



## **DRAFT AGENDA**

### **Joint Committee of the CT Energy Efficiency Board and the Connecticut Green Bank Board of Directors**

**Eversource Energy  
107 Selden Street, Berlin, CT  
Room 0-22E, East Building**

**Wednesday, April 19, 2017  
1:30-3:30 p.m.**

1. Call to Order
2. Public Comments
3. Review and approval of Meeting Minutes for January 18, 2017 meeting (5 min)
4. Other Business (20 min)
  - a. Energy legislation in CT 2017 Legislative session - Update
  - b. Governor's Council on Climate Change – Update
  - c. Comprehensive Energy Strategy – Update
  - d. Strategic electrification – Update/overview
5. Report-Outs from Sector Working Groups: Emerging Opportunities and Issues to Resolve (80 min)
  - a. Deep Dive: C&I – Small, Medium, and Large Business (including update on SBEA financing proposal)
  - b. Brief Report: Residential – Single Family and Multi-Family (including update on 4/18 meeting on multi-family program issues)
  - c. Brief Report: Government
6. Planning for Next Meeting (15 min)
  - a. Propose and discuss updates/revisions to Joint Committee goals at July 2017 meeting
  - b. Identify additional topics for future 2017 meetings
7. Adjourn

Join the meeting online at: <https://global.gotomeeting.com/join/509552173>

Or dial in using your telephone:  
Dial: (408) 650-3123 / Access Code: 509-552-173



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# Joint Committee

Connecticut Energy Efficiency Board and the  
Connecticut Green Bank Board of Directors

Eversource Energy  
April 19, 2017



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# Agenda Item #1

## Call to Order



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# Agenda Item #2

## Public Comments



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# Agenda Item #3

## Approval of Meeting Minutes for January 18, 2017



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# Agenda Item #4a

## Energy Legislation in CT 2017 Session

# Legislative Session 2017 – “Snapshot”

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- **C-PACE** – HB 7208 clarifies lien survivability, financing types, and new construction;
- **R-PACE** – SB 973 makes CGB statewide administrator of an opt-in municipal R-PACE program for residential clean energy improvements;
- **RGGI** – HB 7107 aligns CGB use of RGGI auction proceeds with its statutory definition of “clean energy”;
- **RPS** – SB 630 proposes to increase the Class I RPS (i.e., SB 106 proposed 40% by 2040), CGB advocating for lowering ACP;
- **ZREC-LREC** – SB 860 extends the program by one year (i.e., SB 106 inclusion as well), CGB advocated for lowering ceiling price; and
- **Fuel Cells** – GB 7036 creates a utility-led competitive procurement for 10 MW of fuel cell generation, administered through PURA (i.e., SB 106 inclusion as well).



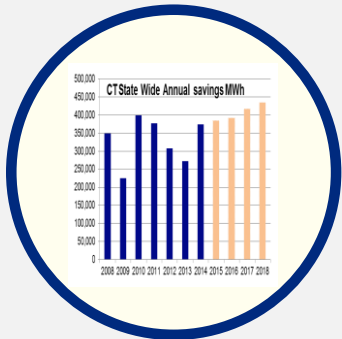
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# Agenda Item #4b

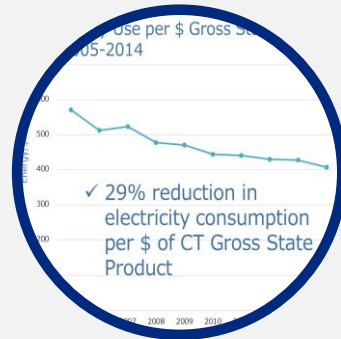
## Governor's Council on Climate Change



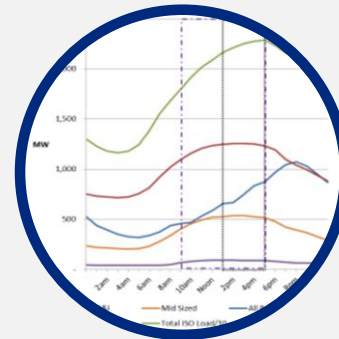
# Key Strategies for Better Buildings



Prioritize energy savings as a financing resource and as an energy resource



Improve energy performance of existing buildings; Increase productivity of processes



