Electronic Sales and Trading
- ETF Trading
- Institutional Research Sales
- Institutional Trading
- Market Structure
- Options Sales and Trading
- Preferred Trading
- Private Placement Equity Origination and Syndication
- Program Trading
- Structured Products

Investment Banking (Product)

Helping clients finance their ongoing operations, strategic acquisitions, expansions, and other critical projects

- Convertible & Equity-Linked Origination
- Debt Private Placements
- Equity Capital Markets
- Financial Sponsors
- High Yield Capital Markets
- Investment Services
- Leveraged Finance
- Loan Capital Markets
- Mergers & Acquisitions
- Private Placements
- Restructuring
- Syndicated Finance

Investment Banking (Coverage)

Broad client and industry coverage, providing strategic advisory services and product integration and management

- Communications Media & Entertainment
- Consumer / Retail
- Energy
- Energy / Richardson Barr
- Financial Institutions
- Financial Sponsors
- Healthcare
- Industrials
- Power & Utilities / Infrastructure
- Project Finance
- Real Estate
- Technology

Research

In-depth market intelligence and keen insight across asset classes, industry sectors, operating disciplines, and geographies

- Economics
- Equity
- Fixed Income and Currencies
- Foreign Exchange
- High Yield Credit
- Investment Grade Credit
- Rates

RBC Capital Markets: Solid, Diversified Financial Performance

Top 10

One of the Top 10 largest global banks by market capitalization

Highest Rated

One of the highest rated global banks

Largest

The largest financial institution and company in Canada

Royal Bank of Canada Key Facts (Q4, as at October 31, 2017)

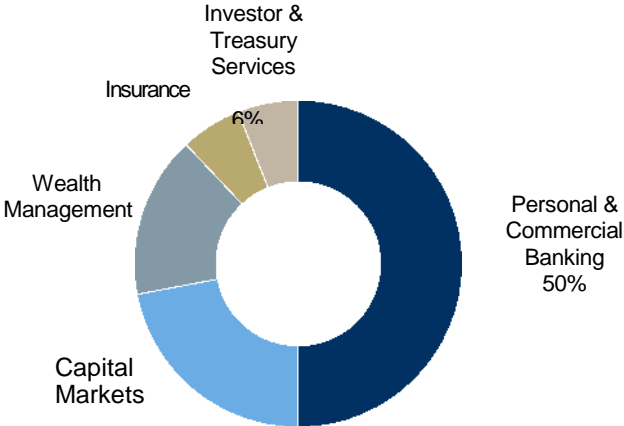
Total Revenue:	C\$10.5 billion	Net Income:	C\$2.8 billion
Market Cap¹:	US\$114 billion	Assets:	C\$1.20 trillion

Credit Ratings: A1 (Moody's) / AA- (S&P) / AA (Fitch) / AA (DBRS)

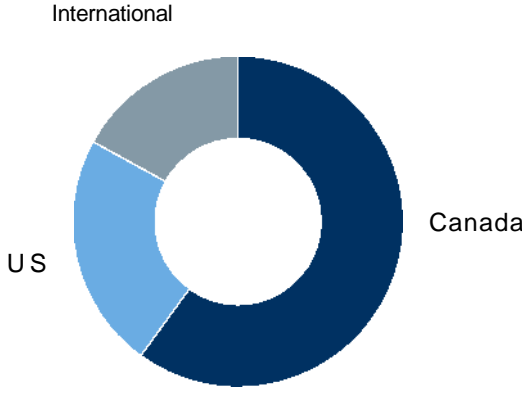
Countries of Operation

Royal Bank of Canada	37
RBC Capital Markets	15

RBC Earnings by Business Segment – Last 12 Months (As at October 31, 2017)²



RBC Revenue by Geography – Last 12 Months (As at October 31, 2017)²



(1) As at October 31, 2017
 (2) Excludes Corporate Support. These are non-GAAP measures. For additional information, refer to the Royal Bank of Canada Q4 2017 Report to Shareholders.

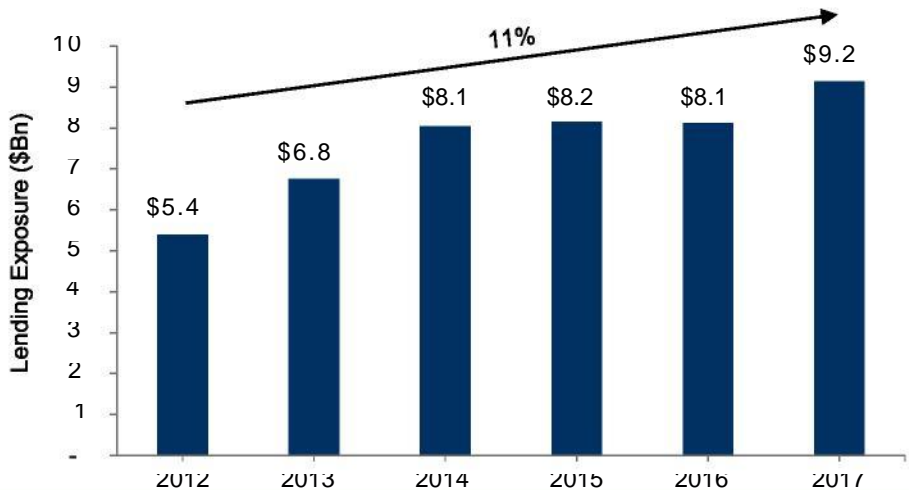
RBC Power Utilities & Infrastructure: Global Presence

RBC has over 80 Power, Utilities & Infrastructure professionals across 4 continents; In the U.S., RBC banks a majority of public utility and IPP clients with a loan book of \$9.2 billion

Country	Total	Dedicated PU&I Professionals
United States	2,711	28
Canada	2,863	17
U.K. & Europe	1,199	25
Total	7,130	86



RBC Balance Sheet Commitment to the U.S. Power & Utilities Sector



RBC Power Utilities & Infrastructure: Active Across North American Renewables

Recent Transactions across M&A, Debt and Equity Financings

 <p>Advisor on sale of C&I Construction and solar portfolio</p> <p>Financial Advisor In Market</p>	 <p>\$1,200,000,000 \$500mm Senior Notes due 2023 \$700mm Senior Notes</p> <p>Lead Left Bookrunner</p>	 <p>\$2,050,000,000</p> <p>Committed Financing at TerraForm to Refinance Indebtedness Subject</p> <p>Joint Lead Arranger</p> <p>Construction and to Change of Control</p>	 <p>Confidential</p> <p>Acquisition of Granger</p> <p>Exclusive Financial Advisor to Energy Developments Inc. August 2017</p>	 <p>Buckthorn Wind</p> <p>\$123,600,000</p> <p>Tax-Equity</p> <p>Construction Loan and LC Facility</p>	 <p>\$350,000,000</p> <p>Senior Notes Due 2024</p> <p>Active Joint Bookrunner January 2017</p>	 <p>\$350,000,000</p> <p>5.00% Senior Notes due 2026</p> <p>Joint Lead Arranger Joint Bookrunner August 2016</p>	 <p>\$150,000,000</p> <p>At-the-Market Offering</p> <p>Sales Agent August 2016</p>
 <p>\$270,070,000</p> <p>Bought Deal Offering</p> <p>Lead Left Bookrunner August 2016</p>	 <p>\$200,000,000</p> <p>At-the-Market Equity Offering</p> <p>Lead Left Sales Agent May 2016</p>	 <p>\$860,000,000</p> <p>Sale of 292 MW of Hydro Generation Assets in Pennsylvania</p> <p>Financial Advisor to Talen Energy April 2016</p>	 <p>\$189,093,000</p> <p>Southgate Solar LP</p> <p>Construction and Acquisition Financing</p> <p>Mandated Lead Arranger February 2016</p>	 <p>C\$1,507,000,000</p> <p>iCON Infrastructure Acquisition of Capstone Infrastructure</p> <p>Financial Advisor to Capstone Infrastructure January 2016</p>	 <p>Confidential</p> <p>Sale of 102 MW Coram Wind Project in California</p> <p>Financial Advisor to Brookfield July 2015</p>	 <p>\$125,000,000</p> <p>1-Day Marketed \$225,000,000</p> <p>Convertible Senior</p> <p>Joint Bookrunner July 2015</p>	 <p>Shannon Wind LLC</p> <p>Confidential</p> <p>Construction Loan / Bridge to Tax Equity</p> <p>Joint Bookrunner Mandated Lead Arranger June 2015</p>
 <p>\$620,356,000</p> <p>1-Day Marketed \$287,500,000</p> <p>Convertible Senior</p> <p>Joint Bookrunner Active Joint Bookrunner June 2015</p>	 <p>\$270,000,000</p> <p>Senior Secured Term Loan B and Revolving Credit Facility</p> <p>Joint Bookrunner May 2015</p>	 <p>Advised and provided committed acquisition to a Phase II bidder for Wind Capital Group</p> <p>Financial Advisor May 2015</p>	 <p>\$351,000,000</p> <p>Follow-on Equity Offering</p> <p>Active Joint Bookrunner February 2015</p>	 <p>Confidential</p> <p>Sale of Little Falls and Lyonsdale Hydro Assets</p> <p>Financial Advisor to Lyonsdale Associates January 2015</p>	 <p>\$500,000,000</p> <p>Construction and</p> <p>acquisition financng</p>	 <p>Sunrun Aurora Portfolio 2014-A, LLC</p> <p>\$543500000</p> <p>Le</p> <p>\$171,400,000</p> <p>acquisition financng</p>	 <p>acquisition financing</p> <p>July 2014</p> <p>Lead Left Arranger Lead Left Bookrunner Administrative Agent December 2014</p>

Note: Transactions are in U.S.\$ unless otherwise denoted.

nelnet
\$539,400,000
NSLT
Student Loan Backed Notes
Joint Lead Manager December 2017

OneMain Financial
\$575,000,000
ODART
Subprime Auto Backed Notes
Joint Lead Manager December 2017

avis budget group
\$500,000,000
AESOP
Rental Car Backed Notes
Joint Lead Manager December 2017

element
\$1,000,000,000
CFII
Fleet Lease Backed Notes
Joint Lead Manager October 2017

ally
\$526,310,000
AFIN
Subprime Auto Backed Notes
Joint Lead Manager October 2017

AMERICAN EXPRESS
\$3,177,689,000
AMXCA
Credit Card Backed Notes
Joint Lead Manager October 2017

Capital One
\$3,000,000,000
COMET
Credit Card Backed Notes
Joint Lead Manager October 2017

GM FINANCIAL
\$987,310,000
GMCAR
Auto Loan Backed Notes
Joint Lead Manager October 2017

DISCOVER
\$825,000,000
DCENT
Credit Card Backed Notes
Joint Lead Manager October 2017

GM FINANCIAL
\$970,220,000
GMALT
Auto Lease Backed Notes
Joint Lead Manager September 2017

TRITON INTERNATIONAL
\$450,000,000
TCF
Container Leas Backed Notes
Joint Lead Manager August 2017

AllianceData
\$400,000,000
WFNMT
Credit Card Backed Notes
Joint Lead Manager August 2017

element
\$1,000,000,000
CFII
Fleet Lease Backed Notes
Joint Lead Manager August 2017

nelnet
\$399,390,000
NSLT
Student Loan Backed Notes
Joint Lead Manager July 2017

NAVIENT
\$1,015,000,000
NAVSL
Student Loan Backed Notes
Joint Lead Manager July 2017

2017 ABS League Tables

Pos.	Underwriter	Deal Value	Market Share
1	Barclays	22.23	10.57
2	JP Morgan	21.98	10.45
3	Citi	18.59	8.84
4	RBC Capital Markets	16.98	8.07
5	Bank of America Merrill Lynch	16.81	7.99
6	Wells Fargo	16.52	7.85
7	Deutsche Bank	13.90	6.61
8	Mitsubishi UFJ Financial Group	11.22	5.33
9	Credit Suisse	11.17	5.31

As of December 31, 2017. Source: Bloomberg. Note: Excludes self-funded transactions.

Top-tier ABS Operations

- Over 60 ABS banking and market professionals with strong global coordination. Significant structuring and marketing expertise with an average of over 10+ years of banking experience.
- Consistent standings at the top of the league tables.

Comprehensive Product Offering & Service Platform

- Securitization products, including direct lending facilities, liquidity facilities, letters of credit, and direct purchases.
- Full range of derivative products.

Sales, Trading & Underwriting

- Dedicated ABS sales & trading, long and short-term underwriting, credit and research professionals.
- Fixed income sales professionals across 12 offices, covering institutions across the spectrum.
- Approximately 2,000 retail financial consultants providing direct access to over 800,000 individual investor accounts

Santander
\$1,033,630,000
SRT
Auto Lease Backed Notes
Joint Lead Manager November 2017

CNH CAPITAL
\$755,490,000
CNH
Equipment Receivables Backed Notes
Joint Lead Manager November 2017

NAVIENT
\$750,000,000
NAVSL
Student Loan Backed Notes
Joint Lead Manager November 2017

enterprise FLEET MANAGEMENT
\$850,100,000
EFF
Fleet Lease Backed Notes
Joint Lead Manager October 2017

BMW
\$1,000,000,000
BMWLT
Auto Lease Backed Notes
Joint Lead Manager October 2017

NAVIENT
\$662,200,000
NAVSL
Student Loan Backed Notes
Joint Lead Manager October 2017

Hertz
\$800,000,000
HERTZ
Rental Car Backed Notes
Joint Lead Manager September 2017

Santander
\$905,690,000
SDART
Subprime Auto Backed Notes
Joint Lead Manager September 2017

USAA
\$456,978,500
USAOT
Auto Loan Backed Notes
Joint Lead Manager September 2017

Hyundai Capital
\$907,041,000
HART
Auto Loan Backed Notes
Joint Lead Manager August 2017

RBC
\$525,000,000
GCCT
Credit Card Backed Notes
Sole Lead Manager August 2017

GM FINANCIAL
\$1,200,060,000
AMCAR
Subprime Auto Backed Notes
Joint Lead Manager August 2017

DISCOVER
\$925,000,000
DCENT
Credit Card Backed Notes
Joint Lead Manager June 2017

Santander
\$1,046,680,000
DRIVE
Subprime Auto Backed Notes
Joint Lead Manager June 2017

Springleaf Financial
\$651,770,000
SLFT
Consumer Loans Backed Notes
Joint Lead Manager June 2017

Case Study: Sunrun Aurora Portfolio 2014-A, LLC

\$171.4 Million Project Financing for 181 MW Roof Top Solar Portfolio



Sunrun Aurora Portfolio 2014-A, LLC

US\$171,400,000 Senior Secured Credit Facilities

Joint Lead Arranger
Documentation Agent
December 2014

Transaction Overview

- On December 31, 2014, financial close was achieved for \$171.4 million of Senior Secured Credit Facilities for Sunrun Aurora Portfolio 2014-A, LLC (“Aurora PortfolioCo” or the “Portfolio”), an indirectly owned subsidiary of Sunrun Inc. (“Sunrun”). The Aurora PortfolioCo has ownership interests in residential roof top solar PV systems deployed across 12 states
- RBC acted as Joint Lead Arranger, Documentation Agent, and Swap Provider for the financing
- Proceeds from the financing were used to repay existing debt, reimburse Sunrun for capital costs, and support debt service reserve and liquidity requirements
- Formed in 2007 and headquartered in San Francisco, Sunrun is the second largest third party owner of residential installations in the United States with ~380 MW deployed and serving over 65,000 customers across 13 states and the District of Columbia

Financing Summary

Borrower	Sunrun Aurora Portfolio 2014-A, LLC
Closing Date	December 31, 2014
Rating(s)	Not Rated
Credit Facilities	<ul style="list-style-type: none"> \$158,500,000 Term Loan A Facility \$7,900,000 Debt Service Reserve LC Facility \$5,000,000 Revolving Credit Facility
Term	7 years
Security	First Lien, Senior Secured
Upfront Fee	200 bps
Drawn	LIBOR + 275 bps
Step-up	25 bps
Step-up year	Year 5

Portfolio Overview

- The Portfolio is geographically diversified with a customer base of ~27,800 spanning across 12 states and 49 utilities
- Customer PPAs within the Portfolio have a weighted average remaining life of 18.6 years with an average FICO customer score of ~764 points

Financing Structure

- The financing was structured in line with precedent transactions in the residential solar space, with an advance rate on the Term Loan A of ~66%
- Cash flows provide investment grade quality minimum and average DSCRs of 1.50x on the Term Loan A

RBC Role

- RBC acted as Joint Lead Arranger, Documentation Agent, and Swap Provider for the Term Loan A

Powerful North American Retail Distribution

North American Retail Distribution Network



Retail Distribution Network (US) as of Q4 2017

Investment Advisors	1,835
Number of offices	171
Assets under administration (AUA)	US\$248.07 Billion
Assets under management (AUM)	US\$45.93 Billion

Retail Distribution Network (Canada) as of Q4 2017

Investment Advisors	1,735
Number of offices	127
Assets under administration (AUA)	C\$307.30 Billion
Assets under management (AUM)	C\$84.64 Billion

RBC Wealth Management Locations in Connecticut

Stamford	Westport	New Haven
Hartford	Glastonbury	

Top Retail Network of Bulge Bracket Investment Banks in U.S. & Canada

U.S.		Canada	
Rank	Brokerage	Rank	Brokerage
1	Morgan Stanley	1	RBC Capital Markets
2	Bank of America	2	CIBC
3	WELLS FARGO	3	BMO
4	UBS	4	Scotiabank
5	RBC Capital Markets	5	TD Bank

Recognized Leadership in North American Project Finance

Award and Recognition



2013 – 2017 Project Bond Arrangers Ranking⁽¹⁾

	Rank	Proceeds (US \$MM)	Market Share %
RBC Capital Markets	1	7,980.3	11.1%
Citigroup	2	5,078.5	7.1%
Mitsubishi UFJ	3	4,938.4	6.9%
Scotiabank	4	4,811.9	6.7%
JPMorgan	5	3,397.7	4.7%
Bank of America	6	3,189.4	4.4%
Barclays	7	3,164.8	4.4%
Societe Generale	8	2,399.7	3.3%
National Bank of Canada	9	2,379.5	3.3%
CIBC	10	2,055.2	2.9%
Top 10 Total		\$ 39,395.3	54.8%
Industry Total		\$ 71,910.0	100.0%

1H 2017 Project Finance Bookrunners Ranking⁽²⁾

	1H 2017	Proceeds (US \$MM)	Market Share %
RBC Capital Markets	1	1,806.0	7.6%
CIBC World Markets Inc	2	1,120.3	4.7%
Goldman Sachs & Co	3	1,104.6	4.7%
Barclays	4	1,101.9	4.7%
Mitsubishi UFJ	5	1,080.1	4.6%
Societe Generale	6	1,053.7	4.5%
Scotiabank	7	1,041.0	4.4%
TD Securities Inc	7	1,041.0	4.4%
Credit Suisse	9	992.1	4.2%
ING	10	884.9	3.7%
Top 10 Total		\$ 11,225.6	47.5%
Industry Total		\$ 23,610.5	100.0%

Select Recent Marquee Transactions in the Power Sector

CONNOR, CLARK & LUNN <small>INFRASTRUCTURE</small> Windsor Solar LP C\$188,270,000 Bond Financing Joint Bookrunner December 2017	CONNOR, CLARK & LUNN <small>INFRASTRUCTURE</small> Southgate Solar LP C\$171,067,000 Bond Financing Joint Bookrunner December 2017	Alberta POWERLINE <small>An ATCO company</small> Fort McMurray West Transmission Project C\$1,384,678,000 Bond Financing Sole Financial Advisor Joint Lead Bookrunner Underwriter	TransAlta Kent Hills Wind LP C\$259,967,000 Bond Financing Exclusive Financial Advisor Sole Bookrunner Lead Agent September 2017	BluEarth <small>RENEWABLES INC.</small> St. Columban Wind LP C\$138,650,000 Bank Financing Exclusive Financial Advisor Sole Bookrunner Sole Swap Execution Agent August 2017	BluEarth <small>RENEWABLES INC.</small> BluEarth Hydro Holdings LP C\$150,481,000 Bank Financing Exclusive Financial Advisor Sole Bookrunner Sole Swap Execution Agent August 2017	 North West Redwater Refinery C\$3,500,000,000 C\$6,350,000,000 Bank & Bond Financings Joint Global Lead June 2014 – May 2017	CONNOR, CLARK & LUNN <small>INFRASTRUCTURE</small> Kingston Solar LP C\$632,970,000 Bond Financing Sole Bookrunner Lead Agent October 2016	CONNOR, CLARK & LUNN <small>INFRASTRUCTURE</small> Grand Renewable Solar LP C\$612,705,000 Sole Bookrunner Lead Agent May 2016
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Sectors:

LNG
Solar
Wind
Hydro
Transmission
Pipeline
Refining
Midstream

Markets:

Rated Bond
Unrated Private Placement
Bank
Term Loan B
US High Yield

Purposes:

Acquisition
Refinancing
Construction

RBC Role:

Sole or Left Lead

2017 Aggregate Quantum:

~US\$8.1 billion⁽³⁾

RBC has led virtually all notable North American project finance transactions year-to-date

21 (1) IJGlobal – 2013 – 2017 North American League Tables Analysis
 (2) Thomson Reuters Global Project Finance Review – 1H 2017 Americas League Tables Analysis
 (3) Includes bond and bank financings executed in 2017 with RBC acting as sole or left lead

RBC's Project Finance Credentials

North American Power

- RBC is a leader in advising, arranging, executing, and syndicating power project finance transactions
- History of combining bank markets and capital markets capabilities ensuring best financing solution

<p>Windsor Solar LP</p> <p>C\$188,270,000 Bond Financing</p> <p>Left Lead Bookrunner and Agent December 2017</p>	<p>Southgate Solar LP</p> <p>C\$171,067,000 Bond Financing</p> <p>Left Lead Bookrunner and Agent December 2017</p>	<p>Fort McMurray West Transmission Project</p> <p>C\$1,384,678,000 Bond Financing</p> <p>Sole Financial Advisor Joint Lead Bookrunner</p> <p>1 Underwriter</p>	<p>Kent Hills Wind LP</p> <p>C\$259,967,000 Bond Financing</p> <p>Exclusive Financial Advisor Sole Bookrunner Lead Agent September 2017</p>	<p>St. Columban Wind LP</p> <p>C\$138,650,000 Bank Financing</p> <p>Exclusive Financial Advisor Sole Bookrunner Sole Swap Execution Agent August 2017</p>	<p>BluEarth Hydro Holdings LP</p> <p>C\$150,482,000 Bank Financing</p> <p>Exclusive Financial Advisor Sole Bookrunner Sole Swap Execution Agent August 2017</p>	<p>Flat Top Wind LLC</p> <p>US\$287,200,000 Bank Financing</p> <p>Joint Bookrunner Mandated Lead Arranger July 2017</p>	<p>Buckthorn Wind LLC</p> <p>US\$124,000,000 Bank Financing</p> <p>Mandated Lead Arranger Administrative Agent May 2017</p>	<p>Kingston Solar LP</p> <p>C\$632,970,000 Bond Financing</p> <p>Sole Bookrunner Lead Agent October 2016</p>
<p>Grand Renewable Solar LP</p> <p>C\$612,705,000 Bond Financing</p> <p>Sole Bookrunner Lead Agent May 2016</p>	<p>Southgate Solar LP</p> <p>C\$189,100,000 Bank Financing</p> <p>Mandated Lead Arranger Swap Provider January 2016</p>	<p>Windsor Solar LP</p> <p>C\$194,900,000 Bank Financing</p> <p>Mandated Lead Arranger Swap Provider December 2015</p>	<p>PSS Generating LP</p> <p>C\$245,000,000 Bond Financing</p> <p>Joint Bookrunner October 2015</p>	<p>Meikle Wind Energy LP</p> <p>C\$393,000,000 Bank Financing</p> <p>Joint Bookrunner Mandated Lead Arranger June 2015</p>	<p>Shannon Wind LLC</p> <p>US\$286,800,000 Bank Financing</p> <p>Joint Bookrunner Mandated Lead Arranger June 2015</p>	<p>Cross Valley Project</p> <p>US\$130,000,000 Bank Financing</p> <p>Joint Bookrunner Joint Lead Arranger January 2015</p>	<p>Nodin Kitigan LP & LP 2</p> <p>C\$215,135,000 Bank Financing</p> <p>Co-Syndication Agent July 2014</p>	<p>Kingston Solar LP</p> <p>C\$543,500,000 Bank Financing</p> <p>Sole Structuring Lead</p> <p>Joint Bookrunner Joint Lead Arranger Administrative Agent</p>
<p>CSOLAR IV West</p> <p>US\$455,000,000 Bank</p> <p>Joint Lead Arranger June 2014</p>	<p>York Energy Center</p> <p>C\$317,000,000 Bank Financing</p> <p>Sole BR/JLA Swap Coordinator Admin Agent May 2014</p>	<p>Lone Star Transmission</p> <p>US\$420,000,000 Bank & Bond Financings</p> <p>JLPA/JLA/JBR April 2014</p>	<p>Copper Mountain Solar 3</p> <p>US\$428,000,000 Bank Financing</p> <p>Mandated Lead Arranger Co-Doc. Agent March 2014</p>	<p>Muskkrat Falls/Labrador</p> <p>C\$5,000,000,000 Bond Financing</p> <p>Joint Lead Agent December 2013</p>	<p>Trillium Windpower LP</p> <p>C\$315,462,000 Bond Financing</p> <p>Sole Bookrunner Co-Lead Private Placement Agent December 2013</p>	<p>CSOLAR IV South</p> <p>US\$484,400,000 Bank & Bond Financings</p> <p>Placement Agent Joint Lead Arranger Joint Bookrunner November 2013</p>	<p>Midland Cogeneration</p> <p>US\$181,250,000 Bond Financing</p> <p>Sole Bookrunner October 2013</p>	<p>Grand Renewable Solar LP</p> <p>C\$525,300,000</p> <p>Sole Structuring Lead JBR/JLA/Admin Agent September 2013</p>

