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CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

December 14, 2012

Dear Clean Energy Finance and Investment Authority Board of Directors:

The Board of Directors will have its final regular meeting for 2012 on Friday, December, 2012 from 9:00 to 11:00 a.m. at the offices of CEFIA at 865 Brook Street, Rocky Hill, CT 06067.

The agenda for the meeting includes:

- **Residential Solar Investment Program – Steps 3 and 4** – the incentive structure for Step 3 is designed to reward the model (i.e. rebate or PBI) that is more effective at "maximizing the amount of clean energy deployed per dollar of ratepayer funds at risk." In concert with several financing programs to be launched in early 2013 in support of residential solar PV deployment, the incentives will be reduced from Step 2 to Step 3 by about 25%.

- **Committee Updates and Approvals** – each of the committees of the Board will be providing various updates on programs, including several recommendations for approval on items such as the annual report, funding requests below $300,000, and telecommuting policy.

Note – if you haven't done so already, please plan on either attending the Ethics Training session from 8:00 to 9:00 a.m. on Friday, December 21st or completing the online version for the Office of State Ethics.

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

AGENDA

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

Friday, December 21, 2012 – Regular Meeting
9:00-11:00 a.m.

Staff Invited: Jessica Bailey, Mackey Dykes, Brian Farnen, Bryan Garcia, David Goldberg, Dale Hedman, Bert Hunter, Alexandra Lieberman, Kim Stevenson, and Bob Wall

1. Call to order

2. Public Comments – 5 minutes

3. Approval of meeting minutes for November 30, 2012* – 5 minutes

4. Update from the President – 5 minutes

5. Deployment Committee updates and recommendations for approval* – 60 minutes

    a. Residential Solar Investment Program* – 30 minutes
    b. Repurposed ARRA-SEP Fund Update – 15 minutes
    c. Commercial and Industrial Property Assessed Clean Energy Update – 15 minutes

6. Audit, Compliance and Governance Committee updates and recommendations for approval* – 15 minutes

    a. Annual Report* – 5 minutes
    b. Funding Requests under $300,000* – 10 minutes

7. Budget and Operations Committee updates and recommendations for approval* – Telecommuting Policy – 10 minutes

8. Technology Innovations Committee updates – 5 minutes

9. Update on the Bridgeport Fuel Cell Project – 15 minutes

10. Adjourn

*Denotes item requiring Committee action
** Denotes item requiring Committee action and recommendation to the Board for approval

Join the meeting online at https://www4.gotomeeting.com/join/249350983

Dial +1 (636) 277-0131 Access Code: 249350983

Next Regular Meeting: Friday, January 18, 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, December 21, 2012 – Regular Meeting
9:00-11:00 a.m.

Staff Invited: Jessica Bailey, Mackey Dykes, Brian Farnen, Bryan Garcia, David Goldberg, Dale Hedman, Bert Hunter, Alexandra Lieberman, Kim Stevenson, and Bob Wall

1. Call to order

2. Public Comments – 5 minutes

3. Approval of meeting minutes for November 30, 2012* – 5 minutes

   Motion to approve the minutes of the Board of Directors for November 30, 2012 Special Meeting. Second. Discussion. Vote.

4. Update from the President – 5 minutes

5. Deployment Committee updates and recommendations for approval* – 60 minutes

   a. Residential Solar Investment Program* – 30 minutes

WHEREAS, Section 106 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") 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;

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") or expected performance-based buydowns ("Rebate"), for the purchase or lease of qualifying residential solar photovoltaic systems;

WHEREAS, the performance of the Rebate model in Step 2 is faster in deploying rooftop solar PV and requires less ratepayer subsidies than the PBI model therefore maximizing the amount of clean energy deployed per dollar of ratepayer funds at risk;

WHEREAS, the Deployment Committee has reviewed and directed CEFIA staff to bring a modified Step 3 of the Schedule to the Board of Directors ("Board").

NOW, therefore be it:

RESOLVED, that the Board approves the Schedule of Incentives for Step 3 outlined above to achieve 7.6 MW of solar PV deployment – 3.8 MW of Rebates, 2.8 MW of PBI, and 1.0 MW of additional capacity for the models to compete for incentives;

RESOLVED, that the Board hereby directs staff that at the point where 1.8 MWs of committed capacity is reached during Step 3 of the Schedule, or earlier if staff deems it appropriate, for either the PBI or the Rebate models, CEFIA staff will make a recommendation to the Deployment Committee on the Step 4 funding allocation and incentive level;

RESOLVED, that the Board hereby recommends that by (a) the point of the Step 3 incentive where 2.8 MW of committed capacity is reached for either the PBI or the Rebate models or (b) January 1, 2014 whichever comes first, the Board will approve a Step 4 incentive that is to deploy ten megawatts of installed capacity and inform residential solar installers to ensure the sustained and orderly deployment of the residential solar market in Connecticut; and

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

b. Repurposed ARRA-SEP Fund Update – 15 minutes
c. Commercial and Industrial Property Assessed Clean Energy Update – 15 minutes

6. Audit, Compliance and Governance Committee updates and recommendations for approval* – 15 minutes

a. Annual Report* – 5 minutes

WHEREAS, pursuant to Public Act 11-80, "An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut's Energy Future," Section 99(f)(1), the Clean Energy Finance and Investment Authority (CEFIA) Board of Directors is required to issue an annual report,

WHEREAS, pursuant to Section 5.3.1 of the CEFIA Bylaws, the Audit, Compliance & Governance Committee has recommended to the Board of Directors approval of the Fiscal Year 2012 Annual Report;

NOW, therefore be it:

RESOLVED, that the CEFIA Board of Directors hereby approves the Fiscal Year 2012 Annual Report.

b. Funding Requests under $300,000* – 10 minutes

WHEREAS, pursuant to Section 5.3.3 of the CEFIA Bylaws, the CEFIA Deployment Committee has been granted the authority to evaluate and approve funding requests between $300,000 and $2,500,000;

WHEREAS, CEFIA staff requests that staff have the authority to evaluate and approve funding requests less than $300,000, which are consistent with the CEFIA Comprehensive Plan and approved within CEFIA's fiscal year budget;

WHEREAS, the Audit, Compliance & Governance Committee recommends approval to the Board of Directors of authorizing CEFIA staff to evaluate and approve funding requests less than $300,000 which are pursuant to an established formal approval process requiring the signature of a CEFIA officer, consistent with the CEFIA Comprehensive Plan, approved within CEFIA's fiscal budget and in an aggregate amount not to exceed $500,000 from the date of the last Deployment Committee meeting.

NOW, therefore be it:

RESOLVED, that the CEFIA Board of Directors hereby approves the authorization of CEFIA staff to evaluate and approve funding requests less than $300,000 which are pursuant to an established formal approval process requiring the signature of a CEFIA officer, consistent with the CEFIA Comprehensive Plan, approved within CEFIA's fiscal budget and in an aggregate amount not to exceed $500,000 from the date of the last Deployment Committee meeting.

7. Budget and Operations Committee updates and recommendations for approval* – Telecommuting Policy – 10 minutes

   RESOLVED, that the CEFIA Budget and Operations Committee hereby recommends the proposed changes to the telecommuting policy to the CEFIA Board of Directors.

8. Technology Innovations Committee updates – 5 minutes

9. Update on the Bridgeport Fuel Cell Project – 15 minutes

10. Adjourn

*Denotes item requiring Committee action
** Denotes item requiring Committee action and recommendation to the Board for approval

Join the meeting online at https://www4.gotomeeting.com/join/249350983
Dial +1 (636) 277-0131 Access Code: 249-350-983

Next Regular Meeting: Friday, January 18, 2013
Clean Energy Finance and Investment Authority, 865 Brook Street, Rocky Hill, CT

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #1

Call to Order

December 21, 2012

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #2

Public Comments

December 21, 2012

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 November 30, 2012

December 21, 2012

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #4

Update from the President

December 21, 2012

Update from the President
Megacommunities Report

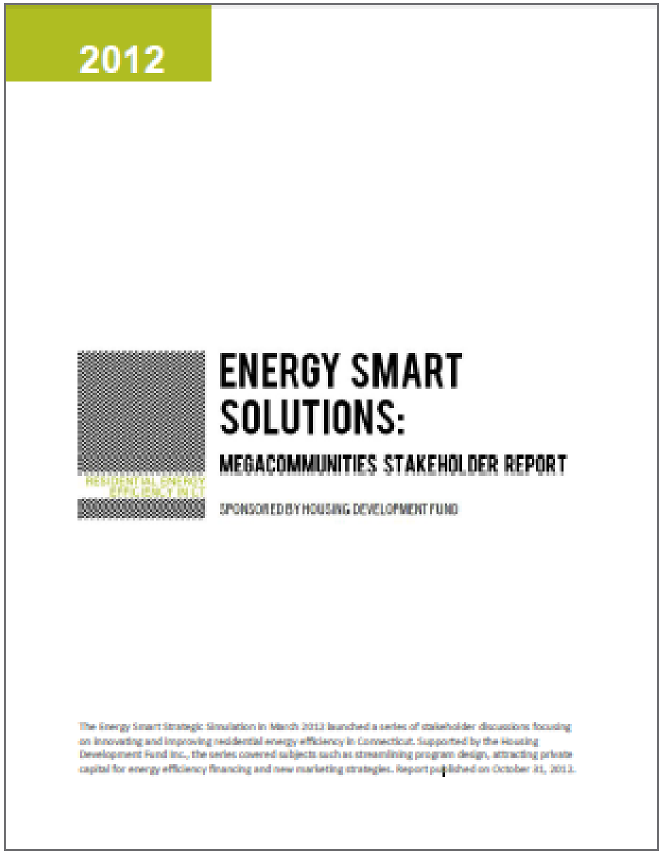
CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

- **Stakeholder Process** – between August through October of 2012, over 60 participants were involved to "bring input to the state's planning process around residential energy efficiency programs"

- **Committees** – program design, marketing and finance. Bryan Garcia was chair of the finance committee which included 22 participants from 16 organizations.

- **Report** – focus on three key constituents – contractors, customers and capital providers.

- **Recommendations** – Provides recommendations based on "best practices" from 4 of the "top 5" ACEEE


2012

ENERGY SMART SOLUTIONS:

MEGACOMMUNITIES STAKEHOLDER REPORT

SPONSORED BY HOUSING DEVELOPMENT FUND

The Energy Smart Strategic Simulation in March 2012 launched a series of stakeholder discussions focusing on innovating and improving residential energy efficiency in Connecticut. Supported by the Housing Development Fund Inc., the series covered subjects such as streamlining program design, attracting private capital for energy efficiency financing and new marketing strategies. Report published on October 31, 2012.

REFERENCES
Energy Smart Solutions: Megacommunities Stakeholder Report (October 2012) by the Housing Development Fund

Update from the President

DEEP Request on Financing Program

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

- **Section 116 of PA 11-80** – tasks DEEP to establish residential heating equipment financing program through on-bill or other mechanism.
- **Request** – develop two pilot residential financing programs:
  - **Credit Unions** – attract private capital and to reduce reliance on ratepayer resources
  - **On-Bill Financing** – explore the merits of OBF to attract low-cost private capital
  - **ARRA-SEP Funds** – DEEP-CEFIA agreement on credit enhancements should be used to support these programs
- **Coordinate** – with EDCs and members of EEB to incorporate appropriate incentives, prevent customer confusion with CHIF loan, and co-brand with EnergizeCT.

Connecticut Department of
ENERGY & ENVIRONMENTAL PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

To: Bryan Garcia, President, Clean Energy Finance and Investment Authority
From: Commissioner Dan Esty, Department of Energy and Environmental Protection
Cc: Jessie Stratton, Tracy Babbidge, and Alex Kragie
Date: November 21, 2012
Re: Pilot Programs to Finance Energy Upgrades

Section 116 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*, (P.A. 11-80) requires the Department of Energy and Environmental Protection (DEEP) to establish a residential heating equipment financing program. This program will allow residential customers to finance, *through on-bill financing or other mechanism*, the installation of energy efficient natural gas or heating oil burners, boilers and furnaces to replace (1) burners, boilers and furnaces that are not less than seven years old with an efficiency rating of not more than seventy-five per cent, or (2) electric heating systems. I want to ensure that the most efficient equipment is being financed through this program.

Consistent with the Draft 2012 Connecticut Comprehensive Energy Strategy (Draft Strategy) and P.A. 11-80, DEEP requests that the Clean Energy Finance and Investment Authority (CEFIA) coordinate with DEEP to develop pilot programs(s) to finance equipment energy efficiency upgrades for the residential sector. These pilots should determine the most effective programs to attract sufficient private capital at low interest rates, to make residential clean energy investments—including investments to upgrade or replace inefficient furnaces and boilers—affordable on the scale needed to achieve Connecticut's overall energy goals. I request that you coordinate with United Illuminating, Connecticut Light & Power, and members of the Energy Efficiency Board to incorporate appropriate incentives and to prevent customer confusion with the Connecticut Housing and Investment Fund program – because all clean energy financing programs will be co-branded underneath the EnergizeCT marketing program.

One of the pilot programs for financing residential energy efficiency measures CEFIA should develop and implement is a "low or no" interest rate loan program modeled on the zero interest HEAT loan offered by Mass Saves (Massachusetts' utility-administered efficiency program). The HEAT loan program is administered directly by community banks and credit unions, with Mass Saves' subsidy in the form of an upfront buy-down of the interest rate to 0%. The Draft Strategy proposes that CEFIA pilot a similar program with Connecticut banks and establish a loan loss reserve, interest rate buy down, or other credit enhancement mechanisms to support affordable interest rates and enable a payback period for the homeowner of up to twelve years. In the design of your financing program, I want to stress that your focus should be to attract and deploy private capital so as to reduce our reliance on ratepayer resources.

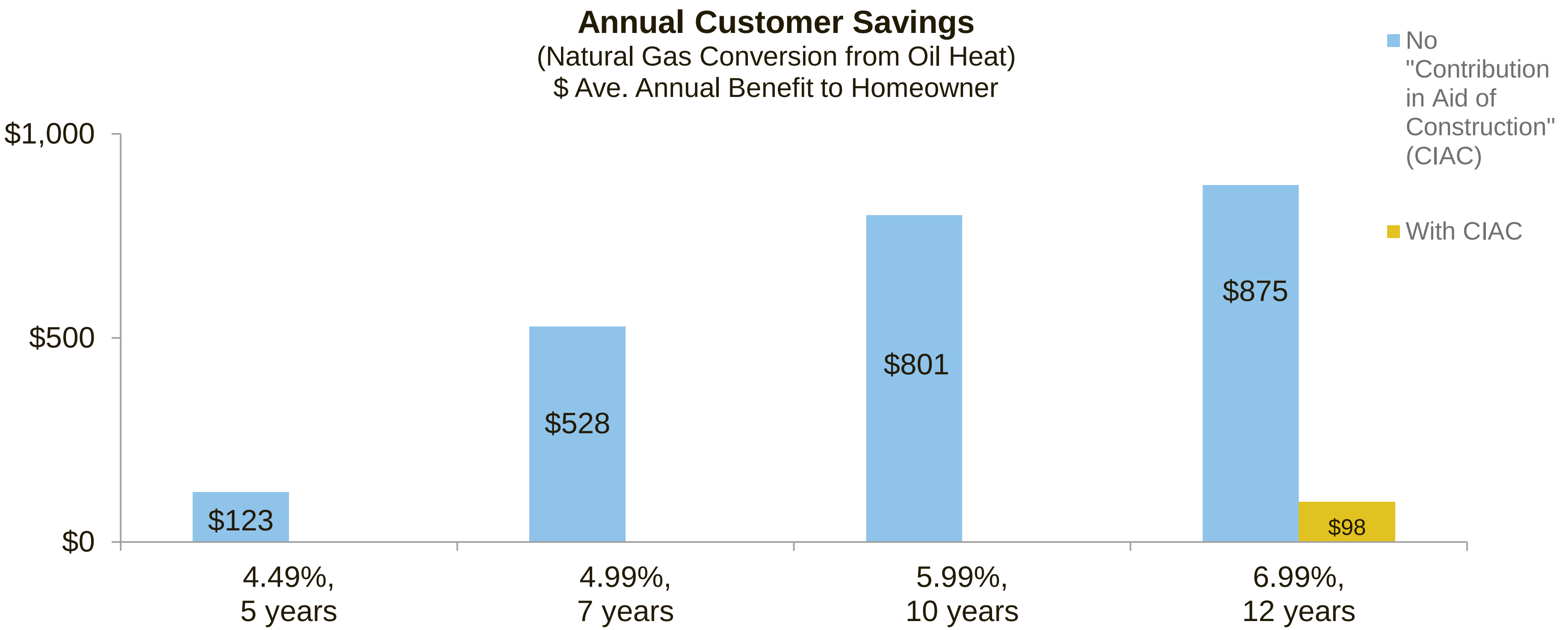
The second pilot program for financing residential energy efficiency measures CEFIA should develop and implement is "on-bill" financing. Through on-bill financing, homeowners can finance energy efficiency, heating equipment upgrades or conversions, and renewable energy improvements with little or no upfront costs by paying for those measures over an extended time on their monthly utility bills. Typically, the loan terms on these clean energy investments are structured so that savings from the efficiency or renewable energy improvements are greater than the loan repayment cost. As a result, the homeowner will have no increase in their monthly utility bill-- and ideally gets some gets some portion of the savings from day one. I ask that you begin to explore the merits of on-bill financing to determine whether or not it is a vehicle to attract low-cost private capital investment in Connecticut.

Update from the President

Equipment Replacement Economics

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

In line with Chapter 4 of CT's Draft Comprehensive Energy Strategy, CEFIA has come up with a set of financing options to **enable fuel switching** for Connecticut homeowners that uses private capital to deliver on the promise of "gas choice" and **immediate savings** called for in the CES



Update from the President

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

- **Comprehensive Energy Strategy** – submitted on December 14th, focused on CEFIA role of attracting and deploying capital to finance Connecticut's clean energy goals, highlights progress made on programs (i.e. residential and C-PACE), and proposes some policies (i.e. property tax exemption, permit fees, local thermal in Class I RPS, VNM, and RGGI allowance proceeds, etc.)
- **CEFIA Website BOD Meetings** – Board and Committee meeting material transparency
- **Economic Development**– Solar City expansion in Rocky Hill (60 jobs and increasing) and Fuel Cell Energy project in Bridgeport (160 jobs)

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #5

Deployment Committee

December 21, 2012

Residential Rooftop Solar PV Deployment

Connecticut (2004 through 2012)

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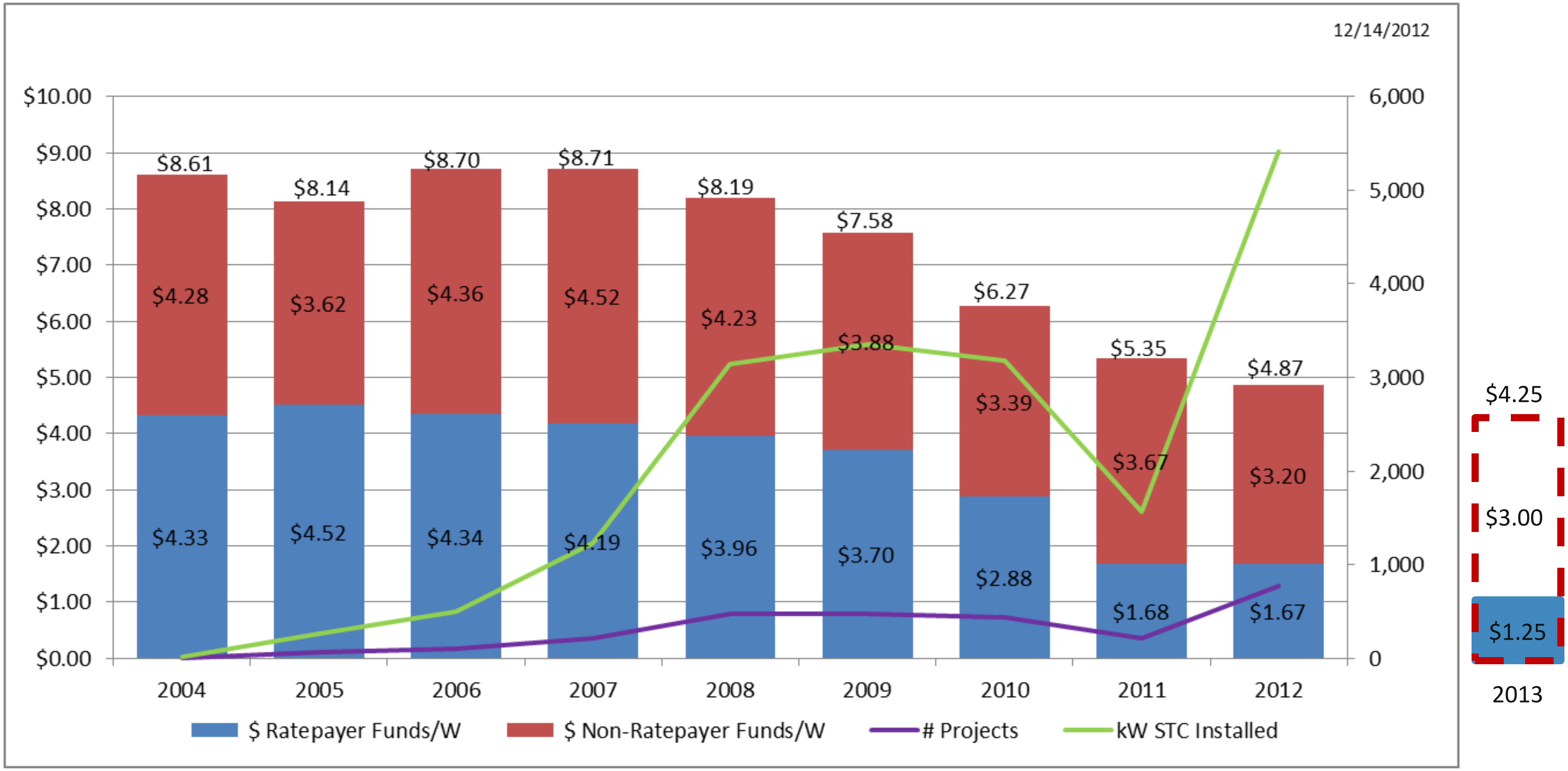

Increasing the amount of rooftop solar PV deployed per dollar of ratepayer funds at risk

Residential Solar Investment Program
Step 2 Performance

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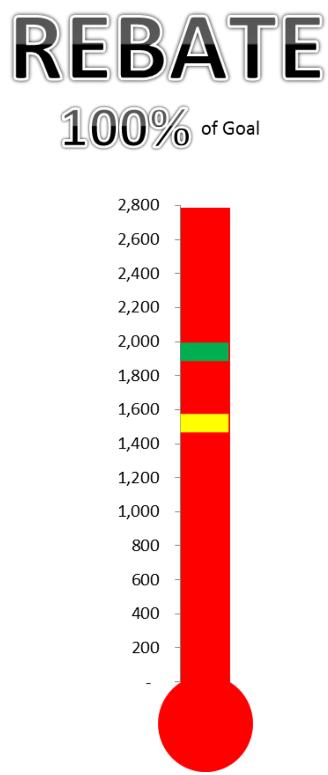
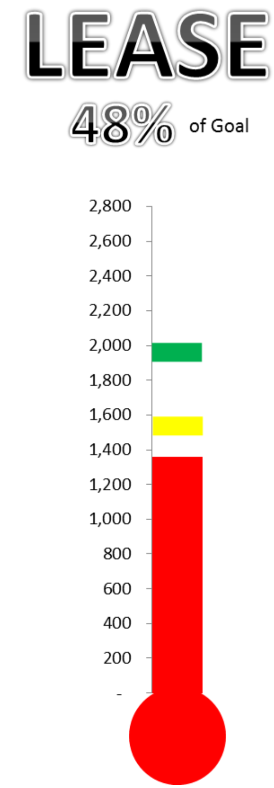
- **Pace** – rebate is twice as fast as the PBI
- **Cost** – rebate and PBI installed costs are nearly the same, however, rebate projects are taking less incentive than PBI





	Rebate	Lease
Installed Cost:	$4.85/W	$4.89/W
Incentive:	$1.58/W	$1.83/W
Installed Capacity:	2.8 MW	1.4 MW

Residential Solar Investment Program

Step 3 Goals

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

- **Sustainable Market Development** – maximizing the amount of clean energy produced per dollar of ratepayer funds at risk
- **Leverage** – achieve a 3:1 (25%) leverage of non-ratepayer funds to ratepayer funds
- **Costs** – support strategies that make solar PV affordable and accessible
- **Financing** – shift from subsidy programs over time to low-cost and long-term financing (i.e. launching $1 million pilot capital competition and lease-loan products in Step 3)
- **Energy Efficiency** – incorporate cost effective energy efficiency measures into solar PV projects

Residential Solar Investment Program
Step 3 Proposed Structure Overview

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

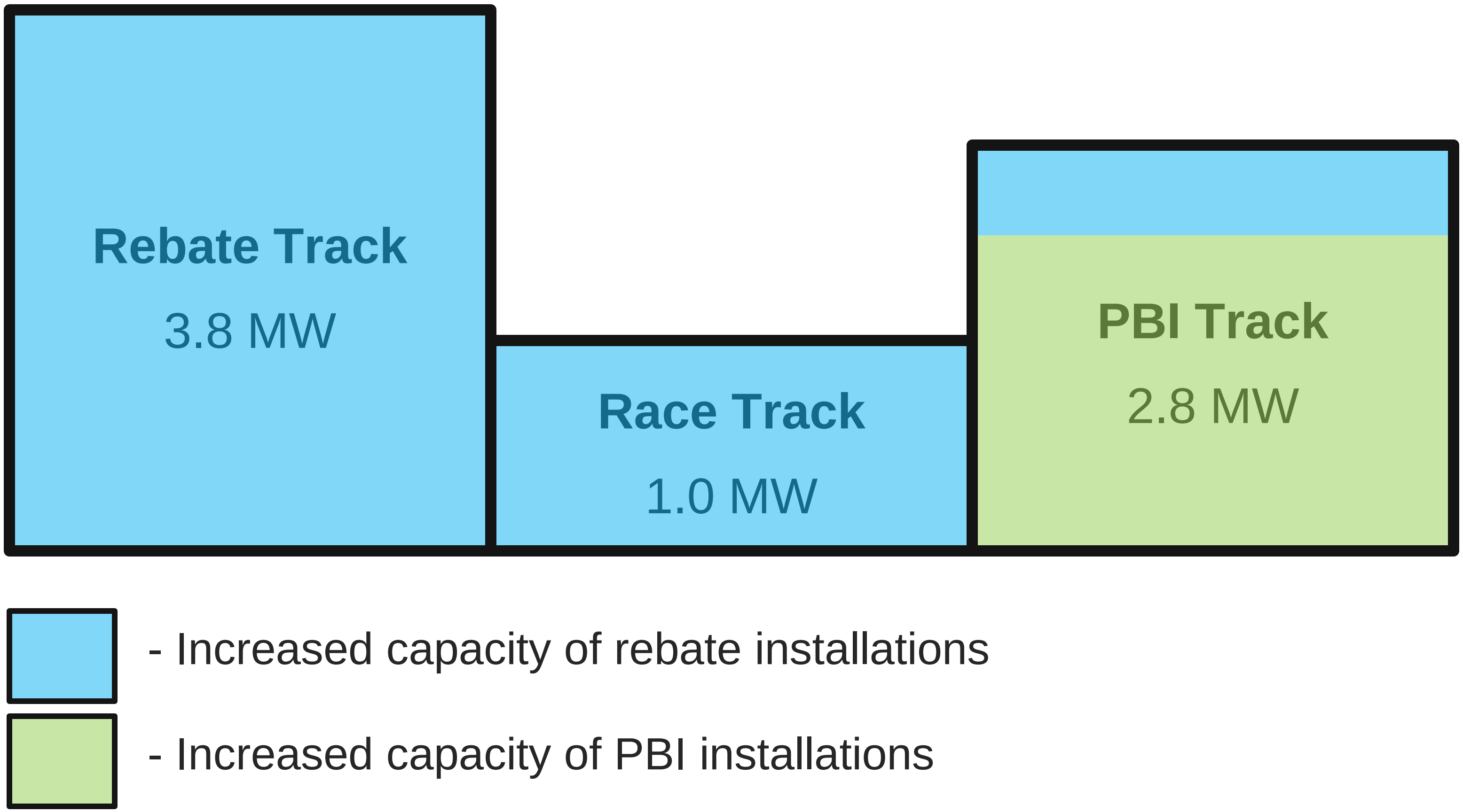
- **Race to the Solar Rooftop** – reward the model that deploys residential rooftop solar PV the quickest
- **Solarize** – reward the model that deploys residential rooftop solar PV the cheapest
- **Incentive Cap** – establish a 30% incentive cap per project to protect ratepayer leverage
- **Incentive Level** – Step 3 rebate incentive of $1.75/W for systems up to 5 kW and an addition $0.55/W for systems greater than 5 kW but less than 10 kW; Step 3 PBI incentive to be proposed when 2.0 MW of deployment achieved for Step 2

Race to the Solar Rooftop
Proposed Structure

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Step 3

7.6 MW “Race to the Rooftop”



Solarize

Proposed Structure

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

- **Participants** – support the participation of more contractors offering systems at a lower cost by increasing the number of participating towns (i.e. from 4 towns to 12 for 2013) and more rounds of the campaign (i.e. from annually to biannually)

- **Benefit** – winning contractors will get the benefit of using Step 3 incentive levels even if Step 4 is in effect

- **Result** – will encourage installers to lower their installed costs while benefitting from potentially greater incentives delivering on the goal of "maximizing clean energy deployment per dollar of ratepayer funds at risk".

Incentive Cap and Level
Proposed Structure

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- **Incentive Cap** – establish a 30% incentive cap per project to protect ratepayer leverage
- **Incentive Levels** – see schedule below

	Rebate ($/W)		PBI ($/kWh)
	x ≤5 kW	**10 kW ≥ x > 5 kW**	**x ≤ 10 kW**
Current Step 2	$2.275	$1.075	$0.300
Proposed Step 3	$1.75	$0.55	$0.200-$0.230
Total Reduction	$0.525	$0.525	$0.070-$0.100
% Reduction	23%	49%	25%-33%

Residential Solar Investment Program
Resolution

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

- **Schedule of Incentives** – $1.75/W up to 5 kW and $0.55/W between 5 to 10 kW for the rebate; TBD for PBI, but expect between $0.20-$0.23/kWh
- **Race to the Solar Rooftop**
  - Step 3 – 7.6 MW target comprised of 3.8 MW for rebate, 2.8 MW for PBI, and 1.0 MW for competitive; and
  - Step 4 – 10.0 MW target
- **Solarize** – if in a Solarize participating community when the Step 3 transitions to Step 4, then the participating households maintain Step 3 incentive until Solarize campaign is over in that town
- **Staff Recommendation and Approval Timing**
  - Deployment Committee – 1.8 MW from either the rebate or PBI is achieved
  - Board of Directors – 2.8 MW from either the rebate or PBI, or January 1, 2014, whichever is first.

Residential Solar Investment Program

Step 3 Key Questions

- **Strategic Plan** – is the RSIP consistent with the Board approved Comprehensive Plan and Budget for the fiscal year?
- **Ratepayer Payback** – How much clean energy is being produced from the project versus the dollars of ratepayer funds at risk?
- **Terms and Conditions** – What are the terms and conditions of the ratepayer payback, if any?
- **Capital Expended** – How much of the ratepayer and other capital that CEFIA manages is being expended on the project?
- **Risk** – What is the maximum risk exposure of ratepayer funds for the project?
- **Target Market** – Who are the end-users of the project?

Residential Solar Investment Program
Portfolio of Financing Programs

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Financing Program	Indicative Interest Rate or Lease Rate	Term	FICO	Number of Loans or Leases	Launch Date
Capital Competition	TBD	20 years	TBD	TBD	January 2013
Solar PV Lease*	$90-$100/month	20 years	640+	1,550	March 2013
Solar Loan**	6.99% 7.99%	15 years 20 years	680+	240	January 2013
Credit Union Loan***	≤4.49% ≤4.99% ≤5.99% ≤6.99%	5 years 7 years 10 years 12 years	≥20% 640-679 ≤80% 680+	TBD	January 2013

* Assumes a 7 kW system at $4.50/W and $7.00/month for O&M. Energy price escalator of 2.9% per year.

