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CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

May 10, 2013

Dear Clean Energy Finance and Investment Authority Board of Directors:

The Board of Directors will be meeting on Friday, May 17, 2013 from 10:00 to 11:00 a.m. at the offices of CEFIA at 865 Brook Street, Rocky Hill, CT 06067.

Our brief agenda includes two items:

- **Solar Lease** – we are in the final documentation stage with our tax equity investors and syndicate of debt providers for the Connecticut Solar Lease. We have credit approvals from a syndicate of banks of over $28 million, including several local banks from Connecticut. And we have a term sheet from the tax equity investor of $24 million awaiting final transaction documentation which we are now in process on before this transaction goes to their credit committee for approval. We are requesting $1 million in short term loans to address timing issues between the tax equity investor and syndicate of bank funds.

- **Budget Update** – we have been working with the Budget and Operations Committee to review the progress made on our two-year Comprehensive Plan (2013 and 2014) and to prepare the FY 2014 budget. We will provide an overview of where we stand, get your feedback, and discuss the process for moving forward.

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

We look forward to the meeting next week. Enjoy the weekend.

Sincerely,

Bryan Garcia
President and CEO

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

AGENDA

Board of Directors of the
Clean Energy Finance and Investment Authority
865 Brook Street, Rocky Hill, CT 06067

Friday, May 17, 2013
10:00-11:00 a.m.

Staff Invited: Jessica Bailey, Mackey Dykes, Brian Farnen, Bryan Garcia, David Goldberg, Dale Hedman, Bert Hunter, and Kerry O'Neill

1. Call to order

2. Public Comments – 5 minutes

3. Approval of meeting minutes for March 15, 2013* – 5 minutes

4. Update from the President – 5 minutes

5. Finance Program updates and recommendations for approval* – 15 minutes

    a. Connecticut Solar Lease*

6. Budget and Operations Committee updates – 30 minutes

7. Adjourn

*Denotes item requiring Board action

Join the meeting online at https://www4.gotomeeting.com/join/601030559

Dial +1 (773) 897-3001 Access Code: 601-030-559

Next Regular Meeting: Friday, June 21, 2013
Clean Energy Finance and Investment Authority, 865 Brook Street, Rocky Hill, CT

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

RESOLUTIONS

Board of Directors of the
Clean Energy Finance and Investment Authority
865 Brook Street, Rocky Hill, CT 06067

Friday, May 17, 2013
10:00-11:00 a.m.

Staff Invited: Jessica Bailey, Mackey Dykes, Brian Farnen, Bryan Garcia, David Goldberg, Dale Hedman, Bert Hunter, and Kerry O'Neill

1. Call to order

2. Public Comments – 5 minutes

3. Approval of meeting minutes for March 15, 2013* – 5 minutes

Resolution #1

Motion to approve the minutes of the Board of Directors meeting for March 15, 2013 Regular Meeting. Second. Discussion. Vote.

4. Update from the President – 5 minutes

5. Finance Program updates and recommendations for approval* – 15 minutes

   a. Connecticut Solar Lease*

Resolution #2

WHEREAS, at the the Board of Directors (Board) meeting held on February 13, 2013, the Board of the Clean Energy Finance and Investment Authority (CEFIA) passed resolutions to effect the reintroduction of its Solar Lease program to build on the success of the first Solar Lease program and achieve the additional benefits of enabling Connecticut homeowners to work with qualified installers of their choice, ensuring that Connecticut's solar installer base remains robust, diverse and able to reach all Connecticut residents, permit homeowners to lease systems for a 20-year period, permit leasing of solar hot water systems and make a portion (20%) of the fund proposed available to non-residential end-users (the "Program");

WHEREAS, by the resolutions approved at said meeting, the Board of Directors approved funding for the Program in the following amounts:

A. an amount not-to-exceed $3.5 million for a Lease/Loan Loss Reserve (LLR) through the use of repurposed ARRA-SEP program funds;

B. an amount not-to-exceed $7.2 million for sponsor equity to be invested into the special purpose vehicle to be established for the Program; and

C. an amount not-to-exceed $2.3 million for subordinated debt

WHEREAS, the operations of the leasing fund based on staff projections have determined that the Program will require approximately $600,000 of additional funding in the next fiscal year (FYE 6/30/2014) on a short term basis before the bank funding is advanced to repay the short term funding;

WHEREAS, to provide a margin above this requirement, staff has recommended that the Board approve a not to exceed amount of $1,000,000 for short term loans for these purposes;

NOW, therefore be it:

RESOLVED, that CEFIA's Board authorizes additional funding for the Program in an amount not to exceed $1,000,000 to be provided by way of short term no interest loans to the special purpose vehicle ("SPV"), CT Solar Lease 2 LLC, or to intermediate SPVs (such intermediate SPVs being wholly-owned by CEFIA and Connecticut Innovations Inc.).

RESOLVED, that any working capital loans provided by CEFIA in support of the Program will be repaid from the US Bank and the bank syndicate financing of the Program. The working capital loans shall be repaid within 6 months of being advanced, provided that any sums advanced and repaid may be re-advanced as needed, provided subsequent advances are repaid within a six month period.

RESOLVED, that the President of CEFIA; and any other duly authorized officer of CEFIA, is authorized to execute and deliver, any contract or other legal instrument necessary to effect the additional $1,000,000 short term working capital loan funding for the Program with terms and conditions consistent with the memorandum submitted to the Board dated May 10, 2013 and as he or she shall deem to be in the interests of CEFIA and the ratepayers; and

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

6. Budget and Operations Committee updates – 30 minutes

7. Adjourn

*Denotes item requiring Board action

Join the meeting online at https://www4.gotomeeting.com/join/601030559

Dial +1 (773) 897-3001 Access Code: 601-030-559

Next Regular Meeting: Friday, June 21, 2013
Clean Energy Finance and Investment Authority, 865 Brook Street, Rocky Hill, CT

Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #1

Call to Order

May 17, 2013

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #2

Public Comments

May 17, 2013

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #3

Approval of Meeting Minutes of March 15, 2013

May 17, 2013

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #4

Update from the President

May 17, 2013


Dominion
DANGER

Update from the President

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

- **Administrative Updates**
  - **Office Locations** – we have transitioned from 865 Brook Street (Building #1) to 845 Brook Street (Building #2) to support CDA merger into CI; we have opened up an office in Stamford at 300 Main Street (4^{th} Floor) to be closer to the finance community and to attract talent from Fairfield County
  - **New Hires** – we have hired our final sector director positions in Kerry O’Neill (Director of Residential Programs) and Andy Brydges (Director of Institutional Programs)
- **Legislative Updates** – commercial property tax, C-PACE, and OBR
- **Smart-E Loan**
  - **Capital Providers** – Core Plus, Eastern Savings, Nutmeg, and Patriot onboard with ten (10) more in process
  - **Contractors** – trained fifty-four (54) contractors from forty-nine (49) companies last week, with NPU on gas conversions, heating equipment replacement, and energy efficiency; with UI at Local 777 Training Center on solar PV, SHWS, and GSHP

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FINANCE AND INVESTMENT AUTHORITY

Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #5

Finance Program Updates and Recommendations for Approval

May 17, 2013

Solar Lease 2 Update

- **Signed term sheet from US Bank for $23.8 million tax equity**
  - Final credit approval is awaiting final transaction documentation.
  - US Bank fully committed to a successful program.
- **Fully credit-approved syndicated financing proposal from lead bank First Niagara for $28.2 million**
  - Bank Syndicate, US Bank & CEFIA are refining debt-sizing (now ~$26.7 MM)
  - Focus is to ensure adequate debt service coverage & liquidity
  - At anticipated debt-sizing, existing approvals from Board sufficient
- **Property & Liability Insurance Agreed**
  - Comprehensive package from The Hartford to insure the program for property, business interruption/breakdown/flood/earthquake/windstorm perils
  - Liability will be covered through Chubb.
- **Possible credit / performance enhancement insurance**
  - Staff performing due diligence
- **Training sessions set - CEFIA and AFC First Financial**
  - May 20 and June 3.