Market Leader in North American Power Project Finance

Leading Tax Equity and Project Finance Platform

Tax Equity Credentials

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Renewable Project Finance Credentials

 Flat Top Wind, LLC \$287,200,000 Tax-Equity Bridge Loan and LC Facilities Mandated Lead Arranger Joint Bookrunner	 Buckthorn Wind Project, LLC Tax-Equity Bridge Loan and LC Facility Sole Lead Arranger May 2017	 Kingston Solar LP C\$632,970,000 Bond & Bank Sole Bookrunner Lead Agent October 2016	 Grand Renewable Solar LP C\$612,705,000 Sole Lead Bookrunner Lead Agent May 2016	 Southgate Solar LP C\$189,100,000 Mandated Lead Arranger Swap Provider January 2016
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 Buckthorn Wind Project, LLC \$117,200,000 Partnership Flip Tax Equity Wind PTC 100.5 MW Tax Equity Investor May 2017	 Ragnar II \$101,000,000 Partnership Flip Tax Equity Residential Solar 51.4 MW Tax Equity Investor March 2017	 SFRC LLC \$20,875,000 Partnership Flip Tax Equity MN Community Solar 28.1 MW Tax Equity Investor October 2016	 Broadview Wind \$60,000,000 Partnership Flip Tax Equity Wind PTC 324.3 MW Tax Equity Investor June 2016
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 Shannon Wind LLC \$286,800,000 Construction Loan / Bridge to Tax Equity Joint Bookrunner Mandated Lead Arranger	 Melke Wind LP C\$393,000,000 Joint Bookrunner Mandated Lead Arranger	 Sunrun Aurora Portfolio 2014-A, LLC \$171,400,000 Construction Loan / Bridge to Tax Equity Joint Lead Arranger Documentation Agent December 2014	 Nodin Kitigan LP & LP 2 C\$215,135,000 Co-Syndication Agent July 2014	 Kingston Solar LP C\$543,500,000 Sole Structuring Lead Joint Bookrunner Joint Lead Arranger Administrative Agent
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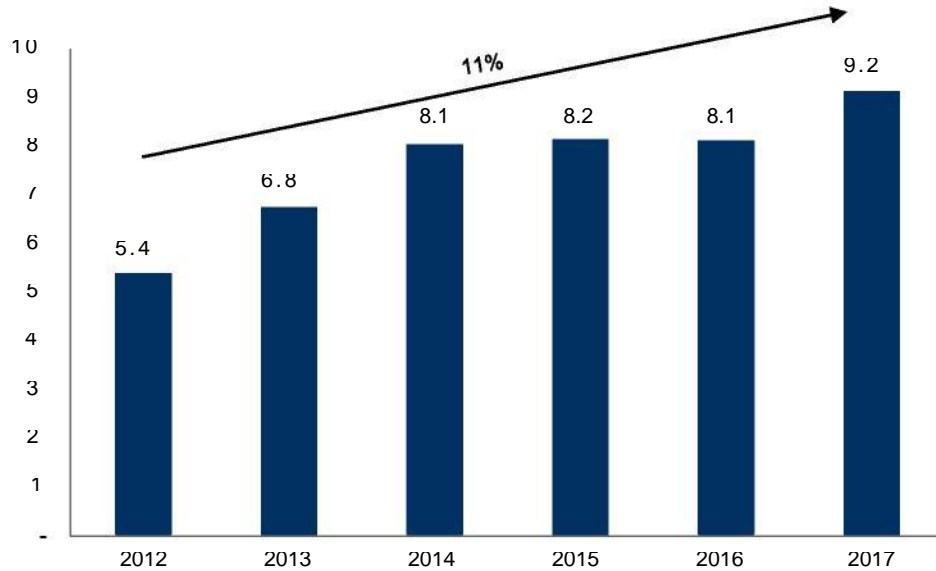
 D.E. Shaw Renewable Investments \$70,200,000 Partnership Flip Tax Equity Utility Scale Solar 134.0 MW Tax Equity Investor May 2016	 Ragnar \$100,000,000 Partnership Flip Tax Equity Residential Solar 46.0 MW Tax Equity Investor October 2015	 Solar Mission I \$11,700,000 Partnership Flip Tax Equity C&I Solar 11.0 MW Tax Equity Investor October 2015
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 CSOLAR IV West U\$455,000,000 Bank Financing Joint Lead Arranger June 2014	 Copper Mountain Solar 3 Bank Financing Mandated Lead Arranger Co-Doc. Agent March 2014	 Trillium Windpower LP C\$315,462,000 Bond Financing Sole Bookrunner Co-Lead Private Placement Agent December 2013	 CSOLAR IV South U\$484,400,000 Bank & Bond Financing Placement Agent Joint Lead Arranger Joint Bookrunner November 2013	 Grand Renewable Solar LP Bank Financing Sole Structuring Lead JBR/JLA/Admin Agent September 2013
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RBC is ready and able to provide additional tax equity commitments to ensure continued and efficient access to capital during the sales process

Strong and Sustained Balance Sheet Support

RBC Commitment to the U.S. Power & Utilities Sector (\$Bn)



RBC as a Trusted Partner – Select JLA Mandates



























Select Corporate Banking Credentials

 \$4,000,000,000 Bridge Loan Facility Joint Lead Arranger January 2018	 \$400,000,000 Revolving Credit Facility Admin Agent November 2017	 \$3,085,000,000 Revolving Credit Facilities Joint Lead Arranger November 2017	 \$2,000,000,000 Revolving Credit Facilities Joint Lead Arranger November 2017
 \$3,250,000,000 Revolving Credit Facility Joint Lead Arranger October 2017	 \$750,000,000 Revolving Credit Facility Syndication Agent October 2017	 \$450,000,000 Revolving Credit Facility Joint Lead Arranger October 2017	 \$287,228,267 Construction Facilities Joint Lead Arranger July 2017
 \$4,550,000,000 Revolving Credit Facilities Joint Lead Arranger June 2017	 \$2,900,000,000 Revolving Credit Facilities Joint Lead Arranger June 2017	 \$97,000,000 Construction Term Loan Facility Sole Lead Arranger May 2017	 \$1,324,000,000 Revolving Credit Facility Joint Lead Arranger March 2017

Other Investment Vehicles – Private Placement Bond

RBC Private Placement Experience

 <p>Ticketing Company</p> <hr/> <p>\$50,000,000</p> <hr/> <p>Exclusive Placement Agent July 2015</p>	 <p>Marketing Software Company</p> <hr/> <p>\$54,000,000</p> <hr/> <p>Exclusive Placement Agent June 2015</p>	 <p>Digital Content Company</p> <hr/> <p>\$135,000,000</p> <hr/> <p>Exclusive Placement Agent June 2015</p>	 <p>Identity Security Company</p> <hr/> <p>\$35,000,000</p> <hr/> <p>Exclusive Placement Agent September 2014</p>	 <p>Open Source Software Company</p> <hr/> <p>\$20,000,000</p> <hr/> <p>Exclusive Placement Agent August 2014</p>	 <p>Digital Marketing Company</p> <hr/> <p>\$20,000,000</p> <hr/> <p>Exclusive Placement Agent June 2014</p>	 <p>SaaS Company</p> <hr/> <p>\$60,000,000</p> <hr/> <p>Exclusive Placement Agent May 2014</p>	 <p>Application Software Company</p> <hr/> <p>\$90,000,000</p> <hr/> <p>Exclusive Placement Agent April 2014</p>
 <p>Data Software Company</p> <hr/> <p>Confidential</p> <hr/> <p>Exclusive Financial Advisor October 2013</p>	 <p>Healthcare Industry Software Company</p> <hr/> <p>\$100,000,000</p> <hr/> <p>Exclusive Placement Agent / Financial Advisor September 2013</p>	 <p>eCommerce Company</p> <hr/> <p>\$83,000,000</p> <hr/> <p>Exclusive Placement Agent April 2013</p>	 <p>Education Software Provider</p> <hr/> <p>\$80,000,000</p> <hr/> <p>Exclusive Placement Agent September 2012</p>	 <p>Clothing Retailer</p> <hr/> <p>\$65,000,000</p> <hr/> <p>Exclusive Financial Advisor July 2012</p>	 <p>Biopharmaceutical Company</p> <hr/> <p>\$46,000,000</p> <hr/> <p>Co-Manager July 2012</p>	 <p>Biopharmaceutical Company</p> <hr/> <p>\$100,000,000</p> <hr/> <p>Co-Manager July 2012</p>	 <p>Biopharmaceutical Company</p> <hr/> <p>\$22,250,000</p> <hr/> <p>Exclusive Placement Agent May 2012</p>
 <p>Midstream Energy MLP</p> <hr/> <p>\$180,000,000</p> <hr/> <p>Exclusive Placement Agent May 2012</p>	 <p>Biopharmaceutical Company</p> <hr/> <p>\$39,163,283</p> <hr/> <p>Lead Placement Agent March 2012</p>	 <p>Biopharmaceutical Company</p> <hr/> <p>\$32,000,000</p> <hr/> <p>Exclusive Placement Agent November 2011 / March 2011</p>	 <p>Software as a Service Company</p> <hr/> <p>\$23,800,000</p> <hr/> <p>Exclusive Financial Advisor to Siemens Enterprise Communications June 2011</p>	 <p>Social Media Management</p> <hr/> <p>\$25,000,000</p> <hr/> <p>Exclusive Placement Agent May 2011</p>	 <p>Biopharmaceutical Company</p> <hr/> <p>\$84,000,000</p> <hr/> <p>Co-Manager May 2011</p>	 <p>Manufacturer of LIDAR Solutions</p> <hr/> <p>\$18,900,000</p> <hr/> <p>Exclusive Financial Advisor March 2011</p>	 <p>SaaS Company</p> <hr/> <p>\$50,000,000</p> <hr/> <p>Exclusive Placement Agent February 2011</p>

6. Team Qualifications

RBC's Dedicated CT Green Bank Team⁽¹⁾



Power, Utilities & Infrastructure

Andrew Rosenbaum Managing Director <i>andrew.rosenbaum@rbccm.com</i>	Eric Berlinger Director <i>eric.berlinger@rbccm.com</i>	Elizabeth Rice Associate <i>elizabeth.rice@rbccm.com</i>	Oscar Zapata Analyst <i>oscar.zapata@rbccm.com</i>
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Ratings Advisory

Wayde Bendus Managing Director <i>wayde.bendus@rbccm.com</i> (212) 618-2224

Corporate Banking

Frank Lambrinos Director <i>frank.lambrinos@rbccm.com</i>	Eric Koppelson Vice President <i>eric.koppelson@rbccm.com</i>
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Securitizations

Keith Helwig Managing Director <i>keith.helwig@rbccm.com</i>	Nicholas Rogers Director <i>nicholas.rogers@rbccm.com</i>
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Municipal Finance

Bob Spangler Managing Director <i>bob.spangler@rbccm.com</i>	Natasha Holiday Director <i>natasha.holiday@rbccm.com</i>
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Debt Private Placements

Peter Walraven Managing Director <i>peter.walraven@rbccm.com</i>	Paolo Matoto Director <i>paolo.matoto@rbccm.com</i>
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RBC's Core Advisory Team Experience (Coverage Teams)

Team Member	Experience Background
<p>Andrew Rosenbaum Managing Director</p> <p>Power, Utilities & Infrastructure</p> <p>Transaction Role: <i>Sector transaction lead</i></p>	<p>18 years</p> <ul style="list-style-type: none"> • RBC Capital Markets, Lehman Brothers • MBA, NYU Stern School of Business and BS, United States Coast Guard Academy • 18 years of Power & Energy transaction experience, including project finance, leveraged finance, tax equity, M&A, equities and restructurings • Select recent experiences include: <ul style="list-style-type: none"> – Originated and managed over \$20 billion of renewable YieldCo financings – Lead banker for Brookfield's acquisition of 51% stake in TerraForm, providing \$2.0+ billion of debt commitments – Managed RBC's sole commitment for construction debt and tax equity for NRG's 100 MW Buckthorn Wind project – Sale of Onyx Renewable Partners ~115 MW of C&I Solar Assets
<p>Eric Berlinger Director</p> <p>Power, Utilities & Infrastructure</p> <p>Transaction Role: <i>Sector transaction lead</i></p>	<p>11 years</p> <ul style="list-style-type: none"> • RBC Capital Markets, Barclays, American Capital, Wachovia • MBA, University of Virginia Darden School of Business • BS Business Administration (Finance), BA Political Science, University of Richmond • Select experience includes: <ul style="list-style-type: none"> – Sale of Talen Energy's Pennsylvania residential retail book – Buy side advisor to Riverstone on take private transaction for Talen Energy – Sale of 292 MW hydro portfolio for Talen Energy – Sale of Carolina Gas Transmission by SCANA to Dominion – MEAG's acquisition of a partial interest in the Miami Wind project from Invenergy

RBC's Core Advisory Team Experience (Product Teams)

Team Member	Experience	Background
Frank Lambrinos Director Corporate Banking Transaction Role: <i>Product transaction lead</i>	10 years	<ul style="list-style-type: none"> RBC Capital Markets BBA, York University CFA Charterholder Execution experience in structuring investment-grade and leveraged bank loans transactions and project financings for power, utilities and infrastructure clients Select experience includes: <ul style="list-style-type: none"> Joint Bookrunner on the \$1,675mm Term Loan B supporting LS Power's acquisition of 2,480 MW in generation assets from TransCanada Joint Bookrunner on Vistra Energy's \$4,250mm DIP to Exit Facilities Lead Left Arranger on Pattern Energy's \$500mm revolving credit facility Lead Left Arranger on NRG Yield's \$495mm revolving credit facility
Eric Koppelson Vice President Corporate banking Transaction Role: <i>Product transaction lead</i>	10 years	<ul style="list-style-type: none"> RBC Capital Markets, Lloyds Bank, Scotiabank Global Banking & Markets BA, Lehigh University Execution experience in structuring investment-grade and leveraged bank loans transactions across a multitude of industries Select experience includes: <ul style="list-style-type: none"> Lead Left Arranger on the credit facilities for NRG Buckthorn Wind (100 MW wind project) (May 2017) Lead Left Arranger on the financing to support Brookfield Asset Management's purchase of TerraForm Power (October 2017) Joint Bookrunner on OGE Energy's \$900 million revolving credit facility (March 2017)
Keith Helwig Managing Director Securitizations Transaction Role: <i>Product transaction lead</i>	13 years	<ul style="list-style-type: none"> RBC Capital Markets, Barclays BA, Lafayette College CFA Charterholder Keith joined the RBC Capital Markets Securitization Finance team in January 2011, responsible for originating ABS term transactions focusing on the credit card, consumer loan, utility ratepayer and other energy related ABS sectors Previously, Keith worked in the ABS group at Barclays Capital from 2005 until 2010, responsible for origination of term ABS and ABCP transactions across various consumer and mortgage assets with specific focus on the credit card related transactions, including various portfolio acquisitions/dispositions advisory roles
Nick Rogers Director Securitizations Transaction Role: <i>Product transaction lead</i>	16 years	<ul style="list-style-type: none"> RBC Capital Markets, RBS Greenwich Capital, Deloitte, J.P. Morgan BBA, University of Michigan At RBC Capital Markets, Nick structures and originates asset-backed securities for shipping container, aircraft, rental car, energy, wireless handset and other non-traditional ABS clients Prior to joining RBC in 2015, Nick spent a decade at RBS Greenwich Capital, where he originated railcar, timeshare, shipping container, equipment and auto ABS transactions Pre-crisis, he structured a range of RMBS transactions for Greenwich Capital's mortgage finance business

7. Litigation

Pending Litigation

- RBC Capital Markets, LLC ("RBCCM") is an indirect, wholly-owned subsidiary of Royal Bank of Canada, a large global institution subject to many different legal and regulatory requirements in the United States, Canada and other jurisdictions. Our response to this question is limited to matters involving the investment banking business of RBCCM, the broker-dealer through which we conduct our investment banking activities. From time to time, RBCCM is a defendant or respondent in various litigations and arbitrations that arise in the ordinary course of business. RBCCM complies fully with its regulators in all litigations and arbitrations and in all settlements RBCCM reaches. The Financial Industry Regulatory Authority ("FINRA"), in furtherance of its responsibilities as the securities industry's self-regulatory organization pursuant to Section 15A(i) of the Securities Exchange Act of 1934, maintains a public database on registered broker-dealers and their associated persons known as BrokerCheck (<http://www.finra.org/Investors/ToolsCalculators/BrokerCheck/>). The information made available through BrokerCheck is derived from the Central Registration Depository (CRD®), the securities industry online registration and licensing database. Information in CRD is obtained through forms that broker-dealers, their associated persons and regulators complete as part of the securities industry registration and licensing process, and to comply with comprehensive disclosure obligations imposed by FINRA and other regulators. RBCCM generally does not disclose litigations, arbitrations, or settlements except as required through CRD, and RBCCM makes no representations as to the existence or non-existence of any such litigations, arbitrations, or settlements beyond what is available through CRD. To the extent material to the financial results of Royal Bank of Canada, any litigation, arbitration, or settlement involving RBCCM also is disclosed in Royal Bank of Canada's financial statements, which may be obtained by visiting www.rbc.com/investorrelations/.
- RBCCM is subjected to Financial Statement Audits as promulgated under SEC Rule 17A-5. For the last two years, those audits have been completed by PricewaterhouseCoopers LLP, and prior thereto, by Deloitte & Touche LLP. In each of the last three years, RBCCM has received clean "unqualified" audit opinions on its financial statements.

8. Examples of Certified Green Financings / Securitizations

RBC Recent Experience in Green Financings and Securitizations


RBC has experience in the Investment Strategies that CTGB would like to pursue



\$1,200,000,000
ngston Solar L
\$500mm Senior Notes
due 2023
acquisition financing
\$700mm Senior Notes
tructuring due 2028
struction a
 Lead Left Bookrunner
December 2017




\$500,000,000
 Joint Active Bookrunner
December 2017




\$350,000,000
Senior Notes Due 2024
Construction and
\$543500000



\$350,000,000
5.00% Senior Notes
due 2026
 Joint Lead Arranger
 Joint Bookrunner
August 2016



2.800% due Jan 2023
\$1,026,000,000
\$535,000,000
Auto Loan Backed Notes
Construction and
stitution finance



\$500,000,000
5.375% Senior Notes
due 2024
 Joint Bookrunner
July 2014

(1) Proceeds used exclusively to finance future loans and leases for hybrid and electric vehicles.

**9. Other Relevant Information
and Experiences**





ESG Commitments & Investing Experience

RBC has a long history of environmental leadership dating back to 1991 when we launched our first corporate environmental policy⁽¹⁾

RBC's Environmental Performance Highlights

- In 2014, RBC launched a new version of the **RBC Environmental Blueprint**, which lays out RBC's priorities, commitments and targets related to our priority environmental objectives and issues through to 2018
- In 2017, RBC's **total exposure to renewable energy companies was \$4 billion**.
- In 2017, RBC participated as **underwriter for \$4 billion in green bonds**, hosted the fourth annual Green Bonds Conference, and issued a green bonds market report titled *Green is the New Black*.
- RBC's Emissions Trading Group **has traded over 1 billion tonnes of carbon offsets and allowances** since 2008.
- Since 2012, RBC has **reduced GHG emissions from our operations by 26.5%**.
- RBC purchases **20,000 MWh of EcoLogo-certified green electricity** annually to power the entire ATM and retail store digital display networks.
- RBC is one of the **largest leasers of LEED certified office space** in Canada at nearly 700,000 m².
- In 2016, **RBC donated US\$7.8 million to environmental charities globally**. This included US\$3.3 million in RBC Blue Water Project grants for fresh water protection and preservation programs

RBC Environmental Awards

	RBC was named to the 2017 Dow Jones Sustainability North American Index for the 18 th consecutive year. The Index is an annual review that recognizes North America's financial, social and environmental corporate leaders
	Named one of Canada's Greenest Employers for the 9 th consecutive year (<i>Canada's Top 100 Employers project</i>)
	One of the Best 50 Corporate Citizens in Canada for the 16 th consecutive year (<i>Corporate Knights magazine</i>)
	RBC received two prestigious 2015 Clean City awards, which recognizes outstanding achievement in waste reduction, reuse and recycling initiatives in London
	RBC WaterPark Place in Toronto won the 2016 Innovation Award presented by the Canada Green Building Council. WaterPark Place has an Energy Star score of 100 — the highest possible score

RBC's
Sustainalytics
Performance



71

Overall ESG Score

Industry leader
Outperformer
Average Performer
Underperformer
Industry Laggard

59

out of

Relative Position

Outperformer

83rd

Percentile

Outperformer

⁽¹⁾ The original Corporate Environmental Policy (1991) has evolved to a suite of enterprise-wide and business-specific Environmental and Social (E&S) Risk Management Policies that we apply to all of RBC's financing relationships. These policies require a risk-based approach whereby we apply enhanced due diligence, and escalation procedures apply to sectors, clients and business activities that may be exposed to E&S issues.