Integrate efficiency, storage, rates, and renewables to reduce peak demand

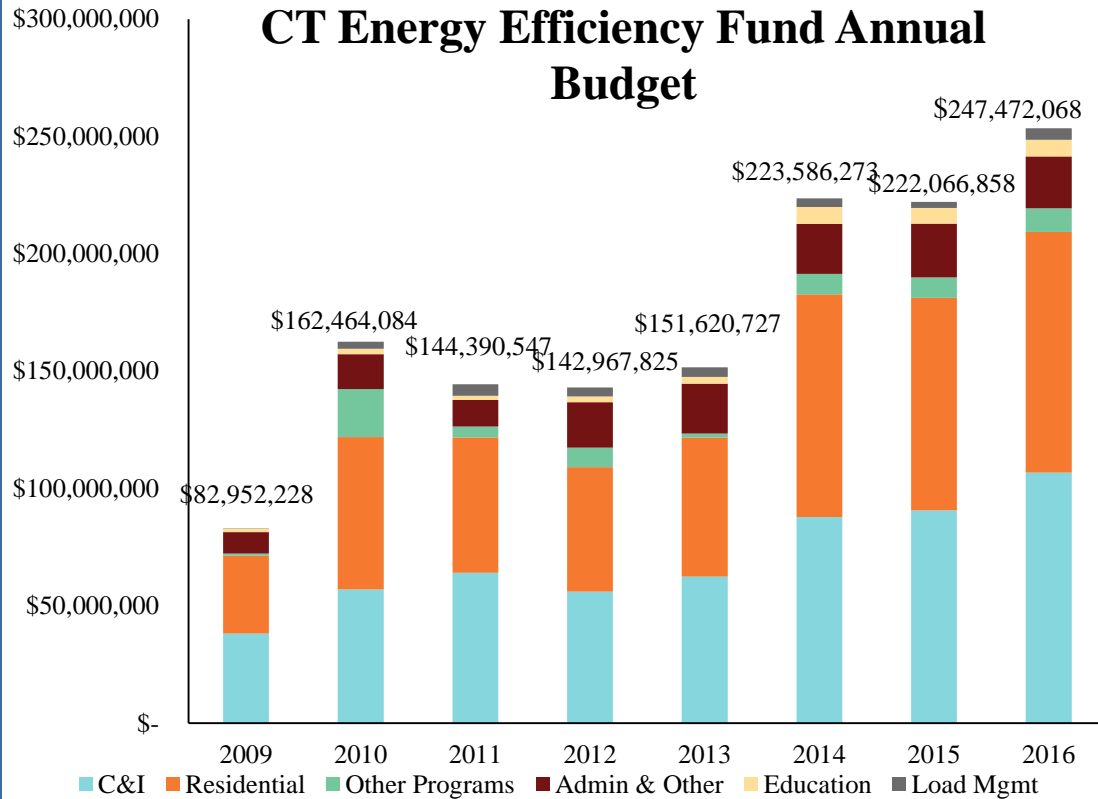


Ensure interoperability of demand response communications between grid and buildings