** Interest rates can be 9.99% and 10.99% if the household doesn't use 80% of the value of the ITC to repay the loan after 18 months

*** Supports "clean energy" technologies, including renewable energy (i.e. solar PV, SHWS, GSHP, etc.), energy efficiency (i.e. insulation, HVAC equipment, etc.), fuel conversion, and transportation (i.e. EV recharger). Note, it does not include small wind.

Note – all financing programs are subject to CEFIA Board of Directors approval.

Residential Solar Investment Program
Statutory Allocation

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

CALENDAR YEAR

	2011 (Jul-11 to Dec-11)	2012 (Jan-12 to Nov-12)	Total Calendar To Date
One-third Annual Ratepayer Contributions	$4,668,000	$8,365,000	$13,033,000
Residential Solar PV Incentives Approved	$0	$7,970,000	$7,970,000
Variance	$4,668,000	$395,000	$5,063,000
Number of Solar PV Systems Approved	0	676	676
Capacity of Systems Deployed (kW)	**0**	**4,750**	**4,750**

FISCAL YEAR

	FY 2012 (Jul-11 to Jun-12)	FY 2013 (Jul-12 to Nov-12)	Total Fiscal To Date
One-third Annual Ratepayer Contributions	$9,008,000	$4,025,000	$13,033,000
Residential Solar PV Incentives Approved	$3,425,000	$4,545,000	$7,970,000
Variance	$5,583,000	($520,000)	$5,063,000
Number of Solar PV Systems Approved	289	387	676
Capacity of Systems Deployed (kW)	**2,000**	**2,750**	**4,750**

Section 106(a) of PA 11-80 states that "…the annual procurement of which shall be determined by the authority and the cost of which shall not exceed one-third of the total surcharge collected annually pursuant to said Section 16-245n." CEFIA Board of Directors approved $12,500,000 for Steps 1 and 2 of the program.

Residential Solar Investment Program

Willingness to Pay (as of December 14, 2012)

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

Calendar Year Approved	# Projects	kW STC Installed	$ Ratepayer Funds/W	$ Non-Ratepayer Funds/W	$ Total Cost/W
2004	3	12.69	$4.33	$4.28	$8.61
2005	63	266.25	$4.52	$3.62	$8.14
2006	108	495.73	$4.34	$4.36	$8.70
2007	217	1,228.81	$4.19	$4.52	$8.71
2008	479	3,139.86	$3.96	$4.23	$8.19
2009	470	3,354.86	$3.70	$3.88	$7.58
2010	437	3,178.23	$2.88	$3.39	$6.27
2011	220	1,568.15	$1.68	$3.67	$5.35
2012	774	5,414.51	$1.67	$3.20	$4.87
Grand Total	**2,771**	**18,659.10**	**$2.91**	**$3.69**	**$6.60**

Residential solar PV customers are willing to pay between $3.20/W and up to $4.50/W after incentives. So if installed costs are $4.50/W, then a $1.00 to $1.25/W subsidy shouldn't adversely impact demand.

Repurposed ARRA-SEP Funds Update

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

	Launch Date	ARRA-SEP LLR/IRB* (M)	Type	CEFIA Senior or Sub Loan (M)	Private Capital (M)	Interest Rate	# of Loans (approx)	CEFIA Leverage	Estimated Energy Produced and Saved
Total Planned Programs		**$6.7**		**$11.0**	**$84.8**	**4.5%-10.99%**	**7,390**	**7.7x**	**12.7MW 240,000MMBtus**
PROGRAM SPECIFICS									
Low Income Energy Loan Fund (Pilot)	Jan-2013	$0.41	$360K LLR and $50K IRB	$0.00	$2.5	4.50%	200	N.M.	25,000 MMBtu
Equipment Replacement and Clean Energy Loan (Pilot)	Jan-Feb 2013	$2.50	LLR	$0.00	$27.8	4.49%-6.99%	5,000	N.M.	210,000 MMBtu
Solar Loan (Pilot)**	Jan-2013	$0.30	LLR	$1.5	$4.5	6.99-10.99%	240	3.0x	1.7 MW
Solar PV and Solar Hot Water Systems Lease/PPA	Mar-2013	$3.50	LLR	$9.50	$50.0	Energy Price	1,950	5.3x	11.0 MW (solar PV) 5,000 MMBtu (SHWS)

* ARRA SEP funds are not ratepayer capital. LLR – Loan Loss Reserve; IRB – interest rate buy down

**Amount of CEIA debt in Solar Loan will range from $500K-$2.5M, depending on deal specifics

What is PACE?

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

"Property Assessed Clean Energy"

- Innovative financing structure that enables **commercial, industrial, and multi-family** property owners to access financing for qualified energy upgrades and repay through a benefit assessment on their property tax.
  - Private sources of capital provide 100% upfront, low-cost & long-term funding for qualified energy upgrades
  - Allows repayment through property tax assessment over 20 years
  - A senior PACE lien is put on the property and stays with the property regardless of change in ownership.

CT Special Session 12-2

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

- Requires **SIR>1**
- Requires the **consent of the existing mortgage lender**.
- Upgrades must be **permanently affixed** to property
- Enables municipalities to opt-in through approval of their legislative body through "**written agreement, as approved by its legislative body, with the authority**"
- Enables **CEFIA** to administer a statewide program, aggregate demand for this financing tool, and provide credit enhancements.

CEFIA's Role

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Design Program	• Publish Program Guidelines	✓
	• Design Website & Application Intake	✓
Administer Program	• Bring Municipalities Onboard	✓
	• Hire Third Party Administrator	✓
	• Marketing and Outreach	(Q1 2013)
Attract Private Capital	• Qualify Capital Providers	✓
	• Offer Credit Enhancement tools	(as needed)
	• Provide capital	(as needed)
	• Develop warehouse / bonding authority	(as needed)

COMMERCIAL PROPERTY ASSESSED CLEAN ENERGY ("C-PACE") AGREEMENT

THIS AGREEMENT is made and entered into as of the ____ day of _________, 2012, by and between the **TOWN OF EAST GRANBY**, **CONNECTICUT**, a municipal corporation organized and existing under the laws of the State of Connecticut (the "Municipality"), and the **CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY**, a public instrumentality and political subdivision of the State of Connecticut established under Public Act No. 11-80 (and codified in Section 16-245n of the Connecticut General Statutes) (the "Authority").

RECITALS

WHEREAS, Commercial Property Assessed Clean Energy (C-PACE) is a program to facilitate loan financing for clean energy improvements to commercial properties by utilizing a state or local assessment mechanism to provide security for repayment of the loans.

WHEREAS, Public Act No. 12-2 of the June 12, 2012 Special Session of the Connecticut General Assembly (the "Act") established a C-PACE program in Connecticut.

Getting Municipalities Onboard

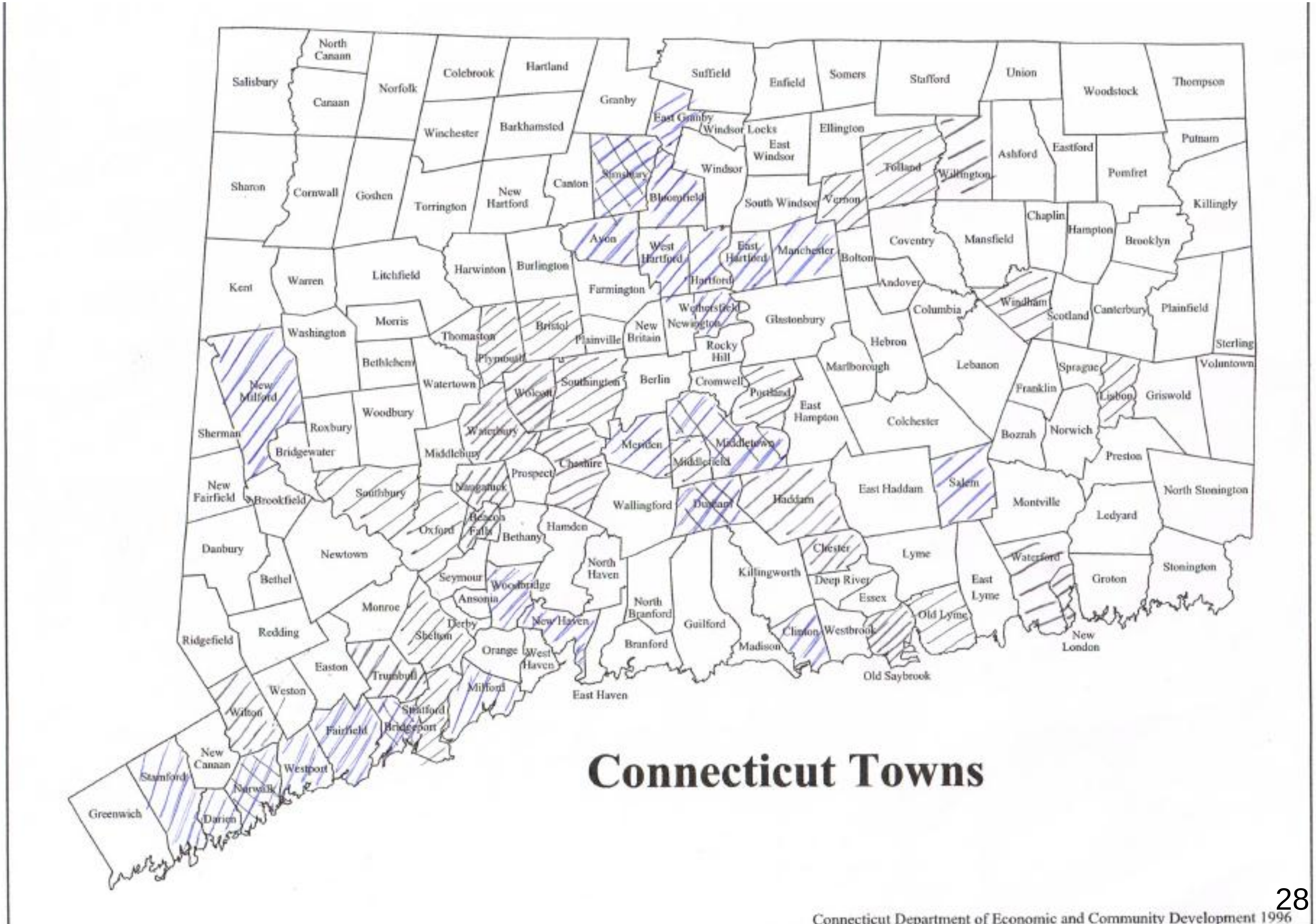
CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

On Board:

- Hartford
- Norwalk
- Bridgeport
- Simsbury
- Middletown
- Durham
- Windham

On Deck:

- West Hartford
- Stamford
- Cheshire
- Wilton
- Stamford
- Meriden
- Stratford
- Clinton
- New Haven
- Waterbury
- Westport
- Old Saybrook
- Fairfield
- Plymouth
- East Granby


Connecticut Towns
Connecticut Department of Economic and Community Development 1996
North Canaan
Salisbury
Canaan
Norfolk
Colebrook
Hartland
Granby
Suffield
Enfield
Somers
Stafford
Union
Woodstock
Thompson
Winchester
Barkhamsted
East Granby
Windsor Locks
East Windsor
Ellington
Tolland
Willington
Ashford
Eastford
Putnam
Pomfret
Sharon
Cornwall
Goshen
Torrington
New Hartford
Canton
Simsbury
Bloomfield
Windsor
South Windsor
Vernon
Killingly
Chaplin
Hampton
Brooklyn
Avon
West Hartford
East Hartford
Manchester
Bolton
Coventry
Mansfield
Kent
Warren
Litchfield
Harwinton
Burlington
Farmington
Hartford
Andover
Columbia
Windham
Scotland
Canterbury
Plainfield
Washington
Morris
Thomaston
Bristol
Plainville
New Britain
Newington
Wethersfield
Glastonbury
Hebron
Sterling
Bethlehem
Plymouth
Rocky Hill
Marlborough
Lebanon
Sprague
Voluntown
New Milford
Watertown
Wolcott
Southington
Berlin
Cromwell
Portland
East Hampton
Franklin
Lisbon
Griswold
Woodbury
Roxbury
Waterbury
Meriden
Middletown
Colchester
Bozrah
Norwich
Sherman
Bridgewater
Middlebury
Cheshire
Middlefield
Preston
Prospect
New Fairfield
Brookfield
Southbury
Naugatuck
Wallingford
Durham
Haddam
East Haddam
Salem
Montville
North Stonington
Ledyard
Oxford
Beacon Falls
Bethany
Hamden
Chester
Lyme
Danbury
Newtown
North Haven
Killingworth
Waterford
Stonington
Bethel
Seymour
Woodbridge
Deep River
East Lyme
Groton
Monroe
Ansonia
North Branford
Essex
Derby
New Haven
Guilford
Old Lyme
Ridgefield
Redding
Shelton
Clinton
Westbrook
New London
Orange
West Haven
Branford
Madison
Easton
Trumbull
Old Saybrook
Weston
Milford
East Haven
Wilton
Stratford
Fairfield
Bridgeport
New Canaan
Stamford
Westport
Norwalk
Darien
Greenwich

Program Development

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Technical Expertise:

Celtic Energy

- Gllastonbury, CT
- $1bn of energy-related projects
- Experience with large commercial end-users, utilities, and government

Program Expertise:

Buonicore Partners

- Milford, CT
- Modeled Energy Profile of CT
- Nationwide PACE experience

Real Estate Expertise:

Sustainable Real Estate Solutions

- Trumbull, CT
- Benchmarking Database
- Industry leader in building energy performance assessment

3rd Party Administrator: Buonicore Partners

Program Development

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

1

- **Application Intake**
  - Tie-in with website developer
  - Collect key data about building and owner

2

- **Applicant Building Screening**
  - Fast Track or Full Assessment
  - Tie-in with SRS Peer Benchmarking Dataset
  - Technical data collected

3

- **Energy Audit Requirements and Project Development**
  - Determine minimum level of audit required
  - Generate reports through SRS to support underwriting

4

- **Project Implementation and Commissioning**
  - Track and ensure data collection for M&V

5

- **Performance Measurement and Verification**
  - Collect data, fix for variables
  - Facilitate ongoing M&V

6

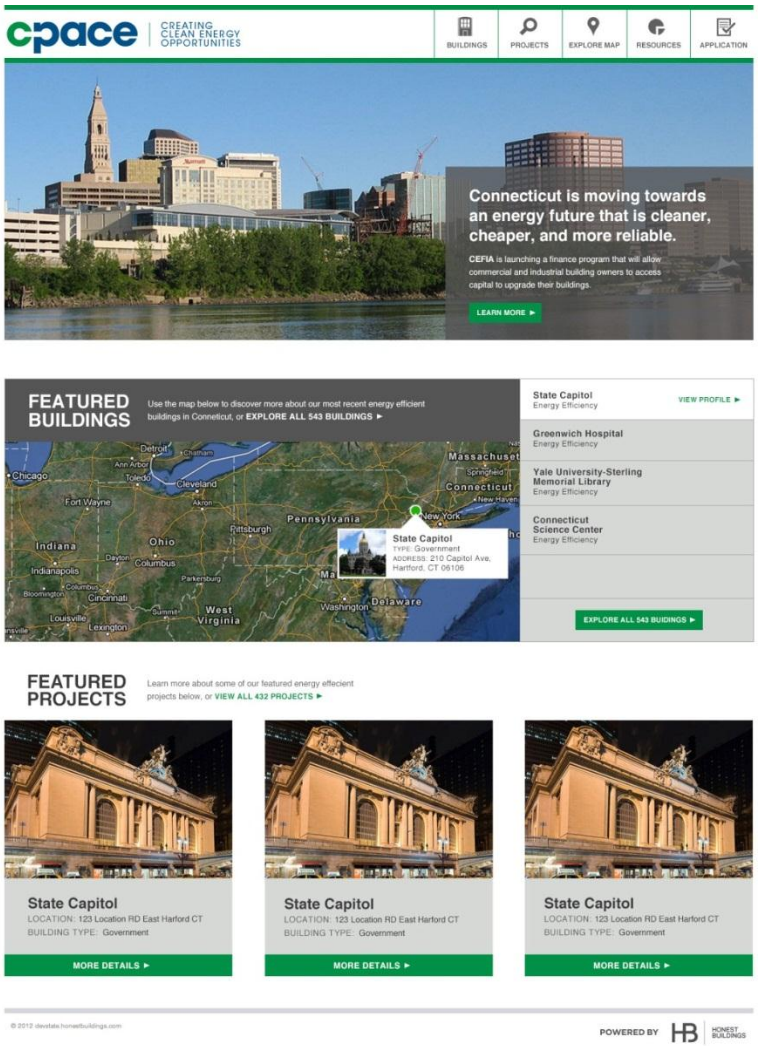
- **Project Pipeline Tracking and Reporting**
  - Visibility into CPACE pipeline
  - Inputs from CEFIA, Building Owners, banks, CPs, etc

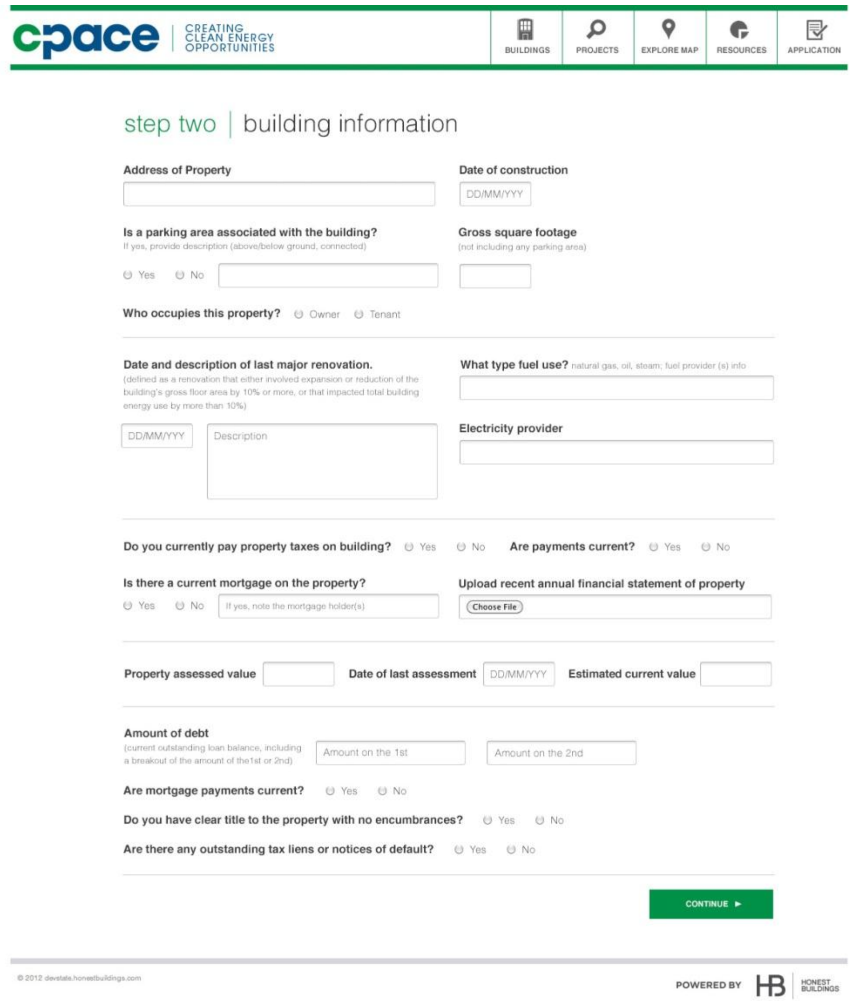
Owner Advocate Role

- Assist property owner in obtaining C-PACE approval
  - Work with auditor
  - Work with mortgage holder
  - "High-touch" customer service
  - As-needed, per-project

Website & Application Intake

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY





Capital Sourcing

Qualified Capital Providers

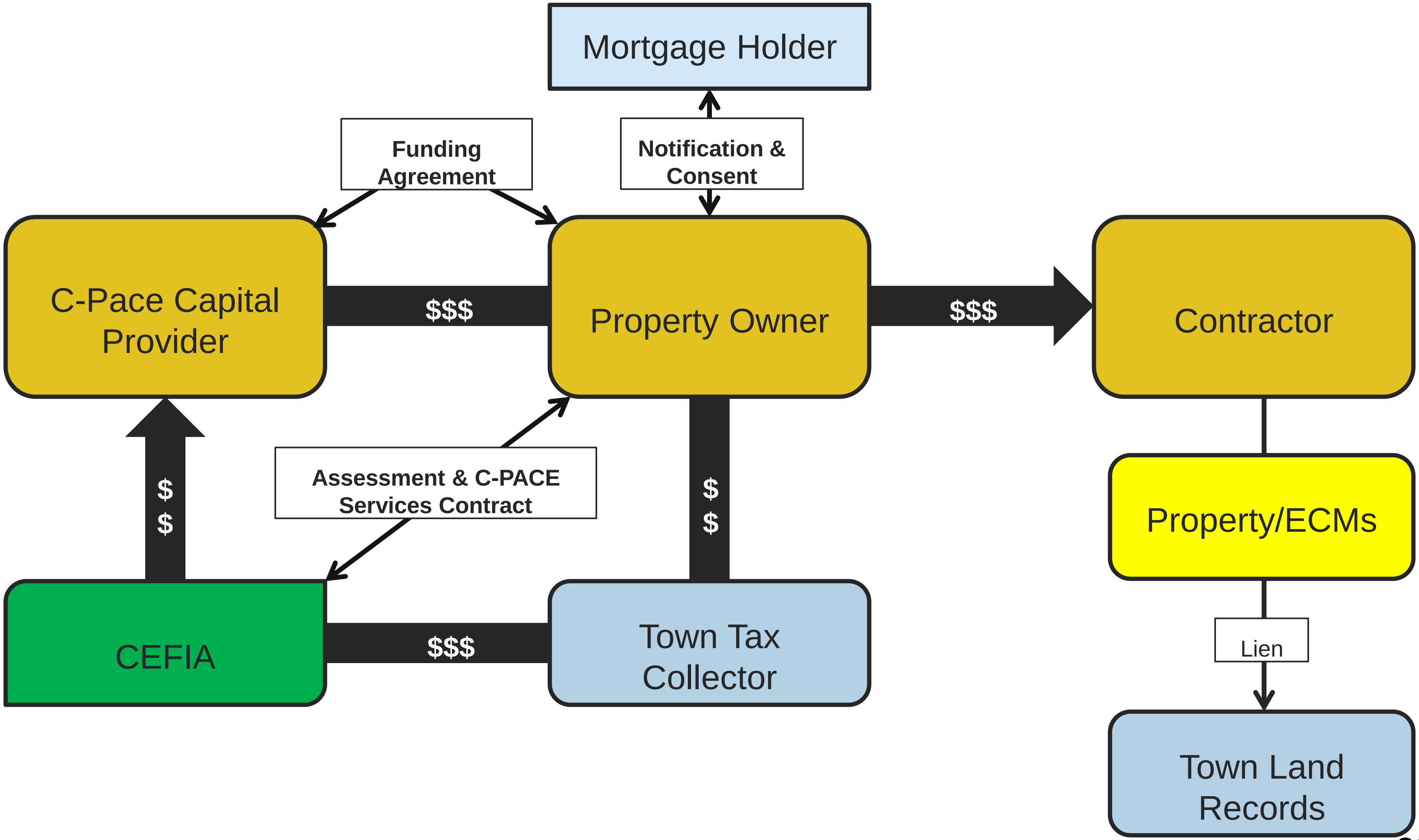
- In November 2012, CEFIA qualified 8 capital providers through a RFI.
- Lending tree model

Owner Arranged Financing

- Property owner is free to choose their capital provider from the private market. There is no government financing required.

Capital Flow Process

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY



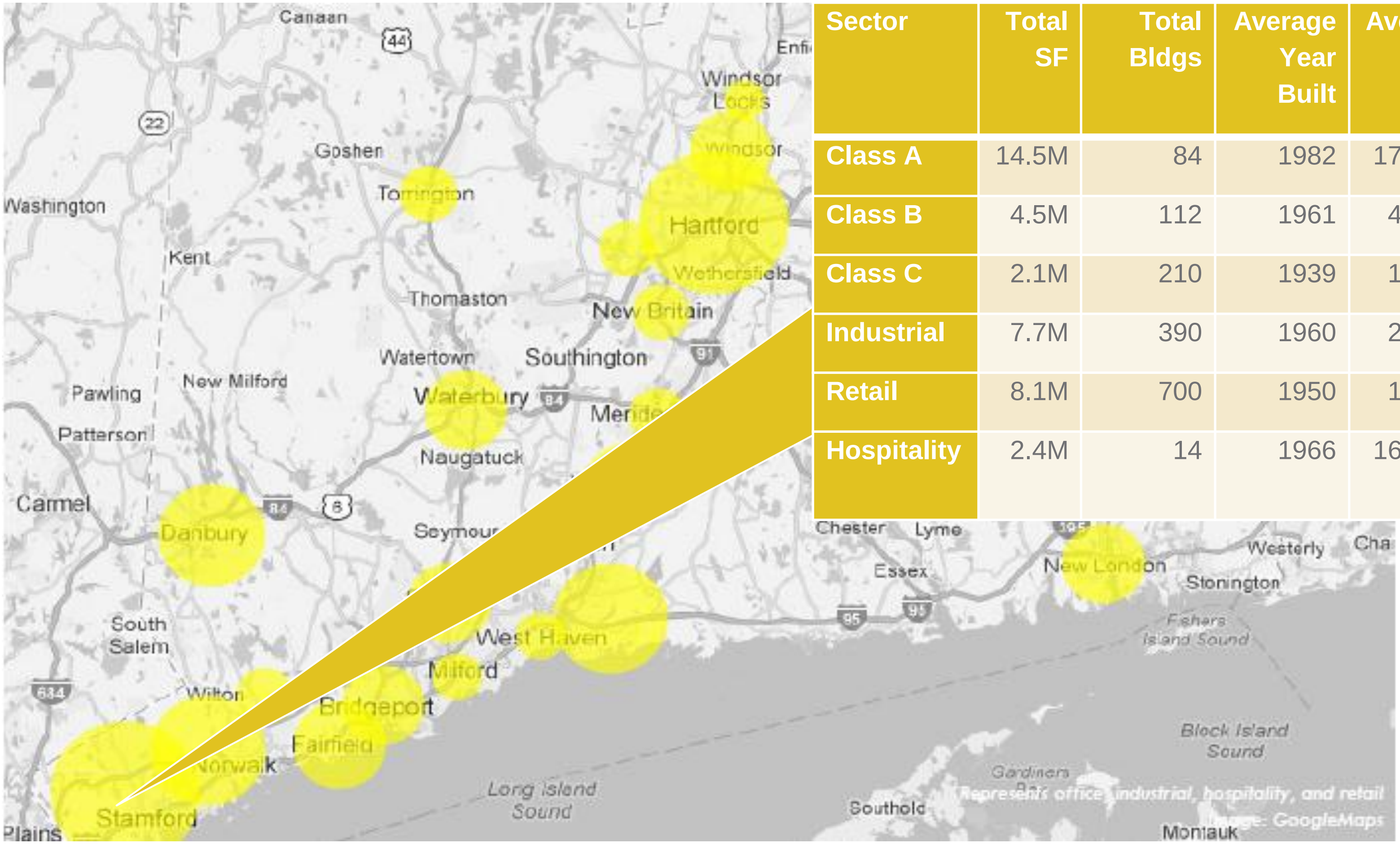
Capital Flow Process

Recap:

- Audit
- Notification to Mortgage Holder / Consent
- Project Review by Program Administrator
- Referral out to Qualified Capital Providers
- Capital Provider Selected by Owner
- Negotiations → Funding Agreement
- Assessment & C-PACE Services Agreement (CEFIA – Owner – Cap Provider)
- Caveat on the Property (CEFIA – Town/City)
- Funding Disbursement(s) & Project Work Commences
- Project Completion
- Finalization of the Lien on the Property, Payment Schedule, etc.
- Owner Enjoys More Efficient Building & Repays Funding via Tax Bill

Marketing & Outreach

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY



Sector	Total SF	Total Bldgs	Average Year Built	Average Size (SF)	Total Unique Owners
Class A	14.5M	84	1982	173,000	78+
Class B	4.5M	112	1961	40,000	103+
Class C	2.1M	210	1939	10,000	190+
Industrial	7.7M	390	1960	20,000	335+
Retail	8.1M	700	1950	12,000	550+
Hospitality	2.4M	14	1966	169,000	12

Source: CoStar May 2012

** Average age is true building age, and does not address major rehabilitation*

*** Represents the buildings for which data was available, which in all cases was the vast majority but not all, thus the use of +s. For instance, data was available for 1,970 of the 2,215 Class B Office buildings.*

Marketing & Outreach

- **Outreach to Key Sector Stakeholders**
  - Municipalities & Regional Launch
  - ESCOs
  - Auditors/Contractors/Vendors
  - Renewable Energy Project Developers
  - Building Owners & Commercial Real Estate Leadership
    - BOMA
    - CBIA
    - USGBC
    - NAIOP
    - Business Council of Fairfield County

Update & Progress

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

	2012				2013		Notes
	Sep	Oct	Nov	Dec	Jan	Feb	
Agreements with towns							Ongoing.
Develop Project pipeline							Ongoing
Qualify Financial partners							Qualified 8 Capital Providers
Third Party Administrator							Buonicore Partners, SRS, Celtic Energy
Publish program Handbook							Posted on www.ctcleanenergy.com/cpace
Procedures and Application process							Posted on ww.ctcleanenergy.com/cpace
Website Launch							Early January
Program Launch							Event with Governor Malloy TBD

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #6

Audit, Compliance and Governance Committee

December 21, 2012

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

- **CEFIA Required to Issue an Annual Report**

- **Pursuant to the CEFIA Bylaws, the ACG Committee "shall review the sufficiency of financial and compliance reports required by statute."**

- **Annual Report theme:**
  - 2012 was a year of transition - transforming from our former model, a rebate-and incentive-based fund to the nation's first full-scale state clean energy finance authority— essentially, Connecticut's own "green bank." And a focus on partnerships.