ESG Commitments & Investing Experience (Cont'd)

RBC general policy regarding ESG commitments can shown below

Managing Social and Environmental Risk

- RBC works with its clients to identify, assess and mitigate the environmental and social risks associated with their business activities
- RBC provides valuable advice to clients to help reduce their risk while promoting environmental and social interests
 - This is consistent with our leadership role in environmental and social risk management, and reflects our commitment to a balanced, responsible approach to business
- RBC believes that a **client's environmental and social issues can affect their** cash flow, their ability to operate, or the ability to grow their business
 - **RBC's** experience and knowledge along with our policies and processes **help us identify and manage risks associated with a client's environmental and social issues**
 - By incorporating environmental and social issues in the credit risk assessment process, we also help to promote the importance of **maintaining superior environmental and social practices in the client's** business

- RBC considers the size and type of transaction, loan to value ratios, term of the loan, and the sector or industry in which the client operates when conducting environmental and social due diligence on a transaction
 - We perform our analysis utilizing various tools such as site visit checklists and third-party environmental assessments
 - Our environmental and social due diligence requirements are often based on international best practices such as the International Finance Corporation (**IFC**) Performance Standards
- Based on the outcome of our investigations, we may require clients to manage or mitigate environmental and social issues before we proceed with financing
- **Transactions flagged as having unclear or higher risk are reviewed by RBC's Environmental and Social Risk Management team**

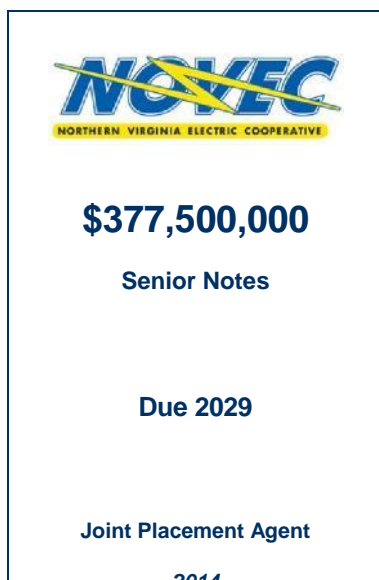
Environmental and Social Risk Management Policies

- **RBC's environmental and social risk management ("ESRM") process is** designed to ensure we apply a suitable level of due diligence on a transaction
- RBC maintains a suite of ESRM policies designed to identify, assess and mitigate the environmental and social risks associated with financing our clients
 - We consider the impact of environmental and social issues in all our activities, such as our own operations and new acquisitions, not just financing
 - RBC was the first Canadian bank to formally adopt the Equator Principles in July 2003
 - The Equator Principles are a voluntary international framework for financial institutions to identify, assess, manage, and mitigate environmental and social risks in projects
 - We assess our capital markets activity for environmental and social risk
 - We follow a detailed environmental due diligence process to ensure we apply a suitable level of analysis in our commercial, agricultural, and small business loan and mortgage transactions
- RBC reports on environmental and social risks to various internal and external stakeholders
 - Our Board of Directors and senior management committees receive periodic reports and analyses on these risks
 - We track loan losses resulting from environmental issues
 - We annually report on our implementation of the Equator Principles, as well as on our environmental risk
 - We also produce information about our environmental and social policies, lending, emerging issues, stakeholder engagement, environmental

Structured Credit - Private Placement Case Study

Northern Virginia Electric Cooperative (“NOVEC”) (NAIC-1)

Transaction Overview



Northern Virginia Electric Cooperative

- On December 19, 2014, RBC Capital Markets acted as a joint placement agent on a \$377.5 million private placement of Senior Notes for NOVEC. The transaction provides NOVEC with financing for the replacement of its existing Power Purchase Agreements (“PPAs”) with the Hopewell and Portsmouth generation facilities. A majority of transaction proceeds will be paid to Cogentrix Virginia Financing Holding Company (“CVFH”), which owns the Hopewell and Portsmouth facilities
- The payment to CVFH will compensate for the remaining payments on the the existing PPAs. An Amended Power Purchase Agreement (“APPA”) will be implemented between Hopewell and Portsmouth and the Replacement Power Statutory Trust (“Trust”) to replace the terminated PPAs. The Trust was created for the completion of this transaction. The remainder of the proceeds will be used for execution costs
 - Terminating NOVEC’s commitment to the PPAs allows NOVEC to replace its current energy sources, Hopewell and Portsmouth, with a source that is expected to significantly reduce NOVEC’s ongoing costs
 - The notes will mature in 14.5 years, the amount of time remaining on the PPAs and the duration of the replacement APPA. Equal monthly payments of principal and interest will be made through May 2029, resulting in an average life of approximately 8 years
 - The Notes have been rated A+ by Fitch
- The deal was launched as \$355 million of senior secured notes with initial price talk of +150bps/10yr
 - The transaction was slightly upsized due to increased execution costs and NOVEC ultimately priced \$377.5 million with a 3.85% coupon

This transaction demonstrates RBC’s ability to structure and execute complex transactions and successfully market to US Private Placement investors, allowing NOVEC to achieve substantial savings for its customers as a result of this contract restructuring

RBC Advised a Macquarie-led Consortium on the Acquisition of the UK Green Investment Bank

RBC acted as financial adviser to Macquarie Group, MIRA and USS in support of the transaction

Transaction Overview

MACQUARIE

Acquisition of

Green Investment Bank

£2,300,000,000

RBC Capital Markets*

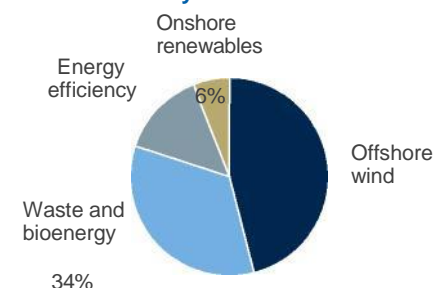
RBC

Financial Adviser to Macquarie, MIRA and USS

August 2017

- On 18 August 2017, a Macquarie-led consortium, comprising Macquarie Group (“Macquarie”), Macquarie Infrastructure and Real Assets (“MIRA”) and Universities Superannuation Scheme (“USS”) announced that it had completed the acquisition of the UK Green Investment Bank (“GIB”) from the UK Government for £2.3bn
 - Macquarie also agreed to invest a minimum of £3bn into renewable energy projects over the next three years
- Following transaction completion, GIB was restructured to ensure the efficient management or supervision of over £4bn of green infrastructure assets and projects, with investors including Macquarie, MIRA (MEIF5 fund) and USS
 - As part of this restructuring, GIB was renamed the Green Investment Group and established three new investment vehicles – an offshore wind investment vehicle, a low carbon lending platform and a green infrastructure investment platform
- GIB was created in 2012 by the UK Government to attract private funds for the financing of the private sector’s investments related to green infrastructure projects
- GIB has direct or indirect stakes via funds managed by third parties across the offshore wind, waste & biomass, energy efficiency and onshore renewables sectors in the UK employing over 130 people operating out of offices in Edinburgh and London
- As at March 2017, the GIB had invested in 100 projects with a net committed capital of c.£2.1bn⁽¹⁾ with a portfolio projected rate of return of 10%

Commitment by sector



Consortium Overview

- Macquarie is a diversified financial group providing clients with asset management and finance, banking, advisory and risk and capital solutions across debt, equity and commodities. The company manages c.£290bn of assets
- MIRA is the asset management arm of Macquarie and pioneered infrastructure as a new asset class for institutional investors. MIRA announced a first and final close of Macquarie European Infrastructure Fund 5 (“MEIF5”) in September 2016, with total investment commitments of c.£3.5bn
- USS was established in 1975 as the principal pension scheme for universities and other higher education institutions in the UK. It has c.375,000 scheme members across more than 360 institutions and is one of the largest pension schemes in the UK, with total fund assets of c.£57bn

RBC’s Role

- RBC acted as financial adviser to Macquarie, MIRA and USS
- The transaction represents a successful example of delivery of RBC’s European Renewables platform in one of the largest and most complex renewables transactions in the UK’s history

Transaction Rationale

- Create a **platform of scale** to invest in green infrastructure in the UK and Europe and beyond
- Consolidate **deep sector specialism**
- Access to **deep pools of capital**
- Partner with a **global platform**

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RBC Capital Markets Response to Connecticut Green Bank RFP for Solar Home Renewable Energy Credit (SHREC)

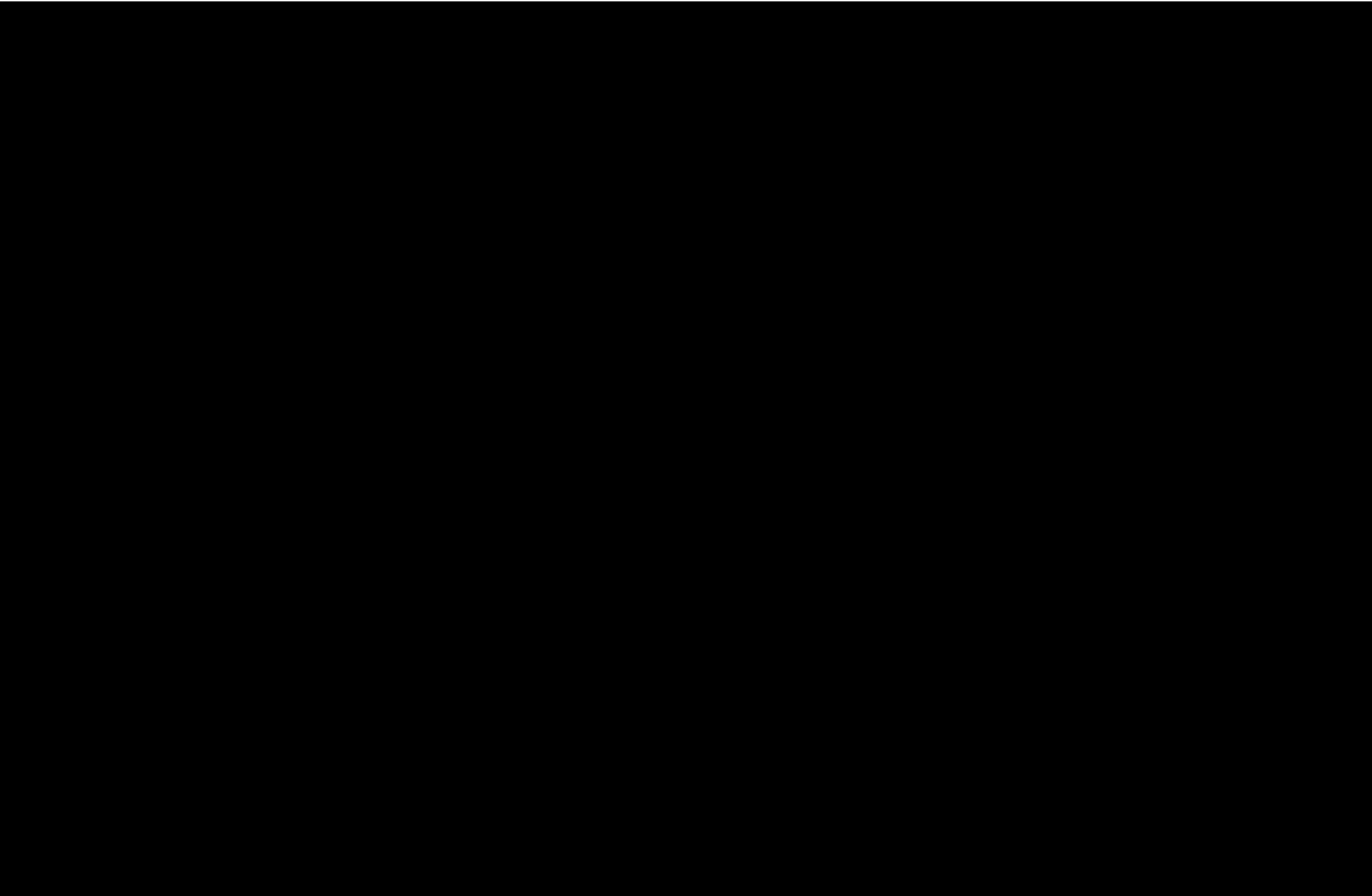
ABS Follow Up

March 2018

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RBC Capital Markets



Note: Capital structure assumes Green Bank's Tranche 1 revenue forecast for tranches 1-2; IRR of 6% used to determine the aggregate discounted collateral balance, against which advance rates are measured

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Memo

To: Connecticut Green Bank Board of Directors
From: Bert Hunter, EVP and CIO and Mike Yu, Associate Director, Clean Energy Finance
CC: Bryan Garcia, President and CEO; Brian Farnen, General Counsel and CLO; Dale Hedman, Managing Director of Statutory & Infrastructure Programs; Ben Healey, Director of Clean Energy Finance
Date: January 19, 2018
Re: SHREC Securitization Update

The Connecticut Green Bank (the “Green Bank”) administers the Residential Solar Investment Program (“RSIP”), which incentivizes and supports up to 300 megawatts of residential solar photovoltaics (“PV”) for 1-4 family owner-occupied homes, whether these solar PV systems are owned by the homeowner or third-parties. Under a Master Purchase Agreement (“MPA”) between the Green Bank and Connecticut’s two investor-owned utilities (Eversource and United Illuminating, collectively the “Utilities”), the Green Bank aggregates RECs generated from solar PV systems participating in its RSIP into annual tranches, and sells those REC tranches to the Utilities at a fixed, predetermined price over a 15-year tranche lifetime (to distinguish renewable energy credits generated under the RSIP from residential solar PV systems placed in service prior to January 1, 2015, renewable energy credits for qualifying residential PV systems placed in service on or after January 1, 2015 are referred to as “SHRECs.”)

The Green Bank intends to monetize the stream of SHREC revenue under the MPA in its entirety or on a tranche by tranche basis. To that end we have issued two Requests for Proposals (RFPs) – one seeking qualified partners to provide a financing solution and the other seeking qualified partners to support this solution via the provision of independent engineering (IE) services. The timelines of these two RFPs, discussed below, have been structured to meet our goal of an Fiscal Q4 2018 monetization for the first tranche.

Preliminary projections for the first tranche, which includes approximately 47.2 MW of nameplate capacity, indicate approximately \$38.7M of gross SHREC revenue over the 15-year life of the Tranche. At a 6% cost of capital (discount rate), a Fiscal Q4 2018 monetization would generate \$21.8M of cash for the Green Bank. Monetization of the remaining five tranches, occurring on an annual basis through 2023, at a price of \$47 on average (vs. \$50 for Tranche 1) and at the same cost of capital, would provide an additional \$85.9M.

Financing Partner RFP

The first RFP, issued for financing partners, was released on December 19th. Prior to the release, the Green Bank spoke to several potential partners to evaluate interest and identify key pieces of information to be included in the RFP. These conversations included counterparties such as KeyBank, Credit Agricole,

Macquarie, BNP Paribas, Credit Suisse, RBC, ICBC, and Hana Bank. Since issuing the RFP, we have since received clarification questions from several of the counterparties, and are holding a webinar to address these and other questions on today (January 19th). Going forward, the Green Bank will populate an external data room for respondents to access key data items including a projected SHREC revenue model, detailed technical and performance information about the first tranche of systems, and our responses to diligence questions received thus far.

Project Milestone	Estimated Date
RFP Released	December 19, 2017
Clarification Questions Due	January 12, 2018
Webinar Q&A Session	January 19, 2018
RFP Responses Due	February 2, 2018
Respondent Award Notification	February 16, 2018 (estimated)

Timing of a monetization is critical given that the Green Bank has significant obligations vis-à-vis the budget sweep of Green Bank funds coming up in June 2018 that SHRECs can provide for. To the extent an ABS transaction cannot be readily executed within this time frame, the Green Bank has asked respondents to include proposals for bridge/warehouse financing into a long-term financing structure.

Independent Engineering Partner RFP

The second RFP, issued for potential IE Partners, was released on January 10th. Similar to the process for the financing partner RFP, the Green Bank held initial interest calls with several potential IEs. These included Black and Veatch, DNV GL, ICF, and Sunshine Analytics. The technical evaluation provided by the selected IE will provide the selected financing partner with the requisite level of confidence to loan money or raise capital against the expected production of the portfolio, and thus we expect the financing partners to have a keen interest in our choice of IE. For this reason, we have compressed the timeline of the IE RFP to reach a conclusion prior to the financing partner RFP. As of this writing we are awaiting diligence questions.

As noted above, the integrity of the forthcoming IE report is critical to our ability to raise capital via our selected financing partner. Moreover, the quality of our data and the certainty with which the IE can forecast production for the SHREC portfolio may well determine the resultant cost of capital at which we are able to monetize the SHRECs. Therefore, our RSIP team is currently working with its data software providers to ensure the best possible quality of system production data and monitoring ability. Updates to these processes will be complete by January 19th and the resulting data will be used to update our cost and revenue forecasts during the following week.

Project Milestone	Estimated Date
RFP Released	January 10, 2018
Clarification Questions Due	January 18, 2018
RFP Responses Due	February 2, 2018
Respondent Award Notification	February 9, 2018 (estimated)

Other Third-Party Engagement

In addition to the two RFPs underway, we have been in discussions with other third parties that may provide transaction-critical services. These include:

T-REX Group – Provides Collateral Data Agent services as well as a financial modeling software focused on energy project finance and the esoteric ABS and markets. The T-REX platform will be used for sourcing investors; sensitizing portfolio risk; rating, pricing, structuring, and executing transactions; and managing SHREC assets post-securitization. The Green Bank would benefit from having access to this suite of capital markets tools, including loan portfolio analytics, bond structuring model, as well as T-REX bond structuring expertise through the credit rating process.

kWh Analytics – Partnered with an investment grade insurance company to enable a production insurance wrap on tranche 1 systems. This means that a percentage of production (e.g., 90% of P50 projections) can be guaranteed in exchange for an annual premium. Staff is in discussion with kWh as well as potential underwriters to determine the costs and benefits of such a secondary form of payment.



Michael Yu
Associate Director, Clean Energy Finance
Connecticut Green Bank
300 Main Street

DNV GL Energy
Renewables Advisory
155 Grand Avenue, Suite 500
Oakland, CA 94612

Date:

January 31, 2018

Re: SHREC IE RFP Response

Dear Mr. Yu:

DNV GL is pleased to provide this response to the "Request for Proposals for Solar Home Renewable Energy Credit (SHREC) Monetization".

DNV GL's main address for Renewables Advisory is: 155 Grand Avenue, Suite 500, Oakland, CA 94612.

DNV GL acknowledges receipt and intention, upon engagement, to complete and submit the required Legal and Policy attachments.

DNV GL has thoroughly reviewed the SHREC IE RFP and acknowledges the requirements of the RFP and accepts all terms and conditions included in the RFP.

Please contact me with any questions regarding this matter.

Sincerely

for DNV KEMA Renewables Inc.

Anat Razon

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Proposal for CT Green Bank SHREC Securitization IE Report

Connecticut Green Bank

Customer Reference: Request for Proposals for Solar Home Renewable Energy Credit (SHREC)
Monetization

Document No.: 157814-HOU-P-01-A

Date of issue: 31 Jan 2018

Date of last revision: 31 Jan 2018

DNV KEMA Renewables, Inc.



Customer Details (the "Customer" or "CT Green Bank")

Customer Name: Connecticut Green Bank
Customer Address: 300 Main Street, Stamford CT 06901
Customer Reference: N/A
Contact Person: Michael Yu

DNV GL Company Details ("DNV GL")

DNV GL Legal Entity: DNV KEMA Renewables, Inc.
DNV GL Organization Unit: Advisory Americas
DNV GL Address: 155 Grand Avenue
Oakland, CA 94612 USA
DNV GL Telephone. No.: 510-891-0446

About this document (the "Proposal")

DNV GL Doc. No.: 157814-HOU-P-01-A
Proposal Title: CT Green Bank SHREC Securitization IE Report
Date of Issue: 31 Jan 2018
Date of Last Revision: 31 Jan 2018
Validity of Proposal: 30 days from date of issue
Terms and Conditions: See Section 5, Contractual
Document Classification (see key below): Commercial in Confidence
Prepared by: Fleming Ray
Verified by: Smitty Ovitt
Approved by: Anat Razon

Project details

Project Name: CT Green Bank SHREC Securitization IE Report
Project Location: Connecticut

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1 EXECUTIVE SUMMARY

DNV GL recommends a technical due diligence cycle with the following tasks:

Phase I – Technical due diligence

- Engineering process review
- Major equipment review
- Review of SHREC production forecasting procedures
- Production analysis
- Major agreement review
- Operating system review
- Financial model technical input review

Phase II – Supplemental technical due diligence

- Site visits

DNV GL proposes the following milestones:

Table 1-1 Anticipated schedule

Milestone	Time to complete	Estimated calendar date	Assumptions
Draft Technical Report	Approximately 4 weeks	March 16	All required documentation is available from Feb 16
Revised draft Technical Report	Approximately 2 weeks	March 30	
Final Technical Report	Dependent on Customer feedback	April 6	

Further details on the proposed technical due diligence cycle, including key sources of data, are provided in Section 3 and Section 4, below.

2 INTRODUCTION

Connecticut Green Bank (“**CT Green Bank**” or the “**Customer**”) has invited DNV KEMA Renewables, Inc. (**DNV GL** or “**Vendor**” or “**Consultant**”) to present a proposal for technical due diligence for CT Green Bank SHREC Securitization IE Report (the “**Project**”) located in Connecticut.

It is understood from the Customer that the Project is a securitization of Solar Home Renewable Energy Credits (SHRECs) generated from a Portfolio of residential PV installations in Connecticut (the “**Portfolio**”). Under Connecticut Green Bank’s Residential Solar Investment Program (RSIP), the CT Green Bank provides incentives for deployment of residential solar PV installations. There are two incentive types available¹:

- **Expected Performance-Based Buydown (EPBB):** Expected Performance Based Buy-Down incentives are only available to Homeowners choosing to purchase a PV system from an Eligible Contractor.
- **Performance Based Incentive:** Performance Based Incentives are only available to System Owners under a third-party financing structure (i.e. lease or power purchase agreement (PPA)).

DNV GL understands that 75-80% of the PV systems in the Portfolio are financed through a third-party financing structure. Major installers such as SolarCity, Sunrun, Vivint, Sungevity, OneRoof, and Posigen are among the firms providing third-party financing for the Portfolio. The balance (20-25%) of the PV systems in the Portfolio are owned by individual homeowners and installed by local installers. Approximately 25 local installers are represented in the Portfolio.

The objective of the services described herein is to provide the Customer with an Independent Engineer’s (IE) Report to support asset backed securitization of SHRECs derived from the Portfolio. DNV GL is well-positioned to work with CT Green Bank to support financing of the Project because:

- DNV GL has experience with the full scope required for this technical due diligence assignment
- A seasoned staff with relevant expertise and project experience
- Extensive experience with technical due diligence for residential solar asset backed securitizations

DNV GL is pleased to present this scope of work for Technical Due Diligence of the Project. This document describes the approach to be taken, the deliverables to be provided to the Customer and the scope of work DNV GL shall provide. It also describes the responsibilities of the Customer toward the satisfactory

completion of the DNV GL services. These Customer responsibilities include timely delivery of information to DNV GL that is required to support the Scope of Work, as described in the Special Conditions.

2.1 Approach

DNV GL strives to identify risks that may negatively impact Project success, and to mitigate or quantify risks for the benefit of the Customer and financing parties. Our focus is on material concerns and on clear communication in order to efficiently resolve issues to the satisfaction of these parties.

This scope of work will be broken into two phases and includes the following tasks:

¹ <http://programs.dsireusa.org/system/program/detail/5120>



Phase I – Technical due diligence

- Engineering process review
- Major equipment review
- Review of SHREC production forecasting procedures
- Production analysis
- Major agreement review
- Operating system review
- Financial model technical input review

Phase II – Supplemental technical due diligence

- Site visits

3 PHASE I SCOPE OF WORK

DNV GL will conduct a technical due diligence assessment of the Customer's processes and production data to evaluate its ability to generate SHRECs as forecast. Analysis necessary for each of the tasks below will be carried out in parallel by different specialized teams within DNV GL. The major findings will be presented in the Draft Technical Report 4 weeks following receipt of all required documentation, as noted in Table 1-1.

3.1 Kick off and initial review

DNV GL will kick the project off with a phone meeting with CT Green Bank and a review of the material in the data room. Gaps in the available documentation will be identified.

3.2 Engineering process review

DNV GL will describe the CT Green Bank's process for generating SHRECs.

DNV GL will review the major technical parameters for generating SHRECs, including origination, installation, performance monitoring, data collection, and billing relevant to the Portfolio.

DNV GL notes that SolarCity, Trinity Solar, and Sunrun are the top 3 installers by system count in the Portfolio. The top 10 installers represent over 92% of the PV systems in the Portfolio, and the top 20 installers represent over 98% of the PV systems in the Portfolio.

3.3 Major equipment

DNV GL will describe the major equipment used in the Portfolio. Equipment to be reviewed includes:

- PV modules
- Inverters
- Racking
- Metering and Communication Equipment

Desktop review of major equipment is included in this section.

DNV GL will perform a high-level assessment including review of the specification sheets for the selected components, expected performance and reliability, product warranties and a brief overview of each manufacturer. DNV GL will comment on the position and reputation of each manufacturer within the solar market. To assess expected performance and reliability, DNV GL will rely on Customer-provided documentation including technology reviews (e.g. "bankability study") and extended duration test data for each supplier. If technology reviews and/or extended duration test data are not available for any of the products reviewed, DNV GL can perform additional technical due diligence, on a time-and-materials basis, as requested by the Customer.

This review will not include a detailed assessment of manufacturing capacity, quality systems, or financial strength of the suppliers.

3.3.1 Module Review

DNV GL notes that as module prices have fallen over the last years, many manufacturers have taken steps that may have impacts on module quality and long term reliability. These steps include start-up of new factories, shifts in bills of materials, and maintenance of quality at high volume and low prices.

Based upon review of the Tranche 1 Composition data provided by CT Green Bank, the following manufacturers represent over 95% of the PV modules deployed in the Portfolio. Review will be focused on these manufacturers: Trina Solar, Canadian Solar, REC Solar, LG Electronics, Hyundai Heavy Industries, Hanwha Q-Cells, Silfab, Kyocera Solar, SunPower, and Yingli Energy.

3.3.2 Inverter Review

Based upon review of the Tranche 1 Composition data provided by CT Green Bank, the following manufacturers represent over 99% of the inverters deployed in the Portfolio. Manufactures anticipated to be included in the review include SolarEdge, ABB/Power-One, Enphase, SMA, Fronius, and SunPower.

3.3.3

Racking Review

3.3.4 DNV GL will provide risk statements related to racking utilized by the top 10 installers in the Portfolio.

Metering and Communication Equipment

DNV GL will review metering and communication equipment utilized in the Portfolio, focusing on technical characteristics critical for maintaining revenue grade metering.

3.4 SHREC estimate methodology review/sample validations

3.4.1 Methodology Review

DNV GL will review the CT Green Bank's forecasting methods for generating SHRECs for the Portfolio.

3.4.2 Validations

DNV GL will select 20 systems from the Portfolio and validate the energy estimates for these 20 systems according to particular installer's energy estimation methodologies. DNV GL will then in turn validate the SHREC estimate for each of these 20 systems.

3.5 Production analysis

DNV GL will evaluate actual SHREC production against the contractual forecast of the SHREC production for the Portfolio.

DNV GL will present P50, P75, P90, and P99 estimates for SHREC production for the Portfolio for a 15-year period.

3.6 Major agreements

DNV GL will review technical aspects of the following documents to assess alignment with Project documentation and financial expectations, and industry standards.

The proposed Budget assumes review of one form of each agreement and associated documentation listed below.

3.6.1 Master Purchase Agreement

Includes items such as parties and contract status; pricing, energy generation, metering, interconnection, and milestones; and general obligations of the parties.

3.6.2 Solar Offtake Contract Review

DNV GL will review a representative PPA and lease for the Portfolio.

3.6.3 Solar incentive contract review

DNV GL will review a Residential Solar Investment Program (RSIP) agreement between the CT Green Bank and solar system owner.

3.6.4 Engineering, Procurement, and Construction Agreement

Includes items such as alignment with the Master Purchase Agreement, scope of work, pricing, QA/QC, warranties/guarantees, guaranteed milestones and damages, and performance testing requirements.

Upon discussion with the CT Green Bank and the investor(s), DNV GL may waive this element of review if risk is deemed to be de minimis, as the PV systems are operating.

DNV GL will assess the qualifications and experience of the EPC contractor(s).