# Connecticut's Current Investment and Progress

## CT Energy Efficiency Fund Annual Budget

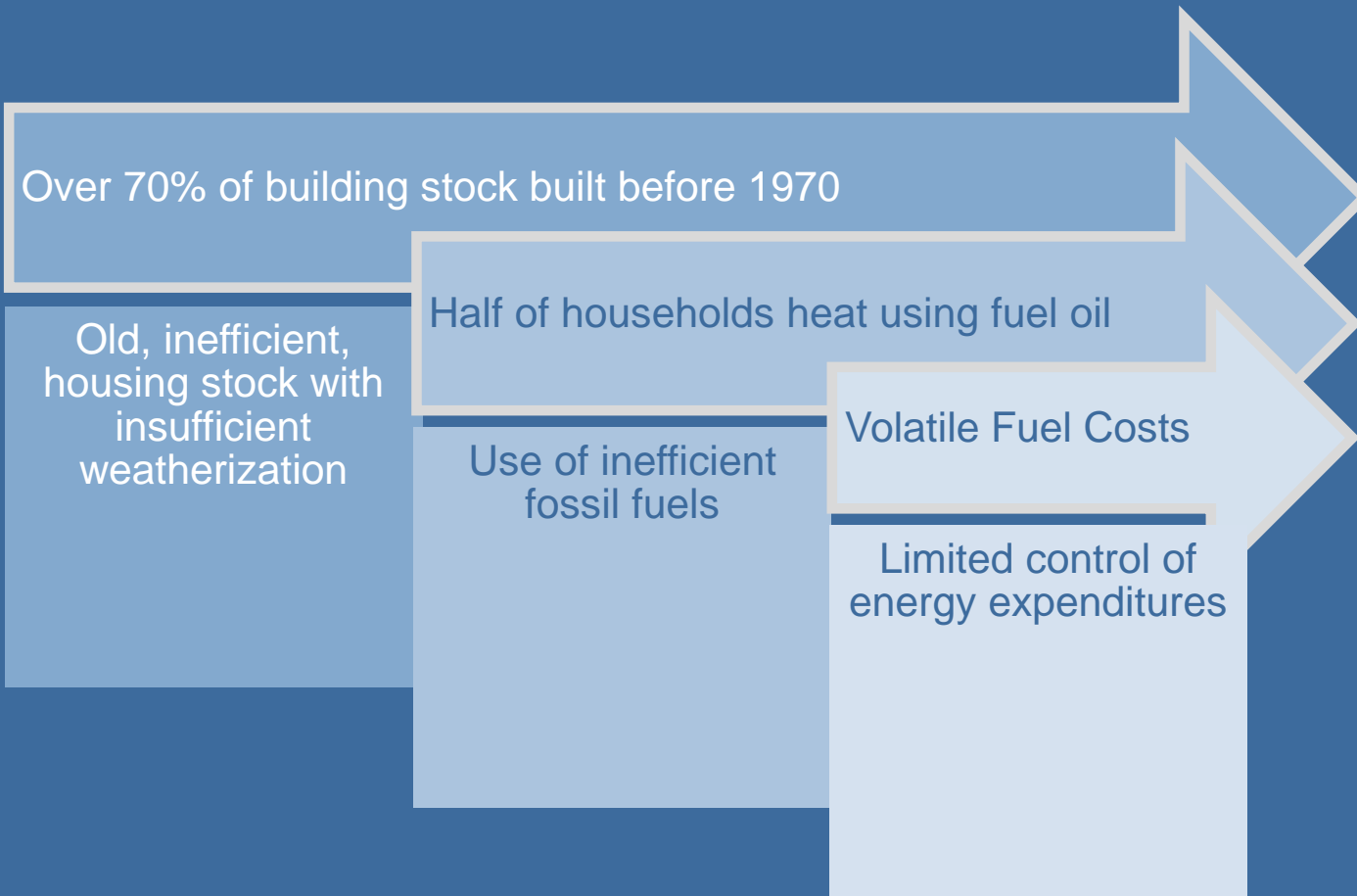


## Highlights of 2016-2018 C&LM Plan Targets:

- \$700M portfolio for customers
- 129k residential homes weatherized
- 9.7 M residential products distributed
- All 169 communities actively engaged
- 28k businesses more efficient
- Energy as a resource: Energy savings equivalent to the output of a 262 MW power plant

Source: 2016-2018 Conservation and Load Management Plan

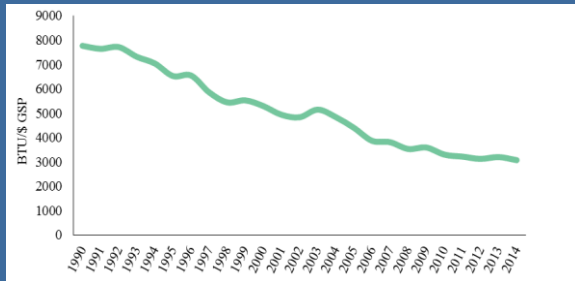
# CT Building Stock: Emissions Reduction Opportunity