Audit Compliance and Governance Committee Funding Requests Under $300,000

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

BACKGROUND

- Section 5.3.3 of Bylaws - Deployment Committee evaluates and approves funding requests between $300,000 and $2,500,000
- By-Laws silent on approval requests below $300,000
- CCEF passed resolution to empower staff

REQUEST

- CEFIA Staff requests similar resolution that is:
  - pursuant to an established formal approval process
  - consistent with the CEFIA Comprehensive Plan
  - approved within CEFIA's fiscal budget
  - No more than $500,000 from date of last Deployment Committee (this restriction was added based on feedback from the Deployment Committee at their last meeting)

Strategic Plan Approved
Example of a Transition Program

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

Recommended Projects - Evaluation Summary (Less than or Equal to 100 kW_{AC})												
Project Name	**Business Type**	**Type of System Owner**	**REC Ownership Option**	**CEFIA Grant Value as ZRECs**	**kW_{STC}**	**Total Cost**	**Cost per kW_{STC}**	**CEFIA Grant Recommendation**	**CEFIA Cum Grant Recommendation**	**CEFIA Grant per kW_{STC}**	**Ratio of CEFIA Grant to Cost**	**Total Pts**
South Kent School	School District	Purchase	Sell to CEFIA	$144.73	102.1	$387,946	**$3,800**	$182,558	$182,558	$1,788	**47.1%**	**70.0**
Evolution Sails	For-profit	Purchase	Sell to CEFIA	$125.41	20.7	$79,000	**$3,816**	$24,132	$206,690	$1,166	**30.5%**	**56.0**
Unitarian Universalist Society East	Religious organization	Purchase	Sell to CEFIA	$191.94	13.0	$51,286	**$3,945**	$28,832	$235,522	$2,218	**56.2%**	**71.5**
Fox Hopyard Golf Course	For-profit	Purchase	Retire	$177.87	26.3	$104,798	**$3,981**	$28,958	$264,480	$1,100	**27.6%**	**59.5**
Tia May McCall / Polywogs Child Development Center	For-profit	Purchase	Sell to CEFIA	$106.22	20.7	$90,000	**$4,348**	$22,208	$286,688	$1,073	**24.7%**	**53.5**
AHM Youth and Family Services, Inc.	Not-for-profit	Purchase	Sell to CEFIA	$372.22	11.3	$49,632	**$4,400**	$28,104	$314,792	$2,491	**56.6%**	**54.5**
Amity Teen Center	Not-for-profit	Purchase	Sell to CEFIA	$165.51	12.0	$53,222	**$4,450**	$23,392	$520,134	$1,956	**44.0%**	**54.5**
Farmington Woods District	Condominium association	Purchase	Sell to CEFIA	$268.80	28.2	$127,629	**$4,526**	$66,241	$586,375	$2,349	**51.9%**	**55.5**
Lake Garda Elementary School	School District	PPA	Sell to CEFIA	$298.69	76.4	$362,300	**$4,740**	$192,765	$779,140	$2,522	**53.2%**	**66.5**
Common Ground - New Haven Ecology Project	School District	Purchase	Retain	$176.89	74.3	$395,500	**$5,327**	$155,200	$934,340	$2,090	**39.2%**	**64.0**
Coventry Public Works Garage	Municipality	PPA	Sell to CEFIA	$279.92	76.4	$337,100	**$4,410**	$181,950	$496,742	$2,380	**54.0%**	**61.5**
Glastonbury Vehicle Maintenance Garage	Municipality	PPA	Sell to CEFIA	$359.99	72.4	$396,900	**$5,484**	$222,897	$1,157,237	$3,080	**56.2%**	**63.0**
Total Recommended				***$222.35***	**533.8**	**$2,435,313**	***$4,436***	**$1,157,237**	**$5,964,694**	**$2,018**	**45.1%**	**60.8**

Note: Projects in Yellow are conditional recommendations

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #7

Budget and Operations Committee

December 21, 2012

Budget and Operations Committee

- **Committee recommends changes to CEFIA's telecommuting policy**
  - Mirrors CI's policy
  - Removes certain telecommuting guidelines (such as ban on Monday and Friday telecommuting) to promote management flexibility
  - Gives flexibility for new staff who are moving between two offices and constantly moving throughout the state (i.e. CPACE team working with towns across CT)

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #8

Technology Innovations Committee

December 21, 2012

Technology Innovation Committee
Update

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

- **Two of the four pending Op Demo proposals will be reviewed by the TI Committee on Jan 8th**
  - RPM: waste oil to biodiesel conversion
  - NEHC: small hydropower technology
- **The remaining two pending proposals will be brought to the TI Committee in late March/ early April**
- **Review of these proposals will complete all pending proposals under the legacy TI programs**

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #9

Update on Bridgeport Fuel Cell Project

December 21, 2012

Bridgeport Fuel Cell Project
Update

- **Resolution Directives**
  - Authorization to execute grant up to $1.55 million to the project **(signed on December 12, 2012)**
  - Authorization to execute loan up to $5.8 million with Fuel Cell Energy **(in process)** subject to the satisfaction of specific conditions:
    - Due diligence review and reasonable satisfaction of project documentation that CEFIA is not party to between FCE and Dominion (completed)
    - Reasonable assurances that Dominion has no likely opportunity to exit the deal (completed)
    - Final review and approval of the project documentation with the Chair or Vice Chair of the Board (completed)
- **Proposed Revision –** CCEF Predevelopment Loan

Bridgeport Fuel Cell Project
Proposed Revision to Resolution

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY

Proposed Revision to the Resolution

- Added **"WHEREAS, CCEF and a FCE subsidiary executed a predevelopment loan with loan principal in the amount of $500,000 and outstanding interest in the approximate amount of $380,000 (the "Predevelopment Loan")."**
- Added "**RESOLVED,** that the Board of Directors authorizes the CEFIA staff to execute definitive loan documentation based on the terms sheet presented during the meeting of the Board of Directors on November 30, 2012 for financial support in an amount not to exceed **$5,000,000 in new loan financing and the principal and outstanding interest of the Predevelopment Loan being incorporating into this new financing arrangement with the existing Predevelopment Loan being either cancelled by CEFIA or assumed by FCE;"**

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Board of Directors of the Clean Energy Finance and Investment Authority

Agenda Item #10

Adjourn

December 21, 2012

Subject to changes and deletions

CLEAN ENERGY FINANCE AND INVESTMENT AUTHORITY
Board of Directors
Draft Minutes – Special Meeting
Friday, November 30, 2012

A special meeting of the Board of Directors of the **Clean Energy Finance and Investment Authority (the "CEFIA")** was held on November 30, 2012, 2012, at the office of the Department of Energy and Environmental Protection, the Russell Room at 79 Elm Street, Hartford, CT.

1. **<u>Call to Order</u>**: Catherine Smith, Chairperson of CEFIA, called the meeting to order at 9:15 a.m. Board members participating: Mun Choi (by phone); Daniel Esty, Vice Chairperson of CEFIA and Commissioner of the Department of Energy and Environmental Protection ("DEEP"); Norma Glover; Reed Hundt; 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.

Member Absent: Tom Flynn.

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

Others Attending Include: Chris Bernard, Northeast Utilities; Michael Bishop, FuelCell Energy; Mitch Kennedy, CBIA; Alex Kragie, DEEP; Henry Link, Enviro Energy; Melissa Patterson-Meador; and Frank Wolak, FuelCell Energy.

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

There were no public comments.

3. **<u>Approval of Minutes of Meeting of September 28, 2012</u>:**

Ms. Smith asked the Board to consider the minutes from the September 28, 2012 meeting.

DRAFT

Upon a motion made by Mr. Ranelli, seconded by Ms. Glover, the Board members voted in favor of adopting the minutes from the September 28, 2012 meeting as presented (Mr. Esty, Mr. Olsen and Ms. Wrice were not present for the vote).

4. <u>Update from the President</u>:

Mr. Garcia reported on ethics training and noted that ethics training is required annually for all Board members and staff. Staff will be putting together a formal training session that will be offered one hour before the December Board meeting, and on-line training is offered for those not able to attend.

Mr. Garcia acknowledged Mr. Hedman who on behalf of CEFIA received the state leadership in clean energy ("SLICE") award for CEFIA's Connecticut Solar Lease Program. He noted that the program supported more than 850 residential leases throughout the state, and is a model for private/public partnership in financing the deployment of clean energy.

Mr. Garcia spoke about the fuel cell seminar and exposition that was held last month at Mohegan Sun. He stated that Connecticut was successful in competing against other states to host the event. Mr. Garcia mentioned that Connecticut Innovations, Department of Economic and Community Development and Connecticut Hydrogen Fuel Cell Coalition collaborated on a Connecticut exhibit space and the Department of Transportation provided the use of the fuel cell bus to take tours across the state at destinations where fuel cells have been deployed. Senator Blumenthal, Congressman Larson and Commissioner Smith were speakers at the event that drew over 1,200 attendees from 38 states and 27 countries. Ms. Gladys Rivera was commended for leading the organization of the event and Mr. Goldberg was acknowledged for helping to prepare excellent talking points for the event.

5. <u>Project 150 Bridgeport Fuel Cell Project</u>:

Attorney Farnen opened a discussion on the Bridgeport Fuel Cell project proposal. He noted the potential to go into executive session, upon a 2/3 vote of the majority of the members present, to discuss confidential, commercial and financial information, terms still being negotiated and/or information given in confidence. Attorney Farnen cautioned that the developer, Fuel Cell Energy, has asked that the potential investor's name remain confidential at this time as negotiations are still ongoing and urged the Board members to refrain from using the name during the public portion of the meeting.

Mr. Garcia stated that the Bridgeport Fuel Cell proposal balances the new mission of the green bank in terms of financing clean energy projects and supporting job creation and economic development, while fitting within CEFIA's strategic plan and budget. He reviewed CEFIA's strategic goals. Mr. Garcia noted that Mayor Bill Finch and the City of Bridgeport is very supportive of the project. He explained how this project will help

CEFIA to attract and deploy private capital to deploy renewable energy in Connecticut. The Bridgeport fuel cell project sponsored by FuelCell Energy will be the largest fuel cell project in the State of Connecticut and in the country.

Mr. Hunter explained that the Bridgeport Fuel Cell proposal was submitted in response to a Request for Proposals ("RFP") that was issued by the Connecticut Clean Energy Fund ("CCEF") in 2008 under Project 150. Project 150 was a legislatively mandated program designed to encourage clean energy projects through long-term energy purchase agreements. Mr. Hunter stated that based on certain identified criteria, the project was rated and ranked the highest of 9 proposals submitted and reviewed in that third round of funding under Project 150. In October 2008, the 15 MW Bridgeport fuel cell project was approved by the CCEF Board for grant funding in the amount of $1,550,000 subject to conditions of Project 150. Mr. Hunter stated that CEFIA maintains committed to Project 150 and the Bridgeport fuel cell project and has budgeted additional funds in the 2013 fiscal year to support loan financing.

Mr. Hunter spoke about the background, capacity and capital raised by Fuel Cell Energy for the project. He described some of the other fuel cell projects sponsored by Fuel Cell Energy. Mr. Hunter discussed in detail the 15 MW hybrid electrical generating facility proposed to be developed in Bridgeport that will generate approximately 115,000 MW hours of electricity annually. He mentioned that Fuel Cell Energy is in final negotiations with an investor and is hoping to close in December. Mr. Hunter summarized the commercial aspects of the project and described the 15-year energy purchase agreement with Connecticut Light & Power. He discussed the structure of the transaction and talked about some of the risks and explained how the risks will be managed. Mr. Hunter summarized that the feasibility study performed indicated that the project location is suitable, the technology is sound and proven and should last 20 years with proper operation and maintenance, the assumptions made are reasonable, the construction schedule is achievable and there are no issues with the owner/developer. He described how the project fits within the strategic goals of CEFIA and as a strategic selection and award because of its: special capabilities, uniqueness, strategic importance, urgency and timeliness, and multi-phase characteristics.

Mr. Hunter described CEFIA's proposed role in funding for the project, including the grant that was approved by the CCEF Board in the amount of $1,550,000, the assumption by Fuel Cell Energy of a predevelopment loan of $500,000 with accrued interest of $300,000 and an additional $5,000,000 in loan financing. He reviewed the proposed terms and conditions of each of the funding pieces. Mr. Hunter summarized some of the benefits of the proposal which include: CEFIA's participation will be leveraged 9 to 1, approximately 161 jobs will be retained or created (135 of which will be in Connecticut), the manufacturing will be retained in Connecticut, the company is headquartered in Connecticut, the site is located on a Brownfield site in a DECD distressed community, and CEFIA will be increasing the fuel cell capacity in the State of Connecticut. It was noted that this project will expand Connecticut's current planned installed fuel cell capacity by 55 percent, and the project will produce approximately 2 percent of the total Renewable Portfolio Standard required by 2020. Mr. Hunter discussed some of the risks associated with the proposal and the ways the risks can be mitigated.

Mr. Hunter talked about the proposed project schedule to achieve completion by December 2013. In response to a question, a representative from Fuel Cell Energy indicated that all relevant permits are in place. Mr. Hunter discussed some of the environmental issues and risks and stated that Fuel Cell Energy is confident that the remediation plan is achievable and will be executed as planned. He explained that CEFIA's Grant will not be payable until 60 days after the commercial operation date and the Loan would only be advanced after site remediation has been completed.

A discussion ensued on the location of the project, and questions arose as to whether there are any potential issues with flooding. The Board discussed the new FEMA standards, and it was noted that it is believed that the project is outside of the 100 year flood zone. A representative from Fuel Cell Energy indicated that project location is at a high elevation, and he is comfortable that the project is not within the risk area. Fuel Cell Energy was asked to provide more details about the location relative to flooding and to confirm whether an analysis was done based on new FEMA maps.

Upon a motion made by Ms. Glover, seconded by Ms. Wrice, the Board members voted unanimously in favor of going into executive session at 9:51 a.m. to discuss confidential commercial and financial information, terms still being negotiated and/or information given in confidence regarding the Bridgeport Fuel Cell project. Mr. Dykes, Attorney Farnen, Mr. Garcia, Mr. Goldberg, Mr. Hunter, Mr. Ljungquist, Mr. Wolak and Mr. Bishop were invited to remain during the executive session.

Mr. Wolak and Mr. Bishop left the executive session at 10:35 a.m. The executive session ended at 10:50 a.m., and the special meeting was immediately reconvened.

Mr. Choi left the meeting at this time.

The Board was asked to consider the resolution regarding the Bridgeport Fuel Cell Project. Attorney Farnen described several amendments to the resolution. There being no objection, the amendments were incorporated into the resolution.

Upon a motion made by Mr. Ranelli, seconded by Mr. Olsen, the Board members voted in favor of adopting the following amended resolution regarding the Bridgeport Fuel Cell project (Mr. Choi was not present for the vote).

WHEREAS, Bridgeport Fuel Cell Park, LLC ("BFCP"), a limited liability company wholly-owned by Fuel Cell Energy, Inc. ("FCE") has a long history with CEFIA and its predecessor, the Connecticut Clean Energy Fund ("CCEF"); and

WHEREAS, in early 2008, the CCEF released a Request for Proposals in the third round of solicitations for renewable energy projects to participate in statutorily mandated Project 150, an initiative aimed at increasing clean energy supply in Connecticut by at least 150MW of installed capacity, and the program is designed to encourage financing of renewable energy projects through the stability of long-term energy purchase agreements for grid-tied projects; and

WHEREAS, BFCP submitted the Bridgeport Fuel Cell Park proposal in response, to develop in the City of Bridgeport, a 15MW fuel cell project; and after a thorough review, was ultimately selected and ranked by CCEF as the number one project out of the nine projects submitted in the third round; and

WHEREAS, CCEF, by Board resolution dated October 27, 2008, approved grant funding for the BFCP project in the amount of $1,550,000 subject to conditions set forth in the Project 150 Program; and

WHEREAS, CEFIA has maintained its commitment to Project 150 and to the success of the BFCP project and to this end budgeted in Fiscal Year 2013 for additional financial support to the BFCP project up to $5,000,000 in loan financing.

NOW, therefore be it:

RESOLVED, that the Board of Directors hereby approves the Bridgeport Fuel Cell Project as a Strategic Selection and Award pursuant to the CEFIA Operating Procedures Section XII given the special capabilities, uniqueness, strategic importance, urgency and timeliness, and multi-phase characteristics of the Bridgeport Fuel Cell Project; and

RESOLVED, that the Board of Directors authorizes the CEFIA staff to execute definitive grant **and loan** documentation based **substantially on** (1) the term sheet set forth in the Project Qualification Memo submitted by the CEFIA staff to the Board of Directors and dated November 30, 2012, and (2) the previously approved CCEF Board of Directors' resolution for financial support in the form of a $1,550,000 grant**;** and

RESOLVED, that the Board of Directors authorizes the CEFIA staff to execute definitive loan documentation based on the terms sheet presented during the meeting of the Board of Directors on November 30, 2012 for financial support in an amount not to exceed $5,800,000 in loan financing; and

RESOLVED, that the Board of Directors' approval of the $5,800,000 in loan financing is conditioned upon (1) the completion of CEFIA staff's due diligence review, including CEFIA's review and reasonable satisfaction with all project documentation that CEFIA is not a party to, (2) reasonable assurances within thirty days of this resolution that the private investor has no likely opportunity to exit the deal, and (3) a final review and approval of the project documentation with the Chair or Vice Chair of the Board; and

RESOLVED, that the proper CEFIA officers are authorized and empowered to do all other acts and execute and deliver all other documents as they shall deem necessary and desirable to effect these Resolutions; and

RESOLVED, that the Board of Directors' action is consistent with CEFIA's purposes as codified in Section 16-245n(d)(1) of the Connecticut General Statutes, its board approved Resolution and Purposes and CEFIA's Comprehensive Plan.

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6. Budget and Operations Committee ("Budget Committee") Financial Statement Updates and Recommendations for Approval—Position Descriptions and Additional Budget for Move and Lease at 845 Brook Street:

Mr. Dykes explained that with the new direction for CEFIA away from government-funded programs to deploying private capital, the organization structure has been divided into four different sectors—1) Residential, 2) Commercial and Industrial, 3) Institutional, and 4) Grid and Infrastructure. Staff recommends the approval of the job descriptions for the following director-level positions 1) Director of Residential Programs, 2) Director of Institutional Programs, and 3) Director of Statutory and Infrastructure Programs. Mr. Dykes noted that the Director of Renewable Energy Deployment position currently encumbered by Dale Hedman would be reclassified to the Director of Statutory and Infrastructure Programs and that Mr. Hedman would transition into the new position. A nation-wide search will be carried out for the other two director positions. Mr. Dykes noted that funding for these positions were included in the fiscal year 2013 budget, and the positions are part of the 29 FTEs that were approved.

Upon a motion made by Ms. Glover, seconded by Mr. Olsen, the Board members voted in favor of adopting the following resolution approving the job descriptions for the Director of Residential Programs, Director of Institutional Programs, and Director of Statutory and infrastructure Programs (Mr. Choi was not present for the vote).

RESOLVED, that the Board of Directors of the Clean Energy Finance and Investment Authority ("CEFIA"), as required by the Operating Procedures of CEFIA, approves the new director-level position descriptions for the Director of Residential Programs, Director of Institutional Programs, and Director of Statutory and infrastructure Programs.

Mr. Dykes explained that with the merger of CI and CDA, CI has been looking at ways to merge the staff together. However, the space at 865 Brook Street is too small for all staff. Mr. Dykes stated that with some of CEFIA's staff moving to Stamford, CEFIA will need less office space and has entered into negotiations for less space at 845 Brook Street. Mr. Dykes reviewed the proposed terms of the lease and costs to build out the new space. He noted that CI has agreed to pay $100,000 of the $260,000 cost to build out the space at 845 Brook Street. Mr. Dykes explained that approval is being sought from the Board to approve the expenses and amend the Memorandum of Understanding with CI accordingly. It was noted that the proposal will ultimately save CEFIA about $150,000 over the 8-year term of the lease. After a discussion about the arrangement with CI, the rent costs and the costs to move, staff and Ms. Smith indicated that this is a fair and equitable deal between both entities.

Upon a motion made by Ms. Glover, seconded by Ms. Dixon-Peay, the Board members voted in favor of adopting the following resolution approving an amendment to the Fiscal Year 2013 budget to cover expenses of moving to 845 Brook Street, Rocky Hill and amend the MOU with CI (Mr. Choi was not present for the vote):

WHEREAS, the current office space at 865 Brook Street shared between the Clean Energy Finance and Investment Authority ("CEFIA") and Connecticut Innovations ("CI") is not large enough to support the increased personnel from the recent CI and Connecticut Development Authority ("CDA") merger; and

WHEREAS, CEFIA has an offer on adjacent office space at 845 Brook Street that will save money over the term of the lease but requires approximately $260,000 for upfront construction, furniture and moving expenses ("Expenses").

NOW, therefore be it:

RESOLVED, that the CEFIA Board of Directors approves an amendment to the Fiscal Year 2013 budget of $260,000 to cover the Expenses; and

RESOLVED, that the proper CEFIA officers are authorized and empowered to amend the Memorandum of Understanding with CI to reflect any necessary changes due to CEFIA moving to the 845 Brook Street location and the merger between CI and CDA.

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7. <u>Audit, Compliance and Governance Committee Updates</u>:

Attorney Farnen provided a brief legislative update, noting that support will be sought to seek legislation to expand residential clean energy property tax exemption to include commercial and industrial clean energy projects administered or supported by the state.

Board members were encouraged to attend ethics training at 8:00 a.m. before the December Board meeting or online training.

8. <u>Technology Innovation Committee Updates</u>:

Mr. Garcia thanked Mr. Olsen for joining the Technology Innovation Committee.

9. Deployment Committee Updates:

It was noted that the Deployment Committee will be meeting this afternoon at CEFIA, and Board members were invited to attend.

10. Approval of CEFIA staff to draft and file public comments in support of the Comprehensive Energy Strategy with Review and Approval by the Chair of the Board of Directors:

Mr. Garcia mentioned that in October Governor Malloy released the Draft Comprehensive Energy Strategy for public comments. The public comment period ends December 14, and staff would like approval from the Board to submit public comments to DEEP that address specific areas involving CEFIA. Mr. Esty stated that he will not be reviewing or commenting on any of the comments provided by CEFIA.

> **Upon a motion made by Mr. Olsen, seconded by Ms. Glover, the Board members voted in favor of approving the following resolution authorizing the President to draft and submit public comments on the Draft Comprehensive Energy Strategy to DEEP (Mr. Choi was not present for the vote, and Mr. Esty was recused from the vote):**

WHEREAS, Governor Malloy announced the release of the Draft Comprehensive Energy Strategy on October 5, 2012 for public comment; and

WHEREAS, the Draft Comprehensive Energy Strategy identifies the Clean Energy Finance and Investment Authority ("CEFIA") to play a significant role in various aspects of the strategy, including leveraging 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; and

WHEREAS, CEFIA's strategic plan and budget are consistent with the Draft Comprehensive Energy Strategy.

NOW, therefore be it:

RESOLVED, that the Board of Directors authorizes the President to draft public comments on behalf of the Board of Directors of CEFIA that are reviewed and approved by the Chair of the Board of Directors and submitted to the Department of Energy and Environmental Protection before the December 14, 2012 due date.

________________Mr. Ranelli asked the staff to comment on how financing programs can be developed to support products where the market has yet to develop solutions for the low income residents. The Board was encouraged to provide comments on the

Comprehensive Energy Strategy to Mr. Garcia as soon as possible, and staff was asked to provide the comments to the full Board before submission to DEEP.

11. **Adjournment**: Upon a motion made by Ms. Glover, seconded by Mr. Ranelli, the Board members voted unanimously in favor of adjourning the November 30, 2012 meeting at 11:05 a.m.

Respectfully submitted,

Catherine Smith, Chairperson

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

To: Bryan Garcia, President, Clean Energy Finance and Investment Authority

From: Commissioner Dan Esty, Department of Energy and Environmental Protection

Cc: Jessie Stratton, Tracy Babbidge, and Alex Kragie

Date: November 21, 2012

Re: Pilot Programs to Finance Energy Upgrades

Section 116 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*, (P.A. 11-80) requires the Department of Energy and Environmental Protection (DEEP) to establish a residential heating equipment financing program. This program will allow residential customers to finance, *through on-bill financing or other mechanism*, the installation of energy efficient natural gas or heating oil burners, boilers and furnaces to replace (1) burners, boilers and furnaces that are not less than seven years old with an efficiency rating of not more than seventy-five per cent, or (2) electric heating systems. I want to ensure that the most efficient equipment is being financed through this program.

Consistent with the Draft 2012 Connecticut Comprehensive Energy Strategy (Draft Strategy) and P.A. 11-80, DEEP requests that the Clean Energy Finance and Investment Authority (CEFIA) coordinate with DEEP to develop pilot programs(s) to finance equipment energy efficiency upgrades for the residential sector. These pilots should determine the most effective programs to attract sufficient private capital at low interest rates, to make residential clean energy investments—including investments to upgrade or replace inefficient furnaces and boilers—affordable on the scale needed to achieve Connecticut's overall energy goals. I request that you coordinate with United Illuminating, Connecticut Light & Power, and members of the Energy Efficiency Board to incorporate appropriate incentives and to prevent customer confusion with the Connecticut Housing and Investment Fund program – because all clean energy financing programs will be co-branded underneath the EnergizeCT marketing program.

One of the pilot programs for financing residential energy efficiency measures CEFIA should develop and implement is a "low or no" interest rate loan program modeled on the zero interest HEAT loan offered by Mass Saves (Massachusetts' utility-administered efficiency program). The HEAT loan program is administered directly by community banks and credit unions, with Mass Saves' subsidy in the form of an upfront buy-down of the interest rate to 0%. The Draft Strategy proposes that CEFIA pilot a similar program with Connecticut banks and establish a loan loss reserve, interest rate buy down, or other credit enhancement mechanisms to support affordable interest rates and enable a payback period for the homeowner of up to twelve years. In the design of your financing program, I want to stress that your focus should be to attract and deploy private capital so as to reduce our reliance on ratepayer resources.

The second pilot program for financing residential energy efficiency measures CEFIA should develop and implement is "on-bill" financing. Through on-bill financing, homeowners can finance energy efficiency, heating equipment upgrades or conversions, and renewable energy improvements with little or no upfront costs by paying for those measures over an extended time on their monthly utility bills. Typically, the loan terms on these clean energy investments are structured so that savings from the efficiency or renewable energy improvements are greater than the loan repayment cost. As a result, the homeowner will have no increase in their monthly utility bill-- and ideally gets some gets some portion of the savings from day one. I ask that you begin to explore the merits of on-bill financing to determine whether or not it is a vehicle to attract low-cost private capital investment in Connecticut.

Lastly, I note that on April 4, 2012, DEEP and CEFIA engaged in a Memorandum of Agreement for the purpose of undertaking projects of mutual interest, which were specific to the use of federal funds for a "Clean Energy Financing Program" through the American Recovery and Reinvestment Act State Energy Program (ARRA-SEP). Those funds are to be used for credit enhancements to leverage additional public and private sectors sources of capital in support of residential energy efficiency and renewable energy financing programs. I would request that you use these federal resources to attract private capital from credit unions, community banks, or other sources to invest in the residential financing programs.

Please respond to Jessie Stratton, Director of Policy, at Jessie.stratton@ct.gov to confirm CEFIA's acceptance of this role. DEEP's goal is to complete programmatic design for both pilot programs this year, and also launch at least one of the pilot programs this year.

Sincerely,

Daniel C. Esty
Commissioner
Connecticut Department of Energy
and Environmental Protection

December 2, 2012

To: Bryan Garcia, President
Clean Energy Finance and Investment Authority (CEFIA)

From: Chris Kramer and Jeff Schlegel, EE Board Consultants

Re: Financing Objectives and Criteria, Follow up on Energy Efficiency Board (EEB) Letter

This memo follows up on Energy Efficiency Board Vice Chairman Jamie Howland's earlier letter regarding the EEB's desire to work with CEFIA in securing and developing attractive and effective financing to support energy improvement projects. In particular, this memo provides further details regarding the EEB consultants' reactions to the "Equipment Replacement and Clean Energy Loan Pilot" ("CEFIA Pilot") that CEFIA is currently exploring with credit unions in the United Illuminating territory. The discussion below focuses specifically on how the product measures up to the key EE program objectives and financing criteria laid out in the November 29th letter, with an emphasis on residential financing.

As noted in the earlier letter, any energy efficiency financing products offered under the Energize CT umbrella must be consistent with and explicitly supportive of the State of Connecticut's and the EEB's strategic *program objectives* for achieving deeper and more sustainable energy efficiency improvements. In addition, effective financing programs must at a minimum meet the following four *financing criteria*:

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

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

3. The product should be economical from a program perspective. Costs to ratepayers and energy efficiency programs should be kept low by attracting low-cost capital, 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 mix of products) must meet the needs of targeted market segments. 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. These may include higher income homeowners, small businesses, and some segments of the large commercial and industrial sector. Financing must also be available to those customer segments that could not otherwise afford energy efficiency investments or could not afford to go as deep as they otherwise might. This includes rental markets and customers with moderate credit scores. Financing products should not be limited to higher-income customers.

The above are the same criteria for financing products that the EEB has emphasized in its work on financing products for both existing and future energy efficiency programs.

The EEB acknowledges that it may take more than one financing product to serve all residential market segments. However, the financing products should be marketed as one overarching residential financing offering under the Energize CT umbrella, and the specific variations in the products should mostly be addressed and managed by CEFIA and the EE program administrators "behind the curtain." As such, it is critical that the EEB and CEFIA coordinate in the development of any products being offered under Energize CT.

The EEB emphasizes that acquiring private capital is not by itself a measure of success. In order to be successful and effective, any new financing products must meet the program objectives and financing criteria above. In the residential sector, the EEB appreciates that CEFIA has moved in the direction of exploring a loan product for Connecticut residents that brings in credit unions as flexible and convenient capital providers and that it has moved away from pursuing a an on-bill product with utility shut-offs. Still, it is important that the CEFIA Pilot product meet the criteria outlined above. The EEB believes that the CEFIA product meets some of these criteria but could be further improved to better achieve these objectives. The following discussion outlines some of the EEB's questions and concerns.

Comparison to Existing Product and MA HEAT Loan:

Comparing the CEFIA Pilot product to the existing CHIF loans and to the Massachusetts HEAT Loan may help to clarify how the CEFIA Pilot product measures up to the criteria outlined above. The table below provides a summary comparison of these different products.

	Existing CHIF Loan	CEFIA Pilot	MA HEAT Loan
Process convenient for customers, streamlined from program perspective	Loan approvals may be drawn out, although they are simplified for the insulation loan. EEB consultants will follow up with CHIF to determine reasons for length of time of loan approvals and whether any improvements can be made.	15-step process modeled after HEAT Loan but may be somewhat complex. Unclear how timing of loan approvals compares to CHIF. EEB consultants will follow up. CEFIA role should be clarified. Loan should be packaged as part of EE programs.	EEB consultants have been told that process may be more simplified, but details unclear. Consultants will follow up. Loans are packaged as integral part of Mass Save. Emphasis is on selling energy efficiency investments, not loans. Loans are one tool to help customers make these investments.
Economical from a customer perspective	2.99% for some measures, 4.99% for others, with max term of 10 years. 2.99% available for entire package if measures eligible for reduced rate included.	Schedule of rates, not to exceed: 4.49% for 5 years 4.99% for 7 years 5.99 for 10 years 6.99 for 12 years Rates higher than typical home equity loans.	0% loan
Economical from a program perspective	Relies on ratepayer capital, so high opportunity cost. Savings per dollar optimized by setting lower rates for measures that are more cost-effective. This modification was made to fix problem during pilot phase of investments in less cost-effective technologies.	Low ratio of pubic to private capital, but unclear whether low cost per unit of net savings achieved. Potentially low uptake may also require achievement of savings goals with higher-cost alternatives. EE measure eligibility unclear, and 25% may be used for non-EE investments. May encourage investments with a lower ratio of net savings/dollar while producing fewer savings for customers.	Higher cost of public capital per dollar invested, but also high uptake ($30MM in 2011 and $50MM in 2012), which may reduce need to achieve savings goals with higher-cost alternatives.
Meets the needs of targeted market segments	640 minimum FICO score for all loans, 50% debt-to-income ratio. Homeowners only.	80% of capital restricted to customers with FICO scores of 680 or above. 20% of capital available to customers with minimum 640 credit score between 640 and 679. 45% debt-to-income ratio. Unclear whether product is available renters.	Minimum 650 credit score for all loans, 50% debt-to-income ratio Available to renters.

The discussion below provides further details regarding the EEB's questions and concerns about the CEFIA Pilot product.

Financing Process Convenient and Streamlined:

The EEB has no specific objections to the process laid out for the CEFIA pilot. However, the EEB believes that CEFIA should examine whether the 15-step process outlined in CEFIA's presentation of the product[1] is as convenient and streamlined as possible. Although it appears the process flow is intended to be modeled after that Massachusetts HEAT Loan, EEB consultants have been told that the HEAT Loan model may be more streamlined, though the details are unclear at this point. The consultants will follow up with HEAT Loan representatives and provide CEFIA with any relevant recommendations.

In addition, the EEB would like to further understand how the timing of the CEFIA Pilot product would compare to that of the existing CHIF loan products, particularly with regard to verification of measure eligibility. CEFIA has stated that loan approvals would be quicker than approvals for the CHIF product. However, in discussions with the EEB consultants, CHIF has indicated that any delays in loan approvals are generally related to measure eligibility verification, which involves gathering information required by the energy efficiency program from contractors and customers. Information from CHIF also indicates that the financial side of the loan approval process is expedient. It is unclear what processes CEFIA intends to use for measure eligibility verification, as required by the energy efficiency programs, and how long these processes would likely take. Verifying measure eligibility is an important part of the energy efficiency programs, as it ensures that the measures installed are cost-effective and will contribute to savings goals as intended. Assuming that the CEFIA Pilot product relies on measure verification processes similar to those of the existing CHIF product, it is unclear whether the CEFIA Pilot product will have a competitive advantage over the current product in terms of the timing of loan approvals.