Solar Lease 2 Update (cont'd)

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

- **Future Steps**
  - **Complete Documentation**
    - Not a duplicate of SL1
    - More than one technology (PV & Thermal)
    - Commercial Component
      - Complex - but essential to solve this financing gap (C-PACE element)
      - CEFIA's leadership could encourage more capital into the market
    - Leveraged transaction - at the "project / SPV" level
      - Groundbreaking in Residential
      - Previously only done with "utility scale" projects
      - Could provide replicable model for other states
  - **May require Special Board Meeting prior to closure**
    - For any terms requiring additional approval
  - **Staff Coordinating Press Releases / Media Campaign**
    - Hartford Courant (upcoming article on residential solar / solar leasing)

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Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #6

Budget and Operations Committee Updates

May 17, 2013

Budget Process
FY 2014

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- **Budget and Operations Committee**
  - **Review of Draft FY 2014 Budget** – May 8, 2013 (Complete)
  - **Further Review of Draft FY 2014 Budget** – week of June 10, 2013

- **Board of Directors**
  - **Overview of the FY 2013 Program Performance to Comprehensive Plan and Draft FY 2014 Budget Processes** – May 17, 2013
  - **Review of FY 2013 Program Performance to Comprehensive Plan** – week of June 3, 2013
  - **Recommendation for the Approval of the FY 2014 Budget** – June 21, 2013

Review of Draft FY 2014 Budget
May 8, 2013

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- **Revenues** – looked at FY 2013 budget versus actual and estimated FY 2014 for Clean Energy Fund, RGGI, interest income, bond proceeds, etc.
- **Program performance** – began the discussion on how the residential, C&I, institutional, and statutory and infrastructure programs are performing towards the two-year Comprehensive Plan with respect to capital, deployment, generation and savings, and loans.
- **Expenses** – began the discussion on program expenses for grants, loans and credit enhancements, as well as administrative expenses.
- **Financial Statements** – presented projected profit and loss statement, projected cash flow statement, and projected balance sheet for both the beginning and end of FY 2013
- **Staffing** – began discussions on staffing needs for FY 2014 to support the implementation of programs within the two-year Comprehensive Plan

Review of FY 2013

Program Performance Outline

- **Comprehensive Plan** – where do we stand overall and by sector on the following key metrics
  - Amount of clean energy deployed (or produced) per dollar of ratepayer funds at risk
  - Amount of clean energy deployed (i.e. MW) and produced (i.e. MWh) over the life of a project and the annual energy saved (i.e. MMBtu and $'s)
  - Ratio of ratepayer funds to private capital and ratio of ratepayer funds committed and invested in subsidies, credit enhancements, and loans-leases
  - Number and amount of grants, loans, and leases
- **Lessons Learned** – what key lessons have been learned from the first year of the Comprehensive Plan implementation
- **FY 2014 Quarterly Targets** – performance targets by sector and program
- **TAM and SAM** – discuss new concept for estimating the market potential and establishing stretch goals

Review of FY 2013 Program Performance
2013 and 2014 Comprehensive Plan

CLEAN ENERGY
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Program Status to Date

	Targets	Residential	Commercial & Industrial	Institutional	Statutory & Infrastructure	Total (as of today)
Ratepayer or Public Capital at Risk	$45,300,000	$15,910,000	$3,443,106	$3,000,000	$17,749,814	$40,102,920
Private Capital	$186,600,000	$82,500,000	-	$6,000,000	$93,816,385	$182,316,385
Deployed (MW)	51.1	-	1.0	-	25.5	26.5
# of Loans/Installs	5,283	-	5	-	975	980
Lifetime Produced (MWh)	-	-	25,654	-	2,231,479	2,257,133 ($0.018/kWh)
Annual Saved (kMMBtu)	180	-	5.3	-	-	5.3

REFERENCES
Status to Date reflects in aggregation the number of projects approved, under construction, or completed for each of the four (4) program sectors – residential, C&I, institutional, and statutory and infrastructure.

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Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #7

Adjourn

May 17, 2013

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY
Board of Directors
Draft Minutes – Regular Meeting
Friday, March 15, 2013

A regular meeting of the Board of Directors of the **Clean Energy Finance and Investment Authority (the "CEFIA")** was held on March 15, 2013, at the office of CEFIA, 865 Brook Street, Rocky Hill, CT.

1. <u>Call to Order</u>: Catherine Smith, Chairperson of CEFIA, called the meeting to order at 9:00 a.m. Board members participating: Daniel Esty, Vice Chairperson of CEFIA and Commissioner of the Department of Energy and Environmental Protection ("DEEP"); Tom Flynn; Norma Glover; Sharon Dixon-Peay, State Treasurer's Office; John Olsen; Matthew Ranelli; Catherine Smith, Chairperson of CEFIA and Commissioner of the Department of Economic and Community Development ("DECD"); and Patricia Wrice.

Members Absent: Mun Choi; and Reed Hundt.

Staff Attending: George Bellas, Mackey Dykes (by phone), Brian Farnen, Bryan Garcia, David Goldberg, Dale Hedman, Bert Hunter, Dave Ljungquist, Cheryl Samuels, Shelly Mondo, and Kimberly Stevenson.

Others Attending: Alex Kragie, DEEP; Henry Link, Enviro Energy Connections; Peter Tavino; and Guy Wanegar, Connecticut Geothermal Association.

2. <u>Public Comments</u>:

Guy Wagoner, President of the Connecticut Geothermal Association, urged CEFIA to keep the association involved and offered assistance in answering any questions about the geothermal technology.

Peter Tavino noted that the Connecticut Geothermal Association has been meeting every month for the last 2 ½ years. He talked about the ground source heating and cooling as being an important natural resource in Connecticut and a good long-term solution for clean energy and the economy. Mr. Tavino urged CEFIA to utilize this natural resource in coordination with public and private investments and to work with the Connecticut Geothermal Association.

3. <u>Approval of Minutes of Meeting of February 15, 2013</u>:

Ms. Smith asked the Board to consider the minutes from the February 15, 2013 meeting.

Upon a motion made by Mr. Ranelli, seconded by Ms. Glover, the Board members voted in favor of adopting the minutes from the February 15, 2013 meeting as presented (Mr. Flynn abstained from the vote, and Mr. Esty was not present for the vote).

There being no objection, the order of the agenda was changed.

4. Areas of Interest: Leading By Example with the Department of Energy and Environmental Protection:

Mr. Kragie provided an update on the "Leading by Example Program" that is a collaborative effort between DEEP and CEFIA. He noted that the intent of the program is to reduce energy use in state buildings by 20 percent by 2018. Mr. Kragie explained three of the fundamental components of the program, including 1) bond funds; 2) performance contracting; and 3) energy monitoring and implementation. He noted that under Public Act 11-80, $15,800,000 of funding was allocated to implement energy efficiency upgrades in state buildings. To date, approximately $10,000,000 in funds has been committed to 44 different projects across the state. The average payback period for the projects is under 6 years. Mr. Kragie spoke about the annual energy savings. In response to a suggestion, Mr. Kragie indicated that he will follow up on energy efficiencies in the Legislative Office Building and the State Capitol.

Mr. Kragie discussed performance contracting, noting that energy efficiency upgrades would be performed without upfront capital. He spoke about the collaborative efforts amongst the various state agencies to standardize the performance contracting documents and processing. Mr. Kragie noted that the standardization gives the municipalities the confidence to do the projects. A full-time program manager will be hired to help municipalities through the process.

A discussion ensued on the behavioral elements to the program, and there was general consensus that more needs to be done with the behavioral aspects of the program in addition to more education.

Mr. Kragie talked about the energy monitoring program. He indicated that staff is working with the public utility companies to determine energy costs for state buildings. Mr. Kragie explained the targets and energy inconsistencies with some of the buildings. Questions arose as to how CEFIA can assist with its Air Permit Amnesty and Energy Efficiency Program. In response to a question, it was noted that the energy efficiency guidelines are much better. Mr. Kragie reported that the program was done entirely in-house, without the use of consultants.

5. Update from the President:

Mr. Garcia reported on the Smart-E Loan Program and mentioned that commitments are in place. A pilot test will be done in the Norwich Public Utility service territory to test fuel conversion, equipment replacement and energy efficiency combinations. Mr. Garcia talked about the success of Solarize Connecticut, noting that the pilot results exceeded expectations. He mentioned that CEFIA was able to meet the Commissioner's challenge and reduce the payback period below six years. Mr. Garcia stated that a $1,800,000 Department of Energy Seeds grant was secured through a Yale partnership to study the program. He indicated that installers have started to privatize the model which helps to further reduce costs. In response to a question about historic buildings, it was noted that the State Housing Preservation Office process has been improved and is becoming easier. Solarize Round 2 is serving the distressed communities of Bridgeport and Windham.