3.6.5 O&M agreement

Includes items such as pricing, scope of work, availability/performance guarantees and damages, and staffing/response time provisions.

Upon discussion with the CT Green Bank and the investor(s), DNV GL may waive this element of review if risk is deemed to be de minimis, as the CT Green Bank does not have direct exposure to O&M costs.

DNV GL will assess the qualifications and experience of the O&M contractor(s).

3.7 Operating system review

3.7.1 Design checks

DNV GL will select a sample of 20 systems from the Portfolio and review conformance with industry best practice for electrical and structural design. This review will include a review of the photo documentation records for these 20 systems.

3.7.2 Inspection result review

DNV GL understands that PV systems are inspected before the incentive is paid. DNV GL will review aggregate inspection results.

3.8 Financial model technical input review

As informed by other portions of DNV GL's analysis, the technical inputs to the Portfolio's financial model will be reviewed to verify the reasonableness of production projections.

DNV GL will advise the Customer with respect to appropriate model stress cases that can be performed to address the Portfolio's risks that have been identified during the technical due diligence review.

3.9 Phase I Deliverables

3.9.1 Technical Report

The results of the work completed pursuant to Section 3.1-3.8 will be provided in a report (the "**Technical Report**"). The Technical Report will conform to the style expected for a typical financing and shall be in a form reasonably satisfactory to the Customer and the financial sponsors. Each of the categories of review described in Section of the Scope of Work will be addressed in the Technical Report. DNV GL will provide the Customer with an opportunity to review every report to be issued by DNV GL prior to formal issuance of each report.

The Technical Report will be provided in a secured PDF format and shall be labelled with a Confidentiality Classification of Customer Discretion.

3.9.2 Response to investor's questions

DNV GL will provide support to CT Green Bank with respect to responding to investor questions.

3.9.3

Ratings agency call support

3.9.4

DNV GL will provide support to CT Green Bank with respect to responding to ratings agency questions.

Form 15E preparation

DNV GL will prepare a version of Form 15E, based upon results of the Technical Report.



4 PHASE II SCOPE OF WORK

4.1 Assist in monitoring and administration

DNV GL will assist in monitoring and administration as needed with respect to ongoing financing program compliance and potential modification to transaction terms (including waivers and amendments) in connection with the financing program.

4.2 Site visits

DNV GL will inspect residential PV systems from the Portfolio in Connecticut to assess electrical and structural installation quality.

One-day trips can be coordinated with the Customer, each covering 4-6 installed systems in a given region, depending on travel logistics and geographic concentration of sites.

4.3 Phase II Deliverables

The results of the work completed pursuant to this Scope of Work will be provided via an update to the IE Report delivered in Phase I. Alternatively, upon the agreement of both parties, results may be delivered via email or via brief reports (the "**Technical Notes**"). The Technical Notes will be provided in a form reasonably satisfactory to the Customer.

5 SCHEDULE

The Scope of Work described above can be completed according to the anticipated schedule detailed below:

Table 5-1 Anticipated schedule

Milestone	Time to complete	Estimated date	Assumptions
Draft Technical Report	Approximately 4 weeks	March 16	All required documentation is available from Feb 16
Revised draft Technical Report	Approximately 2 weeks	March 30	
Final Technical Report	Dependent on Customer feedback	April 6	

Achievement of these milestones is dependent upon the Customer's compliance with the terms of the Agreement, including the Special Conditions described in this Proposal.



6 COMPENSATION

6.1 General



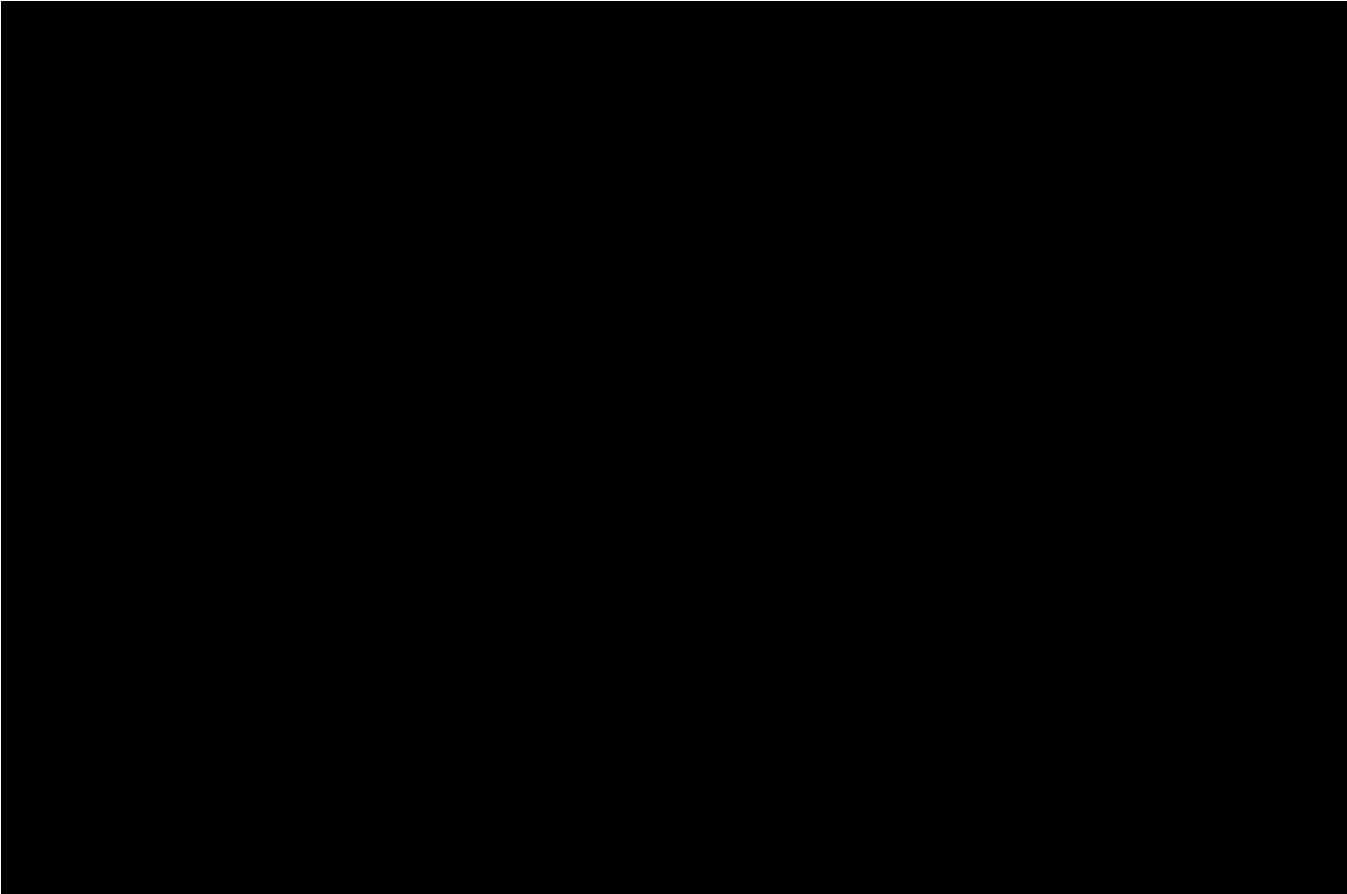
6.3 Budget

DNV GL will provide the Phase I Scope of Work and associated Deliverables on a time-and-materials basis at an estimated labor cost of \$108,100. The breakdown of the time-and-materials budget is shown in Table 6-2.

Pricing for Phase II will be provided separately upon request.

Table 6-2: Phase I Budget Breakdown

Scope Element	Task Description	Estimated hours
3.1	Kick-off meeting and initial review	
	Kick-off meeting	4
	Document review	4
	Subtotal	8
3.2	Engineering process and installer review	
	SHREC generation process review	8
	Installer review	20
	Subtotal	28
3.3	Major equipment review	
	PV module review	40
	Inverter review	24
	Racking review	12
	Subtotal	84
3.4	Equipment review	
	Methodology review	20
	Validations (20 systems)	50
	Subtotal	70
3.5	Production analysis	
	SHREC production analysis	32
	Uncertainty analysis	24
	Subtotal	56
3.6	Major agreements	
	Master Purchase Agreement	8
	Solar offtake contract	8
	Solar incentive contract	8
	EPC agreement	8
	Subtotal	40



6.4 Invoicing and payment

Invoicing will be on a monthly reimbursable basis according to hours worked in the previous period.
Payment terms are net 30 days from invoice.

7 CONTRACTUAL

7.1 Special conditions

In addition to assumptions, conditions, and limitations that may be stated herein or elsewhere, this Proposal is subject to the following Special Conditions:

- A. Customer will provide all information to DNV GL and respond to all inquiries as quickly as is practicable.
- B. Customer will provide all information in English.
- C. Data and documentation will be made available to DNV GL either through electronic mail delivery, through an FTP site (virtual dataroom), or by physical delivery to DNV GL offices. Security for transmitting or storing such information is the responsibility of Customer, subject to the applicability of any confidentiality agreement. Customer shall provide timely notice to DNV GL of any postings of data to a dataroom.
- D. All documentation and data to be delivered to DNV GL shall be delivered to the following:
Electronic delivery by email:
Fleming Ray

[Email: Fleming.Ray@dnvgl.com](mailto:Fleming.Ray@dnvgl.com)
Phone: +1 (858) 344-9389
- E. Customer will obtain any and all third-party consents necessary for the performance of the Services by DNV GL, including consents to delivery of information and access to the Project site.
- F. Customer will provide contact information for all project participants with whom DNV GL may be required to interface in the performance of the Services.
- G. Customer will advise DNV GL in a timely manner of any change in the address and contact for invoices and notices as set forth in the Agreement.
- H. Customer will accompany DNV GL on any site visit.
- I. All prices are exclusive of applicable tax, which will be charged at the rate current at the date of invoice.
- J. DNV GL has not conducted measurements at the sites and therefore cannot accept liability for the accuracy of the data supplied to it.
- K. Where Services are delayed by adverse weather conditions, any costs arising will be charged to the Customer. In calculating these costs, expenses will be charged at cost and staff time will be charged using DNV GL's standard hourly rates.
- L. Customer will provide in a timely manner the information described in the Initial Data Request, to be provided separately via e-mail.

7.2 Mandatory health and safety terms

7.2.1 Customer responsibility

The Customer, or other entity having legal responsibility on the premises where DNV GL personnel will work, shall inform DNV GL of any safety and health hazards related to the work and/or any safety measures required for the work, prior to starting the work, or if such information not is available at that time, during the performance of the work.

Whenever DNV GL undertakes to work on site, the customer shall provide all adequate safety measures to ensure a working environment that is safe and in accordance with all relevant legislation.

7.2.2 Main principle

The DNV GL employee has the right to refuse to carry out an activity, when the safety conditions, according to his/her sole judgment, are not satisfactory.

7.2.3 Substance abuse screening

Customer requirements specifying participation in screening programs shall be communicated to the DNV GL employee prior to commencement of work.

8 PROJECT ORGANIZATION

The following personnel are nominated to perform the services. Brief biographies are found below. Full resumes are available upon request.

Table 8-1 Key Personnel

Name	Project Role	Title	Grade Level	Office Location	DNV GL Experience
Anat Razon	Project Sponsor	Head of Section	Principal 1	Oakland	10
Fleming Ray	Project Manager	Engineer	Senior 1	San Diego	4
Doug Blodgett	PV Technology	Engineer	Senior Principal	Oakland	13
Emily Greeno	Energy Lead	Team Lead	Professional 2	San Diego	3
Jackson Moore	Project Reviewer	Head of Section	Principal 1	Oakland	8

The resources listed above are based on DNV GL's current availability schedule. Should project personnel availability change at the time of contract award or during the project execution, DNV GL will inform the customer of the changes of resources. DNV GL will aim at finding resources with the same level of competence as the resources listed and will work to utilize the most cost efficient resource for the task. Key personnel will be available as needed to support delivery of the project. A lead project manager typically spends approximately 20–25% of his or her time on a project. The nominated project manager is available to travel to meet the CT Green Bank staff in Stamford and Rocky Hill CT. This assignment would be primarily serviced from DNV GL's offices in San Diego and Oakland, California.

Anat Razon

Anat Razon currently serves as the Head of Section, Solar Due Diligence. Overall, the Solar Due Diligence Section is comprised of utility scale, C&I, and residential scale teams. Previous to assuming the role as Head of Section, Ms. Razon served as the team lead for the commercial and industrial scale due diligence team. The C&I scale team supported approximately 150 C&I-scale projects, totaling hundreds of megawatts, through successful financing in the United States and Canada in the past year.

Ms. Razon joined DNV GL in 2009 to provide engineering support for the independent engineering PV team contributing in resource assessment, energy estimates, code compliance, performance review, capacity tests, and site inspections. Anat has also served as a project manager on the utility scale due diligence team.

Anat graduated from Ben Gurion University with a degree in Electrical Engineering. Subsequently, Ms. Razon earned a M.Sc. in Solar Energy from the Blaustien Institute for Desert Research at Israel's National Solar Energy Center.

Fleming Ray

Fleming Ray is a Senior Project Manager providing leadership to DNV GL's cross functional residential solar independent engineering practice and solar and storage technical due diligence engagements.

Since joining DNV GL in 2014, Mr. Ray has participated on delivery teams in both an engineering and project management capacity, delivering independent engineering reviews for residential, commercial, and utility scale PV portfolios. In addition to project management, Mr. Ray brings a particular focus on PV equipment, energy production, O&M, and financial model review.

Mr. Ray holds dual master's degrees, an SM from MIT in Technology and Policy and an MPhil in Engineering from the University of Cambridge, as well as a BS in Materials Science & Engineering from Purdue University.

Doug Blodgett

Mr. Blodgett has over 24 years of experience in the design, manufacture and maintenance of wind turbine and photovoltaic systems. Prior to joining DNV GL in 2006, he coordinated the activities of a team of 16 engineers and technicians as Director of Engineering for Xantrex's three-phase power group. During that eight year period, Mr. Blodgett contributed to the details of design and the process of manufacture for inverters ranging in size from 10kW to 2.5MW for both photovoltaic and wind turbine applications.


Prior to his work at Xantrex, he held a number of positions over a 13 year period with Kenetech Windpower. With job titles ranging from Project Engineer to Manufacturing Engineering Manager, Mr. Blodgett had the opportunity to contribute to the design of wind turbine systems ranging in size from large domestic installations to small, isolated power systems for remote island locations. In addition to his experience

designing and installing many megawatts of inverter and wind turbine systems, he has a well-established track record in the successful third party certification of wind turbine and photovoltaic electrical systems.

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Mr. Blodgett received a BA in business management from St. Mary's College.



Emily Greeno

Emily Greeno is a solar engineer with more than 4 years of direct experience in energy management and energy analysis. Her expertise includes solar energy resource assessments, solar production estimate methodology reviews, building energy performance, energy procurement, and renewable feasibility studies. She has experience working in utility scale, commercial, and residential solar applications.

Over the last year, Ms. Greeno has validated sponsor energy estimates for dozens of residential systems. She has worked in many aspects of residential solar technical due diligence including methodology reviews, production analysis and performance guarantee calculations. Prior to joining DNV GL, Ms. Greeno worked at Syracuse University as its Energy Conservation Manager.

Emily Greeno received her M.S. in Mechanical Engineering from Carnegie Mellon University, her B.S. in Mechanical Engineering from Syracuse University (Cum Laude), and has her EIT designation.

Jackson Moore

Jackson manages the solar technology consulting practice for DNV GL in North America. He previously managed DNV GL's Asia Pacific solar energy consulting teams.

Jackson has worked in the field of photovoltaics since 2007, managing system engineering and inverter product development teams. Immediately prior to joining DNV GL, Jackson had been managing the front-end engineering and permit engineering of utility-scale PV projects for NextLight Renewable Power and First Solar. In this role, he was responsible for site selection, performance evaluation, and permit engineering, and he played key roles in negotiating power purchase agreements and purchase-and-sale agreements for utility scale solar projects. Prior to the PV industry, Jackson was an electrical and controls engineer for electric utility SCADA systems.

Mr. Moore received a BS in Electrical Engineering from the University of Louisville and is the inventor on three issued patents related to inverter control algorithms.

9 EXPERIENCE AND CAPABILITIES


DNV GL's team of PV professionals has been supporting and actively involved in the solar industry for more than 20 years. The former BEW Engineering joined DNV in 2010 and the former GL Garrad Hassan merged to form DNV GL in 2013. The solar energy segment specializes in providing technical consulting, project design, and independent engineering services to a wide range of solar industry clients including project developers, utilities, operators, component manufacturers, investors, and government agencies. Our experience includes utility-scale projects, commercial ground-mount and rooftop systems, and residential solar portfolios. Our solar energy segment is headquartered in Oakland, California and has local North

American presence in Montreal, San Diego, Portland, OR, and Austin, along with international offices in over 20 countries.

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DNV GL has provided technical due diligence services for residential PV portfolios since 2012, serving many of the top residential operators in the United States. DNV GL has served as the IE on over 10 securitizations for residential and C&I PV portfolios. DNV GL maintains offices with renewables advisory staff in locations around the United States and Canada, including San Diego, Oakland, Portland, Seattle, Toronto, Montreal, New York State, Madison, and Austin. In addition to solar due diligence capabilities, DNV GL has energy advisory capabilities which span the energy value chain including generation, transmission, and distribution. DNV GL provides industry leading services in technical advisory, laboratory testing, and PV monitoring. DNV GL is also playing a strong role in opening the market for battery storage technical advisory and laboratory testing services.

Following are two individuals who can provide references for DNV GL:

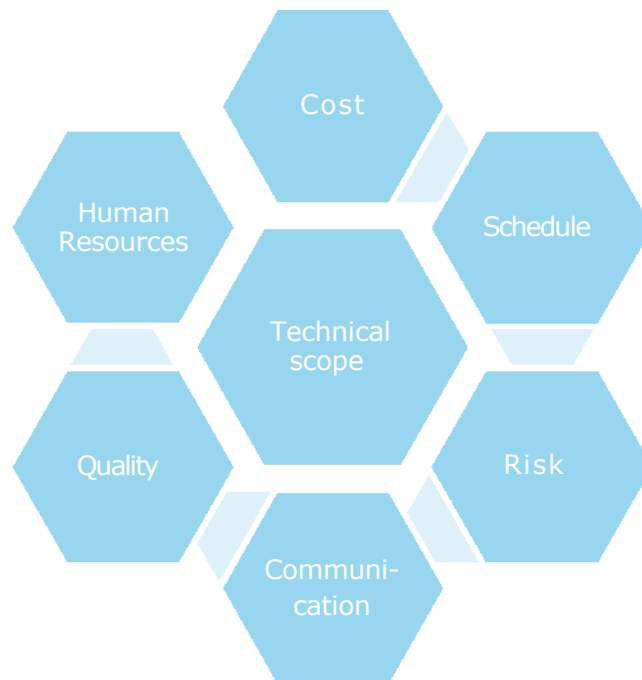
Joe Eisenberg (jeisenberg@sunrun.com) Ph: (914) 450-4956

Jeff Munson (jmunson@tesla.com)

11 PROJECT MANAGEMENT

In DNV GL, we unite the strengths of industry-leading technical expertise and the internationally recognized Project Management Institute (PMI) model of project management. DNV GL has experienced certified Project Management Professionals (PMP) on staff, who adhere to vetted and well-controlled quality control procedures and immediate access to the industry's leading subject matter and technical experts. Our unique industry insight, market experience, and management of multiple projects for multiple clients in tandem allows us to manage projects with extreme efficiency.

Our approach is customer-centric and solution-driven. We are experts in recognizing where robust project controls are required to manage the project; in these situations, we have a full arsenal of Project Management Processes to call upon and implement. In other situations, we work with customers to determine where risk and project parameters are sufficiently controlled, saving time and cost.



The DNV GL project manager (PM) will provide technical oversight and management for the entire scope of work. DNV GL will build on any work and plans completed to date by Customer to initiate, plan, and execute the project under Customer's direction and while providing guidance to Customer. The PM will monitor and control the above-mentioned Project Management Processes concurrently with continuous and open communication of project status to Customer. DNV GL will perform closing processes when the scope has been verified, deliverables accepted by Customer, and all contractual requirements fulfilled. Our internal management systems include dozens of pre-developed industry-specific templates and quality management processes that capitalize on our experience managing a large range of project sizes and scopes.

In accordance with our ISO 9001 certification, DNV GL maintains a minimum set of project team members on each project to ensure technical information and deliverables are appropriately reviewed. The roles of the key project team members are described below.

11.1 Project Sponsor

The Project Sponsor (PS) is part of DNV GL's technical or management team. The PS holds the overall responsibility for the fulfilment of the contract between Customer and DNV GL. The PS is directly responsible for the following:

- Approval of the proposal and contract
- Appointment of the PM
- Allocation of necessary resources to the project (personnel, time and equipment)
- Making decisions in matters having contractual or budgetary implications for DNV GL
- Approval of project plans, budgets, procedures, and quality procedures
- Participating in regular meetings with Customer and/or the PM to evaluate and discuss the project status and progress
- Initiating quality audits and establishing an audit plan for the project
- Approval of final project deliverables (Technical Report and others)

11.2 Project Manager

The PM will manage the project according to the Customer contract. The PM is the primary contact person for the Customer on a project and has the operational responsibility for running the project to meet the defined goals, milestones, and budget according to Customer expectations and business area requirements. Specifically, the PM is responsible for the following:

- Ensure Health, Safety and Environment (HSE) processes are performed and project team building.
- Maintain ownership of all aspects of the project.
- Serve as primary point of contact for internal team regarding details of the project scope, budget, client expectations, schedule, and any other project related items.
- Set up, conduct and document external kick-off meeting with the customer
- Manage project schedule and keep project team apprised of deliverable deadlines.
- Manage and take ownership of quality or safety events.
- Keep project team informed of project status including budget, upcoming milestones, etc.
- Set up and prepare for project status meetings with the Project Sponsor and Customer to review the tasks outlined below.
- Manage the execution of the project quality plan (PQP).
- Manage agreements and tasks performed by subcontractors.
- Coordinate field work with team members and Customer
- Ensure that work in progress (WIP) is managed, reported to Customer, and billed to Customer on a milestone basis as described below.
- Request and document client feedback, both informally as daily work progresses, and formally at the close of the project.

11.3 Subject Matter Experts

- Subject matter experts (SME) are responsible for undertaking their parts of the project work within the schedule and budget limitations specified, and with the required level of performance.

- SMEs are responsible for development of project deliverables and arranging for technical/peer review in addition to PM review prior to Customer submission
- Assist the PM in the development of project quality plans, budget, schedule, and scope.
- Liaise with the customer to organize all field visits, planning/scheduling of the work, and executing the work.

12 MANAGEMENT SYSTEM

The DNV GL management system is an integrated quality health, safety and environment, and business administration management system.

Our management system is certified against ISO 9001. Separate certificates cover DNV GL's business areas Maritime, Oil & Gas and Energy, issued by the Dutch accredited certification body DEKRA Certification B.V.

The DNV GL management system is certified against ISO 14001 and BS OHSAS 18001 by the Dutch accredited certification body DEKRA Certification B.V.

A description of DNV GL's quality, health, safety and environment policy and management system is provided in Appendix A.

13 DNV GL IN THE ENERGY INDUSTRY

In DNV GL we unite the strengths of DNV, KEMA, Garrad Hassan, and GL Renewables Certification. DNV GL's energy experts support customers around the globe in delivering a safe, reliable, efficient, and sustainable energy supply. We deliver world-renowned testing, certification, and advisory services to the energy value chain including renewables and energy efficiency. Our expertise spans onshore and offshore wind power, solar, conventional generation, transmission and distribution, smart grids, and sustainable energy use, as well as energy markets and regulations. Our testing, certification, and advisory services are delivered independent from each other.

Learn more at www.dnvgl.com/energy.

APPENDIX A – DNV GL MANAGEMENT SYSTEM

General

The DNV GL Management System (DMS) documents are sorted under several strategic areas as an index for the management system. The DMS seeks to be independent of the organizational structure, and able to show the main processes of the company.

The management system documentation consists of:

- The DMS – DNV GL’s Management System documentation. This is a 2-tier system. The top tier is owned, issued and maintained at DNV GL Group level and is valid for all in DNV GL. The ownership of the various groups of strategic areas has been assigned to DNV GL Group directors, to ensure anchoring with top management, focus and development.
- Local Operating Procedures (OP) which are specific for an operating unit, or part of the line organization, i.e. Regional OPs.
- Country specific OPs which are valid for a country, typically covering employment items and general compliance with national legislation

All management system documentation is available to all employees on the DNV GL Intranet.

DNV GL monitors, measures and improves the effectiveness of its management system on a continuous basis where opportunities for improvement are identified through internal and external audit, experience feedback, after-action reviews and importantly through dialogue with, and feedback received from our customers. The annual Management System Review is an important instrument in this regard.

DNV GL has a common tool for follow-up of all events such as audits, non-conformities, complaints and potential quality issues called Quality Event Tracker - QET. All quality events shall be registered in QET. QET facilitates the use of root cause analysis and ensures that events are handled and closed after proper actions have been taken.