The process flow diagram and previous CEFIA statements also suggest that CEFIA's role in the program will be limited to reviewing summary data on a monthly basis. The EEB would like to understand the details of CEFIA's role more fully, including measure eligibility verification, general oversight and management, quality control, data collection and reporting, administration of the program and loss reserve fund, marketing, and any other activities and associated costs. A full accounting of CEFIA's role and costs may also impact whether the program is economical from a program perspective.

Finally, the EEB would also like to emphasize that any loan product for energy efficiency should be packaged and fully integrated into existing energy efficiency programs. Streamlined marketing and delivery should take place primarily through these programs. The emphasis of these programs should be on selling energy efficiency investments, not on selling loans. The loan product should be offered as

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[1] "Residential Clean Energy Financing: An Energize CT Financing Partnership with Credit Unions, Community Banks, and Contractors," CEFIA, November 8, 2012.

one tool to encourage more people to take on energy efficiency investments or to go deeper with such investments.

Attractive and Economical from a Customer Perspective:

The EEB believes that the CEFIA Pilot product may not be economical as currently structured from a customer perspective for a large portion of the target market. CEFIA has acknowledged that customers who are eligible for a home equity loan "may or may not be candidates" for the product. For customers who currently have a home equity line of credit, CEFIA has stated, "To the extent they have adequate capacity and no other anticipated uses for the HE-LOC, the consumer should in most cases be able to borrow at lower rates for longer terms with the HE-LOC."[2]

As of the second quarter of 2012, approximately 2/3 of Connecticut mortgage borrowers had more than 20% equity in their homes[3] and could presumably obtain a home equity loan or line of credit, as could many of the 30% of Connecticut homeowners without a mortgage.[4] In other words, roughly 75% of Connecticut homes may be eligible for a home equity loan or line of credit, yet only about 15% of Connecticut homeowners currently have home equity loans.[5] It is likely that some fraction of the outstanding home equity loans and lines of credit are held by residents other than those who would currently be eligible for such financing. In addition, even among those residents who currently have a home equity line of credit, some may have additional capacity to take on energy efficiency investments.

Given the large percentage of Connecticut residents who may already be able to obtain more competitive financing, the EEB believes that CEFIA should further explore whether the rates and terms associated with the pilot product are sufficiently competitive. An alternative option may be to explore the possibility of marketing home equity loans as solutions for energy efficiency improvements.

The EEB acknowledges that some residents may be unable to obtain a home equity loan, yet they may still need financing support for home energy upgrades. However, many of these residents may also be in a position in which taking on additional debt is not advisable. As a result, the pilot product as currently structured may be suitable for only a relatively small sub-segment of the residential population.

The EEB is also open to discussing the possibility of using resources from the Connecticut Energy Efficiency Fund (CEEF) to support interest-rate buy-downs for the product and make it more competitive from a customer perspective. However, if this approach is taken, the product must also remain economical from a program perspective. For illustrative purposes, the following table estimates the costs of interest-rate buy-downs on a $10,000 loan to 2.99% and 0%, given the rate-and-term schedule of the CEFIA Pilot product.

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[2] Email from Bert Hunter to Tilak Subrahmanian, November 13, 2012.
[3] "CoreLogic® Reports Number of Residential Properties in Negative Equity Decreases Again in Second Quarter of 2012," September 12, 2012, http://www.corelogic.com/about-us/news/asset_upload_file516_16435.pdf
[4] 2011 American Community Survey 1-Year Estimates.
[5] 2011 American Community Survey 1-Year Estimates.

Cost of Buy-Downs on CEFIA Pilot Product

	5 Years	7 Years	10 Years	12 Years
Credit Union Rate	4.49%	4.99%	5.99%	6.99%
Cost of Buy-Down to 2.99%	$362	$651	$1,303	$1,951
Cost of Buy-Down to 0%	$1,058	$1,574	$2,490	$3,244

As this chart demonstrates, the cost of buy-downs can be significant, particularly to buy down to lower rates for customers and for longer terms. In order for the buy-downs to make sense , they must make the loan more attractive to customers, but also allow savings goals to be met at a lower cost to ratepayers, as discussed further in the next section.

Economical from a Program Perspective:

CEFIA has stated that it chose to use a loan loss reserve structure for the pilot product instead of interest rate buy-downs, as used in the Massachusetts HEAT Loan model, because a loan loss reserve is "less expensive." This raises the question of how the term "expensive" is defined. It appears that the CEFIA pilot product is likely to have a low ratio of public capital to private capital invested, but it is unclear whether the product is likely to have a low ratio of public capital invested per unit of net savings achieved. This latter test is more appropriate in judging whether a program is economical from a program perspective, since the goal of energy efficiency programs should be to achieve savings, not simply to make leveraged investments.

Net savings are those savings generated from the additional energy efficiency investments that would not have been achieved if a program did not exist. Generally these additional investments are incentivized by reduced prices or rates that put the investments within reach of some additional customers, while other participants who would have made the investment even in the absence of the program are considered free riders.

For anyone who can obtain a lower-rate home equity loan, the CEFIA Pilot product does not actually reduce rates below available market rates, meaning it is not putting energy efficiency investments within economic reach of any new additional customers within this segment. If such customers end up participating in the program, it is questionable whether the savings generated from their participation should be counted as net savings. This would be somewhat analogous to counting net savings from offering more expensive CFL bulbs through an energy efficiency program than those that a customer could simply buy at market rate in a store. Even if some customers participate because the program provides them access to information about financing that they might not otherwise have, it would likely be more economical simply to provide them with better information about cheaper private-market alternatives.

A separate but related issue in examining whether a program is economical from a program perspective is projected uptake. In some cases, a loan may be less economical for a program overall if it leads to lower uptake, even if the amount of public capital invested per loan or unit of net savings is lower. This is because energy efficiency programs have defined goals that they are required to meet and may make up for any savings not achieved by the loan product using a more expensive "next best alternative."

The following simplified example of a program with a 100,000 MMBtu savings goal illustrates this point. (The numbers used are intended to be illustrative only.) Note that Loan A has a lower cost of public capital invested per MMBtu of savings, but the total cost to the program of achieving the savings goal is higher because the uptake on this loan is lower. As this example shows, even with a product that achieves a lower ratio of public to private capital and a low cost per unit of net savings, the product may leave the program economically worse off if its uptake is lower than that of a loan product with higher ratios.

Savings Goal (MMBtu)	**100,000**	**100,000**
	Loan A	Loan B
Typical Loan Size	$10,000	$10,000
Public Capital Invested per Loan	$500	$1,000
Average Savings per Loan (MMBtu)	10	10
Public Cost/MMBtu	$50	$100
Uptake (homes)	1,000	3,000
Total Public Cost of Loan Program	$500,000	$3,000,000
Total Savings (MMBtu)	10,000	30,000
Savings Goal Remaining (MMBtu)	90,000	70,000
Cost per Additional MMBtu (Next Best Alternative)	$150	$150
Total Cost of Additional MMBtus	$13,500,000	$10,500,000
Total Bottom-Line Cost to Achieve Savings Goal	$14,000,000	$13,500,000

Many programs are of course budget constrained, meaning that it may not be possible to spend the additional funds necessary to reach savings targets. In such cases, savings goals may simply not be achieved.

While this example is intended to be illustrative only, there are reasons to consider whether such a scenario may play out with the CEFIA Pilot product. As discussed above, given the wide availability of cheaper home equity loans, it is unclear what the uptake of the CEFIA loan product is likely to be and how much of that uptake should be considered net savings. By contrast, the Massachusetts HEAT Loan product, which buys down the customer interest rate to 0%, may be more expensive in terms of public capital invested per loan, but the product has also achieved significant uptake. Total volume for the HEAT Loan product was $30,000,000 in 2011 and is on track to reach $50,000,000 in 2012.

The EEB believes that CEFIA should examine whether investing some additional amount of public capital per loan to make the product more competitive would likely drive sufficient additional uptake to reduce the bottom-line costs of achieving overall energy savings goals. As noted above, the EEB is open to the possibility of using CEEF funds for this purpose. However, such buy-downs should only be used if they ultimately allow savings goals to be achieved at a lower cost.

Finally, the EEB believes that CEFIA should provide further clarification regarding measure eligibility. Under the current CHIF loan program, measures that are provide greater savings are incentivized at lower rates, which is intended to generate a higher level of savings per dollar invested. The measure eligibility requirements for the CEFIA Pilot product are less clear,[6] and the EEB notes that 25% of capital may also be used for non-energy investments.[7] If public dollars in the form of loan loss reserves used to incentivize investment in technologies that are not sufficiently cost-effective, then the program will be less economical than it could otherwise be while potentially encouraging customers to take on investments that will produce lower savings for them. It should be noted that the existing CHIF loan product was specifically modified from its pilot phase to address ensure that public capital was not devoted to encouraging investments in expensive technologies that did not produce sufficient savings relative to investment costs. Even if public investment costs are lower with a loan loss reserve structure, as noted above, the appreciable net savings generated given other available financing may be lower, as well. CEFIA should work with EEB consultants to clarify what measures will be eligible under the pilot program.

<u>Meets the Needs of Targeted Market Segments</u>:

Financing products should be available to those customers who most need them in order to take on or go deeper with energy efficiency investments. These include rental customers, as well as customers with moderate credit scores.

The EEB would appreciate clarification as to whether the CEFIA Pilot product would be open to any renters. As noted in the comparison chart above, the Massachusetts HEAT Loan product is available to renters. With regard to the CEFIA Pilot product, Exhibit A of the "Financing Program Services Agreement" states that only single-family, 1-4 unit homes used as a primary residence (or not used as

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[6] The CEFIA PowerPoint presentation refers to a SIR > 1 requirement, but this requirement does not seem to appear in the financial services agreement with the credit unions. In any case, while the SIR test ensures cash flow neutrality over the loan term from a customer perspective, it does not ensure that investments are economical from a program perspective. Further, the three measure eligibility requirements that do show up in the Financial Services Agreement are not entirely clear. For example, it is unclear whether all requirements must be met or only one (the language uses the word "and," but meeting all requirements simultaneously appears to be mutually exclusive in some cases, such as improvements that meet requirement #1 or #3, but not both). If meeting only one requirement is required, then the EEB requirement #2, which would appear to allow a wide range of investments as permitted under the ARRA SEP program, some of which may not produce a high level of net savings per dollar invested. In addition, requirement #3, which states that measures must be "Recommended by a Program Contractor," should further clarify "*as an eligible improvement under HES, HPwES, or other utility programs.*" The EEB would also appreciate further clarification regarding the term "Program Contractor," particularly with regard to the origin and purpose of definition #3, "Building Performance Institute contractors that are registered home improvement contractors with the Connecticut Department of Consumer Protection."

[7] Typical energy efficiency portfolio budgets would not permit 25% to be devoted to non-energy investments. The EEB understands that loans may be unique in that customers may wish to finance a package of improvements that include some energy and non-energy investments. It would not be desirable to force an inconvenience on a customer, such as requiring them to fill out two different loan applications for the different aspects of the project, particularly given that a home equity line of credit could support the entire project, However, the EEB believes that CEFIA should explore the possibility of using the loan loss reserve itself to cover only those investments that qualify as eligible.

income property) would be eligible. This language does not explicitly exclude renters of such properties, but other CEFIA presentations of the product do refer to homeowners. In addition, in discussions with CHIF, EEB consultants have been told that a significant number of Connecticut residents live in six-unit homes that may be in need of energy efficiency upgrades. The EEB believes that CEFIA should explore whether it may be appropriate to make this product available to this segment of residents. The EEB understands that CEFIA is working on a separate multifamily energy loan product and a low-income product for landlords and would appreciate further clarification regarding how renters will be covered by the combination of these products.

The EEB also believes that CEFIA should examine the limitation currently built into the product that restricts 80% of the available capital to residents with credit scores of 680 or higher. The current CHIF model sets the minimum credit score at 640 for all loans, while the HEAT Loan model sets the minimum at 650 for all loans. The EEB understands that credit unions have a need to protect their own portfolios and also that extending credit may not always be advisable to customers who are not in a good position to take on additional debt. Nonetheless, the EEB is concerned that the practical effect of restricting 80% of the funds to borrowers with credit scores of 680 or higher may be to make the vast majority of the product capital available only to those who could likely find other alternatives. This may be particularly true given the previous discussion regarding the number of Connecticut residents who could likely obtain a more competitive home equity loan. The EEB would like to see the pilot loan product extended to a larger share of residents for whom access to capital is truly a barrier to investing in energy-saving upgrades.

The EEB recognizes that CEFIA is working on two pilot products for the low-income residential sector that will extend capital to some residents who might otherwise have difficulty accessing it. However, given that credit scores are not calculated using income as a factor, the EEB is still concerned that the credit union product may leave a capital availability gap for some residents.

Conclusion:

The EEB consultants, on behalf of the EEB, reiterate that the EEB would like to continue working with CEFIA to secure attractive and effective financing for residential customers. The EEB appreciates that CEFIA has moved in the direction of exploring a residential energy efficiency financing product that brings in credit unions as capital providers, drawing on some of the best practices from the successful Massachusetts HEAT Loan product. However, the EEB continues to have some questions and concerns regarding the structure of the CEFIA Pilot product being explored in UI territory, particularly with regard to how the product meets the four key criteria laid out at the beginning of this memo. The EEB looks forward to CEFIA's clarifications regarding these issues and expects to continue coordinating with CEFIA to structure a product that can work effectively for residents throughout the state.

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CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Memo

To: Commissioner Dan Esty, Department of Energy and Environmental Protection

From: Bryan Garcia, President, Clean Energy Finance and Investment Authority

Cc: Jessie Stratton, Tracy Babbidge, and Alex Kragie, DEEP
Mackey Dykes, Brian Farnen, David Goldberg, Bert Hunter, and Ben Healey, CEFIA

Date: December 17, 2012

Re: Pilot Programs to Finance Energy Upgrades

In response to your letter of November 21, 2012, the Clean Energy Finance and Investment Authority (CEFIA) hereby formally accepts the role that the Department of Energy and Environmental Protection (DEEP) has delegated to us with regard to piloting residential energy financing programs. We understand our role to include the following:

1) CEFIA shall develop and implement a "low or no" interest rate loan program, modeled on best practices from states across the country, that reduces our reliance on ratepayer resources and helps Connecticut homeowners finance energy upgrades, including energy efficiency retrofits, heating equipment upgrades or conversions, renewable energy improvements, and, where feasible, alternative fuel vehicle infrastructure (i.e. EV recharging stations). Together with the electric distribution companies (EDCs) and their affiliated natural gas companies, as well as the Energy Efficiency Board (EEB), we will work to incorporate appropriate incentives and prevent customer confusion under the EnergizeCT brand; and

2) CEFIA shall explore the development and subsequent implementation of an "on-bill" financing program to support residential energy upgrades, such that the loan terms on these investments are structured so that savings from the improvements undertaken are greater than the loan repayment costs from day one. As you will see, we have already structured a credit union financing product to achieve this goal. This "on bill" financing program would incorporate, as appropriate, capital market mechanisms such as securitization and other financing techniques.

<u>Clean Energy Financial Innovation Program</u>
To accomplish the first of these pilot programs, CEFIA is leveraging federal American Recovery and Reinvestment Act State Energy Program (ARRA-SEP) dollars, repurposed under a Memorandum of Agreement (MOA) with DEEP signed on April 4, 2012.

Shortly after signing this MOA, CEFIA released a Request for Proposals (RFP) for a new Clean Energy Financial Innovation Program, and on June 29, 2012, an expert panel of reviewers[1] selected the following four proposals (out of seven submitted) for follow-up negotiations and due diligence:

- **Housing Development Fund (HDF)** – development of an energy efficiency loan product targeting low-income, *owner-occupied*, single-family homes (1-4 units);

- **Connecticut Housing Investment Fund (CHIF)** – development of an energy efficiency loan product targeting low-income, *non-owner occupied*, single-family homes (1-4 units), and healthy homes;

- **Next Step Living (NSL)** – development of a loan product to support energy efficiency, fuel conversions, etc., for moderate income households and above; and

- **Sungage** – creation of a public-private partnership with investor financial institution to support a loan product for residential solar PV.

On November 30, 2012, the Deployment Committee of CEFIA approved credit enhancements in the total amount of $3.21 million to help move several of these initiatives forward. These credit enhancements will attract nearly $35.00 million of private capital investment at a leverage ratio of more than 10.0:1.0 – see Table 1.

Table 1. Estimated Private Capital Leveraged from Credit Enhancements through the Clean Energy Financial Innovation Program

Program[2]	IRB	LLR	Total Credit Enhancement	Private Capital	Leverage Ratio
Low Income Loan	$50,000	$360,000	$410,000	$2,500,000	6.1:1.0
Credit Union Loan[3]	-	$2,500,000	$2,500,000	$28,000,000	11.2:1.0
Solar PV Loan	-	$300,000	$300,000	$4,500,000	9.0:1.0[4]
Total	**$50,000**	**$3,160,000**	**$3,210,000**	**$35,000,000**	**10.9:1.0**

Credit Union Product

The largest of these three initiatives, and the most directly relevant to the DEEP authority delegated to CEFIA in your letter of November 21, 2012, is the credit union loan product. Highlights of that product are as follows.

[1] Reviewers included Teddi Ezzo and Cindy Jacobs from DEEP, Shirley Bergert, Jamie Howland and Rich Steeves from CEEF, Merrian Borgeson from LBNL, and Bryan Garcia, Dale Hedman and Bert Hunter from CEFIA.
[2] It should be noted that naming for loan programs is currently in process.
[3] CEFIA staff worked with Next Step Living, United Illuminating, and several credit unions to create a financing product that will be made available to all installers at low interest rates and for terms between 5 to 12 years in Connecticut.
[4] Due to further CEFIA participation in the fund as a provider of subordinated debt

Participating lending institutions will provide unsecured loans of up to $25,000 (or potentially more) to qualifying residential borrowers to finance comprehensive energy assessments and efficiency retrofits, in addition to qualifying renewable energy improvements and fuel and equipment conversions. The targeted loan mix will be a maximum of 20% of customers with FICO scores of 640-679 and a minimum of 80% of customers with FICO scores of 680 or above (both consumer classes must have debt-to-income ratios less than or equal to 45%). The rates and terms offered through the program will be as follows (on a not-to-exceed basis) – see Table 2:

Table 2. Terms and Not-to-Exceed Interest Rates for the Credit Union Product

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

In partnership with the EDCs and their natural gas affiliates, as well as the EEB, CEFIA will launch this program in January 2013 with a select group of credit unions, which will underwrite loans based upon standardized criteria and their lending standards. CEFIA will allow other lending institutions to join the program on a rolling basis post-launch.

Participating credit unions and community banks will have access to the CEFIA loan loss reserve (LLR) on a pool-basis, in respect of each lending institution's portfolio performance. Up to $2.5 million of LLR will be set aside in a common pool for the credit union financing program. Of this amount, $300,000 will be restricted to support financing for Next Step Living customers over an initial 18-month period, after which remaining funds will flow back into a common pool.[5]

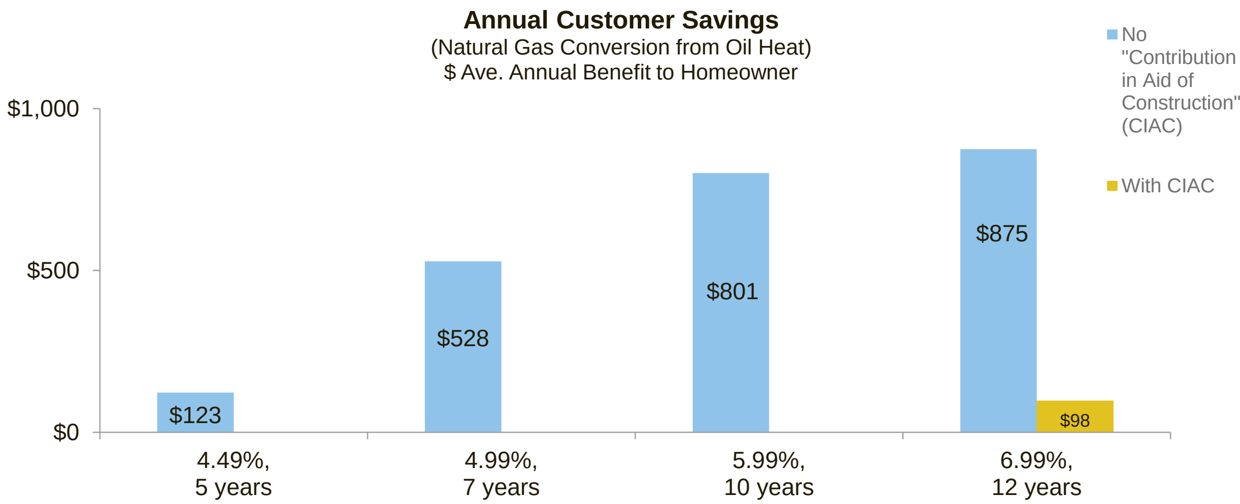
Financing of related home improvements that do not contribute directly to enhanced energy efficiency, but contribute to a healthy home (i.e., asbestos removal, lead abatement, etc.) or readiness of the home for energy improvements (i.e. roof repairs) will be allowed under the program, so long as they do not exceed 20% of a given loan's value.

Finally, subject to a yet-to-be drafted memorandum of understanding (MOU), CEFIA staff anticipates that the EDCs and the EEB will partner with CEFIA to assist with qualifying contractors for the program, as well as with quality assurance and quality control, data collection, and marketing. All approved technology improvements installed

[5] It should be noted that Next Step Living was a finalist in the Clean Energy Financial Innovation RFP. They proposed the need for a low-cost long-term loan that evolved into this credit union product that is being made available to all qualified contractors in Connecticut. For their leadership and contributions of time and experience in supporting the product's development, and their submission under the competitive RFP, CEFIA is providing Next Step living with access to a small portion of the capital – approximately 12 percent.

under the program will be eligible for standard rebates through the Connecticut Energy Efficiency Fund (CEEF) and CEFIA.

Although this program will finance a broad range of measures, we think it is valuable to highlight one portion of CEFIA's mandate here: to help Connecticut homeowners convert and upgrade inefficient home heating equipment by leveraging private capital investment. Based on the information provided in the natural gas section of the draft Comprehensive Energy Strategy (CES), the chart below shows how our anticipated loan terms should allow homeowners to realize immediate and significant savings from a conversion to natural gas heating, net of financing costs, from day one. This is directly in line with the goals laid out in the CES.



<u>Residential Clean Energy Financing Program</u>

In addition to the uses of ARRA-SEP funds laid out above, CEFIA intends to use the remainder of those repurposed dollars to support a follow-on version of the original Connecticut Solar Lease program. This revitalized program will include solar hot water systems, an area of interest to the Governor, alongside solar PV for the residential sector. The structure will include more private capital and less ratepayer capital than the original CT Solar Lease, reach more households, and return most, if not all, of the ratepayer funds, including subsidies, back to CEFIA over the 20-year life of the lease program.

Through a combination of private sector capital, including nearly $22 million of commercial debt and $22 million of tax equity – with ratepayer funds of $22 million, including nearly $7 million of managing member equity and subordinated debt (invested over a 3-year period and both protected by $3.5 million of ARRA-SEP loan loss reserves) and $15 million of performance-based incentives (contributed over a 9-year period) – we forecast that the new lease will return to CEFIA more than $27 million over a 20-year period, paying the ratepayers back for their investment. The new program will reach nearly 2,000 households and deliver over 10 MW (or 235,000,000 kWh's over the 20-year life of the program) of solar PV and 5,000 MMBtu (or

125,000 MMBtu of energy savings over the 20-year life of the program) of solar thermal hot water systems.

Financing Program Results

With the successful implementation of the financing programs involving the repurposed ARRA-SEP funds, we estimate that the following results will be achieved through 2014 – see Table 3.

Table 3. Estimated Performance of the Repurposed ARRA-SEP Funds in Financing Programs

Program	Credit Enhancement	Ratepayer Capital at Risk[6]	Private Capital	# of Loans	Annual Clean Energy Produced or Saved
Low Income Loan	$410,000	-	$2,500,000	350	25,000 MMBtu
Credit Union Loan	$2,500,000	-	$28,000,000	5,000	200,000 MMBtu
Solar PV Loan	$300,000	$500,000-$2,500,000	$4,500,000	240	1.7 MW
Solar PV and SHWS Lease	$3,500,000	$7,000,000[7]	$44,000,000	1,950	11.0 MW and 5,000 MMBtu
Total	**$6,710,000**	**$7,500,000 - $9,500,000**	**$79,000,000**	**7,540**	**230,000 MMBtu and 12.7 MW**

Effectively, these financing programs, once fully implemented, will demonstrate the "green bank" model that CEFIA is pioneering, whereby the amount of clean energy electrons and energy savings are being maximized per dollar of ratepayer funds at risk. Through these programs, we expect that ratepayer capital contributed through the Clean Energy Fund will be returned over time at a reasonable return.

On-Bill Financing

With regard to the second pilot program you have tasked CEFIA to develop and implement, we consider on-bill repayment important because it provides a broader segment of customers with another way to finance energy efficiency, heating equipment upgrades and renewable energy improvements made to their homes at no upfront cost. In the CES, CEFIA recognizes the clear goal of effectively bringing energy efficiency to *all* ratepayers to mitigate the impact of high electric rates. We understand that key to our success is ensuring that low- and moderate-income households are served not only by "available financing," but also by programming that successfully implements retrofits in that segment. The additional central challenge we have before us is that of shifting from ratepayer funding for energy efficiency to leveraged funding.

[6] CEFIA expects the ratepayer capital at risk will be returned through the various financing programs and is protected by the ARRA-SEP credit enhancements in the form of a loan loss reserve.

[7] In addition, CEFIA expects to contribute $15 million in performance-based incentives over a nine-year period.

On-bill repayment is just the sort of programmatic tool that we expect will help us to meet this dual mandate, marrying lending criteria that allow lower-income and credit-strapped customers to access the market, with credit and security criteria that allow institutional lenders to invest on a large scale.

From our vantage point, CEFIA is excited to support a program where the savings from efficiency improvements offset the costs, so customers see no increase in their monthly utility bills from day one (with the caveat that with a fuel conversion, the gas utility bill may be higher, but the overall costs should be lower as the fuel oil bill is eliminated). A properly structured on-bill financing program has the potential to drive higher loan volumes and generate greater levels of private capital investment in clean energy retrofits in Connecticut. CEFIA believes that the fundamental features for a successful on-bill program include keeping the debt with the meter, inclusion of third-party financing as opposed to reliance on ratepayer funds (together with capital markets structures, as appropriate, such as securitization), utility service shutoff for non-payment within a framework of regulatory consumer protections and with input from low-income and elderly advocacy groups to ensure adequate protections are available, and simplicity.

To be clear, CEFIA holds that on-bill financing must be supported by utility shut-off, which is a significant protection for both lenders and borrowers. Consumer advocates in New York State, preparing for the Green Jobs Green NY program, have filed public comment detailing the importance of treating on-bill obligations as a regular, indistinguishable part of the utility bill, including the right to Deferred Payment Arrangements and limits on late payment charges; and as a preventative measure against ballooning debt. CEFIA also recognizes the importance of segmenting low- and moderate-income borrowers into those who can or will likely take out attractive loans, and those who cannot or should not take out loans, and will need to be served by ongoing subsidy programs. Relying again on New York's experience, that group of consumers will likely include households who are eligible borrowers, but who have been keeping their energy bills artificially low by keeping their thermostats below healthy, comfortable heating levels.

Going forward, then, over the coming months, CEFIA commits to continuing to work with the utilities, low-income and elderly advocacy groups, financial institutions, and other key stakeholders to design a flexible on-bill repayment program along these lines, which will utilize minimal ratepayer funds to deliver on our shared goals of attracting low-cost, long-term, private capital investment in clean energy deployment in Connecticut.

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CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

December 14, 2012

Debra Morell
Department of Energy and Environmental Protection
Bureau of Energy and Technology Policy
Ten Franklin Square
New Britain, CT 06051

RE: Comments of the Board of Directors of the Clean Energy Finance and Investment Authority on the Draft Comprehensive Energy Strategy

Dear Ms. Morell:

On behalf of the Board of Directors of the Clean Energy Finance and Investment Authority, I am submitting the attached comments as they pertain to the Draft Comprehensive Energy Strategy (CES).

The CES provides a thorough review and analysis of Connecticut's energy needs for residents and businesses going out to the year 2050. It provides a blueprint for planning and shaping the state's energy future by providing a foundation for better informed policy, regulatory and legislative decisions, as well as better energy choices for residents and businesses. It also recognizes the need to use limited government resources to leverage private capital and increase the flow of investment into energy efficiency, renewable energy, natural gas, and a 21st century transportation infrastructure.

CEFIA looks forward to working with the Department of Energy and Environmental Protection (DEEP) and other stakeholders to support the successful implementation of the CES and to advance Connecticut's energy future.

Introduction

The Clean Energy Finance and Investment Authority ("CEFIA") was created as part 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". CEFIA is governed by a Board of Directors that includes ex-officio members and Gubernatorial and Legislative appointees that oversee the quasi-public organization in accordance with its bylaws, operating procedures, and comprehensive plan. As the nation's first state-level clean energy finance authority, CEFIA's mission is to support the Governor's and Legislature's energy strategies to achieve cleaner, cheaper, and more reliable sources of energy while creating jobs and supporting local economic development.

To that end, CEFIA's goals are to:

- Attract and deploy capital to finance the clean energy[1] goals[2] of Connecticut, including:
  - Helping Connecticut become the most energy efficient state in the nation;
  - Scaling up the deployment of renewable energy in the state; and
  - Providing support for the infrastructure needed to lead the clean energy economy.

- Develop and implement strategies that bring down the cost of clean energy in order to make it more accessible and affordable to consumers.

- Reduce reliance on grants, rebates, and other subsidies and move towards innovative low-cost financing of clean energy deployment.

CEFIA's goals are consistent with the CES and our programs are designed to support its successful implementation by using the limited ratepayer funds[3] and other resources we receive[4] to attract private capital investment into clean energy in our state. CEFIA is prepared to support the policies that are established and implemented---including enhanced energy efficiency, renewable energy, microgrids, equipment conversions, and generally delivering smart energy opportunities to all ratepayers.

To continue to support these goals, the following are CEFIA's comments and recommendations on the CES.

Energy Efficiency Strategy

As the CES emphasizes, investing in energy efficiency is one of the most cost-effective ways to reduce high energy bills facing Connecticut residents and businesses. Public Act 11-80 recognizes the important role of energy efficiency and the need to attract more investment, including private capital, by adding "financing of energy efficiency projects" to the definition of clean energy through CEFIA. CEFIA has a myriad of financial tools to be able to attract private capital investment in energy efficiency including the use of credit enhancements, bonding and access to the special capital reserve fund, administration of commercial and industrial property assessed clean energy (C-PACE), and various other tools. CEFIA will support the broader efforts of expanding energy efficiency investment throughout Connecticut by working with strategic partners to attract private capital investment throughout the state.

CEFIA recognizes the importance of scaling up investments in energy efficiency. Our new role, as outlined in PA 11-80, is to use its limited ratepayer resources and carbon dioxide allowance revenue from the Regional Greenhouse Gas Initiative (RGGI) that CEFIA receives to attract private capital to assist in financing the clean energy goals for Connecticut. CEFIA's challenge is to develop financing programs that are quick, easy, and affordable for consumers and contractors to access necessary capital to support their energy choices.

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[1] It should be noted that for the purposes of CEFIA, "clean energy" has the meaning as provided in Connecticut General Statutes Section 16-245n(a), as amended from time to time.
[2] Goals are inclusive of Connecticut's clean energy policies (i.e. PA 98-28, PA 05-01, PA 07-242, PA 11-80, etc.), including, but not limited to, the Integrated Resources Plan, Comprehensive Energy Strategy, and other clean energy public policies.
[3] Through the Clean Energy Fund, CEFIA receives 1 mil from every kilowatt-hour consumed by electric ratepayers in CL&P and UI service territory.
[4] Including, but not limited to, RGGI allowance proceeds, federal grants, philanthropic contributions and other sources.