Mr. Esty mentioned that the Governor has finalized the Comprehensive Energy Strategy ("CES"). He urged CEFIA staff to help DEEP, the Energy Efficiency Board and the Connecticut Housing Finance Authority move forward with implementing the components of the CES. Mr. Esty noted the importance of having a mechanism to make loans available to everyone within the next 60 days and to have a process in place to direct customers. A discussion ensued on marketing the programs through a television campaign, Facebook, Twitter, fliers, etc. The Board asked staff to provide a summary of the programs which includes the financial impacts to the State.

6. Deployment Committee Updates and Recommendations for Approval:

a. *Connecticut Solar Lease 2—Investment Update*

Mr. Hunter provided an update on the Connecticut Solar Lease 2 program, noting that great progress has been made to launch the program in mid-April. A significant amount of private capital will be raised. Mr. Hunter noted that this is the first ever leveraged residential lease program utilizing a syndicate of banks. He spoke about being able to provide loans to homeowners with FICO scores of 640 or more. Mr. Hunter reviewed the terms and conditions under the program as well as the tax benefits, cash returns and performance-based incentives. He explained the benefits and ultimate recovery of ratepayer funds. Staff was commended for creating a more inclusive program and being able to reach homeowners with FICO scores as low as 640. A discussion ensued on the importance of marketing the program to ensure geographic and demographic diversity. Suggestions were made to use public service announcements.

Mr. Hunter discussed the Solar Loan Program. He noted that staff anticipates launching the program in the next several days. Mr. Hunter mentioned that CEFIA is in the process of finalizing the Special Purpose Vehicle with CI.

b. Residential Solar Investment Program

Mr. Hedman discussed the Residential Solar Investment Program. He explained the program capacity targets approved in December 2012 and the proposed additional changes. Mr. Hedman mentioned that Step 3 for the Performance Based Incentive ("PBI") is scheduled to start no later than April 1, 2013 and will make the PBI comparable with the rebate incentive. He noted that the Deployment Committee reviewed staff's recommended changes and requested that the resolution include language about the termination of the step.

Upon a motion made by Ms. Glover, seconded by Ms. Dixon-Peay, the Board members voted unanimously in favor of adopting the following resolution regarding the Residential Solar Investment Program:

WHEREAS, Section 106 of Public Act 11-80 "An Act Concerning the Establishment of the Department of Energy and Environmental Protection ("DEEP") and Planning for Connecticut's Energy Future" (the "Act") requires the Clean Energy Finance and Investment Authority ("CEFIA") to design and implement a Residential Solar Photovoltaic ("PV") Investment Program ("Program Plan") that results in a minimum of thirty (30) megawatts of new residential PV installation in Connecticut before December 31, 2022; and

WHEREAS, pursuant to Section 106 of the Act, CEFIA has prepared a Program Plan and a declining incentive block schedule ("Schedule") that offer direct financial incentives, in the form of Performance-Based Incentives ("PBI") (i.e. lease model) and Expected Performance-Based Buy-Down incentives ("EPBB") (i.e. rebate model), for the purchase or lease of qualifying residential solar photovoltaic systems; and

WHEREAS, the Deployment Committee has reviewed and recommended for approval to the Board of Directors a PBI for Step 3 of the Schedule be established at $225 a megawatt-hour (MWh) for a six-year period.

NOW, therefore be it:

RESOLVED, that the Board of Directors approves a PBI for Step 3 of the Schedule be established at $225 a megawatt-hour (MWh) for a six-year period.

RESOLVED, the Step 3 incentive shall immediately terminate when (1) committed capacity has been reached for the PBI Step 3 incentive schedule of the EPBB Step 3 incentive schedule, respectively or (2) December 31, 2013, whichever comes first.

RESOLVED, that this Board of Director action is consistent with Section 106 of the Act.

7. Audit, Compliance and Governance Committee Update:

a. *Legislative Session Update*

Mr. Garcia mentioned that CEFIA is working with DEEP on a number of initiatives and has met with the Appropriations Committee; Finance, Revenue and Bonding Committee and Black and Puerto Rican Caucus. Mr. Goldberg mentioned that a forum was held with the Energy and Technology Committee to discuss CEFIA and its legislative priorities, including commercial and industrial property tax exemption and on-bill financing. There was a discussion about the language in Senate Bill 949, "An Act Establishing Commercial and Industrial Property Tax Exemptions for Clean Energy Projects," that expands the definition of clean energy. Attorney Farnen discussed some of the proposed legislation before the Energy and Technology Committee. A discussion ensued on Raised Bill 949, extending Project 150 projects. Several Board members expressed opposition with the bill because they are not in support of open-ended commitments.

8. Technology Innovation Committee Updates:

Ms. Stevenson provided an update on the Operational Demonstration Program, referencing the two projects recently approved by the Board. The contracts for both projects are being finalized and one of the projects received pre-seed funding from CI. Ms. Stevenson mentioned that CEFIA is moving forward with the transition of the programs to CI. Staff was commended for working in collaboration with CI on the transition of the programs.

9. Budget and Operations Committee Updates:

Mr. Dykes reported on behalf of the Budget and Operations Committee and mentioned that both the Rocky Hill and Stamford offices are being finalized. The Rocky Hill office is on track for opening in early April. He mentioned that Kerry O'Neill has been hired as the Director of Residential Programs, and an offer has been made for the Director of Institutional Programs position. Mr. Dykes stated that the draft budget for fiscal year 2014 will be presented to the Budget and Operations Committee in April. It is anticipated that a final budget will be presented to the Board for approval in June.

10. Other Business:

Mr. Hunter discussed the proposed contractor working capital loan or guarantee program. He explained that after discussions with private capital partners, CEFIA recommends the establishment of a $5,000,000 contractor working capital/guarantee program. Mr. Hunter described how the program could address some of the issues with the small business contractors. He indicated that the program would be rolled out with a state agency or through one or several local banks that have state-wide networks. In response to a question, Attorney Farnen indicated that the proposed resolution provides staff with a fair amount of flexibility. The Board asked questions about risks, exposure and experience of losses with similar programs in other agencies. Staff indicated that CEFIA will not be providing the loans and risk is associated with completion of the projects by installers which are familiar to CEFIA. A suggestion was made to amend the resolution to include language that requires an evaluation of the program within a year.

Upon a motion made by Ms. Glover, seconded by Ms. Dixon-Peay, the Board members voted unanimously in favor of adopting the following resolution regarding the Working Capital Loan/Guarantee Program:

WHEREAS, Section 99 of Public Act 11-80 “An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut’s Energy Future” (the “Act”), CEFIA is directed to, amongst other things, develop separate programs to finance and otherwise support clean energy investment in residential, municipal, small business and larger commercial projects and such others as the authority may determine; and

WHEREAS, CEFIA seeks to establish a $5,000,000 working capital loan/guarantee program in support of the Smart-E Loan, Solar Loan and Solar Lease programs; and

WHEREAS, this working capital loan/guarantee program will support such programs for homeowners to promote deep energy efficiency retrofits, renewable energy deployment, and fuel equipment conversions in single-family homes across the state, in line with Public Act 11-80, the State’s Draft Comprehensive Energy Strategy and CEFIA’s Strategic Plan.

NOW, therefore, be it:

RESOLVED, that CEFIA’s Board of Directors authorizes the establishment of a $5,000,000 working capital loan/guarantee program for the benefit of contractors participating in the Smart-E loan, Solar Loan and Solar Lease programs.

RESOLVED, that the President of CEFIA and any other duly authorized officer of CEFIA, is authorized to execute and deliver, any contract or other legal instrument necessary to effect the $5,000,000 working capital loan/guarantee program with terms and conditions consistent with the memorandum submitted to the Board of Directors dated March 8, 2013 titled “Solar Loan, Solar Leases & Smart-E Loan Programs--$5,000,000 Contractor Working Capital Loan or Guarantee Program.”

RESOLVED, that CEFIA staff will report back to the Board within one year on the status and progress of the working capital loan/guarantee program.

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

11. **Adjournment**: Upon a motion made by Mr. Flynn, seconded by Ms. Glover, the Board members voted unanimously in favor of adjourning the March 15, 2013 meeting at 10:55 a.m.