Quality

Quality policy

We will never compromise on quality or integrity.

We commit ourselves to:

- Deliver in accordance with the industry’s expectations
- Continually improve our performance and professionalism

Quality management system

The strategic areas most important in relation to quality of customer-facing activities and project deliverables are:

- Customer management
- Service lines

- Production
- Innovation, research and development
- IT and information management
- Quality and management system

Under Production there are governing documents addressing:

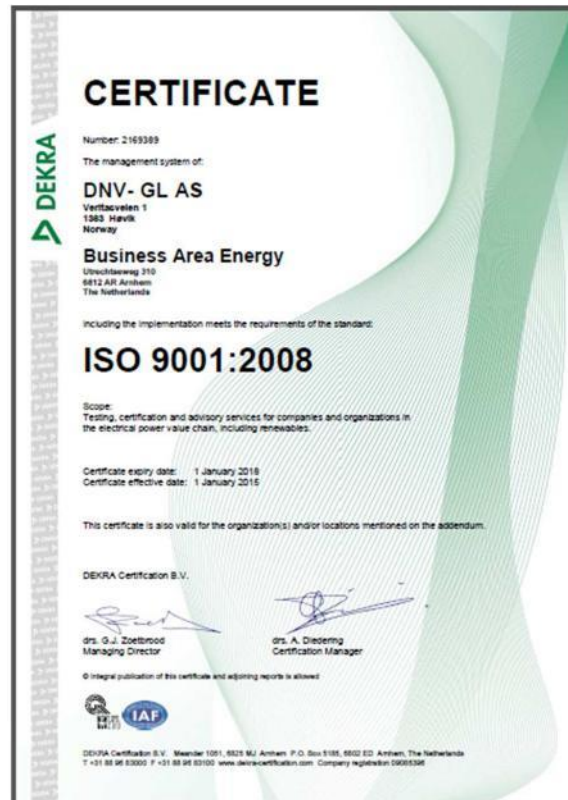
- Project management
- Internal verification of project work and approval of deliverables
- Performance of various categories of services
- Requirements to certain types of deliverable documents
- Competence management and requirements

Further document types are:

- DNV GL Service Specifications
- Internal Service Instructions
- Internal Service Guidelines

DNV GL routinely solicits feedback from our Customers regarding DNV GL's performance. Customer feedback is a crucial element of our continuous improvement process.

Quality Management Certificate





Health, safety and environment (HSE)

HSE policy

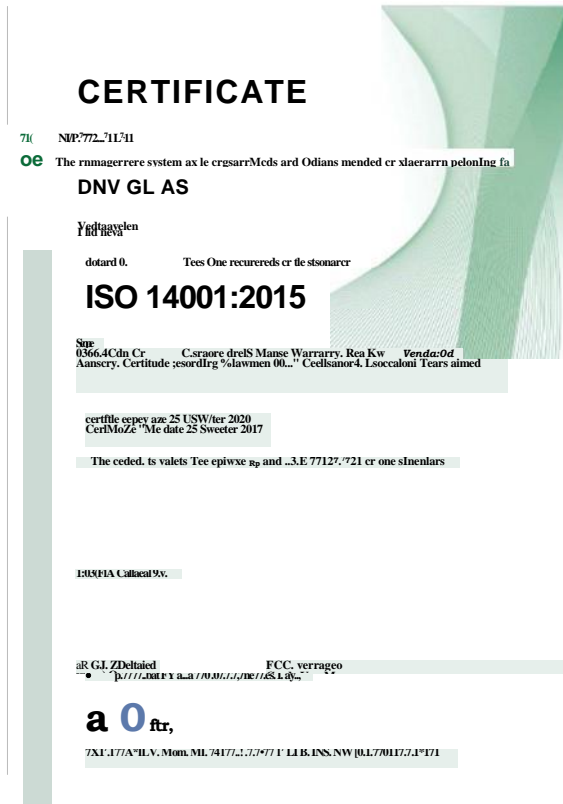
- We know that our work is never so urgent or important that we cannot take time to do it safely. We feel confident and empowered to stop work and to intervene where inappropriate behavior or unacceptable conditions are encountered.
- We identify and assess risks to the health and safety of people, property or the environment in our work. We ensure they are effectively managed and that areas for improvement are prioritized.
- We foster a culture where everyone is actively involved in setting a good example and pursuing, adopting and sharing good HSE practice.
- We develop, resource and implement HSE plans to deliver continual improvement in HSE performance. We openly report and appraise our HSE performance and measure our achievements against our plans and goals and take action to address shortcomings.
- We treat incidents including near misses and hazards and feedback from employees and customers as an important learning opportunity.
- We select our sub-contractors and suppliers based on their ability to provide services which meet our safety, health and environmental requirements.
- We work to the principles of the UN's Global Compact and participate in the World Business Council for Sustainable Development.
- We will visibly demonstrate leadership and commitment to high standards of health, safety and environmental performance.

HSE management system

HSE is a separate strategic area, under which there are governing documents addressing:

- Environment aspects identification and management
- Emergency preparedness
- Implementation support and control processes, e.g. HSE risk assessment, HSE audits
- Health, e.g. occupational health, substance abuse
- Safety, e.g. field work, laboratory and test site, travelling, restricted travel areas
- Management and reporting

HSE management system certificates



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ABOUT DNV GL

Driven by our purpose of safeguarding life, property and the environment, DNV GL enables organizations to advance the safety and sustainability of their business. We provide classification, technical assurance, software and independent expert advisory services to the maritime, oil & gas and energy industries. We also provide certification services to customers across a wide range of industries. Combining leading technical and operational expertise, risk methodology and in-depth industry knowledge, we empower our customers' decisions and actions with trust and confidence. We continuously invest in research and collaborative innovation to provide customers and society with operational and technological foresight. Operating in more than 100 countries, our professionals are dedicated to helping customers make the world safer, smarter and greener.



Memo

To: Connecticut Green Bank Board of Directors

From: Bert Hunter, EVP and CIO, Chris Magalhaes, Associate Director, Clean Energy Finance and Louise Venables, Senior Manager, Clean Energy Finance

CC: Bryan Garcia, President and CEO; George Bellas, Vice President of Finance and Administration; Brian Farnen, General Counsel and CLO; Ben Healey, Director of Clean Energy Finance; Eric Shrago, Director of Operations

Date: April 27, 2018

Re: Union Savings Bank Revolving Credit Facility Proposal

Purpose

This memo seeks approval from the Connecticut Green Bank (“Green Bank”) Board of Directors (the “Board”) for Connecticut Green Bank (“Green Bank”) to enter into an agreement with Union Savings Bank (“USB”) for a \$5,000,000 secured revolving line of credit (the “Revolving Credit Facility”). The Revolving Credit Facility would be provided by USB, to the Green Bank, in order to meet the Green Bank’s short-term liquidity and working capital needs. Along with a general repayment obligation by the Green Bank, USB would be secured by a first priority security interest in, and an absolute assignment of all cash flows associated with, the CT Solar Lease 1 Notes portfolio (the “Collateral”).

The selection of USB as the provider of the Revolving Credit Facility represents a strategic selection by staff, due to (i.) the alignment of USB’s offering with the Green Bank’s strategic outlook and selection criteria, and (ii.) timing constraints associated with upcoming cash flow needs.

Background

Shortly following the announcement of the budget sweeps, the VP Finance and Administration (the “VP F/A”) and the Chief Investment Officer (the “CIO”) together with their teams have been assessing future liquidity needs of the Green Bank [REDACTED].

Related to the need for liquidity are covenants associated with guaranties by the Green Bank to various financial institutions [REDACTED].

After weighing the requisite minimum cash balance requirement plus the difficulty in predicting from one month to the next the swings in cash advances needed for various projects, in particular C-PACE and CT Solar PPA transactions, the VP F/A and CIO jointly determined the benefits to the Green Bank of a short term revolving credit facility. The Finance Team explored options with local Connecticut financial institutions and this memo sets forth a request for approval by the Board of a short term revolving credit

facility being proposed for the Green Bank by Union Savings Bank of Danbury. The Finance Team approached a few additional banks and one CDFI to determine interest in such a facility. The terms offered by the CDFI were far less attractive than the proposal offered by Union Savings Bank and other banks elected to pass based on the budget sweeps recently suffered by the Green Bank.

The decision by staff to pursue a liquidity facility in order to meet upcoming cash flow needs is predicated on the pursuit of an effective, yet flexible, means of managing transaction timelines without having to sacrifice optimal closing terms and conditions for liquidity concerns. By effectively managing gaps between uses of cash, in the form of outgoing program and project related investments, and sources of cash, in the form of capitalization from the system benefit charges and Regional Greenhouse Gas Initiative funds, inflows from Green Bank's portfolio, the SHREC securitization or otherwise, Green Bank staff can optimize its cash flow management while minimizing the risk of short-term liquidity squeezes. The results of effective cash flow management include increased market confidence in the Green Bank's capacity to close transactions, and an increased ability in the Green Bank to be opportunistic with its investment decisions.

The USB secured revolving line of credit is an optimal form of liquidity facility because it will allow the Green Bank to:

- Draw down capital only as needed, with minimal upfront fees [REDACTED];
- Draw down capital at a relatively attractive interest rate, resulting in a greater likelihood of positive arbitrage (i.e. positive net interest margin) on uses of proceeds;
- [REDACTED];
- To have access to \$5 million in additional liquidity over the next year for short term purposes [REDACTED];
- Limit repayment risk exposure by ensuring that obligations under the line of credit are always within the cash flow capacity of the Collateral;
- Have optionality on interest rate structure for each annual period, resulting in the ability to manage interest rate risk for a full year;
- Strengthen Green Bank's position with local lenders [REDACTED].

Interface with Short-Term SHREC Warehouse Facility

As noted in a related memorandum to the Board dated April 27, 2018, [REDACTED], staff recommends utilizing a short-term warehouse facility that will bridge to the securitization. Green Bank has received a joint proposal for [REDACTED] from two Connecticut banks whereby the two banks will jointly fund the facility and share 50/50 in draw requests, collateral (secured by Tranche 1 and Tranche 2 contracts).

The recommended SHREC warehouse facility will permit a [REDACTED] draw against the tranche 1 contract. [REDACTED].

Revolving Credit Facility Structure

The Revolving Credit Facility will be structured as a revolving line of credit whereby the Green Bank may, at any point in time while the line of credit is available, borrow funds in an amount not to exceed the maximum borrowing limit of \$5,000,000. The Green Bank is required to pay monthly, interest-only payments on borrowed funds, and may repay the principal amount of those funds at any point in time while the line of credit is available without penalty. USB has a requirement across all of its short term

revolving credit facilities that it can demand repayment, which then results in Green Bank having to repay all principal outstanding and accrued interest due within [REDACTED] days of notice.

[REDACTED].

The Green Bank has the option of choosing its interest rate at closing; either a floating rate [REDACTED], or a fixed rate [REDACTED]. The Revolving Credit Facility is expected to renew each annual period, unless either USB elects to cancel the facility or Green Bank decides not to renew the facility.

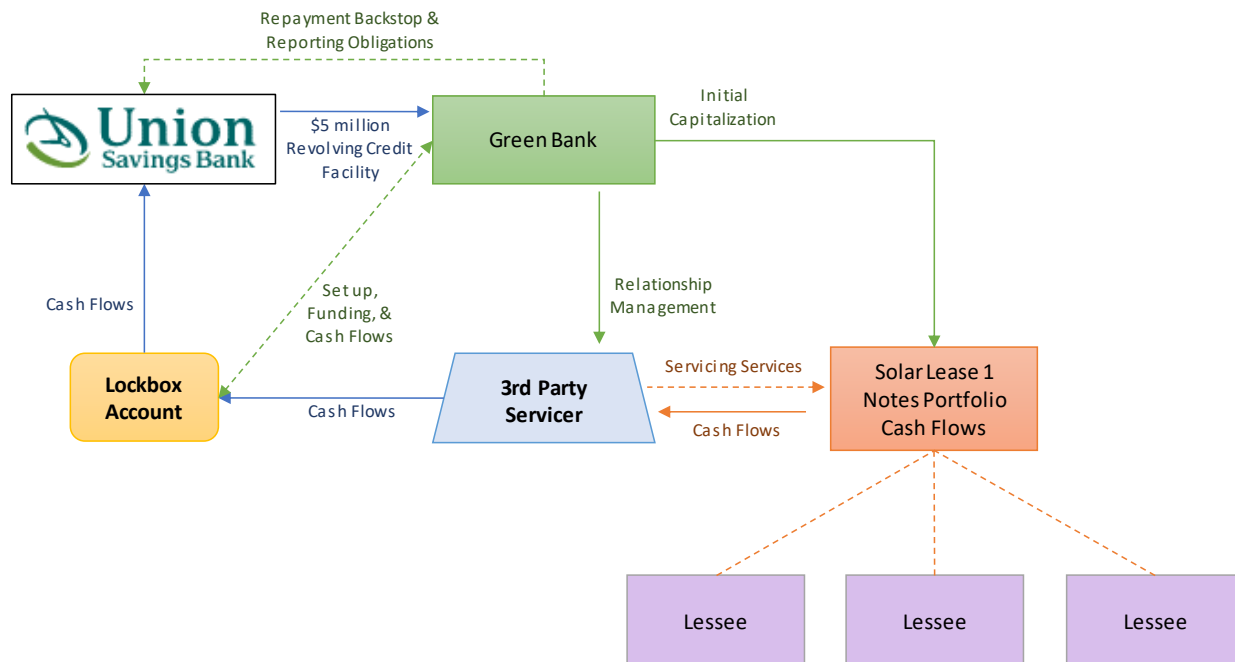
Draws on the Revolving Credit Facility will also be limited by criteria including a maximum advance rate of [REDACTED]% against the value of the Collateral, and a minimum [REDACTED]x Debt Service Coverage Ratio (“DSCR”) measured as Collateral cash flows against a calculation of debt service payments associated with the maximum borrowing limit amount, amortized over a 10-year term and bearing an interest rate of [REDACTED]. Staff is comfortable that even with these criteria the Revolving Credit Facility will still be able to accommodate the Green Bank’s short-term liquidity needs. Furthermore, such constraints on draw amounts ensures that Green Bank will face limited repayment risk associated with the Revolving Credit Facility, which in turns helps to drive down the cost of capital on the line of credit to the benefit of the Green Bank.

Additional key requirements and conditions associated with the Revolving Credit Facility include [the full set of terms and conditions can be found in the **Appendix I – Term Sheet** section below]:

- An upfront “commitment” fee of \$[REDACTED];
- Payment of USB’s closing and legal fees;
- Green Bank’s establishment of a Lockbox account (with USB) to collect and hold Collateral cash flows, for the benefit of USB, with a minimum cash balance of \$[REDACTED] maintained;
- Monthly circulation of Collateral statement/invoice documents to USB from Renew Financial (Green Bank’s third-party servicer);
- Monthly calculation and submission to USB of Collateral value; and
- Annual submission to USB of Green Bank’s CAFR.

Based on staff’s experience with structuring credit facilities, and given conversations with other providers of short-term liquidity facilities (as discussed in the **Strategic Selection** section below), Staff is confident that the above-listed requirements and conditions are both reasonable and manageable.

Proposed Structure Diagram



Facility Selection

As noted in the **Background** section above, the combination of (i.) external shocks to the Green Bank’s expected capitalization with (ii.) the juxtaposition of timing requirements to successfully execute on the securitization of SHRECs with immediate cash flow needs, meant that the ability of the Green Bank to compare and evaluate short-term liquidity facilities to bridge the organization’s cash requirements was constrained.

Staff was able to engage in detailed conversations about short-term liquidity facilities with two different capital providers, reaching the term sheet stage with each. In addition, a few other banks were approached, but because of the budget sweeps declined to propose. The Revolving Credit Facility with USB represents the most immediate, and attractive, of those proposed facilities, as shown in the table below:

[TABLE REDACTED]

In addition, the Revolving Credit Facility exhibits the following characteristics, which align with the Green Bank’s own strategic outlook:

- USB was founded in Danbury, CT in 1866 as a savings and lending institution for the local community, and today remains a multi-faceted bank with multiple business products tailored to meet various needs. As such, USB has significant experience lending to institutions in the manner envisioned herein;

- The Revolving Credit Facility would be the first such facility for Green Bank, and USB has tailored the line of credit to meet current Green Bank needs;
- The Revolving Credit Facility would allow the Green Bank to continue supporting its various program and product related investments, which constitute strategically important initiatives across the program teams and [REDACTED];
- The Green Bank has upcoming liquidity needs, associated with program and product related investments, [REDACTED]; and
- Successful execution of the Revolving Credit Facility would result in access to an attractive source of capital, renewable on a year-by-year basis assuming that Green Bank remains in good standing with UBS on payment terms and that the line of credit remains strategically beneficial to the Green Bank.

Facility Risks and Mitigants

The main risk associated with the Revolving Credit Facility is that upon demand by USB, any outstanding principal balance and interest is due within [REDACTED] days of that notice. Such repayment risk is mitigated by the following structural components of the Revolving Credit Facility:

- 1.) Because the Green Bank is always limited in drawing down only what the underlying Collateral can support in terms of cash flows, the Green Bank always has the option of either (a.) using the Collateral to raise money from a 3rd party in order to repay USB (and Green Bank did source such a facility – except the terms were inferior to USB), (b.) allowing USB hold onto its assignment of Collateral cash flows with a 100% sweep until sufficient repayment has been achieved or (c.) issuing a short term bond backed by the Solar Loan 1 receivables and the SCRF.
- 2.) The Green Bank is able to repay the Revolving Credit Facility with available cash held in accounts on its balance sheet, and given the overall health of the Green Bank’s long-term balance sheet position, there is ample coverage in the form of available net assets relative to the size of the line of credit to raise other credit facilities if needed.
- 3.) Because the Revolving Credit Facility is short-term in nature, to be used in between a financing opportunity and a capital sourcing/monetization event, there is less uncertainty with regards to the economic position of the Green Bank while amounts drawn are outstanding relative to other types of longer-term credit facilities.

Strategic Plan

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

Yes – the proposed facility enables Green Bank to fund advances in respect of various programs active under Green Bank’s Comprehensive Plan (C-PACE, Commercial Solar PPA, etc.).

Ratepayer Payback

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

N/A (funds from the Revolving Credit Facility are being borrowed, not advanced)

Terms and Conditions

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

N/A (funds from the Revolving Credit Facility are being borrowed, not advanced); however, see **Appendix I – Term Sheet** section below for terms of the USB Revolving Credit Facility.

Capital Expended

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

N/A (funds from the Revolving Credit Facility are being borrowed, not advanced)

Risk

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

N/A (funds from the Revolving Credit Facility are being borrowed, not advanced)

Financial Statements

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

When funds are borrowed:

\$x Credit: Cash
 \$x Debit: Short Term Borrowings

When funds are repaid:

\$x Credit: Short Term Borrowings
 \$x Debit: Cash

Target Market

Who are the end-users of the engagement?

The end users of the Revolving Credit Facility are Green Bank as well as the underlying programs and projects that receive short-term funding from the underlying line of credit.

Green Bank Role, Financial Assistance & Selection/Award Process

The Green Bank role is as a borrower, and USB was chosen via strategic selection (see **Strategic Selection** section above).

Program Partners

Union Savings Bank.

Union Savings Bank has been serving the local area since 1866. And since its inception, its stated mission has been to work for the benefit of the community rather than for the benefit of shareholders. The bank has an emphasis on residential mortgages, commercial and small business lending. It's balance sheet is approximately \$2.2 billion in total assets and total loans of approximately \$1.7 billion.

Risks and Mitigation Strategies

See **Facility Risks and Mitigants** section above.

Resolutions

WHEREAS, Connecticut Green Bank ("Green Bank") staff has submitted to the Green Bank Board of Directors ("Board") a proposal for Green Bank to enter into an agreement with Union Savings Bank ("USB") for a \$5,000,000 secured revolving line of credit ("Revolving Credit Facility") whereby the Revolving Credit Facility would be used in order to meet the Green Bank's short-term liquidity and working capital needs for period of up to one year;

WHEREAS, along with a general repayment obligation by the Green Bank, USB would be secured by a first priority security interest in, and an absolute assignment of all cash flows associated with, the CT Solar Lease 1 Notes portfolio (the "Collateral"); and

WHEREAS, Green Bank staff recommends that the Board approve the proposed Revolving Credit Facility, generally in accordance with the terms of the summary term sheet presented to the Board on April 27, 2018.

NOW, therefore be it:

RESOLVED, that the Board approves Green Bank to enter into the Revolving Credit Facility with USB and approves of USB as a strategic selection to be the sole source provider of the Revolving Credit Facility;

RESOLVED, that the Board directs the Vice President Finance and Administration and the Chief Investment Officer of Green Bank to determine procedures for use of the Revolving Credit Facility, including as part of such procedures the consent of the Chair of the Board or, in the Chair's absence, the consent of the Vice Chair of the Board (such procedures to be agreed by the President and Chief Executive Officer, the Chair of the Board and the Vice Chair of the Board and advised to the entire Board prior to any use of the Revolving Credit Facility);

RESOLVED, that the President, Chief Investment Officer and General Counsel of Green Bank; and any other duly authorized officer of Green Bank, is authorized to execute and deliver on behalf of Green Bank any of the definitive agreements related to the Revolving Credit Facility and any other agreement, contract, legal instrument or document as he or she shall deem necessary or appropriate and in the interests of Green Bank and the ratepayers in order to carry out the intent and accomplish the purpose of the foregoing resolutions; and

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

Appendix I – Term Sheet

Summary Term Sheet

Union Savings Bank

1. **Borrower:** Connecticut Green Bank
2. **Amount and Loan Type:** Up to \$5,000,000 Revolving Line of Credit
3. **Purpose:** Provide for working capital
4. **Interest Rate:** Borrower's option of:
 - i. Floating at [REDACTED];
 - ii. Fixed at [REDACTED].
5. **Maturity:** 1 year from closing and Lender can demand payment within [REDACTED] days notice.
6. **Monthly payments:** Interest-only in arrears.
7. **Commitment Fee:** [REDACTED]
8. **Loan Advances:** Limited to [REDACTED]% of the value of eligible Collateral as measured by a Borrowing Base Certificate, updated no less than monthly
9. **Collateral:** An absolute Assignment of the lease portfolio known as the CT Solar 1 portfolio, and all commercially necessary rights thereunder, shall be provided to Lender for the purpose of collateralizing the Loan.
10. **Prepayment Penalty:** None



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Memo

To: Connecticut Green Bank Board of Directors

From: Kerry O'Neill, Vice President, Residential Programs; Madeline Priest, Manager, Residential Programs

Cc: Bryan Garcia, President and CEO; Bert Hunter, EVP and CIO; Brian Farnen, General Counsel and CLO; George Bellas, VP Finance and Administration; Eric Shrago, Director of Operations

Date: March 27, 2018

Re: Strategic Selection of Green and Healthy Homes Initiative for Phase II of the Connecticut Green and Healthy Homes Project

Background

The State of Connecticut has the opportunity to transform the state's approach to energy, health, and housing service delivery by adopting a model that fully integrates previously uncoordinated housing, health, and energy programs. The Connecticut Green Bank (Green Bank), in partnership with the Department of Public Health (DPH), engaged the nonprofit Green & Healthy Homes Initiative (GHHI) in June of 2017 to explore bringing their pioneering model to our state in what was conceived as a three-phased project called the Connecticut Green and Healthy Homes Project (the Project). GHHI's model platform uses a whole house strategy (health, safety and energy efficiency) to advance policies and investments in the field of health care, housing stability, clean energy and education. GHHI's empirically-driven model efficiently delivers results and is rapidly scaling nationally while influencing federal and state agency standards.

Reducing Energy, Medical and Maintenance Costs while Improving Housing Stability:
Families in poverty often lack the resources, support systems and connections needed to ensure safe and stable housing. Low-income families face higher energy burdens and are often unable to afford or access simple measures for reducing energy costs or addressing health hazards in their home. Poor housing conditions can also have adverse mental health impacts and contribute to neighborhood-wide instability. By linking homes to integrated housing programs, families can reduce their energy consumption, address home-based environmental hazards and related asthma episodes, eliminate lead hazards and reduce the risk of household injury. These improvements spur local economic development by increasing property values and stabilizing neighborhoods as families obtain the immediate benefit of lower energy costs, lower health care costs and more affordably maintainable units.

GHHI works to improve unhealthy and inefficient housing to combat the negative effects and costs of chronic health issues such as asthma, lead-based paint poisoning, and trip and falls, as

well as high energy related costs resulting from poorly weatherized housing. GHHI effectively delivers comprehensive housing intervention services to low-income families by brokering strategic partnerships to align, braid, and coordinate resources representing multiple governmental, private sector, and philanthropic housing investments. GHHI sites nationally have consistently shown the numerous beneficial cross-sector results from using the integrated GHHI model such as reductions in chronic school absenteeism, medical costs, missed work days, and utility costs.