The CES builds well on the program experience of ambitious energy efficiency programs in other states. It recognizes the challenges of bringing deep efficiency to lower-income homeowners who are not the usual candidates for home improvement loans, and may previously have been limited to shallower measures like lighting and weather-stripping. It is particularly groundbreaking in its recognition of the need for strategies to overcome major emerging barriers that have not historically been considered the purview of market-based programs, including the need to support "retrofit readiness" repairs.

Public Comments
With respect to the chapter on Energy Efficiency Strategy, CEFIA provides the following public comments:

- **C-PACE** – CEFIA is encouraged by the focus within the CES on the goal of attracting private capital into Connecticut to finance clean energy upgrades. C-PACE, or Property Assessed Clean Energy for Commercial, Industrial, and Multi-Family buildings, is an important tool towards that end. In support of the CES's focus on C-PACE as a tool to attract capital for energy upgrades, CEFIA is currently designing a statewide program to be launched in the first quarter of 2013. CEFIA feels confident that the focus of the CES on finance for clean energy deployment is the right approach to move our state aggressively towards a clean energy future.

- **Residential Financing** – CEFIA has been working on a number of residential financing programs that will increase investments in energy efficiency. Through collaborations with DEEP on repurposing ARRA-SEP funds and other programs, and partnerships with the Connecticut Energy Efficiency Fund (CEEF) and other key stakeholders, more private capital investment will be attracted and deployed in Connecticut to increase energy efficiency. Through various initiatives, CEFIA has been able to identify best practice strategies from other states for developing residential energy efficiency financing programs for Connecticut (see Appendix A). The following is a list of residential financing programs that CEFIA is developing that support investments in energy efficiency:

    - **Cozy Loans** – a key focus of the CES is deepening access to financing for energy upgrades. Through the use of ARRA-SEP funds, CEFIA is working in partnership with the Housing Development Fund, a community development financial institution with proven success providing housing financing to low and moderate income Connecticut residents[5] to support $2.5 million in financial assistance to low income homeowners of 1-4 unit households. This pilot program will reach household incomes less than 80% of area median income and provide them with the necessary low-cost capital needed to deploy energy efficiency, equipment conversion, and renewable energy measures while reducing their energy cost burden. This pilot program is expected to be launched in the first quarter of 2013.

    - **Energy Efficiency Loans**– through the use of ARRA-SEP funds, CEFIA is working with utility companies, credit unions and community banks, and contractors to provide nearly $30.0 million in financial assistance to single-family

[5] While HDF home borrowers average 65.5% of area median income, the default rate on HDF mortgages is 5%, which compares with 7.4% on average nationwide (source: http://www.bloomberg.com/news/2012-05-16/mortgage-delinquencies-in-u-s-fall-to-lowest-since-2008.html).

homeowners with FICO scores greater than 640. This pilot program will provide households with the necessary low-cost, long-term, and unsecured loan capital needed to deploy energy efficiency, equipment conversion, renewable energy, and alternative fuel vehicle refueling equipment for residents. This pilot program is expected to be launched in the first quarter of 2013.

  - **On-Bill Financing** – CEFIA supports the CES strategy to implement an on-bill financing program to finance energy efficiency equipment upgrades for the residential sector. On-bill financing provides customers the ability to finance energy efficiency, heating equipment upgrades and renewable energy improvements made to their homes at no upfront cost. It allows customers with good bill payment history to take loans without being penalized, through unfavorable loan terms, for less-than-perfect credit. Importantly, it confers utility bill consumer protections on energy efficiency loans, making those loans vastly safer for consumers than traditional debt, and suitable for the lower-income homeowners who have not been reached by previous energy efficiency programming. On-bill financing has the potential to drive higher loan volumes and generate greater levels of private capital investment in clean energy retrofits in Connecticut. CEFIA is eager to assist DEEP in developing a pilot program that allow lower-income and credit-strapped customers to access the market to finance these upgrades. CEFIA believes that the fundamental features for a successful on-bill program include keeping the debt with the meter, inclusion of third party financing as opposed to reliance on ratepayer funds, automatic shutoff within a framework of regulatory consumer protections and with input from low income and elderly advocacy groups to ensure adequate protections are available, and simplicity.

- **Campus Efficiency Now** – in August, CEFIA launched Campus Efficiency Now, a pilot, $1m loan fund that enables participating Connecticut colleges to install energy savings measures with no upfront funding. The funds will be repaid by participating schools via savings on energy bills generated by the projects under a 5-year energy savings agreement. CEFIA's initial funding is expected to attract up to $5 million in private capital for expansion of the program beyond the initial 4-5 projects that will begin in early 2013.

Recommendations

To support the implementation of the Comprehensive Energy Strategy, CEFIA proposes the following public policy recommendation for the Energy Efficiency Strategy:

- **Commercial and Industrial Property Tax Exemption** – DEEP, CEFIA and key stakeholders should explore options with municipalities for property tax relief for clean energy projects administered or supported by the state. CEFIA supports a legislative proposal to enable municipalities to exempt commercial clean energy projects from property tax assessments. This would align policy with statutory language authorizing municipalities to exempt residential Class I projects. CEFIA suggests an expansion of the existing residential tax exemption, which is limited to Class I (C.G.S. 16-1(26)) projects, which as currently defined does not capture energy efficiency upgrades. CEFIA encourages both residential and commercial enabling tax exemption language to capture C.G.S. 16-245n which is inclusive of Class I resources as well as clean energy broadly defined to include energy efficiency, alternative fuel vehicle infrastructure, etc. This policy is important to enable municipalities to exempt individuals and businesses, and thus avoid additional costs incurred as a result of making smart energy choices.

Industry Sector Strategy

As the CES notes, the industrial sector serves as a powerful economic engine for Connecticut. Providing low-cost energy options for the industrial sector is essential for their economic competitiveness. Public Act 11-80 recognizes the important role the industrial sector plays in the economy and the need to attract more investment, including private capital, by adding "manufacturing technologies or facilities" to the definition of clean energy through CEFIA. Through CEFIA's administration of C-PACE, improvements can be made within the industrial sector to reduce energy cost burdens and increase economic competitiveness.

Public Comments

With respect to the chapter on Industrial Sector Strategy, CEFIA provides the following public comments:

- **Clean Energy Business Solutions** – In partnership with the Department of Economic and Community Development (DECD), CEFIA will launch this program to support job creation and retention where energy costs are a critical factor. To enable the program to serve as a model for how the State can most sustainably support businesses in key strategic industry sectors that are addressing their energy cost challenges, CEFIA will work with DECD to structure the program such that ratepayer dollars leverage private investment in each project selected for funding. Creative financing structures, including but not limited to power purchase agreements and performance-based contracts, could potentially demonstrate the value of such an approach.

- **Advanced Innovation Hub** – As CEFIA's focus is on attracting and deploying capital to finance the deployment of clean in energy in Connecticut, early stage technology innovation programs, including the Connecticut Clean Energy Fund's Alpha and Operational Demonstration Programs, are being transitioned out of CEFIA. Although these programs are no longer core to CEFIA's mandate, CEFIA recognizes the important role of early stage innovation in building the State's global and national leadership position in clean energy as well as in catalyzing local industry growth, economic development and job creation. CEFIA strongly supports the launch of the Advanced Innovation Hub at the University of Connecticut and will offer its industry expertise and support as it continues to build industry partnerships, which are critical for ensuring commercially focused R&D programs. Connecticut Innovations, the state's quasi-public venture capital fund, is taking the lead in supporting early stage clean energy entrepreneurs through various programs including Techstart, Pre-Seed Fund, SBIR, and the Connecticut Innovation Ecosystem initiative. CEFIA will also continue to offer our support to these programs by way of our industry and technical expertise, networks and relationships.

CEFIA recognizes the importance of providing low-cost energy and financing options for the industrial sector. CEFIA's challenge is to support the successful implementation of C-PACE to provide industrial customers with the necessary capital they need to reduce their energy cost burdens and increase their economic competitiveness. CEFIA also recognizes the importance of technology innovation. Despite CEFIA's departure from supporting early stage technology companies with a focus on financing the deployment of commercially available technology, the leadership of the University of Connecticut, Connecticut Innovations, and other agencies and organizations will serve to advance the research and development of new technologies.

Electricity Sector Strategy

As the CES notes, Connecticut residents and businesses pay some of the highest electric rates in the country. The success of the CES is dependent upon Connecticut achieving the electricity sector goals of cleaner, cheaper and more reliable sources of energy. CEFIA is encouraged by the CES' focus on providing a suite of energy options to empower Connecticut's residents and businesses to make smarter energy choices. PA 11-80 provides CEFIA with a number of financing tools to support the local deployment of clean energy sources.

Public Comments

With respect to the chapter on Electricity Sector Strategy, CEFIA provides the following public comments:

- **Residential Financing** – CEFIA has been working on a number of residential financing programs that will increase investments in renewable energy. Through collaborations with DEEP on repurposing ARRA-SEP funds and other programs, and partnerships with CEEF and other key stakeholders, more private capital investment will be attracted and deployed in Connecticut to increase renewable energy. The following is a list of residential financing programs that CEFIA is developing that support investments in renewable energy:

    - **Solar PV Loans** – through the use of ARRA-SEP funds, CEFIA is working in partnership with Sungage and other investor(s) to provide up to $5.0 million in financial assistance to homeowners who seek to own solar PV systems. This pilot program will provide households with the necessary low-cost, long-term capital needed to deploy rooftop solar PV that they will own. This pilot program is expected to be launched in the first quarter of 2013.

    - **Solar PV and Thermal Hot Water Leases** – based on the success of the original pilot program,[6][7] through the use of ARRA-SEP funds, CEFIA is working with tax equity, debt providers, and others to provide approximately $50 million in financial assistance to homeowners who seek to install solar PV and/or solar thermal hot water systems. This program provides households with a no upfront cost solution to installing rooftop solar PV and thermal hot water systems that is intended to lower their monthly energy costs through a lease payment. This program is expected to be launched in the first quarter of 2013.

    - **Loan Competition --** CEFIA has used the Brattle Group to analyze the merits of using long term low cost financing to expand more quickly distributed solar installation in Connecticut. Based on the economic model developed by Brattle, we have tentatively concluded that we should provide up to ten million dollars of long term low cost financing to distributed solar projects in 2013. We will allocate

[6] The CT Solar Lease received a State Leadership in Clean Energy Award for 2012 through the Clean Energy States Alliance - http://www.cleanenergystates.org/about-us/news/newsitem/cesa-announces-winners-of-2012-state-leadership-in-clean-energy-awards

[7] Connecticut Solar Lease Program Demonstrates High Borrower Fidelity by Bethany Speer of NREL (October 2012)

the money pursuant to a RFP process. Our goal is to lower the cost of solar electricity to customers while providing a fair, but adequate return to private investors, so as to assure that private capital plays the major role in funding the deployment of distributed solar.

- **Micro Grid and Reliability** – CEFIA, through its predecessor the Connecticut Clean Energy Fund, has supported a number of fuel cell projects in the past that have served to provide high reliable power and heat during times of natural disasters or grid disruption. Installations of fuel cells at manufacturing plants have enabled businesses to operate while others can't because of grid failures. The deployment of fuel cells at local high schools has served to provide local shelters for people seeking refuge during natural disasters. The use of fuel cells in grocery stores across the state have allowed people to access the necessary food and water essentials during hurricanes, snow storms, and hot weather which have shown to be disruptive to the reliability of the electric grid. Given CEFIA's experience with tax equity funds in the residential solar PV sector, we would like to investigate the potential for establishing a similar fund for the deployment of fuel cells in important micro grid applications. The CEFIA Board of Directors has identified a need to continue to support the deployment of high reliable clean energy sources such as fuel cells, and has established a placeholder budget for micro grids for Fiscal Year 2014.

  CEFIA seeks to expand upon the value proposition of clean and renewable distributed generation to Connecticut businesses and residents. Many customers in the residential and small-commercial PV-market purchase solar-PV systems under the incorrect assumption that they will provide backup power and operate autonomously when the grid is down. Indeed, this is not currently the case. Through CEFIA's financing programs, we intend to pilot a program that enables small residential and commercial solar-PV installations to remain operational and serve as a back-up power source when the grid is disrupted. This pilot will require collaboration between solution providers, installers, the utilities and DEEP.

- **Permitting and Interconnection Processes and Costs** – In order to continue to drive down the costs of clean energy deployment in Connecticut, it is necessary to identify and take advantage of opportunities to reduce soft or non-hardware costs along with hardware costs. Development and implementation of streamlined and standardized processes and fees at the local jurisdiction and at the state level will allow installers to offer and consumers to access more affordable clean energy sources. For example, reduction of soft costs for rooftop solar PV and small hydropower will help enable increased deployment of these technologies.

  - **Rooftop Solar PV** – CEFIA won a U.S. Department of Energy, SunShot Initiative, Rooftop Solar Challenge grant to reduce non-hardware costs associated with rooftop solar PV. Non-hardware costs represent between 30 to 50% of the cost of a rooftop solar PV system, and include costs such as customer acquisition costs (being addressed through the Solarize Program) and permitting, inspection and interconnection costs and fees.

- **Small Hydro** – Small scale hydropower remains a relatively untapped source of local renewable energy. CEFIA encourages DEEP and the legislature to support initiatives that streamline local, state and federal permitting requirements and processes and to consider development of appropriate processes that would enable site access and development of publically owned dams by private small-hydro developers. Such initiatives would help to expand Connecticut's locally generated renewable energy options as well as provide potential revenue sources for DEEP through lease or off-take agreements.

Recommendations
To support the implementation of the Comprehensive Energy Strategy, CEFIA proposes the following public policy recommendations for the Electricity Sector Strategy:

- **Permit Fees and Streamlined Processes** –Local jurisdiction and state level changes to reduce (and potentially cap) permitting fees would encourage deployment of solar PV, as would adoption of guidelines and practices to streamline permitting practices and processes. Related to this, CL&P and UI should be tasked by PURA to review interconnection processes for rooftop solar PV, eliminating any unnecessary requirements and costs. Specific, detailed policy recommendations for reducing soft costs will be provided through CT's SunRise Rooftop Solar Challenge Project in March of 2013.

- **Inclusion of Thermal Renewable Energy in Class I RPS** – In an effort to achieve the 2020 RPS goal at the lowest cost while creating local jobs, CEFIA encourages the inclusion of thermal energy production from in-state sources as an eligible Class I resource within the Renewable Portfolio Standard (RPS). Thermal resources (i.e. geothermal, biomass, etc.) would provide another opportunity for Connecticut to support its State policy allowing for locally developed and deployed energy projects to help achieve the goal of diversifying our energy supply and making the energy system more resilient. Recognizing solar thermal as a Class I resource is a start.[8] Other states like Maryland, New Hampshire, North Carolina, and Wisconsin have begun to classify thermal energy technologies such as ground source heat pumps and biomass as part of their RPS requirements.[9] Moreover, some thermal technologies provide greater energy, economic development (jobs), and environmental benefits than currently eligible RPS renewable energy technologies. These thermal technologies can also offer consumers that are unable to access natural gas, due to an inability to access the infrastructure expansion, a renewable choice versus other fossil fuel resources.

- **Long-Term Contracts for Grid Reliability and Diversification of Domestic RPS Resources** – Section 71 of PA 07-242 "An Act Concerning Electricity and Energy Efficiency," allows the electric distribution companies (EDC) to engage in long-term contracts for no more than fifteen (15) years for Class I, II and III renewable energy sources. Department of Public Utility Control (DPUC) Docket No. 07-06-61 "DPUC

[8] Figure 3 of Appendix D of the 2012 Integrated Resources Plan
[9] http://solarthermalworld.org/node/2877>http://solarthermalworld.org

Examination of Electric Distribution Company Contracts for Renewable Energy Certificates," establishes a process for the implementation of Section 71 of PA 07-242 allowing, but not requiring, the EDCs to procure long-term contracts between 4 to 10 years for Class I resources only. CEFIA recommends that for technologies that provide grid reliability benefits (i.e. fuel cells, solar PV with battery back-up, CHP, etc.) during times of a natural disaster, or for projects that diversify the state's capacity to meet our RPS goals with domestic resources that the PURA:

- Allow Class III resources, in particular CHP, to have access to long-term REC procurement to provide grid reliability benefits during grid outages;
- Extend the length of the regulatory established contract period from 10 years to the statutorily allowed fifteen years; and
- Outside of the ZREC-LREC policy, require that the utilities solicit projects for long-term Class I resources that provide grid reliability benefits, or that diversify the state's capacity to meet our RPS goals with domestic resources, to receive long-term contracts at a REC price that reduces the IRP projected long-term cost burdens on ratepayers at a cost not to exceed the alternative compliance payment.

- **Virtual Net Metering** – CEFIA suggests a modification to the existing Virtual Net Metering (VNM) law which limits VNM to municipalities and further limits its use to clean energy projects that are owned by the municipality. Most municipalities opt to lease or deploy a clean energy project through a third-party ownership model as to achieve tax credit and other benefits and value that would otherwise not be realized by a municipal project. Given the merger between Northeast Utilities and N-Star, consideration should be given to standardize net metering policies between Connecticut and Massachusetts, taking the best practices from each state and creating a uniform policy approach across the border on net metering. An area of opportunity for Connecticut would be to consider allowing neighborhood net metering—which Massachusetts has enacted—which would allow residents, businesses and municipalities to invest in and benefit from the most efficient distributed generation sites.

- **RGGI Allowance Proceed Regulations** –CEFIA would like to suggest an amendment to the RGGI regulations that apply to CEFIA. The current regulations limit CEFIA's use of RGGI proceeds to Class I resources defined in C.G.S. 16-1(26). CEFIA would like the ability to support other clean energy resources and projects captured within the definition of C.G.S. 16-245n. C.G.S. 16-245n captures all of the resources referenced in 16-1(26) as well as thermal energy, energy efficiency financing, and alternative fuel vehicles and associated infrastructure. The inclusion of C.G.S. 16-245n would allow CEFIA to make investments in projects that further support the state's energy and environmental goals, as well as local economic development. For example, the use of RGGI allowance revenues for thermal technologies can deliver higher greenhouse gas reductions and job creation benefits (see Table 1).

Table 1. Job and Emission Benefits from the Deployment of Various Clean Energy Technologies

Clean Energy Resource	**Direct Jobs (FTE) / $1M Invested**	**CO2 Emissions / MMBTU** (pounds)	**CO2 Weighted Average***

Solar PV – Non Residential	3.4		
Solar PV – Residential	5.9	303.84	
Fuel Cell@ FCE	4.8	28.41	
Fuel Cell@ UTC	4.8	24.38	
GSHP vs. Natural Gas	8.3	86.37	140.63
GSHP vs. Oil	8.3	144.70	140.63
GSHP vs. Electric Resistance Heat	8.3	234.27	140.63
Solar Thermal vs. Natural Gas	7.6	180.00	266.07
Solar Thermal vs. Oil	7.6	298.18	266.07
Solar Thermal vs. Electric	7.6	320.45	266.07

CEFIA recognizes the importance of continuing to deploy clean and renewable sources of energy in Connecticut. Through the support of renewable energy technologies that address electricity and thermal energy, the goal of cleaner, cheaper, and more reliable sources of energy can be achieved. CEFIA stands ready to continue to attract private capital investment in Connecticut that will lead to the increased deployment of clean energy sources.

Natural Gas Sector Strategy

As the CES highlights, the recent developments in natural gas exploration and discovery presents Connecticut residents and businesses with an opportunity to provide a cleaner and cheaper source of fuel for our energy future. As we are seeing with lower electricity prices, natural gas can provide a cleaner and cheaper option for consumers interested in using this energy source. Through PA 11-80, there are several areas where CEFIA can support the state's efforts to expand upon natural gas choice and usage for residential and business customers.

Public Comments

With respect to the chapter on Natural Gas Sector Strategy, CEFIA provides the following public comments:

- **Energy Efficiency Loans** – In Section 116 of Public Act 11-80, the legislature charged DEEP with establishing "a residential heating equipment financing program … [to] allow residential customers to finance … the installation of energy efficient natural gas or heating oil burners, boilers and furnaces." In a letter dated November 21, 2012, DEEP Commissioner Esty formally delegated the authority for creating this program to CEFIA.

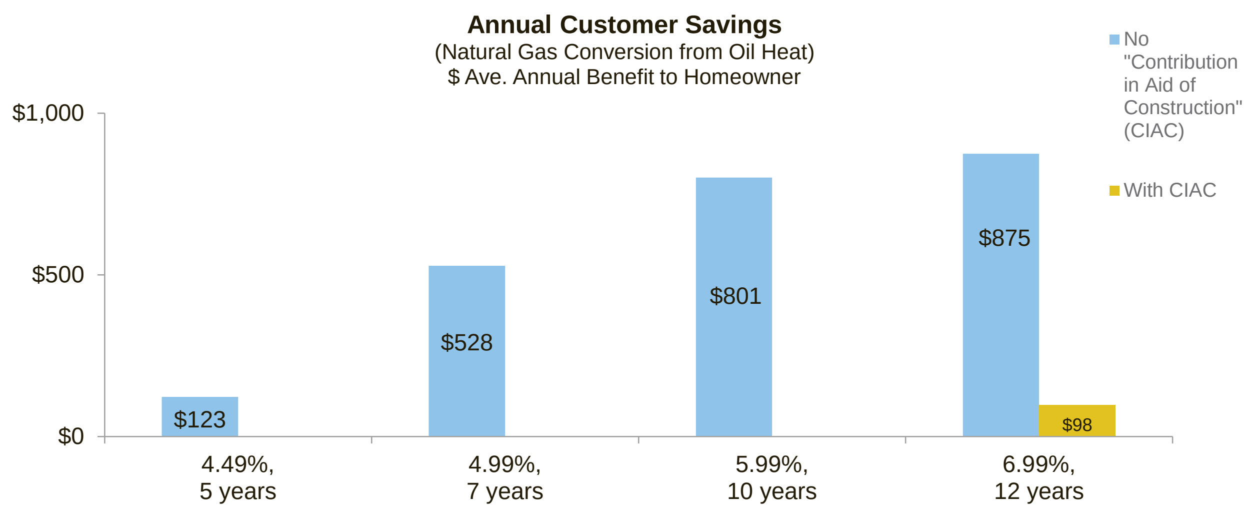
  Thus, in collaboration with the EDCs and their natural gas affiliates, as well as the EEB, CEFIA will launch in the first quarter of 2013 a low interest, long term loan program modeled on best practices from states across the country (see Exhibit A). This initiative, which features a reduced reliance on ratepayer resources, will help Connecticut homeowners finance energy retrofits, with a focus on heating equipment upgrades or conversions.[10] Using repurposed federal ARRA-SEP dollars as a loan loss reserve to

[10] In line with the mandate of Section 116, this program will finance both 1) efficiency upgrades for oil and natural gas boilers and furnaces, as well as 2) burner conversions for homeowners who want to switch from using home heating oil to natural gas.

attract private capital (i.e. credit union and community bank dollars); this program will provide unsecured loans of between $2,500 to $25,000 (and potentially more) to qualifying residential borrowers to finance fuel and equipment conversions, among other measures.[11] At present, the rates and terms contemplated to be offered through the program are as follows (on a not-to-exceed basis):

Term (Years)	Rate
5	4.49%
7	4.99%
10	5.99%
12	6.99%

The chart below demonstrates that these anticipated loan terms should allow homeowners who convert to natural gas heating to realize significant savings, net of financing costs, on day one. If this is the case, then the demand for the loan product to convert from oil to natural gas heating equipment will increase. This is true for Segment A ("low use" and "on main") customers across the range of anticipated financing options. For Segment B customers, CEFIA and its program partners may need to consider an interest rate buydown to ensure that natural gas conversions result in immediate positive cash flow for homeowners.



For Segment C customers or those who are unlikely to convert to natural gas, this new financing program will also support the installation of renewable thermal generation, such as solar hot water or ground source heat pumps, in addition to electric heating systems such as ductless mini-splits. This approach will ensure that all Connecticut

[11] This program is designed to be "technology agnostic" and market-driven, so as to give customers and contractors the maximum flexibility to implement energy upgrades that are appropriate for each home. Such upgrades might include broad energy efficiency measures (i.e. lighting and appliance switch-outs, insulation, building envelope improvements), renewable energy projects (i.e. solar PV or hot water, ground-source heat pumps), smart meters, and even transportation-related improvements such as EV recharging and natural gas refueling stations in homes.

homeowners have real and meaningful choices when it comes to deciding the fuel they want to use to heat their homes.

To reach the low income segment, the Cozy Loan program can also be used for fuel-switching, expanding the access of affordable ways to finance these savings to lower-income populations in the state.

- **Explore Benefits Available From Urban District Energy Systems –** District energy systems are common in many European cities, but even in Connecticut we have examples of such energy systems with the Hartford Steam Loop, for instance. District energy systems make use of a central power source to heat buildings via an underground network of pipes. DEEP, through CEFIA, is exploring the viability of greater use of district energy systems. There is even the synergistic effect of combining such systems with newer energy technologies such as fuel cells, making full use of the waste heat from these energy generation platforms and substantially improving overall efficiency. If these systems can prove their viability, we have the potential to save the public and private companies enormous amounts of energy – and money, thus creating a competitive advantage.

Transportation Sector Strategy

The Transportation Sector Strategy of the CES provides a thorough review of the sources and costs (i.e. economic and environmental) of energy consumption by commuters, various modes of transportation and technologies, and the need to offer consumers more choices in the marketplace.

Public Comments

With respect to the chapter on Transportation Sector Strategy, CEFIA provides the following public comment:

- **Develop Sustainable Funding Sources** – CEFIA supports the need to provide sufficient funding to sustain current transportation sector needs as well as those that will be needed to provide consumers with choices that enhance their mobility options to reduce the negative economic and environmental impacts of transportation.

  In fact, as part of a pilot financing program that CEFIA is working on with local credit unions and the electric and gas utilities, financing is being made available to households for not only energy efficiency and renewable energy improvements, but also for the deployment of electric vehicle recharging and natural gas refueling stations at their homes to support the use of alternative fuel vehicles. Through the use of American Recovery and Reinvestment Act State Energy Program funds, a loan loss reserve fund of $2.5 million is being made available to participating credit unions that will attract nearly $30 million of private capital investment. This program is expected to be launched in of the first quarter of 2013.

Recommendations

To support the implementation of the Comprehensive Energy Strategy, CEFIA proposes the following recommendation for the Transportation Sector Strategy:

- **Interagency Working Group** – given the inclusion of "…projects that seek to deploy electric, electric hybrid, natural gas or alternative fuel vehicles and associated infrastructure…" in the new definition of "clean energy" within CEFIA's mandate, we would ask that CEFIA be included as part of the interagency working group as part of Recommendation #2 in the Transportation Sector Strategy of the CES.

CEFIA recognizes the importance of providing consumers with energy choices that will result in cleaner and cheaper ways to transport people from one place to another.

<u>Conclusion</u>

CEFIA would like to thank DEEP for the opportunity to submit comments on the Comprehensive Energy Strategy and we look forward to working with stakeholders to assist Connecticut in achieving its clean energy goals for households and businesses.

Please do not hesitate to contact us directly if you have any questions or comments.

Sincerely,

Bryan T. Garcia
President and CEO

Cc: Catherine Smith, Commissioner of DECD, Chair of CEFIA

Exhibit A

Overview of Best Practice Residential Energy Efficiency Financing Programs[12]

Name of the Program	HERO Program	Mass Saves HEAT Loan	Michigan Saves	Green Jobs – Green New York	Clean Energy Works Oregon
Program Start Date	December 2011	October 2010	October 2010	January 2012	August 2011
Geographic Coverage	Western Riverside County, California	Statewide, Massachusetts	Statewide, Michigan	Statewide, New York	Statewide, Oregon
Residential Coverage	1,700,000	6,500,000	9,900,000	19,500,000	3,900,000
Source of Capital	Private capital	Credit Unions	Credit Unions	RGGI funds	DOE
Credit Enhancements	PACE	Interest rate buy-down	Loan loss reserve	Loan loss reserve; On-bill repayment	Loan loss reserve; On-bill repayment
# of Loans Funded	445	3,400	1,700	3,500	2,000
Amount of Loans Funded	$7,900,000	$30,400,000	$13,500,000	$20,000,000	$20,000,000
Interest Rate and Term	5.35% upfront fee 5.95% – 5 years 6.95% – 10 years 7.75% – 15 years 8.25% – 20 years	0.00% – 7 years	1.99% upfront fee 6.99% – 10 years	$150 closing cost 2.99% – OBR 3.99% – direct loan 5, 10, 15-year terms	$125 fee for OBR 5.25% 5.99% 5-15 years – direct loan Up to 20 years – OBR
Maximum Loan Size	10% of the market value of the property not to exceed $200,000	$25,000	$25,000	Up to $13,000; $25,000 if payback period is 15 years or less	$30,000 Up to 49% of the value of the loan can be used to finance non-energy efficiency costs

[12] Energy Smart Solutions: MegaCommunities Stakeholder Report by the Housing Development Fund (October 2012)

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Residential Solar Investment Program

A Statutory Program

Due Diligence Package

December 21, 2012

Document Purpose: This document contains background information and due diligence on the Residential Solar Investment Program and the organizations involved. This information is provided to the Board of Directors for the purposes of reviewing and approving recommendations made by the staff of the Clean Energy Finance and Investment Authority.

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

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Program Qualification Memo

To: Board of Directors

From: Bryan Garcia, Dale Hedman, Ed Kranich, and Neil McCarthy

Date: December 14, 2012

Re: Residential Solar Investment Program – Step 3 and Step 4

Summary

The staff proposes the following portfolio of incentives for Step 3 and Step 4 of the Residential Solar Investment Program:

1. **<u>Race to the Solar Rooftop</u>** – to increase the pace of rooftop solar PV deployment, the two separate tracks (i.e. rebate and PBI) for residential solar PV rooftop deployment will continue with an additional third track (i.e. race track). The total capacity target for step 3 is 7.6 MW – 3.8 MW for rebate, 2.8 MW for PBI, and 1.0 MW for the race track – by January 1, 2014. For the track that reaches their capacity first, they will then have access to the race track capacity and then the other's capacity track. To demonstrate a long-term commitment to the sustainable development of the residential solar PV installer market, we propose that a fixed volume of installations of 10.0 MW for Step 4 be considered. We do not propose a specific capacity allocation nor a rebate or PBI incentive level for Step 4.

2. **<u>Solarize Expansion</u>** – to incentive the installers to continue to lower their costs, an expansion of Solarize from 4 to 12 towns in 2013 will assist winning installers that are offering systems at lower costs. A winning contractor for a participating Solarize town will be guaranteed the Step 3 incentive level even if Step 4 is in effect.

3. **<u>Capital Competition</u>** – to continue to transition the market away from incentives and towards financing, the Deployment Committee approved a pilot capital competition that through an RFP process would provide a loan to a contractor and/or third-party financier who can deliver the most amount of clean energy produced without the need for an incentive (i.e. rebate or PBI). CEFIA will provide a $1 million loan at a low-interest rate (i.e. 2 to 3 percent) and a long-term duration (i.e. 20 years) for the pilot. If the pilot is successful, CEFIA staff will propose that additional funds be allocated in FY 2013 and FY 2014 to support a full rollout of the capital competition with up to $10 million in loan financing.

4. **<u>Incentive Level</u>** – we propose approximately a 25% reduction of the Step 2 incentive levels to $1.75/W for systems up to 5 kW and an additional incentive of $0.55/W for systems 5-10 kW for the rebate and between $210 to $230/MWh for the PBI in Step 3. A PBI level will be established after they achieve specific capacity installation milestones (i.e. 2.0 MW) in Step 2. With these

incentive levels, CEFIA will achieve a leverage ratio target of between 25% to 30%[1] (an improvement from 34%) for the Step 3 portfolio of projects. Per Section 106 of PA 11-80, CEFIA staff will seek DEEP's approval of the schedule of incentives for Step 3.

5. **Incentive Cap** – we propose an incentive cap of 30% per project.[2]

This incentive structure for Step 3 is designed to reward the model (i.e. rebate or PBI) that is more effective at "maximizing the amount of clean energy deployed per dollar of ratepayer funds at risk." With the successful implementation of Step 3, CEFIA will continue to transition the residential solar PV market by reducing its reliance on subsidy-based incentives and continuing progress towards financing programs that delivers a payback to ratepayers. During Step 3, CEFIA will launch a solar PV loan[3] and lease[4] programs in January and March respectively.