Respectfully submitted,

Catherine Smith, Chairperson

The Connecticut General Assembly

House Democrats

J. Brendan Sharkey

Speaker of the House

Joe Aresimowicz

House Majority Leader

May 13, 2013

Dear Friends:

We recognize that monthly energy bills represent a significant percent of operating expenses at YMCAs, YWCAs, and Boys and Girls Clubs of Connecticut. We invite you to learn about a new state-wide program that will allow you to reduce energy bills at your facility – with no upfront costs.

Connecticut's Clean Energy Finance and Investment Authority (CEFIA) will tell you how you can take advantage of the Commercial and Industrial Property Assessed Clean Energy (C-PACE) program, at a special presentation scheduled for:

Tuesday, May 21
ROOM 2C of the Legislative Office Building
TIME: 9:30am

Joining CEFIA to lead this discussion will be House Majority leader Joe Aresimowicz, Energy and Technology Committee House Chair Lonnie Reed, Finance, Revenue and Bonding Committee House Chair Pat Widlitz, and Bonding Subcommittee House Chair Betty Boukus. We believe you will be impressed with the details of C-PACE, which allows commercial property owners to access 100% upfront, long-term financing for energy improvements. By state law, the monthly financing costs must be less than the savings realized through reducing your energy use. This means that your building will start saving money – and energy – immediately.

This program allows non-profit entities to take advantage of the tremendous opportunity to engage in smart, cost cutting energy opportunities. In addition to low-cost financing, we will consider ways in which we can take advantage of economies of scale and drive down the cost of participation for YMCAs, YWCAs, and Boys & Girls Clubs.

How C-PACE works - C-PACE allows building owners to finance qualifying energy efficiency and clean energy improvements by placing a voluntary benefit assessment on their property tax bill. Benefit assessments are a safe and familiar tool used by municipalities to finance projects including street paving, water and sewer systems, and street lighting. Property owners pay for the improvements over time through this additional charge on their property tax bill and the repayment obligation transfers automatically to the next owner if the property is sold. The private sector provides the low-interest capital to fund these C-PACE projects (which are secured by a lien on the property).

As a non-profit entity, your facility may participate in this program as long as the municipality is willing to issue you a special 'C-PACE' property tax bill.

Municipal involvement - In order to participate in this innovative program, you must be located in a community that has elected to authorize the C-PACE program. More than 20 municipalities have already adopted C-PACE and you can view this list on the C-PACE website at www.c-pace.com under "Resources." If your municipality is not currently participating, we can engage them to adopt the C-PACE program. Please forward this invitation to the chief administrator and/or chief local elected official of your community and encourage them to attend this special forum.

We look forward to seeing you at the C-PACE presentation on May 21. Please RSVP to Aurora D'Angona at (860) 240-8466 or by email at aurora.dangona@cga.ct.gov by May 20, 2013**.**

Joe Aresimowicz
House Majority Leader

Pat Widlitz
House Chair, Finance, Revenue & Bonding Committee

Lonnie Reed
House Chair, Energy & Technology Committee

Betty Boukus
House Chair, Bonding Subcommittee

cc: Connecticut House of Representatives
Connecticut Senate
Connecticut Conference of Municipalities
Connecticut Council of Small Towns
Connecticut Chambers of Commerce
Connecticut Business and Industry Association

Energy Efficiency Board (EEB) Positions, Objectives, and Criteria for Financing (March 13, 2013)

As stated in our letter to the Clean Energy Finance and Investment Authority (CEFIA) on November 29, 2012, the Connecticut Energy Efficiency Board (EEB) is strongly supportive of using financing to help achieve the goals of the energy efficiency programs and to leverage ratepayer funds. In any program, however, financing products should meet the right criteria and should have the right features in order to be effective. As the November letter made clear, energy efficiency financing products should meet the following "best practices" criteria in order to be effective and successful:

1. The <u>financing process should be convenient and streamlined from a customer perspective</u>. Loan approvals must be quick and simple for customers. Back-end processes should not be too costly or complex. Delivery and promotion should be fully integrated with existing energy efficiency programs.

2. The product should be <u>attractive and economical from a customer perspective</u>. The all-in costs to customers, when considering interest rates, terms, and fees, should be lower than or at least competitive with available alternatives.

3. The product should be <u>economical from a program perspective</u>. Costs to ratepayers and taxpayers should be kept low by attracting low-cost capital, simplifying program processes, reducing perceived risks to repayment of capital through loan loss reserves or other mechanisms, optimizing credit enhancements, and reducing or eliminating any unnecessary fees to the program.

4. The product (or a mix of products) should be <u>available to meet the needs of the targeted market segments</u>.[1] These include those segments in which financing is most likely to work, meaning that financing can be implemented and rebates and other incentives can be reduced commensurately while still achieving the energy savings goals.

For many years, the EEB has supported financing as a key program strategy and financing products that meet the criteria laid out above. The energy efficiency programs have won several national awards for exemplary energy efficiency programs that incorporate financing products. As financing products continue to be developed, refined, and implemented through the energy efficiency programs and related Energize CT efforts, it is the EEB's position that they should meet these key criteria in order to be effective and achieve success.

The EEB believes that financing should be emphasized in markets and market segments in which it is likely to be most effective. The following table summarizes some of the market segments in which financing is likely to be effective:

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[1] We acknowledge that it will take more than one financing product to serve all targeted market segments. But the financing products should be marketed as one overarching financing offering under the Energize CT umbrella, and the specific variations in the financing products should mostly be addressed and managed by the EE program administrators and CEFIA "behind the curtain."

Sector	Rationale
Lower Income Residents (not Income-Eligible Customers)	Want to lower utility bills, but need access to capital in order to fund the EE projects
Higher Income Residents	Attractive financing may spur some to make investments in EE
Small Business	May lack access to attractive financing, or may need attractive offer to focus on EE investments
Commercial and Industrial	Attractive financing can help EE investments compete with other budget priorities

Beyond meeting the four criteria above, the EEB recommends that all parties work together going forward to addressing the following additional issues:

Positioning, Naming, and Marketing of the Financing Product under Energize CT

The EEB believes that a financing product should be seen as a component of a multi-component program under the overarching brand of Energize CT. Financing is one means by which to facilitate the objectives of the Energize CT overarching joint initiative and make it easier for customers to participate, while leveraging program funds. Given the multitude of programs that already fall under the overarching Energize CT brand (including HES, Solarize CT, ENERGY STAR, gas conversions, etc.), we recommend that program components (e.g., financing products and other program components) should not have their own customer-facing names in the marketplace (there are already plenty of/too many customer-facing names and brands). It is important that the Energize CT overarching brand be seen as primary, be supported as primary, and any potential confusion in the marketplace be avoided.

Reducing Customer and Vendor Confusion with Multiple Financing Products in the Market

At this point it is clear that there will be multiple financing products in the market at the same time, therefore efforts to clarify the products and reduce confusion in the marketplace are crucial. The Board recommends that the Companies and CEEF programs make all financing products available through the programs, in a fair and objective manner, to provide financing options to customers. At the same time, the Board recommends that the Companies and programs assist customers in identifying and securing the financing products that will best meet the needs of each customer.

Evaluating Performance and Collecting Billing Data

The EEB recommends that the Companies and CEFIA coordinate to reduce or eliminate any unnecessary program costs with regard to collecting energy usage and energy cost data (i.e., billing data) for purposes of program assessment and evaluation. Billing data for a sample of customers are currently collected periodically as part of the regular impact evaluation process for the energy efficiency programs, including Home Energy Solutions. Collecting billing data on an ongoing basis for all customers could potentially increase program costs and be a barrier to participation. As such, it is important that all parties work together to understand what kind of billing data collection will take place in conjunction with any financing product and whether there are ways to reduce or eliminate any unnecessary program expenses and barriers to participation.

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CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Memo

To: Energy Efficiency Board

From: Bryan Garcia

CC: Mackey Dykes, Ben Healey, Bert Hunter, Alexandra Lieberman, Kerry O'Neill, and Bob Wall

Date: April 10, 2013

Re: EEB Positions, Objectives, and Criteria for Financing – CEFIA Baseline for the Smart-E Loan

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The market segments that CEFIA is currently implementing financing products in that are consistent with Connecticut's Comprehensive Energy Strategy and CEFIA's Strategic Plan are:

- Lower and Higher Income Residents through the Smart-E Loan, Cozy Home Loan, Solar Loan, and Solar Lease; and

- Commercial and Industrial through Commercial Property Assessed Clean Energy (C-PACE)

As a follow-up to the EEB's positions, objectives and criteria for financing, CEFIA provides the following update on progress made to date on our residential financing programs – this serves as the Smart-E Loan product baseline.