In Phase I of the Project, the Green Bank, DPH and GHHI recruited several additional state agencies and the utilities to become formal project partners. The full list of partners and their roles includes:

- **Connecticut Green Bank:** Core convener, funder and partner in feasibility research and pilot planning.
- **Department of Public Health:** Core convener and partner in feasibility research and pilot planning.
- **Green & Healthy Homes Initiative:** Primary researcher, convener and national policy and practice expert.
- **Department of Social Services:** Partner in feasibility research and pilot planning.
- **Department of Energy & Environmental Protection:** Partner in feasibility research and pilot planning.
- **Department of Housing:** Partner in feasibility research and pilot planning.
- **Department of Children and Families:** Partner in feasibility research and pilot planning.
- **Office of Early Childhood:** Partner in feasibility research and pilot planning.
- **Office of Chief State's Attorney:** Partner in feasibility research and pilot planning.
- **United Illuminating:** Partner in feasibility research and pilot planning.
- **Eversource:** Partner in feasibility research and pilot planning.

The level of engagement and buy-in from state agencies is strong, up to the Commissioner level, and demonstrates the critical nature of this project and its potential in the state.

Overview of Phase I: Convenings and Pre-Feasibility Research

In June 2017, the Green Bank and its project partners kicked off Phase I of Connecticut's Green and Healthy Homes project. During this phase, GHHI evaluated the efficacy of comprehensive weatherization, energy efficiency and health-based housing interventions in the state that could produce long term energy, health and safety benefits for Connecticut residents. Also during this phase various convenings were held including a stakeholder convening with the partners and over 20 organizations from the health, housing and energy sector held last October, and a funders roundtable with the agencies and philanthropy and representatives from health systems in February. The funders roundtable was a critical first step in identifying foundations to fund Phase II and beyond (see Appendix I for Project Overview for Funders).

The Phase I pre-feasibility research included the identification and assessment of the key opportunities and barriers to the implementation of an integrated health and energy services delivery model in Connecticut and the likelihood of the project's eventual success as well as:

- Research supporting the effects of comprehensive, integrated health, energy and housing interventions compliant with applicable state and local laws including but not limited to: asthma trigger reduction, household injury prevention, lead poisoning

prevention, energy efficiency measures and other home-based environmental health hazard remediation interventions.

- A preliminary analysis of the potential for return on investment, in the form of health care costs savings and energy cost burden reductions as a result of an integrated service delivery model in Connecticut. This is contained in the Needs Justification Statement that was published.
- Opportunities for scaling an integrated health and energy services delivery program model beyond the initial pilot project phase.
- Opportunities for aligning this approach with existing state or local policy priorities, and identifying policies that could be initial barriers to the advancement or coordination of this approach.
- Preliminary research into Connecticut's capacity to implement a statewide program where public and private insurers or other capital investment models could provide funds for activities associated with preventive health education, environmental hazard reduction and energy retrofits in homes. Selected activities would deliver measurable cost-savings to the health care system and/or the investors, using synchronized intervention implementation and data collection mechanisms.

As part of this Phase I initiative, DPH worked with the Department of Social Services to negotiate access through a Memorandum of Understanding to anonymized Medicaid data at the claims level for the Project. DPH then worked with GHHI to establish an agreement under which GHHI has access to the data for the detailed economic analysis to be done in Phase II. This was done in an extraordinarily short period of time (months as opposed to 1-2 years, if ever, in other jurisdictions) given the sensitive nature of the data and all the applicable privacy laws and considerations.

The Phase I Project Pre-Feasibility Research is in draft review and will be published by the end of April. This research and project development conducted by GHHI has formed the basis for the proposed Phase II Pilot Project Design and Implementation Strategy, which will establish a Connecticut Green & Healthy Homes statewide, integrated health, energy and housing services delivery model.

The cost of Phase I was \$74,000 and was paid for by the Green Bank, \$49,000 of which came from federal Department of Energy Solar Energy Technologies Office grant funds and \$25,000 of which came from the Green Bank.

Overview of Phase II: Pilot Project Design and Implementation Strategy

Phase II will include project design for the development and implementation of pilots for the Connecticut Green & Healthy Homes Project that demonstrates the integrated health, energy and housing services, incorporating Medicaid and other innovative financing mechanisms.

GHHI will provide the following technical assistance services as part of Phase II – Pilot Project Design and Implementation Strategy (see Appendix 2 for full proposal):

- A. **Project Design** – investigation of sustainable funding via Medicaid and policy steps needed access this funding stream; investigation of other reimbursement avenues such as hospital community benefit investments, pay for success, and federal funding opportunities; and development of a project design report to communicate broadly to project partners and stakeholders.

- B. **Medicaid Data Analysis and Report** – preparation of medical cost savings and aggregate state return on investment projections associated with home interventions leading to reductions in the treatment of asthma and injuries related to trips and falls; preparation of a report detailing the findings of the Medicaid data analysis and the costs, cost savings, and potential return on investment of project model home interventions.
- C. **Project Work Plan** – manage the development of the detailed project design and work plan in collaboration with the partners with input from key stakeholders; detail the proposed integrated service delivery model, processes and costs including integration of housing and energy programs; develop a data and evaluation plan; identify any workforce development and training areas; and assist in the selection of project sites for Phase III.
- D. **Stakeholder Convenings, Philanthropic Engagement and Project Management** – work with project partners to hold additional convenings including for community stakeholders, state philanthropies working with the Connecticut Council for Philanthropy, hospital and health systems around Community Needs Assessments and hospital community benefits, and workforce development with community health workers, efficiency and health and safety contractors; and provide overall project management for the partners for Phase II.

The cost to engage GHHI as the technical assistance provider for Phase II is \$200,000 broken down into these categories to be executed over a six-month period culminating in Fall, 2018:

A.	Project Design	-	\$35,000
B.	Project Medicaid Data Analysis and Report	-	\$50,000
C.	Project Work Plan	-	\$70,000
D.	Project Convenings, Philanthropic Engagement and Project Management	-	<u>\$45,000</u>
Total		-	\$200,000

While the Green Bank would engage GHHI again on behalf of the Project partners, the Green Bank would not be responsible for funding Phase II. Instead, the partners are securing foundation and other grant funding to cover the full cost of GHHI’s engagement. The intention is to use no Green Bank ratepayer funding for this engagement.

At the conclusion of Phase II, the partners will proceed to Phase III – Pilot Implementation.

Strategic Selection

Due to the nature of the Connecticut Green and Healthy Homes Project, the number of agencies and organizations involved, and the fact that GHHI is the key technical assistance provider on the project bringing their nationally recognized model to the state, Green Bank staff believes that the award of Phase II technical assistant consultant to GHHI fits well within the requirements for a Strategic Selection from the Green Bank Operating Procedures Section XII:

- **Uniqueness:**
 - o GHHI is demonstrably the nation’s leader in integrated approaches to addressing issues in health, safety, housing, and energy. The GHHI approach offers a mature

intervention model with proven return on investment (ROI) for both public and private investors.

- **Strategic Importance:**

- This Project supports the Green Bank's fourth organizational goal, which is to "support affordable and healthy buildings in low-to-moderate income and distressed communities across the state." This initiative to research and identify sustainable funding sources from the health sector for health and safety repairs and remediation which are preventing energy upgrades from being made is discussed in the residential sector chapter of the Comprehensive Plan – Fiscal Years 2017 and 2018¹.

- **Urgency and Timelines:**

- Participating state agencies will need to make any budget requests for FY19 related to the pilot implementation phase of the project in the next two months.
- There is currently an MOU between Department of Social Service and Department of Public Health (DPH), as well as an agreement between DPH and GHHI t on data sharing for Medicaid data. It would take significant time to secure another provider to have access to this sensitive data, holding up the overall project timeline at a critical point of momentum and where state agencies are with planning for the next budget cycle.
- Acting now allows the program to build off of funding while it exists, and the momentum of current partnerships in place.

- **Special Capabilities:**

- GHHI has also demonstrated how to deliver an increase in housing affordability, a better skilled workforce, improved government efficiency, and neighborhood stabilization. With strong support from HUD, DOE, CDC, EPA, the Council on Foundations, and over thirty local and national foundations, GHHI has created a national movement to improve the integrated delivery of housing interventions. GHHI is actively working with 31 designated or onboarding GHHI sites with over 30 additional next generation jurisdictions seeking GHHI assistance and designation. In partnership with HUD, more than 597,000 green & healthy homes interventions have been completed in homes since 2010 using an integrated intervention model where housing interventions are combined with health and energy interventions. GHHI has pioneered the model of unlocking funding from the health sector and has worked with states to obtain necessary waivers from the Center for Medicaid Services. They have also pioneered using pay for success and social impact bonds for healthy housing interventions that lead to better asthma health outcomes, lower energy burdens, and savings in public health expenditures.

Conclusion

Given the unique approach to this research conducted by GHHI and the model they bring, and the Green Bank's interest in assisting low to moderate income residents make energy improvements to their homes, staff believe that approving a partnership with GHHI will further the Green Bank's mission to support affordable and healthy buildings in low-to-moderate

¹ [Comprehensive Plan – Fiscal Years 2017 and 2018](#), pages 64 -67.

income and distressed communities across the state. The cost to engage GHHI as the technical assistance provider for Phase II is \$200,000, which will be covered in its entirety by grant funding. If grant funding is not secured, the project will not move forward – the intention is for no Green Bank ratepayer funding to be used for Phase II. Accordingly, staff recommends that the Board approve this transaction per the resolutions attached.

Resolutions

WHEREAS, the Connecticut Green Bank (“Green Bank”) actively seeks to support the goal of supporting affordable and healthy buildings in low-to-moderate income and distressed communities across the state, as articulated in an organizational goal in its Comprehensive Plan.

WHEREAS, the Connecticut Green and Healthy Homes Project involves the following state agencies and organizations that are aligned in their common goals related to health, housing and energy: Connecticut Green Bank, Department of Public Health, Green & Healthy Homes Initiative, Department of Social Services, Department of Energy & Environmental Protection, Department of Housing, Department of Children and Families, Office of Early Childhood, Office of Chief State’s Attorney, United Illuminating, and Eversource.

WHEREAS, Green and Healthy Homes Initiative (GHHI) has proposed a scope of work for research and project design for Phase II of the Project for \$200,000 to support the Green Bank’s efforts to accelerate energy efficiency and clean energy generation across Connecticut; and

WHEREAS, Project partners are securing foundation and other grant funding in addition to Department of Energy Solar Energy Technologies Office grant funds to cover the full cost of GHHI’s engagement.

WHEREAS, the proposed scope of work as a strategic selection and award pursuant to Green Bank Operating Procedures Section XII pursuant to the rationale in the memorandum to the Board of Directors dated March 27, 2018 setting forth GHHI’s unique opportunity and approach to developing an integrated model to address health, housing, and energy needs in the Connecticut Green and Healthy Homes Project;

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 accept the GHHI proposal, and in so doing obligate the Green Bank in a total amount not to exceed \$200,000 with terms and conditions consistent with the memorandum submitted to the Board of Directors dated March 27, 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 March 27, 2018; 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: Kerry O’Neill, Vice President, Residential Programs



Connecticut Green & Healthy Homes

Overview

Connecticut Green & Healthy Homes is a collective effort, supported by partners in government, energy, health and housing, to plan and implement statewide, comprehensive health, housing and energy interventions to reduce asthma, injury risks, lead exposure, and energy burdens, and result in long term public sector savings.

Green & Healthy Homes Interventions At-a-Glance

The Connecticut Green & Healthy Homes project seeks to research the feasibility of implementing evidence-based housing interventions to address hazards related to asthma, injury, and lead poisoning, as well as improve energy efficiency and reduce energy burdens. The model proposed in this project implements an integrated, whole-house intervention that produces sustainable green, healthy, and safe homes, and has a proven impact on health outcomes, energy usage and related costs.

Overview of Potential Model for Home Health, Safety and Energy Intervention



1 Intake and enrollment



2 Initial Home Visit



3 Health and safety education and home repairs



4 Evaluation of outcomes





Connecticut Green & Healthy Homes Partners and Roles

- **Connecticut Green Bank:** Core convener, funder and partner in feasibility research and pilot planning.
- **Department of Public Health:** Core convener and partner in feasibility research and pilot planning.
- **Green & Healthy Homes Initiative:** Primary researcher, convener and national policy and practice expert.
- **Department of Social Services:** Partner in feasibility research and pilot planning.
- **Department of Energy & Environmental Protection:** Partner in feasibility research and pilot planning.
- **Department of Housing:** Partner in feasibility research and pilot planning.
- **Department of Children and Families:** Partner in feasibility research and pilot planning.
- **Office of Early Childhood:** Partner in feasibility research and pilot planning.
- **Office of Chief State's Attorney:** Partner in feasibility research and pilot planning.
- **United Illuminating:** Partner in feasibility research and pilot planning.
- **Eversource:** Partner in feasibility research and pilot planning.

Progress and Unique Potential in Connecticut

Connecticut is a national leader in residential energy-efficiency services. Leaders in the state's public health, housing and energy sectors recognize the impact of housing quality on health, energy burden, financial stability and quality of life for Connecticut's families and communities.

Connecticut Green & Healthy Homes Project has convened over 30 organizations, including 7 State Agencies, to share insights and explore Connecticut's shared vision for a statewide housing, health and energy services model. Two phases of feasibility research are complete – a Needs Justification and an Asset and Gap Analysis. An Economic Feasibility Analysis is in progress, to estimate the potential for this intervention to produce healthcare cost savings in Connecticut, and develop a model for cross-sector investment. Connecticut Green Bank has funded the initial phases of this work, but sustained support is needed to continue advancing to the pilot phase and beyond.

Connecticut can achieve greater energy affordability and health benefits by leveraging and expanding existing resources to implement a comprehensive, integrated housing assessment and intervention model as well as infusing sustainable new private and public funding sources such as Medicaid. The integrated model being considered in Connecticut coordinates interventions that lower energy costs and increase financial stability for rate-payers, and lower healthcare costs and societal costs related to lead exposure, household injury and asthma - including costs related to special education, criminal justice, care for seniors and lost productivity.

Importantly, these interventions may produce benefits for individuals and families that transcend improved health or lower utility bills, including mental health and wellbeing, improved school attendance and better educational outcomes for children, and better work attendance and career advancement for adults, improved property values that lead to wealth retention and asset-building, and foreclosure and eviction prevention.

Strategic, leveraged investments from philanthropic, private, and public funders can ensure the success and impact of this model. We are seeking short-term support to complete the final feasibility analysis work and advance to pilot design and implementation, as well as long-term, sustainable support to help make Connecticut a leader in providing healthy, safe, energy-efficient and affordable housing to residents as a platform for improving lives.

Questions? Contact us.

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Connecticut Green Bank
State of Connecticut Green & Healthy Homes Project
GHHI Technical Assistance Contract Scope of Services –
Phase II - Project Design and Implementation Strategy

I. Green & Healthy Homes Connecticut Project Design and Implementation Strategy for Connecticut Green & Healthy Homes Project Pilot

With Connecticut Green Bank funding, GHHI will oversee the Project Design for the development and implementation of a Connecticut Green & Healthy Homes Project pilot, a multi-site, multi-year pilot that works with existing providers to implement the integrated health, energy and housing services delivery model and which incorporates Medicaid and other innovative financing mechanisms. GHHI will provide the following technical assistance services as part of Phase II – Project Design and Implementation Strategy:

A. Project Design

1. Investigation of Sustainable Funding Via Medicaid

Conduct research including the identification and assessment of the key opportunities and barriers to the implementation of an integrated health and energy services delivery model in Connecticut and the likelihood of the project’s eventual success. Conduct research on and provide guidance to Connecticut Green Bank and project partners on:

- a. The possibility and likelihood of Medicaid reimbursement for an initial project pilot, including health and energy efficiency home improvements, and the opportunities for a longer-term model;
 - i. Payment mechanism feasibility through various payment mechanisms which may utilize public funds from Connecticut’s HUSKY program (including an assessment of the feasibility of reimbursement for these proposed interventions through the State Medicaid administration structure). Payment mechanism feasibility for other sources, which may require federal approval for matching dollars in their use for a pilot or full program operations;
 - ii. The technical and economic feasibility of the agreed upon prescriptive interventions including but not limited to: asthma trigger reduction, household injury prevention, energy efficiency measures and other home-based environmental health hazard remediation interventions having the desired benefits in terms of reductions in asthma episodes, asthma related doctor visits, hospitalizations and emergency room visits, reductions in household injuries and other illnesses, reductions in medical and energy costs, long term value created as a result of increased earning potential, and/or other positive outcomes;

- iii. Operational feasibility of scaling an integrated health and energy services delivery program model to a statewide model;
 - iv. Socio-political feasibility of any potential roadblocks in the ecosystem of stakeholders including local, regional, or federal resistance to the methodology or end goals of the project.
- b. Opportunity to utilize CHIP health services state plan amendment or other innovative investment of public healthcare dollars as part of the Project pilot.
 - c. Project linkage and possible integration with Connecticut State Medicaid, Medicaid reform programs in the state and other health care initiatives.
 - d. Other medical reimbursement resources from the health care sector and their possible applicability – i.e.-Hospital Community Benefit Investments, Readmission Reduction Programs, etc.
 - e. Conduct research to identify and assess other possible funding mechanisms and project resources for preventive health-based housing interventions to reduce home-based environmental health hazards - such as Pay For Success, Social Impact Bonds, Title V funding, Aging in Place Initiatives and other federal funding opportunities for health innovation that could be incorporated into the project design model.
 - f. Identify possible opportunities to leverage Connecticut Green Bank’s innovative approach to growing private capital investment in clean energy projects, to support and advance an integrated health and energy service delivery platform.
 - g. An assessment of current GHHI sites in Connecticut and elsewhere, as a basis for informing the development of a statewide delivery model.
 - h. Research to further assess Connecticut’s capacity to implement a statewide program under which public and private insurers or other innovative capital investment model could provide funds for activities associated with preventive health education and environmental hazard and energy inefficiency reductions in the home, to deliver measurable cost-savings to the health care system and/or the investors, using synchronized intervention implementation and data collection mechanisms.
 - i. Conduct additional research as needed on existing health, safety, housing, and energy efficiency programs in Connecticut and make recommendations for inclusion of the programs in a project pilot based upon their available funding; services offered; geographic target areas; client eligibility requirements, compatibility of client enrollment and referral processes as it pertains to

coordinating energy, health, and housing programs; contractor accreditation and certification requirements; and contractor and inspector training capacity among other key factors.

- j. Conduct additional research as needed on the data collected by health, safety, housing, and energy efficiency programs intended to identify opportunities to create consistency in data collected to support an integrated health, energy, and housing delivery model.
 - k. Research, in cooperation with Connecticut Green Bank and project partners, additional funding resources that could be leveraged and integrated with a project pilot and longer term.
 - l. Identify and include any consultants to add to the robust analysis of the opportunities for this approach in the context of the project and Connecticut Green Bank's work as necessary and agreed upon by the parties.
2. Prepare Project Design Report
Prepare Project Design Outline Report, including an executive summary, project model outline, narrative, charts, data tables, maps, diagrams, and other collateral communicating the determination of feasibility, medical and energy cost savings projections, research analysis, financing options and opportunities, key issues to be addressed (including workforce capacity and development, potential investor communication, and community input on Project design, implementation and evaluation), key community stakeholder roles and full documentation of GHHI's justification of its determination by the above listed categories.

B. Project Medicaid Data Analysis and Report

1. Project Medicaid Data Analysis and Report
GHHI will conduct research on and provide guidance to Connecticut Green Bank and project partners on:
 - a. Collect medical cost data and energy and housing intervention cost data provided by State of Connecticut agencies;
 - b. Prepare medical cost savings projections based on Medicaid data, and aggregate return on investment calculations for the State of Connecticut for in-home asthma resident education and combined energy efficiency and asthma trigger reduction housing assessments and interventions;
 - c. Prepare medical cost savings projections and aggregate return on investment calculations for State of Connecticut for household injury prevention and other healthy homes housing assessments and interventions to reduce home-based environmental health hazards;

- d. The economic feasibility of the intervention operation on a per unit basis and at scale based on projections of medical and energy cost-savings derived from medical cost data and housing and energy intervention cost estimates provided by the state agencies, utilities and other partners;
- e. Prepare a Project Medicaid Data Analysis and Report that details the Connecticut Medicaid data research and analysis findings, calculations and determination of costs, feasibility, cost savings projections, potential return on investment from project model interventions, and key considerations and potential issues to be addressed.

2. Additional Research

Additional research as requested by Connecticut Green Bank and project partners, and agreed upon by the parties.

C. **Project Work Plan**

1. Manage the Connecticut Green & Healthy Homes Project Design and Work Plan Development

GHHI will draft a Project Design and Work Plan collaboratively with Connecticut Green Bank, Department of Social Services Connecticut Medicaid Office, and Connecticut Department of Public Health, and in consultation with Connecticut Departments of Energy and Environmental Protection, Housing, Children and Families, Offices of Early Childhood and the State's Attorney, the utility companies, and other key agencies and stakeholders in the State through a series of working sessions. The Project Design will outline the components that will be developed to implement a model program at selected Connecticut Green & Healthy Homes Project pilot Sites under which weatherization services are integrated with health education and environmental hazard and asthma trigger reduction, designed to benefit the person with asthma and other health conditions to deliver measurable cost-savings to the health care system and improve energy efficiency, using synchronized intervention implementation and data collection mechanisms.

The Project Design will include a Work Plan and Evaluation Plan for the State of Connecticut Project pilot will be designed to test that hypothesis, which if substantiated by Project pilot data and evaluation, would incentivize the State to implement a statewide program that funds the proposed evidence-based resident education, environmental assessment and healthy homes housing interventions in coordination with publicly-funded energy efficiency programs as part of a sustainable intervention strategy, and is sustainably funded using a mix of philanthropic, private and public investment. The detailed Work Plan will describe the project mission, strategy, goals/objectives, action items, roles and responsibilities, assignment, model, timeline, budget and projected health and energy returns on investments.

2. Proposed Service Delivery Model, Processes and Costs

GHHI will lead the effort to refine and document the proposed intervention delivery process and related costs of the health care, energy and housing service providers to prepare for new client intake/referral processes and increases in production services to meet the Project pilot demands, specific client eligibility requirements and the energy and healthy homes intervention measures. A report will be produced that includes service delivery process maps (current and future estimate) that highlight data collection nodes, an inventory and budget of additional resources required to accommodate any increased unit production as a result of the Project pilot, and an inventory of any new partners needed to execute the pilot effectively. GHHI will develop a Connecticut Green & Healthy Homes model for the Project pilot Implementation Phase. The Project pilot model will be described in the Work Plan and will be specific to the State of Connecticut and the proposed Project pilot sites (if selected in advance) and will serve as the framework for the full statewide model program implementation. The Project Design outline and the detailed Work Plan will include the following components:

- Client referral and intake: GHHI will lead the effort to design how low-to-moderate income households, including Medicaid patients, will be referred to the Project pilot's service providers and how in-home resident education and case management services will be efficiently coordinated with utility-run energy-efficiency programs and other housing intervention services. GHHI will also work with the medical and case management resources of the various healthcare entities on the design and utilization of various healthy homes educational materials and more coordinated medical case management strategies for the pilot and the future statewide model. Include project linkage and possible integration with Connecticut State Medicaid and other wrap around services where appropriate such as Aging in Place, mental health services and homelessness prevention services among other programs and services where appropriate.
- Property owner and resident (occupant) education
- Comprehensive housing environmental assessment and energy audit (including the possible utilization of the Connecticut DPH developed Healthy Homes Checklist to assess environmental hazards in the home)
- Comprehensive Scope of Work
- Housing intervention strategies and integrated models; including strategies for various types of housing (i.e.-single family, multi-family, rental, owner occupied) and the utilization of Connecticut resource braiding tools
- Post intervention inspections, quality control mechanisms and the securing of all necessary permits and inspections as required by law
- Payment schedules and processes

- Data platforms and sharing mechanisms, pre- and post-data collection methodologies, planned data analysis and evaluation
- Connecticut Green & Healthy Homes Project pilot Outcome Broker (s) position description and roles
- Identifying or designing the required training, certification and accreditation of project personnel

The Project Design will include linkage and possible integration with Connecticut Medicaid, and other health care and energy-related programs and funding where appropriate, plan for workforce development and philanthropic and other potential investor resources, and community input related to Project design, implementation, evaluation and other activities.

3. Connecticut Green & Healthy Homes Project Economic and Financial Models
GHHI will develop an economic model for the Project pilot and conduct a briefing to Connecticut Green Bank, project partners and other key stakeholders to communicate the model and proposed processes. GHHI will provide projections of pilot costs, cost savings, and return on investment for the comprehensive, integrated pilot and statewide models. GHHI will also research and conduct critical analysis of potential innovative funding mechanisms from the energy, health and housing sectors and provide recommendations to the Connecticut Green Bank and project partners on what funding sources are viable in Connecticut and should be further developed or explored. Funding sources to be researched for possible integration with energy and housing intervention programs include: Medicaid investment, via hospital community benefits, value-based purchasing or another mechanism, private and philanthropic capital investment, Pay For Success, Social Impact Bonds, hospital community benefits, and leveraging of other federal funding opportunities for health innovation that could be incorporated into the project design model, etc.
4. Integration of Housing and Energy Programs
GHHI will assist in assessing the capacity of proposed housing intervention programs, including Connecticut's existing energy efficiency programs, to be integrated as part of the Project pilot and will develop a Project pilot design and Work Plan that reflects available capacity for in-home resident education, environmental assessment-energy audit, housing interventions, other leverage resources and client (patient) applicant pool. The Work Plan will provide a detailed description of the systems flow process for the Project from initial client referral to final clearance inspection and evaluation.
5. Inventory of Potential Leverage Partners and Resources
GHHI will assist with the development of an updated inventory of potential public and private leverage funding resources and partners in energy, health and housing that could be included in the Project pilot and incorporate those resources into the Project Design and Work Plan. Partners may include government, community-based organizations,

philanthropies and others who may provide in-kind services or direct leverage support with activities including workforce development and training, housing assessment and intervention, in-home resident education, philanthropic outreach, project administration and evaluation, etc.