Program Description

On March 2, 2012, CEFIA launched the residential solar investment program (the Program). The Program, a statutory requirement underneath Section 106 of Public Act 11-80, supports the sustainable market development for residential solar PV deployment in Connecticut. The Program offers rebates and performance-based incentives (PBI) to support homeowners who install solar photovoltaic systems. Through nine-and-a-half months of the Program, CEFIA has approved over 750 projects that are installing approximately 5.1 MW of clean energy (see Table 1).

Table 1. Program Data as of December 14, 2012

	Rebate	PBI	Total
# Projects Approved	560	203	763
Total Installed Cost	$18.6 MM	$7.2 MM	$25.8 MM
Installed Capacity (kW)	3.8 MW	1.5 MW	5.3 MW
Installed Cost ($/W)	$4.68	$4.83	$4.73
Total Incentive Amount	$6.2 MM	$2.7 MM	$9.0 MM
Incentive ($/W)	$1.58	$1.82	$1.66
Equivalent ZREC Price ($/REC)	$105	$115	

It should be pointed out that the incentives provided by CEFIA through the Program are between 10% to 20% less than the ratepayer supported incentives in the competitive Zero Emissions Renewable Energy Credit (ZREC) program.[5] It should also be noted that nearly 100 projects, or approximately 15% of the

[1] $1 of ratepayer incentive to $3 of non-ratepayer incentive as a portion of the overall installed costs of a project.

[2] No project will receive incentives that are greater than 30% of the total installed costs of a system. For example, households participating in Solarize are able to receive incentives greater than 30% as a result of the reduced costs of the system. This incentive cap will protect CEFIA's leverage ratio target of 25% to 30%.

[3] Deployment Committee approved of a solar PV loan program on November 30, 2012 using repurposed ARRA-SEP funds as credit enhancements and ratepayer funds for loans.

[4] CEFIA staff is raising over $50 million in tax equity and debt capital for the new solar lease program.

[5] United Illuminating offers a 15-year ZREC price of $145, while CL&P offers at $160 for projects less than 100 kW. CEFIA incentives are compared to the ZREC incentives on a present value basis using a 2% discount rate.

projects, are located in distressed communities as defined by the Connecticut Department of Economic and Community Development.[6]

Projects underneath the Program have thus far sought approximately $9.0 million in incentives leveraged by an additional $16.9 million of private investment – a leverage ratio of 1:2, an improvement above the CCEF's historical performance of 1:1; meaning more installations and jobs per ratepayer dollar provided.

The data on program performance indicates the following:

- **PBI Competition** – we are now seeing more competition from PBI installers. It should be noted that Solar City, a PBI installer, is now the #1 residential solar PV installer in Connecticut – installing as many systemsas the next four (4) installers combined. It should also be noted that the local rebate installers are deploying rooftop solar PV at a pace twice as fast as the PBI installers.

- **Costs Declining** – as competition increases in the market, installed costs are decreasing by more than 10% from Step 1 (of $5.32/W) to Step 2 (of $4.73/W). Installed costs for rebate installers is less than that of PBI installers for Step 2. In 2013, CEFIA expects costs to continue to decline to between $4.25 to $4.50/W as a result of further competition in the market and an over-supply of solar PV panels.

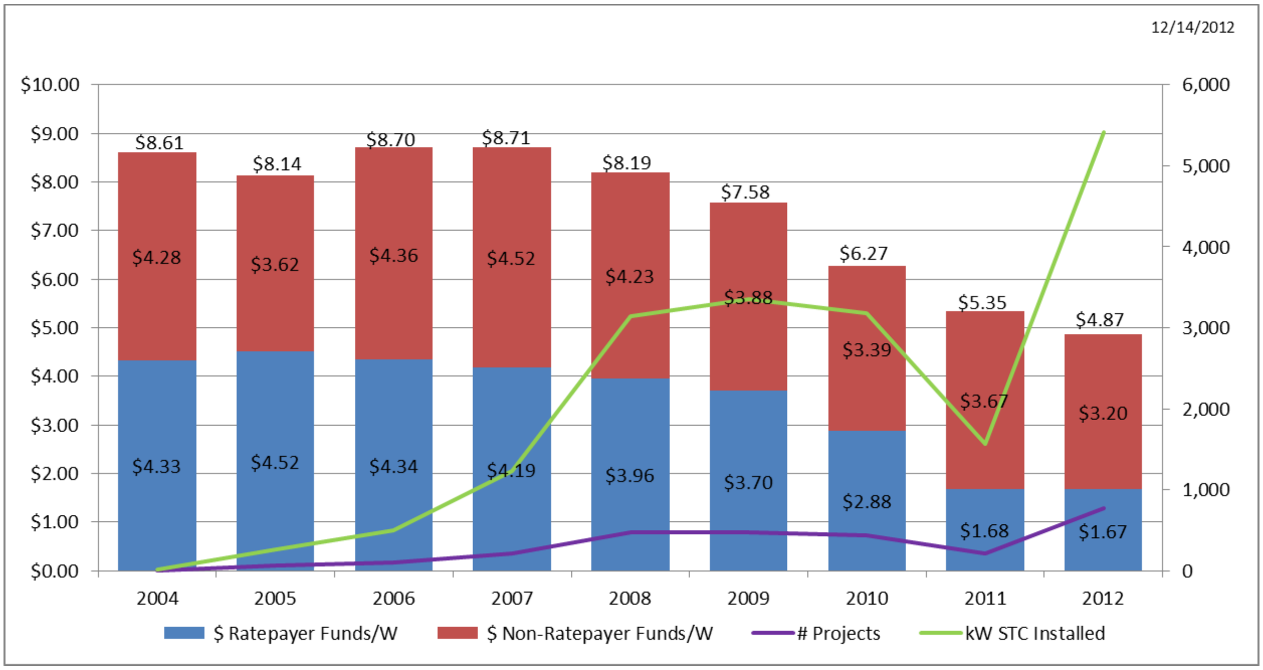
- **Customer Demand Increasing** – the demand for residential solar PV is increasing as indicated by the number of approved projects and the installed capacity resulting from those projects. Within a 12-month period, CEFIA expects demand for residential solar PV systems will more than double historic annual highs.

- **Ratepayer Subsidies Decreasing** – the percentage of incentives as a portion of the overall project costs are decreasing.

For a graphical picture of the Program's performance through December 14, 2012 – see Figure 1.

[6] According to C.G.S. Section 32-9p, a distressed municipality should be based on "high unemployment and poverty, aging housing stock and low or declining rates of growth in job creation, population, and per capita income." http://www.ct.gov/ecd/cwp/view.asp?a=1105&q=251248

Figure 1. Comparison of Installed Costs, Incentives, Projects and Installed Capacity (2004 through 2012)



The CCEF-supported programs were from 2004 through 2011, with CEFIA-supported programs beginning in 2012.

CEFIA's goal is to create a robust market for residential solar PV systems in Connecticut that achieves:

- **Sustainable Market Development** – avoids the stop-start nature of incentives that were experienced in the past while maximizing the amount of rooftop solar PV deployed per dollar of ratepayer funds at risk;
- **Leverage** – achieves a 3:1 (or between 25% to 30%) leverage ratio of non-ratepayer funds to ratepayer funds;
- **Costs** – support strategies that make solar PV more affordable and accessible – i.e. Solarize marketing campaign approaches have brought installed costs down by 20-30%;
- **Energy Efficiency** – incorporates energy efficiency measures into solar PV projects; and
- **Financing** – shifts from subsidy-based incentives over time to low-cost and long-term financing to ensure that maximum residential rooftop solar PV deployment is occurring per dollar of ratepayer funds at risk.

With these goals in mind, we are proposing to DEEP the following schedule of incentives for Step 3 – see Table 2:[7]

Table 2. **PROPOSED SCHEDULE OF INCENTIVE FOR STEP 3**

	Rebate		**PBI**
	x ≤5 kW	10 kW ≥ x > 5 kW	x ≤ 10 kW
Current Step 2	$2.275/W	$1.075/W	$0.300/kWh
Proposed Step 3	$1.75/W	$0.55/W	$0.200-$0.230/kWh
Total Reduction	$0.525/W	$0.525/W	$0.070-$0.100/kWh
% Reduction	23%	49%	25%-33%

It should be noted, that CEFIA staff is not yet recommending a PBI for Step 3 as the installers operating under the PBI have yet to reach the capacity target for Step 3 determination of the PBI. The levels noted above are ranges that CEFIA staff is now considering. CEFIA staff will work with DEEP to approve of this schedule of incentives for Step 3.

Strategic Plan

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

The Residential Solar Investment Program proposal is consistent with the Board approved Comprehensive Plan and Budget for FY 2013. This request of the portfolio of incentives for the Program is consistent with that plan and budget.

The Program is a statutory requirement underneath Section 106 of Public Act 11-80.

Ratepayer Payback

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

The Program proposes a "Race to the Solar Rooftop" target of 7.6 MW for Step 3. At an average forecasted incentive of $1.25/W (i.e. assumes a 7 kW system) for rebates and PBI, $9.5 million of ratepayer capital will be used as incentives to support the deployment of 7.6 MW of solar PV which will produce nearly 10 million kWh of clean energy a year or about 200 GWh over a 20-year period as a result of Step 3.

For providing the rebate and PBI in Step 3, CEFIA owns the renewable energy credits (RECs) produced by the systems – which is equivalent to about 9,000 RECs a year or $180,000 of value a year assuming a $20 REC price. Over a 20-year period, it is estimated that $3.5 million in REC revenue will be generated from 7.6 MW of residential rooftop solar PV systems.

[7] It should be noted that rebate levels from Step 1 to Step 2 for the rebate fell by 7% for up to 5 kW and 14% for 5 to 10 kW, whereas the PBI levels remained unchanged. With Step 3, CEFIA is pursuing a rebate and PBI level that is comparable on a present value basis.

Between the rebate and RECs, it is estimated that at least $3.5 million of the $9.5 million of ratepayer capital will be paid back – see Table 3.

Table 2. Ratepayer Funds at Risk = Step 3 Rebates and PBI Provided less REC Revenue

Ratepayer Payback	(Expense)/Revenue	Period of Time
Step 3 Rebates and PBI	($9,500,000)	Paid out over 6 years
Renewable Energy Credit Revenue	$3,500,000	Received over 20 years
Ratepayer Funds at Risk	**($6,000,000)**	

The Program also proposes that a "Race to the Solar Rooftop" target of 10.0 MW for Step 4 be considered. Given the dynamic changes in the solar PV market, the staff is not proposing a specific rebate or PBI level for Step 4. The approval by the Deployment Committee and the Board of Directors of a subsequent step of a portfolio of incentives will allow the solar installer community to better plan for and build their companies into the future.

Terms and Conditions

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

The rebate and PBI of $9.5 million offered under Step 3 are incentives that are paid out either upfront for the rebate or over a 6-year period for the PBI based on the performance of the system.

CEFIA owns all RECs associated with projects that receive a rebate or PBI. If CEFIA can achieve a REC price of at least $20 on average over 20 years, then it can generate over $3.5 million in revenues back to CEFIA. CEFIA is currently negotiating with an electric distribution company to engage in a long-term contract (i.e. allowable under Section 71 of PA 07-242 and Docket No. 07-06-61) for the sale of its RECs at a price of at least $30 per REC.

Capital Expended

How much of the ratepayer and other capital that CEFIA manages is being expended on the program?

By statute, CEFIA shall apportion no more than one-third of the total surcharge collected annually.

Risk

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

Despite the REC revenue that will be realized as a result of the program, staff expects that the maximum risk exposure for the program is $9.5 million – the estimated value of the rebates and PBI provided through Step 3 of the program to achieve the "Race to the Solar Rooftop" target of 7.6 MW. Given the variability of REC pricing, it would be difficult to ascertain the true value that CEFIA would receive without a forward contract with a fixed price.

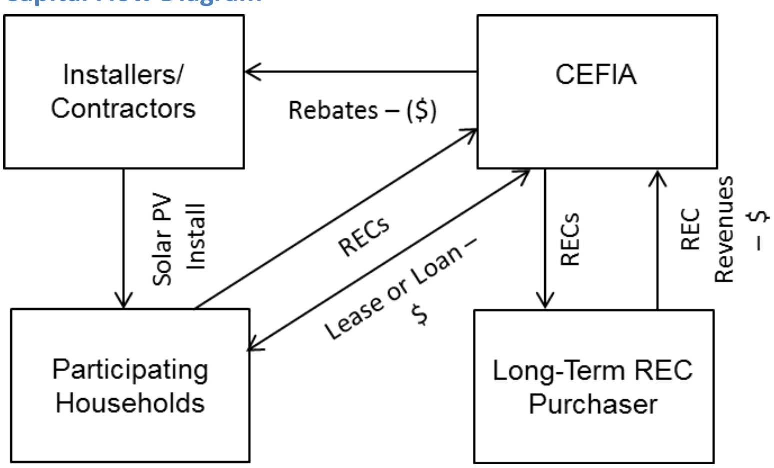
Financial Statements

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

The funding support for the RSIP would be in the form of an upfront rebate or paid over time through a PBI. Once paid the rebate will be reflected on CEFIA's balance sheet as a reduction to "cash" (current assets) with a corresponding entry on the profit and loss statement under "Operating Expenses" in the relevant ledger account under "Financial Incentives - Grants and Rebates," which will have the effect of reducing unrestricted net assets. Once approved the PBI will be reflected on CEFIA's financial statements as an "Open Commitment" which is recorded in the notes to the financial statements and when actually paid over six years, the PBI will be reflected on CEFIA's balance sheet as a reduction to "cash" (current assets) with a corresponding entry on the profit and loss statement under "Operating Expenses" in the relevant ledger account under "Financial Incentives - Grants and Rebates," which will have the effect of reducing unrestricted net assets.

Historically, the production of RECs has been accounted for as a reduction of Rebate Expense (to reflect the fact that CEFIA, by issuing the Rebate (or PBI) has – for a portion of that payment – acquired the RECs that the PV systems will produce) with a corresponding increase to the Non-Current Asset Account: "Investment-RECs." At the time of a sale of RECs, the "Investments – RECs" account is reduced by the carrying value of the RECs sold and the Profit and loss statement will recognize, as necessary, a gain or loss to reflect any difference in value between the actual sale price of the RECs and the carrying value of the RECs sold.

Capital Flow Diagram



Target Market

Who are the end-users of the program?

Per Section 106 of Public Act 11-80, the end-users of the program are residential ratepayers. These ratepayers are interested in either owning solar PV systems or paying a reduced electricity rate as a result of a solar PV system installed on their home. At the conclusion of Step 1 and Step 2, CEFIA will work with Solar Connecticut and the households that have taken advantage of the program to better understand who the end-users are for rooftop solar PV in Connecticut.

CEFIA staff has not estimated the potential market for residential rooftop solar PV in Connecticut. However, DEEP is currently working on an RPS study that will attempt to quantify the potential for solar PV deployment in Connecticut.

It should be noted that nearly 100 of the 763 projects, or approximately 15% of the projects, are located in distressed communities as defined by the Connecticut Department of Economic and Community Development.

CEFIA Role, Financial Assistance & Selection/Award Process

CEFIA's role is to administer the statutory program. Financial assistance being offered through the program is based on general program guidelines developed by staff and a schedule of incentives approved by the Department of Energy and Environmental Protection.

Program Partners

The program partners are the more than 70 qualified solar contractors –40 of which are active – that support the installation of rooftop solar PV systems for residential ratepayers.[8]

Risks and Mitigation Strategies

Risk: Proposed incentives for Step 3 are too low to generate the number of new installations needed to meet the Step 3 installed capacity target of 7.6 MW by January 1, 2014.

Mitigation Strategy: Staff will closely monitor the applications submitted and approved to the program during Step 3. If applications significantly lags what is expected, staff with proposed an adjustment to the Step 3 incentives to the Board to increase the number of applications to an acceptable rate.

Operating Procedures

The Residential Solar Investment Program follows the "Programmatic Selection and Award" aspects of CEFIA's Operating Procedures for financial assistance in the form of grants, loans or loan guarantees, debt, or equity investments.

Resolutions

WHEREAS, Section 106 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") 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;

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") or expected performance-based buydowns ("Rebate"), for the purchase or lease of qualifying residential solar photovoltaic systems;

[8] http://ctcleanenergy.com/YourHome/ResidentialSolarInvestmentProgram/FindanApprovedContractor/tabid/85/Default.aspx

WHEREAS, the performance of the Rebate model in Step 2 is faster in deploying rooftop solar PV and requires less ratepayer subsidies than the PBI model therefore maximizing the amount of clean energy deployed per dollar of ratepayer funds at risk;

WHEREAS, the Deployment Committee has reviewed and directed CEFIA staff to bring a modified Step 3 of the Schedule to the Board of Directors ("Board").

NOW, therefore be it:

RESOLVED, that the Board approves the Schedule of Incentives for Step 3 outlined above to achieve 7.6 MW of solar PV deployment – 3.8 MW of Rebates, 2.8 MW of PBI, and 1.0 MW of additional capacity for the models to compete for incentives;

RESOLVED, that the Board hereby directs staff that at the point where 1.8 MWs of committed capacity is reached during Step 3 of the Schedule, or earlier if staff deems it appropriate, for either the PBI or the Rebate models, CEFIA staff will make a recommendation to the Deployment Committee on the Step 4 funding allocation and incentive level;

RESOLVED, that the Board hereby recommends that by (a) the point of the Step 3 incentive where 2.8 MW of committed capacity is reached for either the PBI or the Rebate models or (b) January 1, 2014 whichever comes first, the Board will approve a Step 4 incentive that is to deploy ten megawatts of installed capacity and inform residential solar installers to ensure the sustained and orderly deployment of the residential solar market in Connecticut; and

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

Program Implementation Plan

Human Resources

Deployment Department – will lead in administering the program and collecting information on each project

Operations Department – will support the analysis of the data being collected to track the overall performance of the program

CEFIA Office of the Chief Investment Officer and the Controller will track leases and loans for each project to track ratepayer payback

Financial Resources

1. Rebates up to 3.8 MW to households interested in owning a solar PV system; PBI up to 2.8 MW to households interested in leasing a solar PV system; and 1.0 MW of competitive capacity for Step 3;
2. Lease and Loan Programs – see separate due diligence packages

Metrics, Targets, Measurement, Verification & Reporting

Metrics:

- Amount of clean energy produced per dollar of ratepayer funds at risk
- Ratio of private to public capital leveraged and ratio of grants versus financing programs
- Annual clean energy generation
- Total amount of investment

Targets:

- Attract nearly $30 million of non-ratepayer capital through the achievement of a leverage ratio of 1:3
- Deploy approximately 7.8 MW of Class I renewable sources in Connecticut
- Produce 10,000 MW hours of Class I renewable sources per year for 20-years
- Reduce installed costs from Step 2 to Step 3 by at least 10%

CEFIA will collect data on the following (the Market Watch Report will continue to report the performance of the program on a weekly basis), but not be limited to:

- Installed capacity
- # of projects
- Installed costs
- Actual clean energy produced
- Benefits achieved including environmental (i.e. emissions avoided) and economic development (i.e. jobs created)

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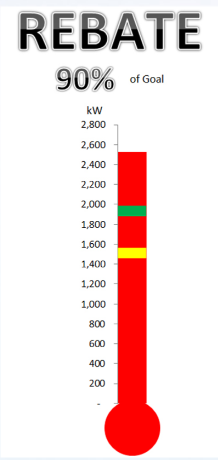
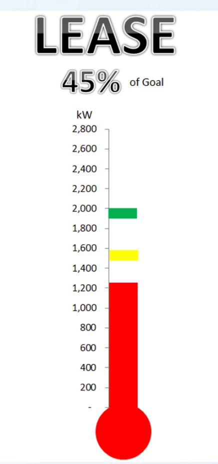
Market Watch Report

Residential Solar Investment Program

Program Data as of December 7, 2012

Race to the Rooftop





The **YELLOW BAR** at 1,600 kW represents a point in time when CEFIA staff will make a recommendation on the Step 3 funding and incentive level to the Deployment Committee for consideration. The **GREEN BAR** at 2,000 kW represents a point in time when the Deployment Committee and CEFIA staff will propose Step 3 funding and incentive level to the Board of Directors for consideration and approval.

Executive Summary

- **Competition – EPBB installers are submitting projects twice as fast as PBI installers... and ratepayer support per installed watt is 13% less for rebate projects than for PBI projects.**
- **Market Remains Open – although the top installer in the state has done 26% of all Step 2 projects, suggesting somewhat increased market concentration, the next nine installers have together installed nearly 50% of all Step 2 projects, demonstrating a healthy field of play overall.**
- **Installation Numbers Breaking Records – Connecticut installers have now submitted over 700 projects under the RSIP (including Solarize projects), which in nine months represents nearly 50% more projects than the previous best year in Connecticut history**
- **CEFIA staff is going to the Board of Directors for an approval of Step 3 "Race to the Solar Rooftop" on Friday, December 21st.**

Step 2 - Effective 5/18/2012	Rebate	PBI	Total	Average
Applications Received	314	167	481	
Applications Approved	297	164	461	
Applications In Progress	86	66	152	
Applications Completed	104	34	138	
Total Cost	$9,827,563	$5,785,336	$15,612,899	
Total kW STC	2,025.3	1,184.1	3,209.4	
Average System Size kW STC	6.8	7.2		7.0
Cost / kW STC	$4,852	$4,886		$4,865
Average Total Cost	$33,089	$35,276		$33,867
Total Incentive Amount	$3,205,114	$2,165,189	$5,370,303	
Incentive / kW STC	$1,583	$1,829		$1,673
ZREC Equivalent Incentive Price	$0.104	$0.112		
Rooftop Solar Capacity Remaining	774.7 kW	1,615.9 kW	2,390.6 kW	

Applications Received – the total number of applications submitted by installers and received by CEFIA through PowerClerk.

Applications Approved – the total number of applications received and approved by CEFIA staff for project incentives.

Applications In Progress – the total number of projects that have received 60% in upfront incentives for delivery of materials to the site.

Applications Completed – the total number of projects that have received 100% in incentives after inspection and completion of the project.

ZREC Equivalent Incentive Price - Given the total system cost, total incentive and total capacity (stc) of all Approved applications, the ZREC Equivalent Price is determined by calculating the net present ZREC Equivalent Price from a 15 years stream of payments that equals net present value of CEFIA's incentive.

Note: Solarize kWs are included in 'The Race to the Rooftop' but excluded from pricing data until the program closes.

About the Clean Energy Finance and Investment Authority

CEFIA was established by Connecticut's General Assembly on July 1, 2011 as a part of Public Act 11-80. This new quasi-public agency supersedes the former Connecticut Clean Energy Fund. CEFIA's mission is to help ensure Connecticut's energy security and community prosperity by realizing its environmental and economic opportunities through clean energy finance and investments. As the nation's first full-scale clean energy finance authority, CEFIA will leverage public and private funds to drive investment and scale-up clean energy deployment in Connecticut.

Historical Program Data (Previous Steps)

Step 1 - Fully Subscribed	Rebate	PBI	Total	Average
Applications Received	151	16	167	
Applications Approved	151	16	167	
Applications In Progress	52	11	63	
Applications Completed	98	5	103	
Total Cost	$5,350,694	$594,599	$5,945,293	
Total kW STC	991.8	125.5	1,117.3	
Average System Size kW STC	6.6	7.8		6.7
Cost / kW STC	$5,395	$4,737		$5,321
Average Total Cost	$35,435	$37,162		$35,601
Total Incentive Amount	$1,758,087	$229,999	$1,988,086	
Incentive / kW STC	$1,773	$1,832		$1,779
ZREC Equivalent Incentive Price	$0.115	$0.112		

Based on estimated lifetime system production under Step 1, current residential deployment represents an average levelized cost of solar energy within the range of $0.223 - $0.240 / kWh. Of that total, CEFIA's support accounts for $0.074 - $0.085 / kWh.

Estimated Environmental Benefits based upon all Approved Applications

Lifetime CO_2 Reduction	Lifetime NO_x Reduction	Lifetime SO_2 Reduction	Annual Cars off the Road	Equivalent Acres of Trees Planted
106,614,388 lbs.	48,321 lbs.	44,208 lbs.	355	711

Estimated Economic Development and Jobs Benefits based upon all Approved Applications[1]

Direct Jobs Created	Indirect and Induced Jobs	Total Jobs Created
127	205	332

1
- Direct jobs are jobs created in CT that are directly related to manufacturing and system assembly in CT, as well as installation of the PV systems.
- Indirect jobs are jobs created at CT suppliers in order to meet demand resulting from the new systems coming on line. An example would be increased employment associated with metal bending or wiring supplied to integrate and install the units.
- Induced jobs are jobs generated by spending from households that benefit from the additional wages and business income they earn through all of the direct and indirect activity. An example would be increased employment at a local restaurant, because installers are working overtime, have extra income and don't have time to eat at home.

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PROGRESS THROUGH PARTNERSHIPS

Annual Report Fiscal Year 2012

Who We Are

The Clean Energy Finance and Investment Authority (CEFIA) is a quasi-public agency that uses innovative financing tools to promote the deployment of clean energy in Connecticut. The successor organization to the Connecticut Clean Energy Fund, CEFIA's broader focus is to leverage private investment in renewable energy and energy-efficiency projects and extends to include alternative fuel vehicles and infrastructure. CEFIA was created in July 2011 when the Connecticut General Assembly, through the leadership of Governor Dannel Malloy, enacted Public Act 11-80, *An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut's Energy Future.*

Vision

To help ensure Connecticut's energy security and community prosperity by realizing its environmental and economic opportunities through clean energy finance and investments.

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Mission

To support the governor's and legislature's energy strategy to achieve cleaner, cheaper and more reliable sources of energy while creating jobs and supporting local economic development.

Goals

- Attract and deploy capital to finance the clean energy goals for Connecticut
  - Assist Connecticut in becoming the most energy efficient state in the nation
  - Scale up the deployment of renewable energy in the state
  - Support the infrastructure needed to lead the clean energy economy
- Develop and implement strategies that bring down the cost of clean energy in order to make it more accessible and affordable to consumers
- Reduce reliance on grants, rebates and other subsidies and move toward innovative low-cost financing to support clean energy deployment in Connecticut.

A Message from the President and CEO

2012 was a year of transition for the Clean Energy Finance and Investment Authority (CEFIA). As required by Public Act 11-80, we continued the work of transforming from our former model, a rebate-and incentive-based fund known as the Connecticut Clean Energy Fund, to the model outlined in the 2011 law: the nation's first full-scale state clean energy finance authority—essentially, Connecticut's own "green bank."

We are proud to report that we have made significant progress. CEFIA enters the next fiscal year with a strong foundation in the form of new governance, a comprehensive strategic plan, expert new staff and a revamped suite of programs. These achievements position our organization well to play a vital role in realizing Connecticut's energy, environmental and economic goals. You'll read more about these and other topics in this report.

I'd like to mention just a few additional highlights of CEFIA's accomplishments this year:

SunShot Initiative – CEFIA won a nearly half-million-dollar grant from the U.S. Department of Energy for its "Sun Rise New England—Open for Business" project. The project aims to promote adoption of solar photovoltaic technology by reducing costs and removing barriers.

Solarize Connecticut – We launched a pilot program in which we partner with cities and towns across Connecticut to bring competitively priced solar photovoltaic (PV) systems to Connecticut homeowners.

Commercial Property Assessed Clean Energy (C-PACE) Program – We helped create—and now administer—this program, which enables lower-cost, longer-term financing for energy-related improvements to privately owned commercial properties.

American Recovery and Reinvestment Act– We worked with DEEP to repurpose ARRA-SEP funds from grants to credit enhancements that will attract private capital investment into energy efficiency and renewable energy deployment in Connecticut, including support for financing programs for low and moderate income households.

Neighbor-to-Neighbor Energy Challenge – With a grant from the U.S. Department of Energy in 2010, we launched a three-year project to help residents of 14 Connecticut towns reduce their energy consumption by 20 percent.

With these and other accomplishments as a foundation, we will continue to scale up investments in deployment of clean energy by building partnerships and leveraging private investment. We look forward to working with our many new partners to help Connecticut attain its energy goals.

Bryan Garcia
President and Chief Executive Officer

Successful Partnerships for a Sustainable Future

CEFIA is leveraging the talent and resources of a host of organizations in order to achieve "Progress Through Partnerships" and advance Connecticut's ambitious energy agenda. Our partners include:

AFC First Financial Corporation
Center for Clean Energy Engineering
Connecticut Business & Industry Association
Connecticut Center for Advanced Technology
Connecticut Conference of Municipalities
Connecticut Energy Efficiency Fund
Connecticut Housing and Finance Authority
Clean Energy States Alliance
Connecticut Light & Power Co.
Clean Energy Finance Center
Connecticut Bankers Association
Connecticut Community College System
Connecticut Green Building Council
Connecticut Green Jobs Partnership
Connecticut Hydrogen-Fuel Cell Coalition
Connecticut Innovations
Connecticut Municipal Electric Energy Cooperative
Connecticut Science Center Collaborative
Connecticut Technical High School System
Connecticut Power & Energy Society
Department of Economic and Community Development
Department of Energy and Environmental Protection
Emily Hall Tremaine Foundation
Institute for Sustainable Energy
John Merck Fund
Massachusetts Clean Energy Center
New England Clean Energy Council
Renewable Energy and Efficiency Business Association Inc.
Solar Connecticut
SmartPower
University of Connecticut
U.S. Bank
U.S. Department of Agriculture
U.S. Department of Energy
U.S. Environmental Protection Agency
United Illuminating
Yale University

Connecticut's "Green Bank"

CEFIA promotes clean energy by investing its own funds and attracting private investment in clean energy initiatives in the state.

The Brookings-Rockefeller Project on State and Metropolitan Innovation recently pointed to CEFIA as an example of what states can do to accelerate transition to clean energy. Its white paper, *State Clean Energy Finance Banks: New Investment Facilities for Clean Energy Deployment,* notes:

"Fortunately a number of states are now exploring a variety of ways to leverage scarce public resources with sophisticated banking and finance mechanisms. Epitomized by Connecticut's Clean Energy Finance and Investment Authority (CEFIA), the proposed new finance entities entail the creation by states of dedicated clean energy banks that leverage public money with private sector funds and expertise.

While these banks can take different forms based on each state's unique circumstances, they essentially combine scarce public resources with private sector funds and then leverage those funds to invest in attractive clean energy and energy efficiency projects. A timely benefit of the low-cost financing that these banks will make available is that it will reduce clean energy projects' dependence on expiring federal grants, tax credits, and subsidies and lower the cost of these projects enough to make them cost-competitive with conventional technologies."

A Transformative Year

This fiscal year saw CEFIA build a strong foundation for future success as we continued our transition from a subsidy-driven model to a low-cost financing and credit-enhancement entity dedicated to attracting and deploying capital to advance Connecticut's clean energy goals. Elements of that foundation include:

Governance and Organization

We established a board of directors and created bylaws, operating procedures, an employee handbook and a comprehensive strategic plan articulating the vision, mission and goals that will guide our actions going forward.

Additional Expert Staff

We have engaged new staff members with the private-sector experience and financial expertise required by our new configuration as a "green bank."

New Financing Model

We made considerable progress in laying the groundwork for developing innovative financing programs to scale up Connecticut's investment in renewable energy and energy efficiency. We entered into discussions with a broad range of financial institutions to introduce CEFIA to this important source of financing, with an eye to bringing more private capital into the marketplace for renewable energy and energy efficiency.

Program Changes

We have altered our program offerings in keeping with our new model and mission. Several programs formerly run by the Clean Energy Fund are being transferred to other organizations or phased out.

Workforce Development, Education and Training– Programs aimed at preparing individuals for "green" jobs are being transitioned to another governmental entity and/or the Clean Energy Efficiency Fund (CEEF). CEFIA continues to manage existing contracts and commitments, including eight Community College workforce development contracts that support equipment, training, and curriculum development. Additionally, CEFIA, in partnership with CEEF will provide funding to the Connecticut Technical High School System to support the design and development of E-Houses at all of the Connecticut Technical High Schools. CEFIA will continue to transition these programs to CEEF's eesmarts program. We will no longer support formal and informal education programs.