CEFIA is focused on developing and implementing financing products that are designed to achieve cleaner, cheaper, and more reliable sources of energy and advancing job creation and economic development goals of Governor Malloy:

> "CEFIA was established in 2011 to develop programs that will leverage private sector capital to create long-term, sustainable financing for energy efficiency and clean energy to support residential, commercial, and industrial sector implementation of energy efficiency and clean energy measures."

The following memo provides the EEB an update specifically on CEFIA's residential financing product – the Smart-E Loan – and how it currently addresses the four (4) criteria outlined and the three (3) issues identified in the EEB letter to CEFIA.

<u>Smart-E Loan</u>

The Smart-E Loan product was created through the repurposing of $2.5 million of American Recovery and Reinvestment Act State Energy Program (ARRA-SEP) funding to provide a credit enhancement – a loan loss reserve – to attract nearly $30 million in low-interest and long-term financing from local credit unions and community banks. The product is a sustainable open-market financing solution that is available to households and qualified contractors in all electric and gas utility service territories throughout Connecticut and provides capital for the deployment of all energy measures that are consistent with the public policy goals of the State of Connecticut – through PA 07-242, PA 11-80, Comprehensive Energy Strategy, and other relevant policies.

The Smart-E Loan product has now transitioned from the design and development stage and is in implementation in Q2 of 2013 with a pilot launch in Norwich Public Utility (NPU) service territory (in April), a rollout in United Illuminating (UI) service territory (expected in May), and a statewide expansion into Connecticut Light & Power (CL&P) and the other Connecticut Municipal Electric Energy Cooperative (CMEEC) service territories (expected in June). CEFIA had expected a Q1 2013 launch for the Smart-E Loan in UI service territory, but as the result of a desire for statewide program expansion added internal and external structuring and coordination to support that approach (including coordination with EEB), and a longer than expected documentation process with financial institutions coming onboard, it is expected that the Smart-E Loan will be available across the state by summer 2013.

With respect to the four (4) criteria outlined in the EEB letter to CEFIA, the following describes how the Smart-E Loan currently addresses them.

Financing process should be convenient and streamlined from a customer perspective
Since the inception of the Smart-E Loan product, CEFIA staff has worked with contractors and capital providers to develop a financing process that is accessible, quick and easy for customers – the key process factors from a customer's perspective.

With respect to accessibility, the Smart-E Loan:

- **Credit Scores** – Smart-E Loan provides access to nearly 80% of the single family homes in Connecticut as it is available at FICO scores greater than 680 (see Table 1).

Table 1. Smart-E Loan Accessibility to Credit Scores[1]

FICO Range	Percent of Households
640-679	9%
680-699	6%
700+	72%

CEFIA, working with the Connecticut Housing Investment Fund (CHIF), Department of Energy and Environmental Protection (DEEP), UI, and CL&P has suggested that for households at 80%+ of area median income, FICO scores for interested households equal to or greater than 680 will be channeled through the Smart-E Loan, while FICO scores less than 680 and microloans less than $3,000 (i.e. 0% interest loans for insulation) will be handled by CHIF for CL&P and UI service territories.

CEFIA has experience designing and implementing successful, award-winning residential financial products for clean energy that are accessible and affordable to

[1] Credit data from Experian, current as of November 30, 2012 from over a 500,000 household dataset

customers.[2][3] In fact, the Connecticut Solar Lease product reached nearly 1,000 households with less than 30% of those participating households under the median for both household income and credit scores – making expensive solar PV technology more accessible and affordable to customers through an innovative financing product. Based on the success of the original $55 million pilot financing program – $40 million from ratepayers (i.e. $15 million in debt and $25 million in subsidies) and $15 million from non-ratepayer sources (i.e. a tax equity investor) – CEFIA is moving the pilot program into a $75 million program – $25 million from ratepayers (i.e. $10 million in debt and equity and $15 million in subsidies, all of which are returned back to CEFIA over time) and $50 million from non-ratepayer sources (i.e. a tax equity investor and a syndicate of state and regional banks providing the debt).

- **Service Territory** – Smart-E Loan provides access to all electric and natural gas ratepayers including those in municipal service territories (i.e. CMEEC).

- **Capital Providers** – Smart-E Loan will provide access to a statewide distribution of participating lenders competing in an open market for loan origination.

  Currently, the following capital providers are participating in the Smart-E Loan product to enable financing in CMEEC service territories of NPU and then Bozrah Light and Power Company, Groton Utilities, and the Jewett City Department of Public Utilities:

  - **Core Plus Federal Credit Union** – a credit union with $188 million in assets with 7 branches serving East Lyme, Groton, Norwich, Plainfield, and Watertown.

  - **Eastern Savings Bank** – a community bank with $165 million in assets with 4 branches serving Jewett City, Norwich, and Plainfield.

  The following capital providers are in the process of coming onboard or are in negotiations with CEFIA regarding the Smart-E Loan product:

  - **First County Bank** – a community bank with $1.3 billion in assets with 15 branches serving Darien, Greenwich, New Canaan, Norwalk, Stamford, and Westport.

  - **GE Employee Federal Credit Union** – a credit union with $119 million in assets with 7 branches serving Bridgeport, Fairfield, Milford, New Haven, North Haven, and Stamford.

  - **Liberty Bank** – a community bank with $3 billion in assets and 43 branches serving the central, eastern and shorelines of Connecticut.

  - **Naugatuck Savings Bank** – a community bank with nearly $1 billion in assets and 19 branches in 13 towns in Connecticut.

[2] Connecticut's Solar Lease Program Demonstrates High Borrower Fidelity by Bethany Speer of NREL (October 2012)
[3] State Leadership in Clean Energy Awards (October 2012)

- **<u>Nutmeg State Federal Credit Union</u>** – a credit union with $324 million in assets with 6 branches serving the counties of Hartford, Middlesex, and Tolland in Connecticut.

- **<u>Patriot Bank</u>** – a community bank with over $350 million in assets with 9 branches serving Darien, Fairfield, Greenwich, Milford, Norwalk, Southport, Stamford, Trumbull, and Westport.

- **<u>Quinnipiac Bank</u>** – a community bank with $87 million in assets and 1 branch in Hamden, Connecticut.

- **<u>Sikorsky Federal Credit Union</u>** – Sikorsky Credit Union is one of the largest credit unions in Connecticut with nine offices, over 54,000 members and over $600 million in assets. Sikorsky will come on board later in 2013 due to its transition to a new systems backbone covering all loans and accounting that prevents it from bringing on a major product like Smart-E before this new system is fully implemented.

- **<u>Union Savings Bank</u>** – a mutual bank with $2.5 billion in assets and 25 branches located throughout Western Connecticut.

The following capital providers have been selected by CEFIA for invitation into the Smart-E Loan program based on their strategic location in the state. Staff have either initiated preliminary discussions with this group or are in the process of making contact:

- **<u>American Eagle</u>** – American Eagle FCU is currently the largest community credit union in Connecticut with over 100,000 members and $1.3 billion dollars in assets. The Credit Union operates 17 branches in Central Connecticut.

- **<u>First Niagara Bank</u>** – a multi-state community bank with $37 billion in assets and 430 branches in Connecticut, Massachusetts, New York and Pennsylvania.

- **<u>Litchfield Bancorp, Northwest Community Bank & Collinsville Savings Society</u>** – these three banks are affiliated with each other (under Connecticut Mutual Holding Company) and cover a dozen towns in the northwest corner of the state.

- **<u>Savings Institute Bank & Trust and Citizens National Bank</u>** – these two unaffiliated banks cover two dozen towns between them in eastern portion of the state.

- **<u>Webster Bank</u>** – a community bank with $20 billion in assets with 168 branches serving Connecticut, Massachusetts, and New York.

Altogether, these institutions would provide statewide coverage for the Smart-E Loan program.