6. Data and Evaluation Plan

GHHI will assemble an advisory panel of research leaders to customize the Project pilot Evaluation Plan for the project. A set of recommendations will be produced that details proposed key indicators, evaluation and data collection methodologies, data sets and partners currently engaged, prospective evaluation partners, a data collection and evaluation gap analysis, and an assessment of the level of effort required to customize the evaluation model for the specific Project pilot and to produce consistent, reliable data tracking for the Project pilot agency participants. Dashboard project data indicators will include: resident health status, home based hazards, unit production, health and safety outcomes, energy outcomes, workforce development measures, interventions and costs, program cost efficiencies and Connecticut Green & Healthy Homes standard indicators.

Other data and evaluation indicators may be developed to study the effect of the green and health housing intervention measures short and long-term impact on juvenile delinquency and area crime rates as pertains reductions in lead poisoned children as well as the reduction in general substandard housing resident populations. Data indicators will also measure the impact of the interventions on all occupants in the household and not exclusively on the child, senior or other point of referral entry into the program. As requested by Connecticut Green Bank, Connecticut Department of Housing, Connecticut Department of Public Health, and Connecticut Medicaid Office, propose other indicators for data collection and analysis by the project. GHHI may contract services from an actuarial firm or other consultant depending upon the required services necessary and funding available to support this deliverable.

7. Workforce Development and Training

GHHI will identify or design the required training, certification and accreditation of project personnel, including community health workers and health and safety contractors (among others) to perform key functions such as: in-home resident education, medical case management, environmental assessment-energy audit and housing interventions. GHHI will work with Connecticut Green Bank and the project partners to engage key stakeholders in workforce development and career advancement planning, both to ensure Connecticut's capacity to provide the proposed evidence-based housing intervention related services statewide, and to explore the potential of a statewide model to improve access to skilled career opportunities for Connecticut's residents including residents of low income communities.

8. Produce Materials to Inform Stakeholders

GHHI will provide example work products (e.g., sample flow charts, forms, assessment, education and intervention tools, reporting templates) from national best practices so that all parties understand the steps associated with the Project pilot Implementation Phase

and can begin the process of customizing Project forms and materials as appropriate to each of the proposed pilot jurisdiction's particular processes and needs prior to the Project pilot Implementation commencement. GHHI will deliver working meetings with Connecticut Green Bank and key weatherization, housing and health stakeholders to develop and present the timeline, example work products and templates in preparation for the subsequent Project pilot Implementation Phase.

9. Create State of Connecticut Green & Healthy Homes Integrated Housing Standard
Develop a State of Connecticut health, energy and housing standard for units that are receiving comprehensive housing assessments and housing interventions through the Connecticut Green & Healthy Homes Project model. Will include consideration of adoption of standards into various housing codes and/or property maintenance codes.
10. Connecticut Green & Healthy Homes Project Pilot Site Selection
GHHI will assist with the identification of potential Pilot Project cities in the state of Connecticut for the Phase III Project Pilot Implementation Phase as requested by Connecticut Green Bank and its Project partners.
11. Additional Project Design Work
Additional project design work as requested by Connecticut Green Bank and agreed upon by the parties.

D. Stakeholder Convenings, Philanthropic Engagement and Project Management

1. Project Convenings and Philanthropic Engagement
As requested by Connecticut Green Bank, GHHI will meet with and consult with stakeholders from Connecticut Department of Public Health, Connecticut Department of Social Services HUSKY Program, relevant health agencies, and weatherization, utility-run energy efficiency programs and other housing intervention providers in discussions about the Project Design and the future statewide model implementation. GHHI will work with city, county and/or state procurement and legal officials to review regulatory, statutory and programmatic requirements related to the implementation of the Project pilot in the State of Connecticut. GHHI will assist Connecticut Green Bank in conducting additional convenings with energy, health and housing partners to explore new cross sector partnerships and innovative funding opportunities.
 - a. GHHI will work with Connecticut Green Bank and other project partners to convene key community stakeholders, and develop a plan for eliciting and including key stakeholder and community input into the Project design, implementation, evaluation, investment and other activities.
 - b. GHHI will work with the Connecticut Green Bank, Connecticut Council for Philanthropy, project partners and other key stakeholders to effectively communicate the goals of Project Design, Work Plan and implementation to the philanthropic community, in order to educate these stakeholders on the potentially

transformative impact of the proposed models, and to increase philanthropic investment and support of this work.

- c. GHHI will work with Connecticut Green Bank and other project partners to explore other private sector investment and support for the Project.
- d. GHHI will work with Connecticut Green Bank and other project partners to convene partners and develop a plan for eliciting and incorporating feedback on workforce development to increase the capacity of housing-related health and energy providers, including community health workers, health and safety contractors and others.
- e. GHHI will work with the Connecticut Green Bank and other project partners to convene health systems and hospitals to elicit and incorporate feedback on Community Needs Assessments and Hospital Community Benefits investment in housing and health.
- f. GHHI will work with Connecticut Green Bank and key partners to organize and conduct a stakeholders meeting to review the Project findings and Project Design elements to stakeholders.

2. Phase II Project Management

GHHI, in consultation with Connecticut Green Bank and other key project partners, will manage all phases of the project to ensure that deliverables, work products and project objectives are achieved within the designated timeframes and within the project budget.

II. Project Design and Work Plan Project Deliverables and Timelines

The following project deliverables and timeline is based upon a 180-day project implementation period, culminating in the Fall, 2018.

A. Project Administration

1. Bi monthly Project Check-In Calls with Green Bank (every two weeks)
2. Monthly progress updates. (due the 10th of each month)
3. Other reports as requested by the Green Bank Project Manager. (as directed by Green Bank)

B. Project Medicaid Data Analysis and Report

1. Obtain access, in partnership with Connecticut Department of Public Health and Connecticut Department of Social Services to an extract of Connecticut HUSKY Program Medicaid/CHIP data which allows for the analysis of high-utilizer

asthma, unintentional injury and elevated blood lead patients. (within 15 days of contract execution)

2. Construct and complete analysis of Connecticut HUSKY program data, to determine healthcare utilization rates, apply evidence-based treatment effects associated with proposed Project interventions on a Connecticut-specific population, and project potential cost savings, value-created and Return on Investment for the state of Connecticut as a result of implementation of the proposed model. (within 60 days of contract execution)
3. Draft and submit a report detailing analysis findings, and making recommendations for inclusion/targeting of high utilizer Medicaid populations in the proposed intervention, based upon the economic analysis. (within 90 days of contract execution)

C. Project Convenings and Reporting

1. Plan and implement a Workforce Development Convening, which gathers key stakeholders to discuss and plan the development of workforce capacity in the Community Health Worker, Health and Safety Contractor, and/or other sectors, to meet the implementation needs of a broad statewide model for housing, health and energy services. (within 90 days of contract execution)
2. Plan and implement a Health System/Hospital Convening, which gathers key stakeholders to discuss partner needs and goals related to Community Needs Assessments, setting priorities for Hospital Community Benefit investments, and partnerships to improve housing conditions. (within 90 days of contract execution)
3. Plan and implement one or more meetings to engage Connecticut's philanthropic community in the Project, and educate key stakeholders in this sector regarding the Project's potential for transformative impact. (within 150 days of contract execution)
4. Complete Final Work Plan and implement a broad stakeholder convening to share and elicit feedback regarding the findings of the Pre-Feasibility, Project Design and Work Plan Reports. (within 180 days of contract execution)

D. Project Work Plans

1. Draft a Project Pilot Work Plan, incorporating feedback from Convenings and other meetings with key stakeholders, that makes recommendations related to participant referral/recruitment and targeting, intervention, evaluation, pilot siting and other considerations. (within 120 days of execution)

2. Draft and submit a workforce development activities work plan, incorporating findings from Workforce Development Convening. (within 60 days of the Convening)
3. Draft and submit a philanthropic education/engagement plan. (within 30 days of contract execution)
4. Draft and submit a health system/health partner engagement activities plan, incorporating findings from the Health System/Hospital Convening. (within 60 days of the Convening)

III. Budget - Phase II Project Design Research and Work Plan Cost: \$200,000

A. Project Design	-	\$35,000
B. Project Medicaid Data Analysis and Report	-	\$50,000
C. Project Work Plan	-	\$70,000
D. Project Convenings, Philanthropic Engagement and Project Management	-	<u>\$45,000</u>
Total	-	\$200,000

IV. Project Staffing Plan

GHHI is prepared and has the capacity to start work immediately upon contract award to successfully meet the objectives and deliverables outlined for the Phase II Scope of Services. GHHI’s Project Management Team for this grant will be led by Ruth Ann Norton, President and CEO (Project Director), Catherine Klinger, Technical Assistance and Social Innovation Specialist (Project Manager), Wes Stewart, Vice President for Technical Assistance and Legal Services, and Michael McKnight, Vice President for Policy and Innovation. Ms. Norton will be actively engaged in partnership development, training, leadership and project execution as well as responsibility for overall project design and for ongoing project management to achieve all grant deliverables. Catherine Klinger will be responsible for the day to day execution of all aspects of the project. Key GHHI project staff for the project include:

RUTH ANN NORTON

President & CEO

Ruth Ann Norton serves as President & CEO of the Green & Healthy Homes Initiative (GHHI), a national nonprofit founded in 1986 dedicated to the elimination of childhood lead poisoning and the creation of healthy, safe and energy efficient housing for America’s children. A dedicated advocate for healthy housing, she broadened the mission of the organization, formerly the Coalition to End Childhood Lead Poisoning, by designing a groundbreaking national program built on a framework of cross-sector collaboration to efficiently deliver green, healthy and safe homes in communities throughout the United States. One of the nation’s leading experts on healthy housing, Ms. Norton led efforts to reduce childhood lead poisoning by 98% in the

state of Maryland. She also developed and implemented one of the nation's first healthy homes programs to address the multiple environmental health and safety hazards in low- and very low-income housing for pregnant women. In addition, Ms. Norton has authored 30 pieces of healthy housing legislation and has served as manager, senior advisor or as the principal or co-principal for numerous federally funded grant programs to combat unhealthy housing. Ms. Norton serves as senior advisor to government and philanthropy and has directly raised more than \$325 million from the public and private sector to advance healthy housing.

In partnership with the Council on Foundations, the U.S. Department of Housing and Urban Development, the U.S. Centers for Disease Control and Prevention, the U.S. Department of Energy and the U.S. Conference of Mayors, Ms. Norton designed the national Green & Healthy Homes Initiative to cost effectively integrate energy efficiency and weatherization investments with lead hazard control and health and safety efforts. GHHI currently operates in over 30 U.S. cities. In 2014, Ms. Norton led GHHI's entry into the Social Impact Bond/Pay for Success field to advance health-based housing and demonstrate the outcomes of evidence-based practices to change Medicaid policies and enhance broad health care and other private sector financing support. She also provides a leading voice to articulate the significant health and social benefits of energy efficient investments through her senior advisory role with Energy Efficiency for All, her support and guidance in the development of NEWHAB, and her role as a Board member for Groundswell.

Ms. Norton served as a federally appointed liaison to the CDC's Advisory Committee on Childhood Lead Poisoning Prevention and served as an expert panel member for HUD's Healthy Homes Guidance Manual. She serves on the Executive Committee of the Maryland Asthma Control Council. Formerly she served on the Maryland Medicaid Advisory Committee, the Sustainability Commission of Baltimore as well as the Maryland Lead Poisoning Prevention Commission. She serves on the steering committee for Network Energy Water and Health in Affordable Housing and is a Healthy Homes Technical Advisor for the National Environmental Health Association. Ms. Norton was awarded the prestigious Robert Wood Johnson Foundation Community Health Leader (2005) and a Weinberg Foundation Fellow (2003) and was named as one of Maryland's Top 100 Women by The Daily Record. In 2016, she received the Tony Woods Award from the Building Performance Industry.

GHHI's President serves as an advisor to the U.S. Department of Housing and Urban Development, U.S. Conference of Mayors, the National Grade Level Reading Campaign, the Bloomberg School of Public Health at Johns Hopkins, National League of Cities, the Council on Foundations, Maryland Department of Health, New York State, and the State of Rhode Island among many other organizations and foundations. Ms. Norton, a Robert Wood Johnson Foundation Community Health Leader (2005) and a Weinberg Foundation Fellow (2003), also has served as the Chair of the Built Environment for the Sustainability Commission of Baltimore and was named as one of Maryland's Top 100 Women by The Daily Record.

G. WESLEY STEWART, Esq.

Vice President of Technical Assistance and Legal Services

Wes Stewart is the senior advisor for Standards & Practices at the GHHI. In his role, Mr. Stewart oversees and provides consultation on the GHHI integrated health, energy and housing intervention model, GHHI site development and technical program management in 30 jurisdictions across the nation. He also serves as the regulatory affairs expert and chief training provider on the implementation of multiple federal grant programs associated with GHHI. He has also provided technical assistance to other lead hazard reduction, Healthy Homes, and weatherization/energy efficiency programs in Arizona, Delaware, Florida, Georgia, Maine, Maryland, Michigan, Missouri, Mississippi, Nebraska, New York, Ohio, Pennsylvania, Rhode Island, Texas, Utah, Virginia, Wisconsin, and Washington, DC among others. He has also worked on the NYSERDA energy and health integration feasibility research project in New York State as well as other project and site work with other GHHI cities and states.

During his more than 20 years with GHHI, Mr. Stewart has provided trainings extensively throughout the United States on healthy homes, the integration of health, energy and housing, the Maryland Reduction of Lead Risk in Housing Law, federal Title X, the EPA Renovation, Repair, and Painting Rule, Lead and Healthy Homes program design, and GHHI. Mr. Stewart has served as Program Manager for GHHI on six HUD funded Lead Elimination Action Program (LEAP) and Healthy Homes Grant Programs, its weatherization and energy efficiency programs, and its housing, family advocacy and legal services programs. Prior to joining GHHI in 1996, he was an attorney in private practice in Baltimore, Maryland.

MICHAEL MCKNIGHT

Vice President of Policy and Innovation

Michael McKnight heads policy analysis, advocacy and social innovation and leads GHHI's cohort of twenty asthma Pay for Success and innovative health care financing projects. He also delivers trainings and provides technical assistance on healthy policy and integrating healthy homes services with clinical care. In this role, he has overseen data analysis, cost benefit analysis, construction of financial models, delivery of technical assistance, and analysis utilizing actuarial models. Mr. McKnight also has extensive experience reviewing policies that impact payment models and reimbursement of environmental services in healthcare, including providing information for state and federal public health policy makers. He has been project manager of the \$1.1 million Cooperative Agreement from the Corporation for National and Community Service's Social Innovation Fund to provide technical assistance to asthma projects in five states. He also has been project manager for a \$1.83 million grant from the Robert Wood Johnson Foundation to implement innovative financing models for comprehensive asthma programs, and a \$1.77 million cooperative agreement from the Social Innovation fund to advancing Pay for Success financing models for projects that address social determinants of health. He holds a degree in biomedical engineering from Harvard University.

CATHERINE KLINGER

Technical Assistance and Social Innovation Specialist

Catherine Klinger joined GHHI as a Technical Assistance Specialist and currently works on the NYSERDA energy and health integration feasibility research project in New York State as well as other project and site work with other GHHI cities and states. Ms. Klinger has 10 years of experience in work on cross sector collaborations between health and energy and has been

involved in a number of innovative projects in that sphere. She is a former program manager of the Philadelphia Lead and Healthy Homes programs at the City of Philadelphia Department of Health. She also served as the site lead for the development of the GHHI Philadelphia site and played a key role in the integration of lead and healthy homes interventions with leverage-funded weatherization and energy efficiency interventions. She is an Adjunct Instructor at University of Pennsylvania Center for Public Health Initiatives and Thomas Jefferson University, and was formerly the Lead Poisoning Prevention Programs Manager at the Partnership for Maternal and Child Health of Northern New Jersey. Ms. Klinger has a Masters of Public Health from Drexel University and a Bachelor of Science degree from St. Joseph's University.

ANDREW OLSON

Social Innovation Specialist

Andrew Olson provides technical assistance on identifying healthcare savings to PFS project stakeholders and works with the healthcare data team to provide capacity to organizations around the country who are exploring the feasibility of Pay for Success (PFS) and other innovative models to solve social problems. Mr. Olson's work in social innovation focuses on the strategy, data analysis, organizational design and financial engineering of social innovation programs. He joined GHHI from the Advisory Board Company, where he led a product portfolio working at the intersection of healthcare and technology. Prior, he established a socially oriented consulting firm with the George Washington University School of Business that focused on economic development leadership and was advised by former and current partners from Booz Allen Hamilton as well as McKinsey and Company. Andrew holds four academic degrees and two certifications including credentials in philosophy, psychology, political science, foreign policy, international affairs, international economic relations, business intelligence, finance and business management.

WILL KLEIN

Social Innovation Specialist

Will Klein works with GHHI partner organizations in cities across the U.S. to help them access innovative health care funding to pay for housing and health projects that address the underlying triggers of asthma, and remediate hazards that cause lead poisoning, and household injury. Previously, Mr. Klein worked for Solar Mosaic, where he ran online marketing to help drive the first \$10 million ever crowd-invested in community solar projects and then served as the company's business analyst in its transition to becoming the largest residential solar lender in the country, originating over \$1 billion annually. Additionally, he spent an AmeriCorps service year helping local governments and non-profits take advantage of Pacific Gas & Electric's energy-efficiency programs. Mr. Klein holds a BA in Nature and Culture from the University of California, Davis and a MEM from the Yale School of Forestry and Environmental Studies, where he focused his studies at the intersections of affordable housing, public health, and the environment.

JAMAL LEWIS

Technical Assistance Specialist

Jamal Lewis has served as an Environmental Health and Policy Fellow at GHHI since 2016, where he is involved in policy, research, drafting and program analysis. At GHHI, Mr. Lewis works with research teams, local partnering agencies and national initiatives, including Energy Efficiency For All, to support projects that integrate housing, energy, and health resources to improve outcomes. Currently pursuing his Master of Public Health Degree at Columbia University, he is dedicated to improving the health and well-being of vulnerable populations through fostering a healthier environment and implementing systems change. Mr. Lewis has an undergraduate degree from the University of Pennsylvania.

VICTOR ARTHUR, CPA

Controller

Victor Arthur joined GHHI in January 2015 as its Controller. In this role, he oversees GHHI's administrative, financial, accounting, and risk management operations including financial reporting. He is a Certified Public Accountant (CPA) and a Certified QuickBooks ProAdvisor with more than 10 years of progressive finance and corporate accounting experience. As a seasoned finance and accounting professional with an entrepreneurial mind, Mr. Arthur has been instrumental in helping businesses to develop strong financial reporting systems with emphasis on value add and innovative processes. Previously, he worked as accounting supervisor for Laureate Education and as a senior accountant for Bravo Health. Mr. Arthur is currently working towards a PhD in management with a specialization in finance. He holds MBA and MS degrees from the University of Maryland.

Organizational Experience

The Green & Healthy Homes Initiative is led by its President and CEO, Ruth Ann Norton who has served in this role since 1993. Ms. Norton, an economist by training is a well-known and effective advocate and leader in the field of green and healthy housing. She is credited as having helped to bring national focus to the health and societal benefits of energy efficiency investments and in fostering integrated housing intervention models. The organization employs 49 professionals, working in offices across the United States (District of Columbia, Maryland, Maine, Mississippi, Rhode Island and California).

Launched in 1986 as Parents Against Lead, and known for two decades as the Coalition to End Childhood Lead Poisoning, the Green & Healthy Homes Initiative utilizes a holistic approach to housing rehabilitation that aligns and coordinates resources to deliver healthier housing and healthier communities. Known for its innovation and common-sense approach, GHHI was launched to more effectively and efficiently integrate housing interventions to improve health, energy, economic and social outcomes and build new avenues for funding what works -- at scale. GHHI is currently working in over 35 cities, counties and states as well as with over 20 health care systems in the US on innovative health care financing projects. For over thirty years, GHHI has played a strong leadership role in the reduction of childhood lead poisoning, the advancement of healthier housing and changing standards for federal agencies and building new avenues for funding -- including significant changes in funding for the integrated standard of healthy, safe and energy efficient homes. GHHI has successfully helped in the adoption of lead and healthy homes policies and best practices that have been adopted into law and is leading the



national effort to have Medicaid invest in healthier, safer and more energy efficient homes that have proven to improve health. GHHI has strongly influenced HUD and other federal agencies to integrate energy efficiency and healthy housing interventions with other housing rehabilitation programs. The adoption of the GHHI comprehensive, integrated approach for HUD funded programs resulted in 597,000 green & healthy homes units that were produced between FY2010 and FY2016.

GHHI has a demonstrated track record as a national convener of key stakeholders to advance new standards and innovations in the green and healthy homes field. GHHI has worked since 2009 to increase the integration of the fields of housing, health and energy at the federal, state and local level. The GHHI model is designed to cut across silos and work on a collaborative platform for collective impact, by building capacity at the local level and providing recommendations from the field to influence national stakeholders, work and investments. GHHI builds capacity through establishing local leadership, shared data, holistic interventions and effective partnerships. At the national level, GHHI seeks out strategic NGO and federal partners that can advance the policy objectives or cross sector systems change.

GHHI partners with a diverse array of partners and has received a number of awards for its partnership and leadership work including: National Partnership and Achievements Awards from HUD's Office of Lead Hazard Control and Healthy Homes, the EPA's National Environmental Leadership in Asthma Management Award, Building Performance Institute and the Advocacy Award from the American Academy of Pediatrics, Maryland Chapter for its working in developing and coordinating impactful programs and partnerships. GHHI has twice been awarded the prestigious "Standards of Excellence" by the Maryland Association of Nonprofit Organizations for its management, financial policies and operations. GHHI is an active and supportive member of partnerships and coalitions that work collectively to advance change in the energy, housing and environmental health sectors such as: National Housing Conference, Green Affordable Housing Coalition, the Childhood Asthma Leadership Coalition, the National Safe and Healthy Housing Coalition, Energy Efficiency For All, and NEWHAB among others.

GHHI works with federal partners at HUD, DOE, EPA, and CDC as well as numerous other partners to advance its systems change agenda including; US Conference of Mayors, National League of Cities, Council on Foundations, Urban Institute, Johns Hopkins Bloomberg School of Public Health, Harvard School of Public Health, Columbia University Mailman School of Public Health, National Environmental Health Association (NEHA), Federal Interagency Healthy Homes Work Group, American Lung Association, APHA, Building Performance Institute (BPI), National Community Action Foundation, National Center for Healthy Housing, NASCSP, WegoWise, Habitat for Humanity, NeighborWorks America, Rebuilding Together, Enterprise Green Communities, National Academy of Public Administration, Annie E. Casey Foundation, and W.K. Kellogg Foundation. The Funders Network for Smart Growth and Livable Communities, Grade Level Reading Campaign, National League of Cities and Third Sector Capital Partners as well as more than 28 local and national foundations.