Technology Innovation Programs – With our new focus on financing commercial technologies, we are phasing out our Technology Innovation Programs, including our Alpha and Operational Demonstration programs. Such early-stage technology support is available from Connecticut Innovations and other sources.

On-Site Distributed Generation Programs – We made our final grants under this program so as to provide clean energy market continuity as the state transitions to its new Low Emission Renewable Energy Credit/Zero Emission Renewable Energy Credit program developed and administered by the Public Utility Regulatory Authority and the state's two publicly owned utility companies.

American Recovery and Reinvestment Act (ARRA)

Funds received through this federal stimulus program were allocated to several financing programs in keeping with CEFIA's transition to a low-cost financing model. CEFIA, in partnership with the Connecticut Department of Energy and Environmental Protection, launched a Clean Energy Financial Innovation initiative to source exciting new models for driving private sector capital to finance renewable energy and energy efficiency in Connecticut. The projects, selected through an open process, include:

- Credit enhancements to enable low-cost financing for energy upgrades in low-income, multifamily housing units;
- A pooled credit enhancement mechanism to enable low-cost energy efficiency loans through local credit unions; and,
- Subordinated debt to support the pilot of a solar loan fund, which will offer favorable loan terms for Connecticut residents to directly own and benefit from solar panels on their homes.

CEFIA's Chief Investment Officer

Bert Hunter leads CEFIA's efforts to develop innovative financing programs to scale up the state's investments in commercially viable clean energy technologies. Hunter brings to his position extensive experience in private-sector financing and investment. He was formerly vice president of finance and chief financial officer of Spectrum Capital Ltd., an investment bank focused on commercial aircraft finance and investment in electric power generation. Hunter is a graduate of Wake Forest University and holds an MBA from The Wharton School at the University of Pennsylvania.

Legislation Sets Direction

As mentioned earlier, the Connecticut General Assembly and Governor Malloy created CEFIA as part of Public Act 11-80, which was enacted during the 2011 regular session. In doing so, they established CEFIA as the nation's first full-scale state clean energy finance authority.

The law expanded CEFIA's charge beyond that of the original Clean Energy Fund to include financing of energy efficiency and alternative-fuel vehicle infrastructure, and it emphasized maximizing state resources by leveraging private capital investment.

PA 11-80 mandated that CEFIA develop and implement several new programs: a Residential Solar Photovoltaic Program, a three-year Combined Heat and Power pilot program and a three-year Anaerobic Digestion project pilot program. Updates on these programs appear on the following page.

Additional Action: 2012 Special Legislative Session

Clarification – CEFIA worked with legislators during the General Assembly's 2012 Special Session to clarify CEFIA's status and bonding authorization and proposed modifications that would support CEFIA's critical goal of leveraging private capital.

Commercial Property Assessed Clean Energy Program (C-PACE) – Public Act 12-2 established the groundbreaking C-PACE program and appointed CEFIA as the program's statewide administrator. The nation's first statewide program of its kind, C-PACE facilitates loan financing for clean energy improvements to commercial and industrial properties by using a municipal assessment mechanism to provide security for repayment of the loans. The program provides a significant opportunity to achieve the state's long-term energy goals.

Special Capital Reserve Fund (SCRF) – Public Act 12-2 authorized CEFIA to access the state's Special Capital Reserve Fund, a credit-enhancement fund. This allows CEFIA to issue bonds for self-supporting programs, with backing by the state.

CEFIA's Director of the Commercial Property Assessed Clean Energy Program (C-PACE)

Jessica Bailey is charged with designing the statewide C-PACE program. Jessica will work closely with key stakeholders, including municipalities, financiers, property owners and energy service providers to upgrade qualifying commercial and industrial properties in the state. Prior to joining CEFIA, Jessica served as the program officer for sustainable development at the Rockefeller Brothers Fund and she received her graduate degree from Yale University and undergraduate from the University of Notre Dame. Jessica also sits on the board of the New England Clean Energy Council.

The Connecticut General Assembly and Governor Malloy created CEFIA as part of Public Act 11-80, which was enacted during the 2011 regular session. In doing so, they established CEFIA as the nation's first statewide clean energy finance authority.

Mandated Programs Advancing

We have made excellent progress in establishing the programs mandated by PA 11-80.

Residential Solar Investment Program

This program is designed to encourage homeowners to install solar photovoltaic (PV) systems—a proven, reliable, pollution-free technology that can save them money. CEFIA offers incentive programs to help make solar PV affordable for consumers. One reduces costs for people who want to purchase a solar PV system. The other is a leasing model that gives consumers access to solar PV systems with little or no up-front costs to them. Currently, CEFIA subsidizes leases offered by third-party installers; we hope to begin offering our own leases in 2013.

Given the new focus on finance rather than incentives and subsidies, CEFIA plans to transition these programs to a financing model over time so that, ultimately, financing will completely replace direct incentives and ratepayer contributions will be retired over time.

As of June 30, 2012 a total of 306 projects have been approved, deploying 2,068 kilowatts with a total cost of approximately $10 million.

Combined Heat and Power / Anaerobic Digestion – Three-Year Pilot Program

CEFIA issued RFPs for two, three-year pilot programs: one involving anaerobic digestion (AD) and the other involving combined heat and power (CHP) projects. The program was designed to seek to minimize costs for the general class of electric utility ratepayers, ensuring that the project developer/owner has a significant share of the financial burden and risk, while fostering the development of projects that benefit Connecticut's economy, ratepayers and environment.

CEFIA is using a variety of programs and strategies to encourage people and communities across Connecticut to embrace clean energy and to bring down the cost of clean energy for consumers.

Making Clean Energy a Way of Life in Connecticut

CEFIA is using a variety of programs and strategies to encourage people and communities across Connecticut to embrace clean energy and to bring down the cost of clean energy for consumers.

Through its programs, CEFIA invested more than 15% of ratepayer incentives in distressed municipalities. New financing initiatives will expand on these investments and further increase support for clean energy deployment in communities with higher unemployment rates, poverty and aging housing stock.

Clean Energy Communities

The Clean Energy Communities Program has helped to attract significant federal funding in competitive solicitations offered by the U.S. Department of Energy. CEFIA (or its predecessor, the Connecticut Clean Energy Fund), served as lead applicant and acts as administrative agent for two diverse public-private project teams that received grants under two separate funding opportunities: the Neighbor to Neighbor Energy Challenge and Sun Rise New England – Open for Business. Collectively, CEFIA helped to attract nearly $4.7 million for Connecticut to dramatically increase energy savings actions within communities and decrease the non-hardware costs associated with solar photovoltaic systems.

The program is designed to encourage communities to increase their support for energy efficiency and renewable energy. One hundred three communities joined the original program. CEFIA now offers this program in collaboration with the CEEF. Under the revised program participating municipalities pledge to reduce building energy consumption by 20 percent by 2018; purchase 20 percent of building energy from renewable sources by 2018; and achieve certain milestones along the way. Towns earn points toward Bright Idea Grants and clean energy systems.

Residential Solar Hot Water

In April 2012 CEFIA introduced a new Solar Hot Water program as a follow-on to the ARRA-funded program launched in October 2009. The Residential Solar Hot Water Incentive program provides rebates based on the rated capacity of the system.

Twenty-eight projects were approved by the end of FY 2012, which are expected to produce 452 MMBtu in useful hot water every year. In the five months since then, 26 additional projects have been received, which will produce 390 MMBtu annually. The Commercial program is competitive, with applications being solicited in four rounds. Incentive requests can be a combination of grants and loans, submitted in a "reverse auction" in each round. By the end of FY 2012, following the first round, we had approved five projects which are predicted to produce 347 MMBtu annually. In the second and third rounds, (first and second of the new fiscal year) 15 projects have been approved, producing 1893 MMBtu in total. The evaluation process is calculated to favor loan requests over grants and is intended to make this program a true transition from cash grants to a more sustainable financing type of incentive.

Solarize Connecticut

We launched the Solarize Connecticut pilot program this year in partnership with the John Merck Fund and SmartPower. Solarize Connecticut leverages funds from philanthropic foundations. It uses a proven, community-based approach and an aggregation strategy to reduce costs and accelerate adoption of solar technologies. We plan to partner with four municipalities to implement the first phase of the Solarize pilot program in 2012 and four more communities as part of the second phase of the pilot in early 2013.

Neighbor to Neighbor Energy Challenge

With a $4.1 million grant from the DOE, CEFIA leads a coalition of public and private entities and municipalities in the three-year Neighbor to Neighbor Energy Challenge. The initiative is a community energy-savings program being implemented in 14 Connecticut towns. It challenges residents to take energy efficiency actions that will reduce their energy use by 20 percent. Participants save money and reduce energy waste. CEFIA will incorporate lesson learned from the program into its deployment, outreach and financing programs.

Sun Rise New England—Open for Business

CEFIA won one of 22 regional U.S. Department of Energy (DOE) grants under the DOE SunShot Initiative's Rooftop Solar Challenge, part of the department's effort to make the cost of solar electricity competitive, without subsidies, by the end of the decade. The challenge initiative aims to reduce the non-hardware costs associated with solar PV. Connecticut's program, Sun Rise New England—Open for Business, was awarded $481,500. Project accomplishments in FY 2012 included administration setup, research and analysis necessary for implementing the program.

From the Board of Directors

All of us who live and work in Connecticut can take pride in the leadership Connecticut has shown in creating the Clean Energy Finance and Investment Authority (CEFIA). As part of the state's Comprehensive Energy Strategy, CEFIA will work to promote the deployment of clean, renewable energy and to collaborate with partners to increase energy efficiency.

The CEFIA is a vital partner in Governor Malloy's Comprehensive Energy Strategy, which seeks to create cleaner, cheaper and more reliable energy opportunities for Connecticut citizens and businesses. As part of a broader effort to use limited public dollars in a more effective and sustainable manner, CEFIA is leveraging private capital and offering innovative financing mechanisms to attract investments and help expand clean energy deployment right here in Connecticut.

CEFIA's work also contributes to our efforts to reduce energy costs. For consumers, that means saving money. For businesses, it means using the money they save on energy to expand here and create jobs. Plus, lowering energy costs helps Connecticut compete more effectively when it comes to attracting businesses to our state.

We congratulate CEFIA on its accomplishments this year and look forward to working with them to shape a brighter energy, economic, and environmental future for Connecticut.

Catherine Smith

Commissioner, Department of Economic and Community Development

Chair, CEFIA Board of Directors

Dan Esty

Commissioner, Department of Energy and Environmental Protection

Vice Chair, CEFIA Board of Directors

CEFIA Board of Directors

Catherine Smith
Commissioner, Department of Economic and Community Development

Daniel Esty
Commissioner, Department of Energy and Environmental Protection

Denise Nappier
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Norma Glover
Principal, NJG Associates

Patricia Wrice
Executive Director, Operation Fuel

Reed Hundt
CEO, Coalition for Green Capital

Thomas Flynn
Managing Member, Coral Drive Partners, LLC

Mark Cirilli
Managing Director, MissionPoint Capital Partners
(9/2011 - 4/2012)

Financial Highlights

Clean Energy Finance and Investment Authority - For the year ended June 30, 2012 (in thousands)

Statement of Net Assets		
Assets		
Cash and short-term investments	$	64,673
Rate Payer contributions receivable	$	2,580
Other assets	$	1,076
Investments and programs	$	15,215
Capital assets, net of depreciation and amortization	$	91
Restricted cash and cash equivalents	$	8,541
Total Assets	$	92,176
Liabilities		
Accounts payable and accrued expenses	$	2,625
Deferred revenue	$	8,363
Total Liabilities	$	10,988
Net assets		
Invested in capital assets	$	91
Restricted	$	8,541
Unrestricted	$	72,556
Total Net Assets	$	81,188
Total Liabilities and Net Assets	$	92,176
Statement of Activities		
Revenues	$	40,483
Expenditures and expenses		
General and administrative expenses	$	1,388
Grants and programs	$	31,122
Total expenditures and expenses	$	32,510
Operating Income	$	7,973
Nonoperating income	$	435
Income before transfers in from State of Connecticut	$	8,408
Transfers in from State of Connecticut - Connecticut Clean Energy Fund	$	72,780
Net Assets, Beginning of Year	$	-
Net Assets, End of Year	$	81,188

2012 CEFIA Activity by Municipality

	ARRA	Commercial Installations (OSDG)		Small Solar Lease		Small Solar Rebate		Communities		Total	
	Incentive Amount	Incentive Amount	KwStc	Incentive Amount	KwStc	Incentive Amount	KwStc	Incen-tive Amount	Kw-Stc	Incentive Amount	KwStc
Andover				$0	-	$37,211	22.18	$0	-	$37,211	22.18
Ansonia		$338,908	250.39	$0	-	$1,458	0.94	$0	-	$340,366	251.33
Ashford				$0	-	$0	-	$0	-	$0	
Avon	$14,520			$6,151	5.28	$14,982	9.50	$0	-	$35,653	14.78
Barkhamsted				$0	-	$13,025	7.28	$0	-	$13,025	7.28
Beacon Falls	$6,000			$0	-	$14,428	8.16	$0	-	$20,428	8.16
Berlin	$13,500	$3,002		$0	-	$0	-	$0	-	$16,502	
Bethany	$11,100			$0	-	$0	-	$0	-	$11,100	
Bethel				$0	-	$15,714	10.14	$0	-	$15,714	10.14
Bethlehem	$4,861			$7,172	3.52	$23,686	13.53	$0	-	$35,719	17.05
Bloomfield	$22,781	$1,191,940	-	$0	-	$24,272	16.32	$0	-	$1,238,994	16.32
Bolton	$13,200			$0	-	$35,128	21.58	$0	-	$48,328	21.58
Bozrah				$0	-	$0	-	$0	-	$0	
Branford	$116,899			$0	-	$38,132	21.80	$17,992	3.00	$173,023	24.80
Bridgeport	$19,530	$229,500		$8,435	3.68	$11,390	8.00	$0	-	$268,855	11.68
Bridgewater				$12,656	6.82	$0	-	$0	-	$12,656	6.82
Bristol	$5,250	$315,811	122.98	$0	-	$33,075	22.18	$0	-	$354,136	145.16
Brookfield				$0	-	$25,599	18.31	$0	-	$25,599	18.31
Brooklyn	$4,845			$34,564	18.00	$60,787	31.81	$0	-	$100,195	49.81
Burlington	$26,700			$0	-	$26,400	15.56	$0	-	$53,100	15.56
Canaan				$0	-	$17,354	11.28	$0	-	$17,354	11.28
Canterbury	$7,200			$26,252	14.48	$0	-	$0	-	$33,452	14.48
Canton				$0	-	$17,987	9.57	$0	-	$17,987	9.57
Chaplin				$0	-	$8,488	5.17	$0	-	$8,488	5.17
Cheshire	$30,300			$44,265	22.24	$6,984	4.84	$0	-	$81,549	27.08
Chester	$16,800			$15,991	8.00	$0	-	$0	-	$32,791	8.00
Clinton	$3,150			$0	-	$9,626	7.22	$0	-	$12,776	7.22
Colchester	$66,559			$11,946	5.52	$99,957	62.79	$0	-	$178,462	68.31
Colebrook	$4,350			$0	-	$0	-	$0	-	$4,350	
Columbia		$3,213		$0	-	$0	-	$0	-	$3,213	
Cornwall				$14,984	6.84	$24,425	13.98	$0	-	$39,409	20.82
Coventry	$14,189			$0	-	$23,918	12.69	$0	-	$38,107	12.69
Cromwell	$9,600			$0	-	$13,621	15.18	$0	-	$23,221	15.18
Danbury				$0	-	$23,149	13.87	$0	-	$23,149	13.87
Darien	$12,600	$406,155	235.69	$0	-	$31,716	19.78	$0	-	$450,471	255.47
Deep River	$7,200			$0	-	$12,186	8.97	$0	-	$19,386	8.97
Derby				$0	-	$0	-	$0	-	$0	
Durham	$10,200			$0	-	$58,632	35.87	$0	-	$68,832	35.87
East Granby	$12,000			$12,357	6.67	$0	-	$0	-	$24,357	6.67
East Haddam	$6,113			$38,684	20.03	$84,116	44.79	$0	-	$128,913	64.82
East Hampton	$12,000	$5,066		$21,473	11.04	$37,275	25.94	$0	-	$75,814	36.98

	ARRA	Commercial Installations (OSDG)		Small Solar Lease		Small Solar Rebate		Communities		Total	
	Incentive Amount	Incentive Amount	KwStc	Incentive Amount	KwStc	Incentive Amount	KwStc	Incen-tive Amount	Kw-Stc	Incentive Amount	KwStc
East Hartford	$1,711			$0	-	$3,684	3.29	$0	-	$5,395	3.29
East Haven				$0	-	$0	-	$0	-	$0	
East Lyme	$25,900	$185,114		$0	-	$61,486	38.96	$0	-	$272,500	38.96
East Windsor	$9,450			$31,606	15.77	$28,366	15.87	$0	-	$69,422	31.64
Eastford				$0	-	$32,953	16.20	$0	-	$32,953	16.20
Easton	$13,200			$25,017	13.68	$0	-	$0	-	$38,217	13.68
Ellington	$3,150			$0	-	$7,786	4.00	$0	-	$10,936	4.00
Enfield	$11,403			$9,713	4.94	$57,934	31.27	$2,000	-	$81,050	36.21
Essex				$0	-	$0	-	$0	-	$0	
Fairfield	$21,639			$27,352	13.44	$75,442	49.94	$0	-	$124,433	63.38
Farmington	$25,800	$5,079		$38,901	19.92	$7,663	3.50	$0	-	$77,443	23.42
Franklin				$0	-	$12,999	11.66	$0	-	$12,999	11.66
Glastonbury	$63,300	$3,146		$0	-	$57,757	34.60	$0	-	$124,203	34.60
Goshen				$0	-	$0	-	$0	-	$0	
Granby				$34,608	17.76	$24,738	14.90	$0	-	$59,346	32.66
Greenwich	$218,849	$6,300		$4,613	3.36	$31,623	20.47	$20,160	6.00	$281,545	98.60
Griswold				$34,740	17.04	$12,425	7.00	$0	-	$47,165	24.04
Groton	$3,724			$0	-	$11,284	5.80	$0	-	$15,008	5.80
Guilford	$18,588	$8,456		$15,601	6.66	$64,769	36.92	$0	-	$107,414	43.58
Haddam	$27,333			$23,258	13.02	$0	-	$0	-	$50,591	13.02
Hamden	$6,000			$42,465	21.89	$31,006	20.73	$0	-	$79,471	42.62
Hampton				$0	-	$12,777	6.50	$23,711	1.00	$36,488	7.50
Hartford		$4,455		$0	-	$0	-	$31,954	5.00	$36,409	5.00
Hartland				$37,610	20.04	$7,104	4.18	$0	-	$44,714	24.22
Harwinton	$14,250			$0	-	$27,633	16.42	$0	-	$41,883	16.42
Hebron	$10,991	$250,300	171.99	$0	-	$9,761	5.28	$0	-	$271,052	177.27
Kent	$12,167			$0	-	$16,455	11.52	$0	-	$28,622	11.52
Killingly				$0	-	$27,216	14.63	$0	-	$27,216	14.63
Killingworth	$17,518			$0	-	$26,251	14.04	$0	-	$43,769	14.04
Lebanon	$9,847			$21,251	10.00	$34,660	21.38	$0	-	$65,758	31.38
Ledyard	$7,800			$6,816	3.68	$30,464	16.03	$0	-	$45,080	19.71
Lisbon				$0	-	$0	-	$0	-	$0	
Litchfield	$7,200	$3,137		$0	-	$26,847	20.42	$0	-	$37,184	20.42
Lyme	$3,503			$0	-	$17,105	10.12	$0	-	$20,608	10.12
Madison	$21,634	$2,233		$0	-	$45,893	28.28	$0	-	$69,760	28.28
Manchester	$36,780	$1,823		$0	-	$31,415	15.27	$0	-	$70,018	15.27
Mansfield	$15,464	$4,863		$0	-	$99,175	67.27	$0	-	$119,502	67.27
Marlborough				$0	-	$28,235	16.43	$0	-	$28,235	16.43
Meriden	$2,400			$18,816	9.25	$13,211	7.59	$0	-	$34,427	16.84
Middlebury	$12,300			$0	-	$9,720	7.36	$0	-	$22,020	7.36
Middlefield	$7,132			$15,114	9.60	$0	-	$0	-	$22,246	9.60
Middletown	$14,056	$594,063	242.44	$0	-	$92,990	53.92	$0	-	$701,109	296.36
Milford	$13,500	$4,466		$30,178	14.75	$19,037	10.27	$0	-	$67,181	25.02

	ARRA	Commercial Installations (OSDG)		Small Solar Lease		Small Solar Rebate		Communities		Total	
	Incentive Amount	Incentive Amount	KwStc	Incentive Amount	KwStc	Incentive Amount	KwStc	Incen-tive Amount	Kw-Stc	Incentive Amount	KwStc
Monroe				$0	-	$38,757	26.39	$0	-	$38,757	26.39
Montville		$4,112		$0	-	$45,475	31.53	$0	-	$49,587	31.53
Morris				$18,014	8.05	$24,055	18.56	$0	-	$42,069	26.61
Naugatuck				$13,875	7.70	$0	-	$0	-	$13,875	7.70
New Britain				$5,650	2.88	$0	-	$0	-	$5,650	2.88
New Canaan	$19,800			$0	-	$43,332	29.84	$0	-	$63,132	29.84
New Fairfield	$12,600			$0	-	$5,924	5.17	$0	-	$18,524	5.17
New Hartford	$4,800			$0	-	$7,626	4.41	$0	-	$12,426	4.41
New Haven	$157,500	$29,945		$0	-	$24,169	12.94	$0	-	$211,614	12.94
New London				$0	-	$8,759	3.92	$0	-	$8,759	3.92
New Milford				$15,128	8.64	$23,931	17.16	$0	-	$39,059	25.80
Newington	$4,800	$4,100		$0	-	$0	-	$0	-	$8,900	
Newtown	$14,023			$18,143	10.34	$11,765	6.37	$0	-	$43,931	16.71
Norfolk	$7,200			$0	-	$10,746	8.10	$0	-	$17,946	8.10
North Branford	$9,707	$681,906	306.24	$0	-	$0	-	$0	-	$691,613	306.24
North Canaan				$0	-	$0	-	$0	-	$0	
North Haven	$4,800			$0	-	$30,610	17.77	$0	-	$35,410	17.77
North Stonington		$3,392		$32,277	17.28	$17,261	11.20	$0	-	$52,931	28.48
Norwalk	$11,460	$5,785		$36,955	19.92	$30,349	23.28	$0	-	$84,548	43.20
Norwich	$18,842			$0	-	$0	-	$0	-	$18,842	
Old Lyme	$12,300	$4,038		$9,566	4.80	$14,738	9.56	$0	-	$40,642	14.36
Old Saybrook	$18,000			$0	-	$50,363	25.51	$0	-	$68,363	25.51
Orange	$2,988	$221,166	152.49	$25,823	14.96	$28,387	18.90	$0	-	$278,364	186.35
Oxford	$3,271	$5,787		$17,569	9.36	$11,806	5.75	$0	-	$38,433	15.11
Plainfield				$30,404	16.56	$0	-	$0	-	$30,404	16.56
Plainville				$0	-	$0	-	$0	-	$0	
Plymouth				$0	-	$11,850	6.00	$0	-	$11,850	6.00
Pomfret				$0	-	$17,724	12.30	$0	-	$17,724	12.30
Portland	$15,750			$10,163	5.28	$11,991	7.50	$0	-	$37,904	12.78
Preston				$0	-	$13,250	8.09	$0	-	$13,250	8.09
Prospect	$11,520			$9,505	4.56	$0	-	$0	-	$21,025	4.56
Putnam				$30,440	15.48	$47,972	26.93	$0	-	$78,412	42.41
Redding	$13,117			$0	-	$35,571	30.32	$0	-	$48,688	30.32
Ridgefield	$15,862			$13,686	6.35	$29,040	19.94	$0	-	$58,588	26.29
Rocky Hill				$0	-	$29,866	18.14	$0	-	$29,866	18.14
Roxbury				$0	-	$0	-	$0	-	$0	
Salem				$0	-	$23,330	12.67	$0	-	$23,330	12.67
Salisbury				$15,663	9.36	$28,400	23.40	$0	-	$44,063	32.76
Scotland				$0	-	$0	-	$0	-	$0	
Seymour				$0	-	$8,099	5.52	$0	-	$8,099	5.52
Sharon	$2,821			$0	-	$20,994	14.85	$0	-	$23,815	14.85
Shelton	$6,224			$33,700	18.57	$97,378	58.21	$0	-	$137,302	76.78
Sherman	$7,200			$0	-	$29,343	21.88	$0	-	$36,543	21.88

	ARRA	Commercial Installations (OSDG)		Small Solar Lease		Small Solar Rebate		Communities		Total	
	Incentive Amount	Incentive Amount	KwStc	Incentive Amount	KwStc	Incentive Amount	KwStc	Incen-tive Amount	Kw-Stc	Incentive Amount	KwStc
Simsbury	$7,200			$0	-	$16,507	10.31	$0	-	$23,707	10.31
Somers	$3,600			$0	-	$14,690	7.92	$0	-	$18,290	7.92
South Windsor	$5,520	$2,088		$0	-	$68,747	46.92	$0	-	$76,355	46.92
Southbury	$3,600			$0	-	$15,320	9.81	$0	-	$18,920	9.81
Southington	$8,880			$29,769	16.26	$67,355	39.86	$0	-	$106,004	56.12
Sprague				$34,758	16.80	$0	-	$0	-	$34,758	16.80
Stafford	$32,700			$11,959	6.00	$22,797	10.54	$0	-	$67,456	16.54
Stamford		$6,066		$0	-	$13,326	9.45	$0	-	$19,392	9.45
Sterling				$0	-	$12,450	8.64	$0	-	$12,450	8.64
Stonington	$42,316	$4,657		$32,064	14.33	$86,629	52.06	$0	-	$165,666	66.38
Stratford				$0	-	$8,087	4.49	$0	-	$8,087	4.49
Suffield	$24,000			$0	-	$45,434	33.64	$0	-	$69,434	33.64
Thomaston	$96,250			$13,290	6.96	$0	-	$0	-	$109,540	6.96
Thompson				$0	-	$6,709	3.29	$0	-	$6,709	3.29
Tolland	$193,600			$0	-	$69,963	41.98	$0	-	$263,563	41.98
Torrington	$3,150	$5,897		$13,457	6.24	$0	-	$0	-	$22,505	6.24
Trumbull				$22,084	10.34	$43,511	27.94	$17,815	3.00	$83,410	41.28
Union				$0	-	$0	-	$0	-	$0	
Vernon	$3,840			$10,725	7.68	$20,718	10.64	$0	-	$35,283	18.32
Voluntown				$0	-	$13,933	8.16	$0	-	$13,933	8.16
Wallingford	$329,150			$0	-	$0	-	$0	-	$329,150	
Warren				$0	-	$42,875	27.32	$0	-	$42,875	27.32
Washington	$45,900			$0	-	$39,320	26.28	$0	-	$85,220	26.28
Waterbury				$12,865	6.72	$0	-	$0	-	$12,865	6.72
Waterford	$12,085			$8,958	4.80	$56,006	29.51	$0	-	$77,049	34.31
Watertown	$6,300			$15,973	8.28	$9,399	7.34	$0	-	$31,672	15.62
West Hartford	$9,600	$4,067		$42,185	19.94	$36,544	20.02	$0	-	$92,395	39.96
West Haven				$0	-	$15,075	8.84	$0	-	$15,075	8.84
Westbrook				$0	-	$5,323	2.88	$0	-	$5,323	2.88
Weston	$14,110			$16,566	8.64	$12,828	7.35	$0	-	$43,504	15.99
Westport	$39,686	$3,996		$0	-	$92,217	59.80	$0	-	$135,899	59.80
Wethersfield	$21,000			$0	-	$0	-	$0	-	$21,000	
Willington				$0	-	$0	-	$0	-	$0	
Wilton	$23,250			$0	-	$36,458	29.81	$1,000	-	$60,708	29.81
Winchester				$8,351	4.32	$0	-	$0	-	$8,351	4.32
Windham	$476,934			$0	-	$9,782	13.96	$0	-	$486,716	13.96
Windsor				$16,148	7.76	$17,361	9.09	$0	-	$33,509	16.85
Windsor Locks		$3,444		$0	-	$8,285	4.17	$0	-	$11,729	4.17
Wolcott	$11,550			$0	-	$71,611	50.06	$0	-	$83,161	50.06
Woodbridge	$32,379	$1,987		$0	-	$6,985	5.27	$21,500	3.00	$62,851	8.27
Woodbury				$11,809	6.24	$0	-	$0	-	$11,809	6.24
Woodstock	$3,600	$2,229		$33,143	17.01	$44,337	26.09	$26,219	4.00	$109,529	47.10
Grand Total	$2,952,820	$4,561,693	1,482.22	$1,343,250	695.30	$3,806,028	2,376.71	$162,351	25.00	$12,826,142	4,648.01

CEFIA Staff

Bryan Garcia
President & CEO

Jessica Bailey
Director, CPACE

Lucy Charpentier
Manager, Evaluation, Measurement and Verification

Mackey Dykes
Chief of Staff

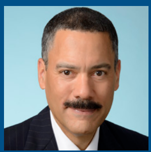
Brian Farnen
General Counsel

Loyola French
Paralegal

David Goldberg
Director, Government and External Relations

Benjamin Healey
Senior Manager, Clean Energy Finance

Dale Hedman
Director, Project Development



Bert Hunter
Chief Investment Officer

Alex Kragie
Project Manager

Edward Kranich
Project Assistant, Clean Energy Deployment

Lynne Lewis
Project Assistant, Clean Energy Deployment

Alexandra Lieberman
Manager, Clean Energy Finance

David Ljungquist
Director, Energy Efficiency Deployment

Andrea Mancini
Administrative Assistant

Neil McCarthy
Project Associate, Clean Energy Deployment

John Murphy
Senior Manager, Marketing and Outreach

Selya Price
Manager, Technology Innovation

Gladys Rivera
Senior Manager, Marketing and Outreach

Rick Ross
Senior Project Manager, Clean Energy Deployment

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Executive Assistant

Robert Schmitt
Associate, Energy Market Initiatives

Kim Stevenson
Associate Director, Technology Innovation

Mary Vigil
Project Assistant, Clean Energy Deployment

Robert Wall
Director, Energy Market Initiatives

CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

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CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Memo

To: CEFIA Board of Directors Committee

From: Bryan Garcia and Bert Hunter

CC: Brian Farnen, Mackey Dykes, Dale Hedman and Jessica Bailey

Date: December 13, 2012

Re: Funding Requests below $300,000

BACKGROUND

Pursuant to Section 5.3.3 of the Clean Energy Finance and Investment Authority (CEFIA) Bylaws, the CEFIA Deployment Committee has the authority to evaluate and approve project and programmatic funding requests between $300,000 and $2,500,000. The CEFIA Board of Directors retains sole authority to approve funding requests in excess of $2,500,000. The By-Laws are silent on the approval of project and programmatic approval requests below $300,000. This was previously addressed by the Connecticut Clean Energy Fund (CCEF), which passed a CCEF Board resolution permitting CCEF staff to approve funding requests below $300,000 (See Attached **Exhibit A**).

Pursuant to Section 5.3.1 of the CEFIA Bylaws, the Audit, Compliance and Governance Committee recommended approval to the Board of Directors a resolution authorizing staff to evaluate and approve funding requests less than $300,000 after incorporating feedback from the Deployment Committee, which tabled the issue so CEFIA staff could address their request to incorporate a total aggregate cap on the amount that could be approved between Deployment Committee Meetings.

By authorizing CEFIA staff to approve funding requests below $300,000 that are (1) pursuant to an established formal approval process utilizing the attached **Exhibit B** Staff Approval Form, (2) require monthly notification to the Board of any expenditure in excess of $150,000, (3) consistent with the CEFIA Comprehensive Plan, and (4) approved within CEFIA's fiscal budget and in an aggregate amount not to exceed $500,000 from the date of the last Deployment Committee meeting, CEFIA staff is further empowered to manage the day to day operations of CEFIA consistent with the broader vision of the CEFIA Board.