- **<u>Technology Agnostic</u>** – Smart-E Loan provides access to an entire suite of not only energy efficiency and renewable energy measures, but also fuel conversions and equipment replacement, automobile recharging or refueling stations, energy management systems, Energy STAR appliances, and healthy home renovations (i.e.

lead abatement, asbestos removal, mold remediation, etc.). For details on current technologies that are approved for Smart-E Loan financing see Appendix I. These measures were approved by the electric distribution companies as administrators of CEEF, the Energy Efficiency Board consultants, and CEFIA in the design and development stage of the Smart-E Loan.

- **Contractors** – Smart-E Loan is designed to be accessed by a wide variety of eligible contractors across the clean energy spectrum, drawing from CEEF, utility and CHIF approved lists for HES, HPwES, HVAC and weatherization contractors, CEFIA approved contractors for renewables, and minimum standards for other contractors seeking to gain access to Smart-E Loan financing. Smart-E Loan also provides progress payments of 1/3 upon technical and loan approval, and remaining funds available upon project completion. This is particularly attractive to contractors, since it addresses a key working capital constraint to scaling widespread promotion of financing options.

With respect to quick and easy, the Smart-E Loan:

- **Loan Processing** – Smart-E Loan credit approval can be done on the spot (for certain participating institutions), online, or in-person. Technical approval will take an estimated 3 days.

- **Rebate Processing** – Smart-E Loan follows the same process for accessing CEEF and CEFIA rebates and ensures that existing energy efficiency rebate programs are being fully integrated.

The Smart-E Loan is designed to provide sustainable and affordable private capital that is quick and easy to access by single family homes throughout Connecticut.

Attractive and economical from a customer perspective
CEFIA staff has worked with capital providers to develop a financing product that is affordable and attractive for customers. The Smart-E Loan offers affordable long-term financing for household consumers through the use of a credit enhancement that attracts private capital.

With respect to affordable and attractive, the Smart-E Loan:

- **Terms and Rates** – Smart-E Loan provides short to long term unsecured loans at not to exceed interest rates by participating lenders (see Table 2). Participating lenders will compete for customers by offering different interest rates, offering other financing products and services (i.e. home equity loans, home equity lines of credit, etc.), partnering with CEFIA and contractors on special programs and limited time offers, and other marketing approaches.

Table 2. Smart-E Loan Affordability by Term and Not to Exceed Interest Rates

Term of the Loan	**Interest Rates** (not to exceed)
5	4.49%
7	4.99%
10	5.99%
12	6.99%

For the EEB's information, the Mass HEAT Loan, the loan product for Mass Saves in Massachusetts, offers loans up to 7 years at 0% interest rates. For an average loan of $10,000, it costs over $1,500 upfront to buy down the interest rate from 5% to 0%. If the loan (prior to subsidy) were to be offered at 5% for 10 or 12 years, then the interest rate buy down to 0% would cost $2,100 and $2,500 per loan respectively. The Massachusetts program has had great success originating over 9,000 loans and attracting over $90 million of private capital at a cost to ratepayers of nearly $13.5 million – a 6.7:1 leverage of private capital to public funds.

CEFIA is pursuing a strategy that reduces subsidies to not only contractors and consumers, but also capital providers that offer lower interest rates and longer term loans. This approach, which is consistent with Governor Malloy's efforts to "transition programs away from government-funded grants, rebates, and other subsidies, and towards deploying private capital," is intended to educate capital providers about the low default risk investments in clean energy (i.e. energy efficiency and renewable energy) by providing them with a loan loss reserve as a credit enhancement – instead of an interest rate buy down, the latter of which is in effect an upfront subsidy to capital providers. This approach is estimated to achieve a minimum of nearly 11:1 leverage of private capital to public funds. To align our interests, the capital providers are required to take the first 1.5% of losses on the portfolio. If cumulative portfolio losses (such as with the Keystone HELP loan program) approximate 6.5%, CEFIA's net program cost of 5% of the portfolio (after the 1.5% retained loss by the banks) would result in an effective 20:1 leverage ratio for ratepayer funds. It should be noted that based on the experiences of loan programs across the country that loan default rates for energy efficiency and renewable energy is less than 1.0%.

- **<u>No or Low Fees</u>** – Loans are provided by participating community banks and credit unions. Most credit unions charge membership fees. These "one-time" fees are typically low ($5-$15). Lenders may choose to waive these fees to increase their competitiveness with other Smart-E lenders, but the membership fee has not proved a significant barrier in the MassHEAT Loan program.

- **<u>Home Performance Structure</u>** – the Smart-E Loan offers 10 and 12-year terms that allow customers to pursue greater home performance and receive larger energy savings than their loan repayments. The Smart-E Loan delivers positive cash flow day-one for various measures and combinations of measures to deliver full home performance (see Tables 3 and 4).[4][5][6]

[4] Bankrate.com was used to calculate the monthly loan payment from various clean energy measures financed through the Smart-E Loan product http://www.bankrate.com/calculators/mortgages/loan-calculator.aspx

[5] Monthly energy savings from equipment replacement is equal to annual savings from fuel costs of $1,800 as noted in the CES divided by 12.

[6] Monthly energy savings from solar PV based on a 7 kW system with annual savings from electricity costs of $1,742 divided by 12.

Table 3. Monthly Household Cash Flow after Energy Savings and Smart-E Loan at 10-Year Term and 5.99% Interest Rate

	Weatherization ($4,000 Loan)	**Equipment Replacement** ($7,500 Loan)	**Weatherization + Equipment Replacement** ($11,500 Loan)	**Weatherization + Equipment Replacement + Solar PV**[7] ($24,000 Loan)
Monthly Loan Payment	($44.64)	($83.23)	($125.08)	($266.07)
Monthly Energy Savings	$73.84	$150.00	$162.29	$280.27
Monthly Cash Flow	$29.20	$66.77	$37.21	$14.20

Note that equipment and weatherization together results in less savings because the weatherization is based on natural gas heating savings, whereas standalone weatherization is based on oil savings.

Table 4. Monthly Household Cash Flow after Energy Savings and Smart-E Loan at 12-Year Term and 6.99% Interest Rate

	Weatherization ($4,000 Loan)	**Equipment Replacement** ($7,500 Loan)	**Weatherization + Equipment Replacement** ($11,500 Loan)	**Weatherization + Equipment Replacement + Solar PV** ($24,000 Loan)
Monthly Loan Payment	($41.35)	($77.09)	($115.85)	(246.44)
Monthly Energy Savings	$73.84	$150.00	$162.29	$280.27
Monthly Cash Flow	$32.49	$72.91	$44.44	$33.83

Note that equipment and weatherization together results in less savings because the weatherization is based on natural gas heating savings, whereas standalone weatherization is based on oil savings.

Economical from a program perspective

CEFIA staff has worked with capital providers to develop a financing product that is economical and sustainable from a program perspective.

The Smart-E Loan offers affordable and sustainable long-term financing for household consumers through the use of an innovative loan loss reserve structure that attracts nearly $30 million in private capital at a leverage of 11:1.

Credit Enhancement – Smart-E Loan uses a $2.5 million credit enhancement from repurposed ARRA-SEP funds to attract $28 million in private capital from participating credit unions and community banks. In comparison to an interest buy-down, a loan loss reserve reduces program

[7] Assumes a 7kW system, priced at $28,000 gross. Net (financed) is assumed to be net of state and ITC rebates and is $12,705 for the above examples.

costs and maintains a more sustainable financing approach as demand for clean energy increases (see Table 4).

Table 4. Comparison of the Cost of a Credit Enhancement for the Value of a Loan

	Interest Rate Buy-Down			Loan Loss Reserve		
Term	**7** (5.00%)	**10** (5.00%)	**12** (5.00%)	**7** (4.99%)	**10** (5.99%)	**12** (6.99%)
Value of the Loan	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Monthly Loan Payment[8]	($119)	($83)	($69)	($141)	($111)	($103)
Expense of Credit Enhancement to the Ratepayers	$1,500	$2,100	$2,500	$900	$900	$900
Interest Expense to the Customer	$0.00	$0.00	$0.00	$1,870	$3,320	$4,800

By capital providers sustaining first losses prior to accessing loan loss reserve funds through the Smart-E Loan, local lenders become more comfortable with home energy performance investing as an asset class without the need for government or ratepayer subsidization. This makes the Smart-E Loan a more sustainable financing approach that delivers longer terms (i.e. 10 and 12-year terms) at competitive market rates than with an interest rate buy down in a low-interest environment.

In comparison, there are several other finance offerings from local financial institutions without a credit enhancement, including the Home Improvement Loan Program and Home Heating Efficiency Conversion Loan from People's United Bank (see Table 5).