GHHI has long been recognized as an accountable, action-oriented and innovative organization. With broad and diverse partnerships, GHHI has a clear mission, effective programs and a strong

history of successful advocacy. GHHI also has a proven track record in helping cities and states transform often dysfunctional housing intervention models into efficient and impactful GHHI programs. Key highlights of the organization's recent work include:

- * Fostered the production of 597,000 green and healthy homes units in the United States since 2010 in partnership with HUD;
- * Conducting 20 Pay For Success and Innovative Healthcare Financing Projects across the country, to prove out the innovative GHHI asthma intervention model and secure private sector funding support to address a public health resource gap.
- * Expansion of GHHI model to 30 sites in the US;
- * Helped coordinate the National Lead Summit in December 2016 in Washington, DC of 250 lead stakeholders as well as releasing GHHI's Strategic Plan to End Childhood Lead Poisoning - A Blueprint for Action of key actions needed to more aggressively set the nation on a defined path to eliminate childhood lead poisoning;
- * Jointly developed the Healthy Homes Evaluator Micro-Credential in partnership with the Building Performance Institute (BPI) to cross train and accredit thousands of energy auditors to be able to perform environmental assessment for home-based environmental health hazards and develop comprehensive green and healthy homes scopes of work;
- * To foster the adoption of the GHHI integrated model, designed green and healthy policy priorities that have been adopted across HUD programs and included within all HUD competitive funding opportunities. Applicants who adopt the GHHI influenced policy priorities will benefit from bonus points which will provide a competitive advantage;
- * Initiated meetings with State Medicaid Offices in Maryland, Michigan, New York, Rhode Island, Utah and Texas among others to advocate for in-home health education and health-based housing assessments and interventions to be covered medical costs for Medicaid recipients that is helping lead the field;
- * The State of Maryland Department of Housing and Community Development recently adopted GHHI's Comprehensive Assessment Form for use by their grantees and contractors completing DHCD weatherization programs;
- * GHHI has emerged as a driver of policy innovation and a stronger national thought leader through its research and publishing of papers on the intersection of health, energy and housing and on innovative funding streams to finance those interventions. In August 2016, GHHI released its peer reviewed "Understanding the Multiple Benefits of Energy Efficient Investments" at the American Council for an Energy-Efficient Economy" (ACEEE) summer study conference. GHHI's contributions to the field include among others the following other key recent publications and concept papers: *Pay For Success for Lead Poisoning Prevention Concept Paper; Non-Energy Benefits, the Clean Power Plan, and Policy Implications for Multifamily Housing; and Determining the Feasibility of Pay for Success projects: An Objective Algorithmic Approach to Analysis, and Weatherization and Its Impact on Occupant Health Outcomes;*

Achieving Health and Social Equity through Housing: Understanding the Impact of Non Energy Benefits in the United States

* Successfully assisted four GHHI jurisdictions design and successfully apply for funding through HUD's Office of Lead Hazard Control and Healthy Homes in June 2016 and June 2017, bringing \$27.4M in new lead hazard reduction and Healthy Homes grant funding to the State Housing agencies of Maine and Rhode Island, Salt Lake County, Utah, City of Pittsburgh/Allegheny County, Pennsylvania and Cities of Jackson, Mississippi, Kenosha/Racine, Wisconsin, Lewiston-Auburn, Maine, Providence, Rhode Island, and Richmond, Virginia.

National Green & Healthy Homes Technical Assistance Expertise

The Green & Healthy Homes Initiative® is a national 501(c)(3) non-profit organization that creates, implements, and promotes programs and policies to eradicate childhood lead poisoning and create green and healthy homes. GHHI's work at the local and national level encompasses the design, development and implementation of effective healthy homes, lead poisoning prevention and green & healthy homes programs; innovative media, outreach, education, and advocacy strategies; public policy and legislative initiatives; legal and family advocacy services; lead safe housing relocation initiatives; energy efficiency, weatherization, green and sustainable initiatives; and national technical assistance. GHHI has shown a unique acumen for leveraging its stellar direct service programs into concrete policy change at the local, state and federal level – directly contributing to the prevention of childhood lead poisoning, asthma and injury – while creating an increasing stock of affordable, energy efficient, and sustainable healthy homes. GHHI's current technical assistance work is focused on the continued development and implementation of GHHI's national Green & Healthy Homes Initiative strategy that is utilizing an integrated, single stream assessment and intervention model to comprehensively combine healthy homes, lead hazard reduction, weatherization, and energy efficiency in sites around the country.

The American Recovery and Reinvestment Act (ARRA) presented an historic opportunity on a national scale to leverage dollars targeted for weatherization and energy efficiency with existing programs providing in-home lead hazard reduction and Healthy Homes interventions. GHHI seized upon this opportunity which has resulted in systemic changes to the design, financing and implementation of housing interventions strategies at both the federal and local level. GHHI's national Green & Healthy Homes Initiative is designed to streamline programs that address health, safety, lead hazard reduction, energy efficiency, and weatherization into an integrated, comprehensive "whole house" approach to better serve low-to-moderate income populations at the local level. With strong support and endorsement from the U.S. Department of Housing and Urban Development, Centers for Disease Control and Prevention, Department of Energy, the Council on Foundations, and over twenty-seven local and national foundations, the Green & Healthy Homes Initiative has created a national movement to improve the integrated delivery of housing interventions that create healthier, more stable and cost-effective housing.

GHHI was selected in 2009 by HUD, CDC, the Council on Foundations, and the White House Office of Recovery Implementation to lead both the local and the national efforts to transition



from the traditional fragmented program approach to an innovative Green & Healthy Homes Initiative model. In 2010, HUD and CDC awarded GHHI a \$1.4 million contract to provide technical assistance to twelve cities and two Indian tribes to develop the initial Green & Healthy Homes Programs. GHHI project sites were initially developed in the cities of Atlanta, Baltimore, Chicago, Cleveland, Cowlitz Indian Tribe, Denver, Detroit, Flint, New Haven, Oakland, Philadelphia, Providence, San Antonio, and Spirit Lake Indian Tribe. Since that time, additional GHHI designated sites have been added in Albany, Austin, Buffalo, Dubuque, Greater Syracuse, Jackson, Lansing, Lewiston-Auburn, Marin County, Memphis-Shelby County, Pittsburgh, Salt Lake County, Schenectady and Troy.

GHHI is currently providing technical assistance under contract with NYSEERDA to conduct feasibility research and project design for an integrated, New York State specific energy, health and housing model. GHHI is conducting research on the feasibility of Medicaid reimbursement and other innovative funding mechanisms in the State of New York for healthy homes interventions in properties receiving weatherization and energy efficiency interventions. In collaboration with NYSEERDA, New York Department of Health and New York State Homes and Community Renewal, GHHI will create a project design for how Medicaid funded healthy homes housing interventions (to reduce asthma episodes, lead poisoning, and household injuries) can be integrated with NYSEERDA and HCR funded weatherization and energy efficiency interventions and other housing intervention programs to produce comprehensive interventions where home-based environmental health hazards are remediated and energy loss is addressed.

GHHI has a proven record of working with federal, state, local, and private entities on the development of lead poisoning prevention and Healthy Homes model programs and initiatives in a manner that brings together differing perspectives, builds consensus, develops innovative programs, and results in policy successes and dynamic strategic plans that produce results in improving health outcomes for low income children and other target populations. GHHI has served as a consultant and technical advisor for numerous cities, counties, and States in their development of innovative Healthy Homes and Lead Poisoning Prevention Model programs and strategic plans. In addition to its HUD/CDC funded Green & Healthy Homes Initiative technical assistance contract work, GHHI has also been contracted to provide technical assistance on lead poisoning prevention programs and Healthy Homes strategic program development with among others: States of Delaware and Maine, Counties of Baltimore, Maryland, Salt Lake, Utah, and Genesee, Michigan, and the Cities of Annapolis, Buffalo, Lewiston, Newark, Racine and St. Louis among others. GHHI was hired by Salt Lake County, Utah in 2012 to develop Green & Healthy Homes program models that will focus on lead poisoning prevention, asthma trigger reduction and household injury prevention while leveraging other housing and energy resources. GHHI was hired by The Community Foundation of Greater Buffalo in 2010 to work with City and County health and housing agencies as well as private partners to develop a comprehensive Greater Buffalo Green & Healthy Homes Strategic Plan. GHHI developed a Green & Healthy Homes Strategic Action Plan that created the framework for the City and County to implement comprehensive assessment and intervention strategies that reduce asthma episodes, childhood lead poisoning, and household injuries while also reducing energy consumption costs through energy efficiency and weatherization interventions.

Based upon its groundbreaking lead poisoning prevention work in Maryland, GHHI has helped to replicate similar results in St. Louis, through its design of the Lead Safe St. Louis Program and the City of St. Louis's Comprehensive Action Plan in 2003. Utilizing its analysis of St. Louis's capacity and systems, and based upon its experiences in Baltimore and other jurisdictions, GHHI drafted the Lead Safe St. Louis Comprehensive Action Plan that provided the comprehensive strategy for investments in lead hazard reduction grants, enforcement, blood lead testing, and outreach initiatives that have produced the significant decline in lead poisoning in the City of St. Louis. Improved protocols, agency coordination, and data systems have reduced the time frame from initial inspection to final clearance on properties by 25%. GHHI's assisted in the forging of public and private partnerships and its work has produced significant outcomes in the reduction in childhood lead poisoning and the development of greater Healthy Homes capacity. The St. Louis Action Plan's adoption and implementation showed immediate results in decreasing St. Louis's lead poisoning rate from 23% in 2003 to 1.7% by 2014.

In 2013, the John T. Gorman Foundation provided technical assistance funding for GHHI to develop the Lead Poisoning Prevention Comprehensive Action Plan for Lewiston, Maine to combat disproportionately high lead poisoning rates. GHHI supported efforts to pass Maine legislation in 2015 that established Maine as the first state in the country to set its blood lead action level for environmental investigation to conform with the CDC's new blood lead reference level of 5 µg/dl. GHHI was hired by the City of Waukesha in 2010 to provide technical assistance to the City in developing lead poisoning prevention strategies and lead hazard reduction program models, increasing the City's overall lead poisoning prevention capacity, and better positioning the City to successfully pursue future HUD lead hazard control funding. GHHI contracted with the CDC in 2009 to provide technical assistance to the City of Houston in the development of lead poisoning prevention legislation, policies, and strategic enforcement plans. GHHI served as the project leader for the national \$32 million Ad Council Campaign for lead poisoning prevention that was launched in April 2010 in partnership with the Ad Council, HUD, and EPA. GHHI's extensive media experience on the Ad Council Campaign and other initiatives is utilized to develop enhanced communications plans and media strategies for its technical assistance clients.

Pay For Success/Social Impact Bond Project Technical Assistance

GHHI is one of the lead organizations in the country providing technical assistance on the development of healthy homes and asthma Pay For Success projects. GHHI received a \$1.1 million grant from the White House Social Innovation Fund and the Corporation for National and Community Service (CNCS) in 2015 to provide technical assistance to lead asthma Pay for Success (PFS) feasibility studies with a cohort of healthcare organizations and housing service providers in: Buffalo, NY, Grand Rapids, MI, Memphis, TN, Salt Lake, UT and Springfield, MA. GHHI has completed the technical assistance feasibility work for these projects and expects to move to project transaction structuring in 2017 for these initial five sites. GHHI received a new \$1.77 million grant from the White House Social Innovation Fund and the CNCS in 2016 GHHI to provide technical assistance and transaction developmental support to SIF-supported Pay for Success projects that address the social determinants of health. In December 2015, GHHI received a \$1.83 million award from the Robert Wood Johnson Foundation to support the expansion of the PFS feasibility and development work. The Robert Wood Johnson Foundation



grant provides funding for GHHI to provide technical assistance in the completion of asthma PFS feasibility studies in a second cohort of healthcare organizations and service providers in five additional cities in Chicago, IL, Houston, TX, New York City, NY, Philadelphia, PA and the State of Rhode Island.

GHHI's current transformative work involves 20 asthma PFS or innovative health care financing projects that are designed to address the lack of funding for healthy homes and asthma prevention measures that exists and has the potential to fundamentally change how those services are funded in the United States through sustainable funding streams such as Medicaid/CHIP and health care provider investments. To advance policy changes to permit in-home health resident education and health-based housing assessment and intervention to be covered medical costs for Medicaid recipients. GHHI meets regularly with State Medicaid Offices across the country to further the development of coverage for preventive interventions for asthma, household injury and other illnesses which have a high return on investment.



Memo

To: Connecticut Green Bank Board of Directors

From: Bryan Garcia (President and CEO)

CC: George Bellas (VP of Finance and Administration), Mackey Dykes (Vice President of CI&I Programs and Officer), Brian Farnen (General Counsel and CLO), Bert Hunter (EVP and CIO), and Eric Shrago (Director of Operations)

Date: April 27, 2018

Re: Staff Transition Plan – From the Connecticut Green Bank to the Nonprofit

Background

As a result of the significant budget sweep to the Connecticut Green Bank (Green Bank) which was signed into law on October 31, 2017, the Board of Directors of the Green Bank subsequently approved of a budget mitigation strategy (i.e., revision to the FY 2018 budget) consistent with the Sustainability Pathway Strategy (the Strategy) put forth on December 15, 2017.¹ Part of the Strategy involved a transition plan for certain employees that would be transferred from the Green Bank to a nonprofit.²

On April 3, 2018, the Board of Directors authorized the Green Bank's participation to enable an independent nonprofit non-stock corporation (the Nonprofit) to further its purposes.

The table below outlines the initial group of products that would be administered by or housed in the Nonprofit.

Product or Program Area	Nonprofit Role
Multifamily Suite of Products	Outsourced program administration
Residential 1-4 Low-Income Programs	PosiGen partnership and investment / asset management support

¹ For details, see "Sustainability Pathway – FY 2018, FY 2019, and Beyond" provided to the Board of Directors for the December 15, 2017 meeting.

² For details, see "Nonprofit Business Plan and Steps to Establish" memo provided to the Board of Directors for the April 3, 2018 meeting.

	Support for other low-income initiatives such as CT Green and Healthy Homes Project and DOE's Clean Energy Low Income Communities Accelerator
Smart-E Loan Program	Outsourced program administration
Commercial Solar Fund	Administrative support for the existing Green Bank Commercial Solar fund Outsourced program administration for a new fund being raised in the Nonprofit

This memo summarizes, per the Strategy, the staff that will be transitioning to the Nonprofit on July 2, 2018.

Staff Transitions

As of approximately Friday, June 29, 2018, the following individuals will no longer be employees of the Green Bank, but instead be employed by the Nonprofit to begin work there on July 2, 2018 – see Table 1. These Green Bank employees were identified by the programs and products they support at the Green Bank in the following segments of the market – the broader needs of buildings in low-to-moderate income (LMI) communities and unconventional credits.

Table 1. Connecticut Green Bank Staff Transitioning to the Nonprofit and their Product and Functional Areas

Name	Current Position	Nonprofit Product and Functional Areas
Kerry O'Neill	Vice President Residential Programs	All
Giuseppe Buonannata	Associate Manager Residential Programs	Smart-E Loan Program
John D'Agostino	Associate Director Multifamily	Multifamily Suite of Programs
Elizabeth Johnson	Assistant Residential Programs	Smart-E Loan Program
Madeline Priest	Manager Residential Programs	Residential 1-4 Low-Income Programs, Smart-E Loan Program
Kim Stevenson³	Director Multifamily	Multifamily Suit of Programs
Benjamin Healey	Director Clean Energy Finance	All (Finance) Commercial Solar Program
Christopher Magalhaes	Associate Director Clean Energy Finance	All (Finance)

In order to support the orderly transition of staff to the Nonprofit, the Green Bank sought an Advisory Opinion (see Attachment I) from the State of Connecticut Office of State Ethics around three principle areas:

1. Whether the involvement of the seven (7) Green Bank employees in the formation of a non-governmental organization and their subsequent transition to it would be in violation of General Statutes § 1-84(c);

³ [REDACTED]

2. Whether those employees may begin employment with the Nonprofit immediately after leaving state service with the Green Bank without violating General Statutes § 1-84b(f); and
3. Whether the transitioning employees may have contact with the Green Bank immediately upon leaving state service under the technical implementation of an existing contract exception to General Statutes § 1-84b(b).

The Connecticut Citizen's Ethics Advisory Board recently approved an advisory opinion with the following conclusions: (1) the employees who transition to the NGO will not be in violation of § 1-84(c); (2) the employees may begin employment with the NGO immediately after leaving state service without violating § 1-84b(f); and may have contact with the Green Bank immediately upon leaving state service under the technical implementation of an existing contract exception to General Statutes § 1-84b(b).

Transition Plan

The transition plan for the individuals transitioning from the Green Bank to the Nonprofit includes:

- **Ethics** – received a favorable determination by the Connecticut Citizen's Ethics Advisory Board to ensure the orderly transition of individuals transitioning from the Green Bank to the Nonprofit (April 19, 2018);
- **Benefits Assistance** – the VP of Human Resources of the Green Bank to provide assistance in identifying, analyzing and recommending benefits for the Nonprofit (April-June 2018);
- **Approval of Contracts for Services** – Green Bank Board approves of the professional services agreements and memorandum of understanding between the Green Bank and the Nonprofit to support various products and programs to advance the mission of the Green Bank (first week of June 2018);
- **Notification of End of Service** – official notification of staff that are transitioning from the Green Bank to the Nonprofit of the end of their service as a Green Bank employee, including their last date of employment of June 29, 2018 (second week of June 2018); and
- **Hiring Notice** – official notification of hiring by the Nonprofit of the staff transitioning from the Green Bank to the Nonprofit, including offer of salary and benefits and starting date of employment of July 2, 2018 (second week of June 2018); and
- **Contract for Services** – execution of a professional services agreement between the Green Bank and the Nonprofit to support various products and programs to advance the mission of the Green Bank (July 2, 2018).

Staff Considerations

Payroll & Employee Benefits

As the Nonprofit is being established as an entity independent of the Green Bank, upon separation from the Green Bank the staff who are transitioning to the Nonprofit will cease to have payroll processed via CORE-CT (the Connecticut State employee payroll system) and will also be ineligible for Green Bank employee benefit programs. These staff will be eligible for normal continuation of benefit provisions under COBRA or other employee benefit continuation arrangements applicable to staff who separate from service to the Green Bank under a variety of circumstances.

As the staff transitioning to the Nonprofit are doing so under an overall arrangement that has been outlined by the senior leadership and Board of the Green Bank, the Green Bank has a particular interest that staff transitioning to the Nonprofit do so with minimal disruption to their existing compensation and benefit arrangements. At the same time, it is recognized by senior leadership, the Board as well as the transitioning staff themselves that the Nonprofit will be unable to exactly duplicate the precise benefit package enjoyed by transitioning staff as Green Bank employees as this package of benefits for Green Bank staff is made possible by its quasi-state status which makes all Green Bank staff eligible for the full array of Connecticut State employee benefits.

Senior leadership, guided by the Green Bank's head of Human Resources (Sue Kaswan), has been exploring several benefit arrangements that could be sourced by the Nonprofit and put in place by the Nonprofit for the benefit of transitioning staff once their employment with the Nonprofit commences. The arrangements currently under review include:

- Payroll processing
- Medical, dental and vision insurance
- Short term / long term disability
- Retirement benefits (such as 401(k) or 403(b) – whichever applies)
- Life insurance
- Long term care
- Workers compensation
- Flexible Spending Accounts (FSA)
- Health Savings Accounts (HSA)
- Pre-tax commuter benefits

Sue Kaswan has received (and continues to receive) several proposals in respect of the foregoing benefits which are made possible through a number of mechanisms (including professional employee organizations or "PEOs" which enable smaller organizations, such as the Nonprofit, to acquire better and more cost effective benefit arrangements by joining with other organizations of varying sizes to improve their bargaining power when soliciting employee benefit proposals). All benefit arrangements would be reviewed by Sue Kaswan, our Chief Legal Officer and Chief Investment Officer for quality of coverage, efficacy and risk, together with the assistance of external consultants as warranted. Once a number of benefit arrangements have been "short-listed", the transitioning staff will be brought into the process so that the various benefit options can be discussed and assessed. The final decision on the matters above will rest with the Nonprofit.

Questions and Answers

A number of questions have been raised by various members of the Board of Directors involving the staff transitions, including:

Is the creation of the nonprofit the only model that can allow the Green Bank to survive?

With the Strategy in place, and the focus on pursuing organizational sustainability and breakeven in 4 to 7 years, the creation of a nonprofit is essential to the Green Bank's survival.

The creation of the Nonprofit will help the Green Bank lower its operating expenses in the near (i.e., up to 3 years) and mid-terms (i.e., after 3 years), while at the same time allowing it to pursue its mission of ensuring clean energy deployment in underserved market segments.

How are the savings achieved?

The eight (8) Green Bank staff transitioning to the nonprofit earn \$911,656 in total salary. Including benefits (e.g., retirement, medical, etc.), total salary and benefits for the staff transitioning to the nonprofit is \$1,626,394. Given the high cost of benefits for Green Bank employees (i.e., now at 1.78 times compensation),^[1] the Nonprofit is expected to cost \$1,276,318 – or \$350,076 less than the Green Bank⁴. This will be the case for years 1 through 3 of the Nonprofit.^[2]

For years 4 through 6 of the Nonprofit, the Green Bank will provide \$638,159 each year in total compensation and benefits to the nonprofit, half of the level for years 1 through 3. Savings to the Green Bank after year 3 will be near \$1 million a year from salary and overhead savings.

Is compensation – including wages, health insurance and retirement benefits the same, or how does it change?

Compensation will be the same as it pertains to wages. With regards to health insurance, retirement, and other benefits, it is our understanding that the Nonprofit intends to offer its staff comparable benefits, assuming a 1.40 times compensation level.

As set forth in the Ethics Advisory Opinion received by the Green Bank and consistent with past rulings of the Connecticut Citizen's Ethics Advisory Board, the total value of compensation (salary and benefits) for each of the transitioning employees can be no greater during the first year than it was at the Green Bank. Thereafter, the Nonprofit would determine how it would compensate its staff given the evaluation standards that it establishes, its charitable purpose, and an understanding of how competitive the field is for highly skilled clean energy finance and program professionals. Compensation would be subject to an overall standard of reasonableness consistent with IRS rules for tax-exempt organizations and would be subject to public reporting on Form 990.

The Green Bank has a particular interest in encouraging that staff transitioning to the Nonprofit do so with minimal disruption to their existing compensation and benefit arrangements. Also, the Nonprofit represents an opportunity for these staff to accomplish more for the mission that they are so passionate about. Senior leadership has had conversations with transitioning staff to discuss aspects of the potential for change in staff benefits, but also prospects for additional impact.

After one year the compensation paid to employees would shift from the same as the Green Bank to a standard based on other nonprofits. What is the expected result from that change in evaluation standards?

The Nonprofit would determine how it would compensate its staff given the evaluation standards that it establishes and its charitable purpose, and understanding how competitive the field is for highly skilled clean energy finance and program professionals.

^[1] See February 2018 Financial Package (Page 11)

⁴ Savings the first year are \$298, 236 and savings years 2 and three are estimated at \$350,076.

^[2] [REDACTED]

How is seniority factored in? Does seniority have any weight in Green Bank employees' current employment? Will it have the same weight in the new organization?

All employees of the Green Bank are “at will”⁵ employees. Therefore, seniority is not factored in at the Green Bank except as it relates to vacation time off, sick time and personal days, where we understand the Nonprofit itself will determine how a process might deal with these matters for transitioning employees. The Nonprofit will determine itself if seniority will have the same weight as it does at the Green Bank and if Green Bank employment time “counts” toward seniority at the Nonprofit. The Green Bank VP of Human Resources is assisting with the development of Nonprofit policies where seniority is a factor.

What are retirement benefits for the Green Bank staff transitioning to the Nonprofit?

Seven of the eight Green Bank staff transitioning to the Nonprofit are currently classified as Tier 3 or greater in the Connecticut retirement system (i.e., those employees hired after July 1, 2011) – the other Green Bank staff member transitioning to the Nonprofit on July 1, 2019 is Tier IIA. The Nonprofit will determine itself, what retirement benefits it will offer its staff. The Green Bank VP of Human Resources is assisting with the development of benefits for the Nonprofit.

In what ways is this plan the same and/or different than outsourcing or privatizing public employee jobs?

We see the staff transitions as fundamentally different from the usual “outsourcing” concept – because all of the staff that is moving is retaining employment. This arrangement could be compared to “privatizing” in a sense – but typically when government privatizes a function, the government employees lose their jobs, or at least many lose their jobs. In this circumstance, jobs are being preserved. Further, the missions of the Nonprofit and the Green Bank are closely aligned – which is not necessarily the case when government services are privatized. So for these reasons staff sees the approach unlike a typical privatization of government functions.

How are the employees transitioning chosen?

Staff have been chosen based on their duties related to the products being transitioned to the Nonprofit.

⁵ Either the employee or employer is free to terminate the employment relationship at any time and for any reason unless there is a law or contract that provides otherwise.

Resolution

WHEREAS, on December 15, 2017, the Board of Directors of the Green Bank approved of a budget mitigation strategy consistent with the Sustainability Pathway Strategy, including the need for staff to present a detailed business plan, budget, and transition plan for certain employees to a Nonprofit;

WHEREAS, on April 3, 2018, the Board of Directors of the Green Bank was presented by staff a detailed business plan to which the Board of Directors then authorized the President and any other duly authorized officers of the Green Bank to participate in the formation of an independent nonprofit non-stock corporation to further the purposes of the Green Bank, including achieving operating leverage and attracting mission-oriented investors for a set of products serving underserved market segments; and

WHEREAS, on April 27, 2018, the Board of Directors of the Green Bank was presented a staff transition plan for those individual staff members of the Green Bank transitioning to the Nonprofit.

NOW, therefore be it:

RESOLVED, that the Board of Directors of the Green Bank authorizes the President of the Green Bank and any other duly authorized officer of the Green Bank to ensure the orderly transition of individuals transitioning from the Green Bank to the Nonprofit, taking into consideration, but not limited to, the Advisory Opinion No. 2018-2 by the Office of State Ethics;

RESOLVED, that the Board of Directors of the Green Bank authorize the President of the Green Bank and any other duly authorized officer of the Green Bank to provide assistance to the Nonprofit to identify, analyze, and recommend benefits options for the staff transitioning from the Green Bank to the Nonprofit; and

RESOLVED, that the Board of Directors of the Green Bank directs the President of the Green Bank to notify the individuals that will be transitioning from the Green Bank to the Nonprofit of their last day with the Green Bank tentatively planned for Friday, June 29, 2018.