RESOLUTION

WHEREAS, pursuant to Section 5.3.3 of the CEFIA Bylaws, the CEFIA Deployment Committee has been granted the authority to evaluate and approve funding requests between $300,000 and $2,500,000;

WHEREAS, CEFIA staff requests that staff have the authority to evaluate and approve funding requests less than $300,000, which are consistent with the CEFIA Comprehensive Plan and approved within CEFIA's fiscal year budget;

WHEREAS, the Audit, Compliance & Governance Committee recommends approval to the Board of Directors of authorizing CEFIA staff to evaluate and approve funding requests less than $300,000 which are pursuant to an established formal approval process requiring the signature of a CEFIA officer, consistent with the CEFIA Comprehensive Plan, approved within CEFIA's fiscal budget and in an aggregate amount not to exceed $500,000 from the date of the last Deployment Committee meeting.

NOW, therefore be it:

RESOLVED, that the CEFIA Board of Directors hereby approves the authorization of CEFIA staff to evaluate and approve funding requests less than $300,000 which are pursuant to an established formal approval process requiring the signature of a CEFIA officer, consistent with the CEFIA Comprehensive Plan, approved within CEFIA's fiscal budget and in an aggregate amount not to exceed $500,000 from the date of the last Deployment Committee meeting.

Clean Energy Finance & Investment Authority
Staff Approval Form

version 11/14/2012

Project Name:		**Sector:**	Select Sector from list
Applicant:		**Installer:**	Select Installer from list or type name
Street Address:			
Municipality:			
Zip Code:			

Project Code:		**Class Code & Desc:**	Select Class Code from list
Strategic Plan Program:	Select Strategic Plan Program from list	**Describe Other:**	
Transition Programs:	Select Transition Program from list	**Describe Other:**	
Statutory Programs:	Select Statutory Program from list	**Describe Other:**	
Financing Programs:	Select Financing Program from list	**Describe Other:**	

Technology:	Select Technology from list	**Describe Other:**	
Annual Peak Demand kW: (estimated)		**Annual kWh Usage:**	
kW_{AC}:			
kW_{PTC}:			
kW_{STC}:			
MMBtu/Hr: (Fuel Cell Gas Usage)			

FINANCIAL & LOAN DATA

Project Cost:		**Cost/kW_{STC}:**	#DIV/0!
Recommended Incentive:		**Incentive/kW_{PTC}:**	#DIV/0!
Incentive % of Cost:	#DIV/0!		
Project IRR: (Net Capital w/incentive)		**Payback on Net Capital:** (years)	
Interest Rate:			
Term:			
Principal:			

APPROVALS

Recommended By:	Select Name from list	**Signature & Date**	______________________
Approved By:	Select Name from list	**Signature & Date**	______________________
Approved By:	Bryan Garcia	**Signature & Date**	______________________
Recorded By:	George Bellas	**Signature & Date**	______________________

Notes:

Renewable Energy Investments Board
Minutes - Regular Meeting
Monday, November 19, 2007

A regular meeting of the **Renewable Energy Investments Board hereinafter referred to as "the Connecticut Clean Energy Fund Board"** (the "Board") was held on November 19, 2007, at the Inn at Middletown, 70 Main Street, Middletown, CT.

7. **Creation of Standing Committees:** Mr. Bowles recommended that wherever possible, CCEF's standing committees mirror the standing committees of CI. He specifically discussed the need to create an executive committee consisting of the three officers of the Board (the Chairperson, Vice Chairperson and Secretary) in addition to Ms. Healey and Mr. Bowman to meet periodically to work out and discuss issues that may arise. Another committee discussed was a Projects Committee to review and make decisions on projects under an approved funding limit. Ms. Dondy discussed the authorizations and limits that were effective for the Clean Energy Advisory and Investment Committees. Discussion ensued on an appropriate level of funding to authorize a committee and staff to take action on projects without requiring Board approval. Ms. Dondy noted that the commercial projects with funding requests of less than $2,500,000 are typically routine projects.

> Upon a motion made by Mr. Bowman, seconded by Mr. Mengacci, the Board voted unanimously in favor of creating a Projects Committee authorized to make decisions on projects with funding requests between $300,000 and $2,500,000.

Mr. Mengacci, Ms. Glover, Mr. Maddox agreed to serve on the Projects Committee. Mr. Olsen will also be invited to participate as a member of the committee.

> Upon a motion made by Mr. Bowman, seconded by Mr. Mengacci, the Board voted unanimously in favor of authorizing staff to make funding decisions on the projects with funding requests less than $300,000.

The staff and/or the Projects Committee Chair will provide the Board with reports on the projects that receive funding; and any projects requesting over $2,500,000 will be brought to the Board for consideration.

Further information on the specific committees will be provided to the Board for consideration at a future meeting.

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CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

Memo

To: Board of Directors, Clean Energy Finance and Investment Authority

From: Bryan Garcia, President

Date: December 7, 2012

Re: Proposed Handbook Change – Telecommuting Policy

We would like to propose the following change to the CEFIA Handbook. We are requesting deleting the specific guidelines regarding telecommuting from the Handbook. This change mirrors CI's Telecommuting Policy and will allow us to have the discretion to use telecommuting in order to best meet the business needs of CEFIA. CEFIA's current telecommuting policy with proposed deletions and CI's current telecommuting policy are excerpted below for review.

CEFIA'S CURRENT TELECOMMUTING POLICY EXCERPTED FROM THE CEFIA HANDBOOK

Telecommuting

Telecommuting is a management option that allows an employee to work at home or an alternate work site; it is not an employee entitlement. Telecommuting does not change the hours of work. An employee may be considered for this option when the following minimum criteria are met:

1. In most instances, the employee must have completed their introductory period and have been performing his/her current job duties for at least 60 days.
2. The employee has requested to telecommute by filling out a telecommuting agreement which will outline the terms and conditions of their telecommuting arrangement.
3. CEFIA has determined that the employee's job can be readily and effectively completed at an alternate site.
4. CEFIA determines that the employee's absence from the office is not detrimental to office operations, overall productivity, the working conditions of other employees, or services to clients and customers.
5. The employee's performance has been satisfactory or better.
6. The employee agrees to abide by the guidelines of the Telecommuting Policy.

~~The following guidelines for telecommuting are to be followed in accordance with each employee's individual telecommuting agreement:~~

1. ~~Each employee must specify a regular telecommuting day on their telecommuting agreement including hours to be worked per day, start time, end time, breaks, lunch periods, and duration if this is implemented on a project basis.~~
2. ~~No employee shall telecommute more than one (1) day per week;~~
3. ~~No employee shall telecommute on Mondays or Fridays.~~
4. ~~No employee shall telecommute during a week where there is a holiday or that employee has a scheduled day off.~~
5. ~~If an employee would like to telecommute in the case of inclement weather, they must have a signed "inclement weather" telecommuting agreement on file.~~
6. ~~Telecommuting is not an entitlement. If business needs dictate the employee's physical presence in the office, the employee is required to report to work.~~
7. ~~In order to meet the business needs of the agency, an employee may request an adjustment to the telecommuting schedule outlined in this agreement. No adjustment may be made without prior supervisory approval~~

CI Handbook Language

Telecommuting

Telecommuting is a management option that allows an employee to work at home or an alternate work site; it is not an employee entitlement. Telecommuting does not change the hours of work. An employee may be considered for this option when the following minimum criteria are met:

1. In most instances, the employee must have completed their introductory period and have been performing his/her current job duties for at least 60 days.
2. The employee has requested to telecommute by filling out a telecommuting agreement which will outline the terms and conditions of their telecommuting arrangement.
3. CI has determined that the employee's job can be readily and effectively completed at an alternate site.
4. CI determines that the employee's absence from the office is not detrimental to office operations, overall productivity, the working conditions of other employees, or services to clients and customers.
5. The employee's performance has been satisfactory or better.

Clean Energy Finance and Investment Authority

Financial Analysis

Executive Summary

For the five months ended November 30, 2012

Statement of Income and General Operations and Program Expenses

Revenues for the period totaled $13,750,400 compared to a budget of $13,638,700. Utility customer assessments totaled $12,075,400 and were $249,600 under budget. As of the date of the preparation of the financial statements, November's actual results had not been reported to CEFIA so the budgeted November amounts are reflected in the actuals (see page 7 for a detailed analysis). Storm Sandy had a negative impact on October's results, however this negative impact was offset by greater than anticipated RGGI auction results. RGGI auction proceeds from the September auction totaled $773,800, and were $273,800 over budget for this auction. Proceeds from the December RGGI auction totaled $558,000 compared to a budgeted amount of $500,000. The proceeds from the December auction will be reflected in next month's financial statements. Other income of $116,200 included $108,500 in penalty payments from energy resellers as a result of not having met their RPS requirements for 2009.

Expenses associated with the general operations of CEFIA totaled $1,277,200 as compared to a budget of $1,373,500 for the period. Generally expenses for operations were in line with budget. The only line item with a variance greater than $10,000 was for temporary employees although the amount incurred, $23,000, was still within the total budget for the year of $25,000. Due to organizational changes at CI, a temporary employee has been utilized to support some accounting functions rather than CI staff as originally budgeted for. The overage in the temporary employee line item is offset by a favorable budget variance for salaries for CI shared services. All other operating expenses were within $5,000 of the budgeted amount or under budget.

Expenses associated with supporting CEFIA's programs totaled $2,634,300 as compared to a budget of $2,937,900. The favorable variance to budget can be found primarily within compensation and the associated benefits for CEFIA employees supporting these programs. The refinement of new CEFIA programs being developed resulted in positions being filled later than anticipated in the budget and vacancies that still exit for some programs . It is anticipated that these vacancies will be filled within the next two months as CEFIA's new financing programs are implemented.

Statement of Assets and CashFlows

Net assets as of November 30, 2012 were $87,925,300 an increase of $6,737,100 from June 30, 2012. Cash balances of $79,201,200 increased $5,987,700 since the beginning of the year. These cash balances are offset by $23,779,600 of program commitments as of November 30th(see page 6 for a detailed analysis of commitments by programs). It is anticipated that commitments for the residential solar PV investment program and CEFIA's new residential,commercial and nonprofit financing programs will increase significantly in the coming months

Clean Energy Finance and Investment Authority

Financial Analysis

Table of Contents

For the five months ended November 30, 2012

Clean Energy Finance and Investment Authority

Comparison of FY 2013 Budget to Actual

Statement of Income and General Operations and Program Expenses

For the four months ended November 30, 2012

(000's)

	Actual FY2013 Gen. Ops	Actual FY2013 Programs	Actual FY2013 Total	Budget FY2013 Gen. Ops	Budget FY2013 Programs	Budget FY2013 Total	(Under) Over Budget	%
Income								
Utility customer assessments	$ 12,075.4	$ -	$ 12,075.4	$ 12,325.0	$ -	$ 12,325.0	$ (249.6)	(2%)
RGGI auction proceeds	$ 773.8	$ -	$ 773.8	$ 500.0	$ -	$ 500.0	$ 273.8	
Interest on bank deposits	$ 61.2	$ -	$ 61.2	$ 50.0	$ -	$ 50.0	$ 11.2	22%
Renewable Energy Credits,net of fees	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Interest income-Solar Lease Notes,net of fees	$ 40.2	$ -	$ 40.2	$ 50.0	$ -	$ 50.0	$ (9.8)	(20%)
Grant income (LBE,N2N,Sunrise)	$ 683.7	$ -	$ 683.7	$ 683.7	$ -	$ 683.7	$ (0.0)	(0%)
Grant income (ARRA SEP)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Other income	$ 116.2	$ -	$ 116.2	$ 30.0	$ -	$ 30.0	$ 86.2	287%
Total revenues:	$ 13,750.4	$ -	$ 13,750.4	$ 13,638.7	$ -	$ 13,638.7	$ 111.7	1%
Expenses								
Compensation & Benefits:								
-Salaries & Wages-CEFIA employees	$ 461.1	$ 531.9	$ 993.0	$ 461.1	$ 736.9	$ 1,198.0	$ (205.0)	(17%)
-Salaries & Wages-CI shared services	$ 123.4	$ 1.7	$ 125.1	$ 152.9	$ 2.0	$ 154.9	$ (29.8)	(19%)
-Employee Benefits-CEFIA employees	$ 292.3	$ 358.9	$ 651.2	$ 285.9	$ 456.9	$ 742.8	$ (91.6)	(12%)
-Employee Benefits-CI shared services	$ 84.6	$ 1.0	$ 85.6	$ 94.6	$ 1.3	$ 95.9	$ (10.2)	(11%)
Consulting and professional fees								
- Legal	$ 3.5	$ 32.3	$ 35.8	$ 15.0	$ 32.3	$ 47.3	$ (11.5)	(24%)
- Accounting & Audit	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
- Consulting fees	$ 29.9	$ 89.6	$ 119.5	$ 35.0	$ 89.6	$ 124.6	$ (5.1)	(4%)
- Project inspection fees	$ -	$ 56.4	$ 56.4	$ -	$ 56.4	$ 56.4	$ (0.0)	(0%)
Marketing/External relations	$ 43.4	$ 50.0	$ 93.4	$ 60.0	$ 50.0	$ 110.0	$ (16.6)	(15%)
EM&V	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Rent and location related expenses								
-Rent/Utilities/Maintenance	$ 79.1	$ -	$ 79.1	$ 91.0	$ -	$ 91.0	$ (11.9)	(13%)
-Telephone/Communications	$ 17.9	$ -	$ 17.9	$ 17.0	$ -	$ 17.0	$ 0.9	5%
-Equipment & storage rentals	$ 3.2	$ -	$ 3.2	$ 5.0	$ -	$ 5.0	$ (1.8)	(36%)
-Depreciation FF&E	$ 25.5	$ -	$ 25.5	$ 35.0	$ -	$ 35.0	$ (9.5)	(27%)
Office, computer & other expenses								
-Office expense	$ 15.5	$ -	$ 15.5	$ 20.0	$ -	$ 20.0	$ (4.5)	(23%)
-Computer operations	$ 16.2	$ -	$ 16.2	$ 21.0	$ -	$ 21.0	$ (4.8)	(23%)
-Subscriptions	$ 5.0	$ -	$ 5.0	$ 7.0	$ -	$ 7.0	$ (2.1)	(29%)
-Training and education	$ 4.8	$ -	$ 4.8	$ 14.0	$ -	$ 14.0	$ (9.2)	(66%)
-Temporary employees	$ 23.0	$ -	$ 23.0	$ 11.0	$ -	$ 11.0	$ 12.0	109%
-Travel,meetings & related expenses	$ 27.4	$ -	$ 27.4	$ 25.0	$ -	$ 25.0	$ 2.4	10%
-Insurance	$ 21.4	$ -	$ 21.4	$ 23.0	$ -	$ 23.0	$ (1.6)	(7%)
Grant expenses(LBE/N2N/Sunrise)	$ -	$ 574.6	$ 574.6	$ -	$ 574.6	$ 574.6	$ -	0%
Financial Incentives-Grants & Rebates	$ -	$ 938.0	$ 938.0	$ -	$ 938.0	$ 938.0	$ -	0%
Interest rate buydown-HDF/CHIF	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Provision for Loan loss -Grid Tied Loan Program	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Provision for Loan loss - Op Demo Loans	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Provision for Loan loss - Alpha Loans	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Provision for Loan Loss - GreenerU	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Provision for Loan Loss - WINN LISC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Provision for Loan Loss -CPACE Loans	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Provision for Loan Loss - Lease Programs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Provision for Loan Loss -Res. Solar Loans	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Provision for Loan Loss - Res. EE Loans	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Provision of Loan Loss - Clean Energy Bus Sol Loans	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Total expenses:	$ 1,277.2	$ 2,634.3	$ 3,911.5	$ 1,373.5	$ 2,937.9	$ 4,311.4	$ (399.9)	(9%)
FY13 revenues over FY13 expenses:			$ 9,838.9			$ 9,327.3	$ 511.6	
Financial Incen.:Grants/Rebates Paid - FY12 Commitments:			$ (3,157.3)					
Revenues over expenses:			$ 6,681.6					

Clean Energy Finance and Investment Authority
Statement of Revenues, Expenses
and Changes in Net Assets
For the five months ended November 30, 2012
(000's)

Total Net Assets	**6/30/2012**		$	81,188.2
FY 2013 expenses over income:				9,842.9
Utility customer assessments	12,075.4			
Inrest income	101.4			
RGGI auction proceeds	773.8			
Grant income	683.7			
Other income	116.2			
		13,750.5		
Compensation	(1,854.9)			
Consulting and professional fees	(211.7)			
Marketing/External relations	(93.4)			
EM&V	-			
Rent and location related expenses	(125.7)			
Office, computer & other expenses	(113.3)			
		(2,399.0)		
Provision for Loan Loss - New Programs	-			
Interest Rate Buydowns - New Programs	-			
Residential Solar PV rebates	(891.9)			
Anaerobic Digestor Pilot	-			
CHP Pilot	-			
Condo Renewable Energy grants	-			
Maintained Programs	(42.1)			
		(934.0)		
NOTE: Subtotal, Recurring Programs		10,417.5		
Clean Energy Business Solutions	-			
Transition & Other	-			
Federal Grants	(574.6)			
Loan Loss Reserve - Grid Tied, Op Demo & Alpha Loans	-			
NOTE: Subtotal, Non-Recurring/Special Programs		(574.6)		
Expenditures grants and rebates approved prior to FY13			$	(3,157.0)
PROGRAM GOAL 1 PROJECT 150 & PRE DEVELOPMENT PROGRAM	$	-		
CI&I ON SITE GENERATION PROGRAM - Strategic Investments		-		
CI&I ON SITE GENERATION PROGRAM - COMM. SOLAR		(287.0)		
Residential Solar PV -Pre Sec 106, PA 11-80		(81.0)		
RESIDENTIAL SOLAR PV INVESTMENT PROGRAM (Section 106,PA 11-80)		(1,226.0)		
CI&I On Site Generation - Solar NFP/Govt		(365.0)		
CI&I On Site Generation -Fuel Cell		(475.0)		
GEO THERMAL,SOLAR THERMAL AND HOT WATER PROJECTS		(330.0)		
CI&I ON SITE GENERATION PROGRAM - FEASIBILITY STUDIES		(67.0)		
Operational Demonstration Program		(158.0)		
TECHNOLOGY AND DEVELOPMENT STUDIES		-		
Education & Outreach Programs		(165.0)		
Other		(3.0)		
Other (change in other balance sheet components)			$	51.2
Total Net Assets	**11/30/2012**		$	87,925.3

Clean Energy Finance and Investment Authority

Financial Analysis

For the five months ended November 30, 2012

Statement of Net Assets

(000's)

	Actual 6/30/2012	YTD 11/30/2012
Assets		
Current assets		
Cash and cash equivalents (Unrestricted)	$ 64,672.9	$ 70,830.4
Utility receivables	$ 2,580.0	$ 2,523.4
Accounts receivable	$ 725.3	$ 54.1
Other current assets	$ 350.3	$ 100.9
Total current assets	$ 68,328.5	$ 73,508.8
Noncurrent assets		
Investments		
Promissory notes - solar lease program V1	$ 12,036.6	$ 11,816.7
Loan loss reserve - solar lease program V1	$ (300.9)	$ (300.9)
Promissory notes - solar lease program V2	$ -	$ -
Loan loss reserve - solar lease program V2	$ -	$ -
Promissory notes - solar loan program	$ -	$ -
Loan loss reserve - solar loan program	$ -	$ -
Promissory notes - WIN LISC program	$ -	$ -
Promissory notes - GreenerU program	$ -	$ -
Promissory notes - EE Loan program	$ -	$ -
Loan loss reserve - EE loan program	$ -	$ -
Promissory notes - CPACE program	$ -	$ -
Loan loss reserve - CPACE program	$ -	$ -
Promissory notes - Alpha program	$ -	$ -
Loan loss reserve - Alpha program	$ -	$ -
Promissory notes - Grid tied program	$ -	$ -
Loan loss reserve - Grid tied program	$ -	$ -
Promissory notes - Op Demo program	$ -	$ -
Loan loss reserve - Op Demo program	$ -	$ -
Equity/Debt investments (pre FY13)	$ 2,155.5	$ 2,155.5
Investments-REC's	$ 1,324.6	$ 1,324.6
Cash and cash equivalents (Restricted)	$ 8,540.6	$ 8,370.7
Capital assets		
Furniture,Equipment & L/H Improvements	$ 91.3	$ 82.4
Total non current assets	$ 23,847.7	$ 23,449.0
Total assets	$ 92,176.2	$ 96,957.8

	Actual 6/30/2012	YTD 11/30/2012
Liabilities and Net Assets		
Accounts,grants payable and accrued expenses	$ 2,624.9	$ 669.4
Deferred revenue-ARRA	$ 8,363.1	$ 8,363.1
LLR- outside debt solar loan program	$ -	$ -
LLR- outside debt EE loan program	$ -	$ -
Total libilities	$ 10,988.0	$ 9,032.5
Net Assets:		
Investment in capital assets	$ 91.3	$ 82.4
Restricted net assets	$ 8,540.7	$ 8,370.7
Unrestricted net assets	$ 72,556.2	$ 79,472.2
Total Net Assets	$ 81,188.2	$ 87,925.3
Total Liabilities and Net Assets	$ 92,176.2	$ 96,957.8

Clean Energy Finance and Investment Authority

Statement of Cash Flows

as of November 30, 2012

(000's)

Cash flows from operating activities		
Utility customer assessments	$	10,121.2
Other income	$	136.0
Proceeds received from RGGI auctions	$	1,499.0
Proceeds received from private foundation & federal grants	$	542.5
Return of principal on investments	$	219.2
Interest on deposits,investments, solar lease notes	$	181.4
Cash paid for federal grants	$	(578.3)
Cash paid for CEFIA grants and rebates	$	(4,042.7)
Cash paid for general & admin expense	$	(2,090.7)
Net change in cash and cash equivalents	$	5,987.7
Cash and cash equiv., beginning of period	$	73,213.5
Cash and cash equiv., end of period	$	79,201.2

Clean Energy Finance and Investment Authority
Statement of Program Investments
As of November 30, 2012
(000's)

Loan/Investment Date	Loan No.	Issuer	Project	Board Approved Commitment	Investment/ Advances to date	Reserve	Current Valuation	Interest Rate	Termination/ Maturity Date	Notes
Alpha Program										
8/28/2012	13-50100-2	Anchor Science, LLC	Development of nanomaterial for thermal energy management in electronics.	**$ 150**	**$ -**	**$ -**	**$ -**	**6% or Prime +1%**	8/28/2022	Non Recourse Loan. Repayment based on commercial success of technology or liquidation event.. No repayment of loan is required if commercial success is not achieved after ten years from the execution date of the agreement. (5 yr amortization or lump sum payment)
8/9/2012	13-50100-1	Apollo Solar, Inc.	Development of solar smart grid inverter.	**$ 150**	**$ -**	**$ -**	**$ -**	**6% or Prime +1%**	8/9/2022	Non Recourse Loan. Repayment based on commercial success of technology or liquidation event.. No repayment of loan is required if commercial success is not achieved after ten years from the execution date of the agreement. (5 yr amortization or lump sum payment)
Energy Efficiency Financing										
9/13/2012	GU-001	Greener U/Campus Efficiency Now	Energy efficiency financing to Colleges and Universities in the CT Conference of Independent Colleges	**$ 1,000**	**$ -**	**$ -**	**$ -**	**IRR of 7%**	TBD Project by Project	College/University will enter into a service agreeement with Campus Efficiency, LLC to provide energy efficiency improvements. CEFIA will assist the colleges/university with its financial obligation under the agreement. CEFIA wil earn an IRR of 7% on its advances.
Pre Development Program (1)										
4/13/2006	PD -001	Bridgeport Fuel Cell Park, LLC	Fairfield County Fuel Cell Park	**$ 500**	**$ 499**	**$ (499)**	**$ -**	8.75%	See Notes	LOC. Note matures upon the earlier of: closing of permenant financing,12 months after comercial operation of project,sale,acquisition or merger of interest. Terminates upon event of default.
4/30/2009	PD-002	Chestnut Hill BioEnergy CT, LLC	Biomass generation project, Waterbury,CT	**$ 500**	**$ 237**	**$ (237)**	**$ -**	4.25%	See Notes	LOC. Note matures upon the earlier of: closing of permenant financing,12 months after comercial operation of project,sale,acquisition or merger of interest. Terminates upon event of default.
02/19/09	PD-003	BNE Energy Inc.	Colebrook Wind - Phase 1	**$ 120**	**$ 120**	**$ (120)**	**$ -**	4.25%	See Notes	LOC. Note matures upon the earlier of: closing of permenant financing,12 months after comercial operation of project,sale,acquisition or merger of interest. Terminates upon event of default.
02/19/09	PD-004	BNE Energy Inc.	Prospect Wind - Phase 1	**$ 102**	**$ 102**	**$ (102)**	**$ -**	4.25%	See Notes	LOC. Note matures upon the earlier of: closing of permenant financing,12 months after comercial operation of project,sale,acquisition or merger of interest. Terminates upon event of default.
06/24/10	PD-005	BNE Energy Inc.	Colebrook Wind - Phase II	**$ 380**	**$ 380**	**$ (380)**	**$ -**	4.25%	See Notes	LOC. Note matures upon the earlier of: closing of permenant financing,12 months after comercial operation of project,sale,acquisition or merger of interest. Terminates upon event of default.
06/24/10	PD-006	BNE Energy Inc.	Colebrook Wind - Prospect II	**$ 398**	**$ 398**	**$ (398)**	**$ -**	4.25%	See Notes	LOC. Note matures upon the earlier of: closing of permenant financing,12 months after comercial operation of project,sale,acquisition or merger of interest. Terminates upon event of default.
Op Demo Program (1)										
8/8/2007	ODP-001	Mechatronic Energy Systems, LLC	Low Head Run-of the-River Hydro Turbine Technology Project, Mansfield,CT	**$ 557**	**$ 501**	**$ (501)**	**$ -**	**TBD**	8/7/2017	Non Recourse Loan. Repayment based on commercial success ($541,000/m) of technology. No repayment of loan is required if commercial success is not achieved after ten years from the execution date of the agreement. (10 yr amortization)
7/1/2009	ODP-002	Optiwind, inc.	Compact Wind Accelerated Turbine, Torrington,CT	**$ 750**	**$ 413**	**$ (412)**	**$ -**	**TBD**	6/30/2019	Non Recourse Loan. Repayment based on commercial success ($2,000,000/m) of technology. No repayment of loan is required if commercial success is not achieved after ten years from the execution date of the agreement. (10 yr amortization)
4/5/2010	ODP-003	LiteTrough, LLC	Concentrated Solar Water Heater Technology,Milford,CT	**$ 81**	**$ 31**	**$ (31)**	**$ -**	4.25%	4/4/2020	Non Recourse Loan. Repayment based on commercial success ($500,000/m) of technology. No repayment of loan is required if commercial success is not achieved after ten years from the execution date of the agreement.(5 yr amortization)
6/28/2010	ODP-004	Avalence, LLC	High pressure multipurpose electrolyer technology, Hamden,CT	**$ 500**	**$ 350**	**$ (350)**	**$ -**	**TBD**	6/27/2020	Non Recourse Loan. Repayment based on commercial success ($1,000,000/m) of technology. If no commercial success company repays amount advanced. If commercial success company pays 2 times amount advanced or amortizes over 5 yr period at applicable interest rate.

Clean Energy Finance and Investment Authority
Statement of Program Investments
As of November 30, 2012
(000's)

Loan/Investment Date	Loan No.	Issuer	Project	Board Approved Commitment	Investment/ Advances to date	Reserve	Current Valuation	Interest Rate	Termination/ Maturity Date	Notes
Other Investments										
		Company	**Security**							
3/27/2002		Acumentrics Corporation	Series B Preferred Stock		$ 4,000	$ (2,000)	$ 2,000			Fuel Cell Technology
6/30/2010		Optiwind Corporation	Series B Preferred Stock		$ 272	$ (204)	$ 68			Wind Turbine Technology
6/29/2011		Optiwind Corporation	Promissory Note		$ 350	$ (263)	$ 88			
					$ 7,654	$ (5,498)	$ 2,156			

(1) Due to the nature of the Pre Development and Op Demo Loans, the loans are currently fully reserved for.

Clean Energy Finance and Investment Authority
Statement of Incentives, Grants and Rebates
As of November 30, 2012
(000's)

Program	FY12 Programs Commitments Outstanding 6/30/2012	Fundings YTD FY13	Withdrawn	Commitments Outstanding 10/31/2012
Project 150	$ 7,224	$ -	$ (3,950)	$ 3,274
Pre Development Loans	$ 263	$ -	$ -	$ 263
Strategic Investments	$ 35	$ -	$ -	$ 35
Commercial Solar (for profit)	$ 2,215	$ (287)	$ -	$ 1,928
Commercial Solar (not for profit/government)	$ 2,719	$ (365)	$ -	$ 2,354
Fuel Cell program	$ 5,870	$ (475)	$ -	$ 5,395
CI&I On Site Generation -Feasibility Studies	$ 195	$ (67)	$ -	$ 128
Residential Solar PV Program (pre Solar PV Investment Program)	$ 87	$ (81)	$ -	$ 6
Residential Solar PV Investment Program	$ 2,945	$ (1,226)	$ -	$ 1,719
Solar Thermal & Geothermal Programs	$ 1,017	$ (250)	$ -	$ 767
Solar Hot Water Program - Residential	$ 283	$ (80)	$ -	$ 203
Solar Hot Water Program - Commercial	$ 2,000	$ -	$ -	$ 2,000
Operational Demonstration & Alpha Programs	$ 948	$ (158)	$ -	$ 790
Education & Outreach Programs	$ 1,459	$ (165)	$ (59)	$ 1,235
FY11-FY12 CP Goal 4: advocacy & public policy support	$ 102	$ (3)	$ -	$ 99
	$ 27,362	$ (3,157.3)	$ (4,009)	$ 20,196

Program	FY13 Budget	FY 13 Programs FY13 Commitments	Fundings YTD FY13	Withdrawn	Commitments Outstanding 10/31/2012
Transition					
Education & Training Programs	$ 400.0	$ -	$ -	$ -	$ -
Maintain					
Clean Energy Communities	$ 650.0	$ 73.5	$ (42.1)	$ -	$ 31.4
Community Innovation Grants	$ 200.0	$ -	$ -	$ -	$ -
Project Opportunities Fund	$ 500.0	$ -	$ -	$ -	$ -
Strategic Investment Fund	$ 100.0	$ -	$ -	$ -	$ -
Statutory					
Residential Solar PV Investment Program	$ 9,333.0	$ 4,444.1	$ (891.9)	$ -	$ 3,552.2
Anaerobic Digestor Pilot	$ 2,000.0	$ -	$ -	$ -	$ -
CHP Pilot	$ 2,000.0	$ -	$ -	$ -	$ -
Condo Renewable Energy Grants	$ 50.0	$ -	$ -	$ -	$ -
Commercial & Industrial					
Clean Energy Business Solutions	$ 2,500.0	$ -	$ -	$ -	$ -
Federal Grants - InKind payments					
Sun Rise New England	$ 48.0	$ 4.0	$ (4.0)	$ -	$ -
	$ 17,781.0	$ 4,521.6	$ (938.0)	$ -	$ 3,583.6
			$ (4,095.3)		$ 23,779.8

Clean Energy Finance and Investment Authority
Financial Analysis
Utility Customer Assessment Analysis
For the four months ended November 30, 2012
(000's)

	FY 13 Actual		FY13 Budget		(Under) Over FY 12		
July	$	2,709.4	$	2,700.0	$	9.4	
August	$	2,815.0	$	2,825.0	$	(10.0)	
September	$	2,457.0	$	2,500.0	$	(43.0)	
October	$	1,994.0	$	2,200.0	$	(206.0)	
November	$	2,100.0	$	2,100.0	$	-	A
December	$	-	$	-	$	-	
January	$	-	$	-	$	-	
February	$	-	$	-	$	-	
March	$	-	$	-	$	-	
April	$	-	$	-	$	-	
May	$	-	$	-	$	-	
June	$	-	$	-	$	-	
Total assessments:	$	12,075.3	$	12,325.0	$	(249.7)	
						-2.1%	

A. Data on actual activity had not been received from the utility companies as of te date this report was prepared. Current month actual results will be reflected in next month's financial report.