Table 5. People's United Bank Finance Offerings

	Home Improvement Loan Program	Home Heating Efficiency Conversion Loan
Interest Rate	7.99%	6.99%
Term	Up to 10 years	Up to 4 years
Loan Amount	Up to $10,000	$2,500-$10,000
Monthly Payment on a $10,000 Loan	($121.27)	($239.42)

These offerings are more expensive and provide less capital for homeowner projects than the Smart-E Loan.

- **Limited Income Assistance** – by shifting the existing energy efficiency loan offerings backed by ratepayers and offered by CHIF for households with FICO scores greater than 680 to the private sector backed Smart-E Loan, resources can be freed up by CEEF to provide more assistance where it is needed to limited income households.

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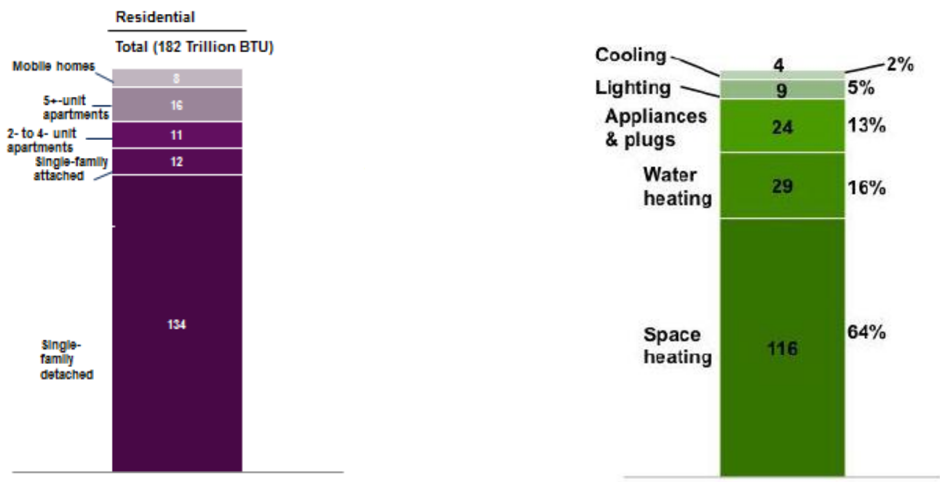
[8] Bankrate.com was used to calculate the monthly loan payment from various clean energy measures financed through the Smart-E Loan product http://www.bankrate.com/calculators/mortgages/loan-calculator.aspx

Available to meet the needs of the targeted market segments
For the residential sector, the Comprehensive Energy Strategy has identified several market segments where there is a need for financing (see Figure 1). The Smart-E Loan covers over 85% of the residential market, including single family detached (74%), single-family attached (7%), and 2 to 4 unit apartments (6%). As noted above, the Smart-E Loan is also technology agnostic and can finance energy improvements regardless of the fuel source, thereby providing the necessary capital to address space and water heating – the two largest areas of end-use energy consumption at 80%.

Figure 1. Connecticut Residential Building Energy Use by Property Type and End-Use Energy



The longer terms and lower interest rates of the Smart-E Loan offer households immediate positive cash flow benefits for full home performance (see Figure 2) – meaning, the monthly energy savings exceed the monthly loan repayment costs for a combination of deeper energy efficiency and renewable energy measures.

Figure 2. Smart-E Loan Monthly Cash Flow for Equipment Replacement, Weatherization, and Solar PV with incentives (green bar) and without incentive (orange bar) – Above the Line is Cash Flow Positive on a Monthly Basis

This feature of the Smart-E Loan product having a 10 and 12-year term at low interest rates will allow for the reduction of rebates over time and the replacement with financing in various customer segments as positive cash flow for home performance measures in combination (i.e. equipment replacement, weatherization, and solar PV) become more affordable and accessible for homeowners to finance.

With respect to the three (3) issues identified in the EEB letter to CEFIA, the following describes how the Smart-E Loan currently addresses them.

Positioning, Naming, and Marketing of the Financing Product under EnergizeCT
Through our collaboration with CEEF, the state, and the utilities, EnergizeCT is the primary and overarching brand that makes it easy for customers to participate in various rebate and financing programs. Like the successful Mass Saves Residential HEAT Loan Program (i.e. HEAT Loan), the Energize Connecticut Smart-E Loan product (i.e. Smart-E Loan) provides households with access to long-term, affordable, quick and easy to use financing for the home energy improvements.

Reducing Customer and Vendor Confusion with Multiple Financing Products in the Market
To reduce customer and vendor confusion with multiple financing products being offered in the market through ratepayers and private capital, CEFIA is working with CHIF, DEEP and the utilities to identify which market segments and loan product offerings would be offered by CEFIA and which would be offered by CHIF/EEB. Furthermore, the parties are working to establish a common intake process for residential financing programs, and the ability to refer a customer to CHIF if they are denied Smart-E financing due to a FICO score below 680. The implementing parties are working together to provide financing options for customers that are fair and objective. It is expected that the implementing parties will have a recommendation for the Energy Efficiency Board's consideration at the May board meeting.

Evaluating Performance and Collecting Billing Data
CEFIA and the utilities will continue to work together on collecting energy usage and energy cost data for purposes of program assessment and evaluation. CEFIA is committed to robust data collection of both energy and financial performance data, to ensure Connecticut becomes a premier place for private capital to invest. As energy lending is still viewed as a new and evolving asset class by private capital providers, it is critical that CEFIA gather data to prove the case to capital providers that these are attractive investments that are achieving real and measurable energy savings.

Appendix I

Eligible Measures for the Smart-E Loan[9]

MEASURE #	MEASURE
0	Other
1	Asbestos Remediation
2	ENERGY STAR appliances
3	ENERGY STAR QIV incentive
4	Mold Remediation
5	Roof Repair
6	Structural Remediation
7	Air Sealing
8	Air Source Heat Pump
	Must meet or exceed ENERGY STAR: 14.5 SEER, 12 EER, 8.2 HSPF for split systems: 14 SEER , 11 EER, 8.0 HSPF for single packaged systems
9	Central AC
	Must meet or exceed ENERGY STAR: 14.5 SEER, 12 EER, for split systems: 14 SEER, 11 EER for single packaged systems
10	Duct Sealing
11	Ductless Mini-Split Heat Pump
	Must be ENERGY STAR: meet or exceed 14.5 SEER, 12 EER, 8.2 HSPF with inverter driven outdoor compressor
12	Energy Efficient Zone Heating Controls
13	Energy Efficient Lighting Systems
14	Ground Source Heat Pump
	GLHP Closed Loop Water to Air 17.1 EER, 3.6 COP
	DX Direct Expansion Refrigerant 16.0 EER, 3.6 COP
	Water to Water 16.1 EER, 3.1 COP

[9] CEFIA worked with the EEB consultants and EDCs, as administrators of the CEEF, to identify the current list of eligible measures.

15	Heat Pump Water Heater
	Energy Factor (EF) of 2.0 or greater, ENERGY STAR
16	High Efficiency Insulation - all heating types
	Final R-Value must be >=38 (attic only). Ceiling must be <=30, walls <=4. ***No basement ceilings, below grade walls or interior walls***
17	High Efficiency Window AC Units
	PTAC/PTHP 8,000 BTU or Below: 12.5 EER – 3.0 COP
	8,100 BTU to 10,000 BTU: 12.0 EER – 2.9 COP
	10,100 BTU to 12,000 BTU: 11.5 EER – 2.9 COP
	12,100 BTU to 13,000 BTU:11.0 EER – 2.9 COP
	13,100 BTU and above: 10.0 EER – 2.8 COP
18	Hot Air Furnace - Biomass
	ASME Certified, 85% AFUE
19	Hot Air Furnace - Natural Gas
	ENERGY STAR: *AHRI rated 95% AFUE, Performance EAE of 2% or lower*
20	Hot Air Furnace - Oil
	86% AFUE, Performance EAE of 2% or lower
21	Hot Air Furnace - Propane
	ENERGY STAR *AHRI rated 95% AFUE, Performance EAE of 2% or lower*
22	Hot Water Boiler - Biomass
	ASME Certified
	85% AFUE
23	Hot Water Boiler - Natural Gas
	90% AFUE with temperature reset or purge control
24	Hot Water Boiler - Oil
	86% AFUE with temperature reset or purge control
25	Hot Water Boiler - Propane

	90% AFUE with temperature reset or purge control
26	Indirect Water Heater - Natural Gas
	attached to ENERGY STAR Boiler of AFUE of 90% or greater
27	Micro CHP
	Contact CEFIA for technical requirements
28	Micro fuel cell
	Contact CEFIA for technical requirements
29	Natural Gas Conversion of code efficiency equipment (Burner and CIAC, if applicable)
30	On-Demand Tankless Water Heater - Natural Gas
	ENERGY STAR: ***EF of 0.82 or greater***
31	On-Demand Tankless Water Heater - Propane
	ENERGY STAR: ***EF of 0.82 or greater***
32	Electric Vehicle Recharging Station
33	Natural Gas Vehicle Refueling Station
34	Replacement Windows - All heating fuels
	ENERGY STAR U-factor < or = 0.30. ***Not for unconditioned spaces***
35	Smart Meters
36	Solar Photovoltaic System
	Must meet CEFIA's standards for rebates
37	Solar Photovoltaic Islanding Inverters
	Please contact CEFIA for technical standards
38	Solar Photovoltaic Battery Back-up
	Please contact CEFIA for technical standards
39	Solar Hot Water Heater
40	Steam Boilers - all fuels
41	Weather Responsive Controls - Natural Gas
42	Weather Responsive Controls - Oil

43	Weather Responsive Controls - Propane
44	Wind System (Residential)
	Please contact CEFIA for technical standards

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CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Memo

To: Board of Directors

From: Bryan Garcia, President and CEO, Bert Hunter, EVP and CIO, Ben Healey, Sr Manager of Clean Energy Finance and Alexandra Lieberman, Sr Manager of Clean Energy Finance

CC: Mackey Dykes, Chief of Staff, Brian Farnen, General Counsel

Date: May 10, 2013

Re: CT Solar Lease 2 Program Update & Request for $1 million Working Capital Facility

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Background

The CT Solar Lease 2 Program is making solid progress with an anticipated transaction closing in the first half of June. CEFIA now has:

- A fully credit-approved syndicated financing proposal from lead bank First Niagara for $28.2 million. The syndicate includes Webster Bank, Liberty Bank and Peoples United Bank – all local banks from Connecticut. The facility will use interest rate swaps to lock in fixed rate funds for the 15-year repayment period, which is important for CEFIA to hedge against interest rate risk.

- A signed term sheet from US Bank for $23.8 million tax equity for the program. Final credit approval is awaiting final transaction documentation, but US Bank is fully committed to a successful program.

In anticipation of the program launch, CEFIA staff have set up training sessions for solar contractors to be held by CEFIA and AFC First Financial May 20 and June 3.

Insurance

CEFIA staff have met extensively with its insurance advisor (Roy Nivens) and brokers (RC Knox) in respect of the program. During the week of May 6, CEFIA staff finalized a comprehensive package to insure the program for property, business interruption, breakdown, flood, earthquake and windstorm perils through The Hartford. Liability will be covered through a policy from Chubb.

Working Capital

CEFIA staff have been working with its advisors, Reznick Capital, and US Bank to agree to the financial projections for the lease program. The projections determine the flow of funds from anticipated lease installations. Funding is advanced by each of the stakeholders to the leasing program special purpose vehicle (CT Solar Lease 2 LLC) in stages. CEFIA's initial funding for the program is capital used to purchase and aggregate the leases into packages for CT Solar Lease 2 LLC. Once the agreed package size is reached using funding from CEFIA and US Bank, the bank syndicate advances $3,000,000 to CT Solar Lease 2 LLC which replenishes the CEFIA advances. Based on our current monthly projections for sources and uses of cash, the program will require approximately $600,000 of additional funding late in the next fiscal year (FYE 6/30/2014) on a short term basis before the bank funding is advanced to repay the short term advances. As sponsor of the lease program – CEFIA would advance these short term loans. The no interest loans paid into the program would be repaid from the US Bank and bank syndicate funding received by the program. CEFIA's working capital advance would be repaid within 6 months of their advance. To provide a margin above this requirement, staff recommends that the Board approve a not to exceed amount of $1,000,000 for short term loans to address the timing issue with the US Bank and syndicate bank funds.

The table below recaps the capital stack for the fund and presents the high level cash flows by month, indicating CEFIA's cumulative investment and the amount of working capital required (noted where cumulative equity investment exceeds the approved limit of $7.2 million).

<u>Investment Summary</u>

Sub Debt Investment	$ 2,300,000
Equity Investment	$ 7,200,000
Total CEFIA Investment	**$ 9,500,000**
Tax Equity	$ 23,800,000
Sr Debt	$ 28,200,000
Total Capital	$ 61,500,000
Total Private Capital	$ 52,000,000
Leverage of CEFIA $	5.5x

Per monthly schedule below, short term loan is needed when CEFIA's cumulative equity investment exceeds the approved $7,200,000 level.

	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13
Sources	4,494,000	-	-	-	3,659,922	3,659,922	2,777,505
Uses	4,494,000	-	-	-	3,659,922	3,659,922	2,777,505

	-	-	-	-	-	-	-
Cumulative Investment	-	-	-	-	1,202,771	3,096,294	4,467,634
Working Capital					-	-	-

	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
Sources	2,777,505	2,777,505	2,790,695	3,082,163	2,777,505	2,777,505	2,777,505
Uses	2,777,505	2,777,505	2,790,695	3,082,163	2,777,505	2,777,505	2,777,505
	-	-	-	-	-	-	-
Cumulative Investment	5,819,952	7,028,404	5,244,305	6,609,218	7,816,808	6,099,813	7,250,674
Working Capital	-	-	-	-	(616,808)	-	(50,674)

RESOLUTION

WHEREAS, at the the Board of Directors (Board) meeting held on February 13, 2013, the Board of the Clean Energy Finance and Investment Authority (CEFIA) passed resolutions to effect the reintroduction of its Solar Lease program to build on the success of the first Solar Lease program and achieve the additional benefits of enabling Connecticut homeowners to work with qualified installers of their choice, ensuring that Connecticut's solar installer base remains robust, diverse and able to reach all Connecticut residents, permit homeowners to lease systems for a 20-year period, permit leasing of solar hot water systems and make a portion (20%) of the fund proposed available to non-residential end-users (the "Program");

WHEREAS, by the resolutions approved at said meeting, the Board of Directors approved funding for the Program in the following amounts:

A. an amount not-to-exceed $3.5 million for a Lease/Loan Loss Reserve (LLR) through the use of repurposed ARRA-SEP program funds;

B. an amount not-to-exceed $7.2 million for sponsor equity to be invested into the special purpose vehicle to be established for the Program; and

C. an amount not-to-exceed $2.3 million for subordinated debt

WHEREAS, the operations of the leasing fund based on staff projections have determined that the Program will require approximately $600,000 of additional funding in the next fiscal year (FYE 6/30/2014) on a short term basis before the bank funding is advanced to repay the short term funding;

WHEREAS, to provide a margin above this requirement, staff has recommended that the Board approve a not to exceed amount of $1,000,000 for short term loans for these purposes;

NOW, therefore be it:

RESOLVED, that CEFIA's Board authorizes additional funding for the Program in an amount not to exceed $1,000,000 to be provided by way of short term no interest loans to the special purpose vehicle ("SPV"), CT Solar Lease 2 LLC, or to intermediate SPVs (such intermediate SPVs being wholly-owned by CEFIA and Connecticut Innovations Inc.).

RESOLVED, that any working capital loans provided by CEFIA in support of the Program will be repaid from the US Bank and the bank syndicate financing of the Program. The working capital loans shall be repaid within 6 months of being advanced, provided that any sums advanced and repaid may be re-advanced as needed, provided subsequent advances are repaid within a six month period.

RESOLVED, that the President of CEFIA; and any other duly authorized officer of CEFIA, is authorized to execute and deliver, any contract or other legal instrument necessary to effect the additional $1,000,000 short term working capital loan funding for the Program with terms and conditions consistent with the memorandum submitted to the Board dated May 10, 2013 and as he or she shall deem to be in the interests of CEFIA and the ratepayers; and

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

Submitted by: Bryan Garcia, President and CEO, Bert Hunter, EVP and CIO, Ben Healey, Senior Manager of Clean Energy Finance and Alexandra Lieberman, Manager of Clean Energy Finance