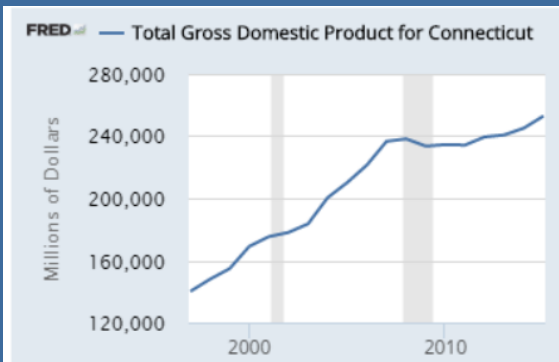
Focus  
Investment  
on Thermal  
Efficiency



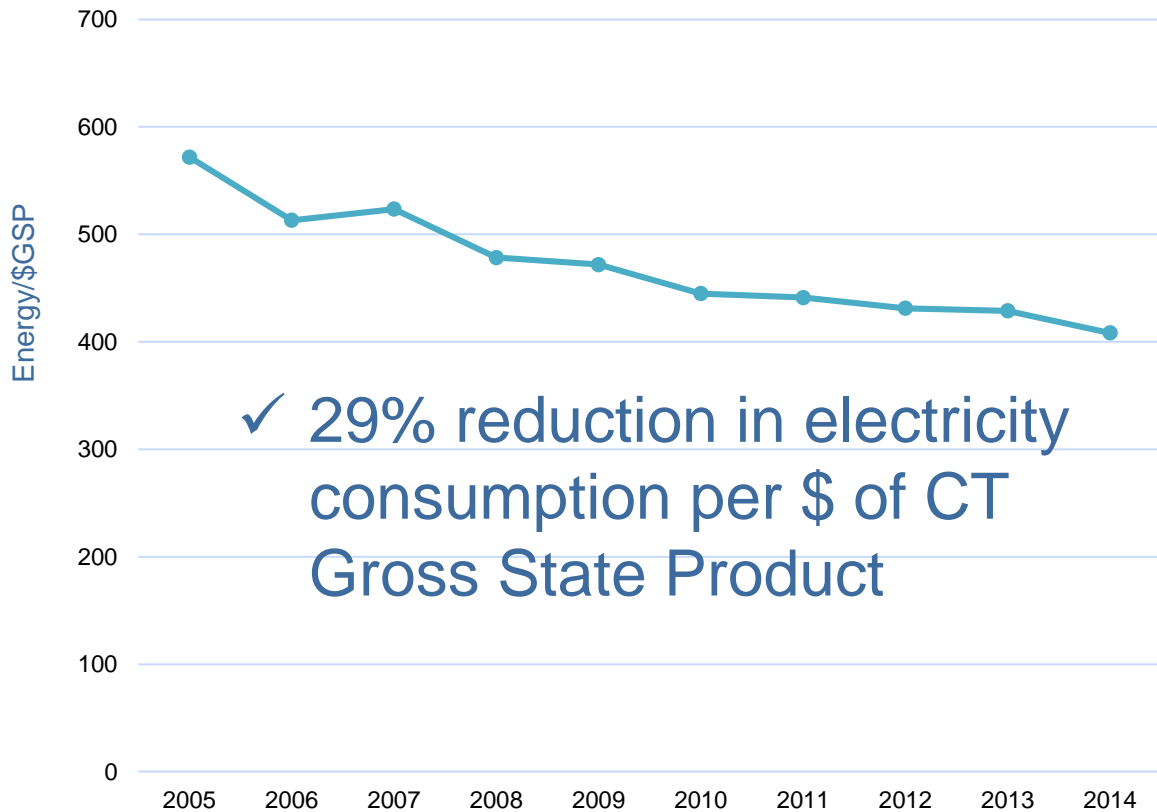
# Efficiency Improves CT Productivity



Connecticut's businesses are using less electricity to produce an increasing quantity of goods and services



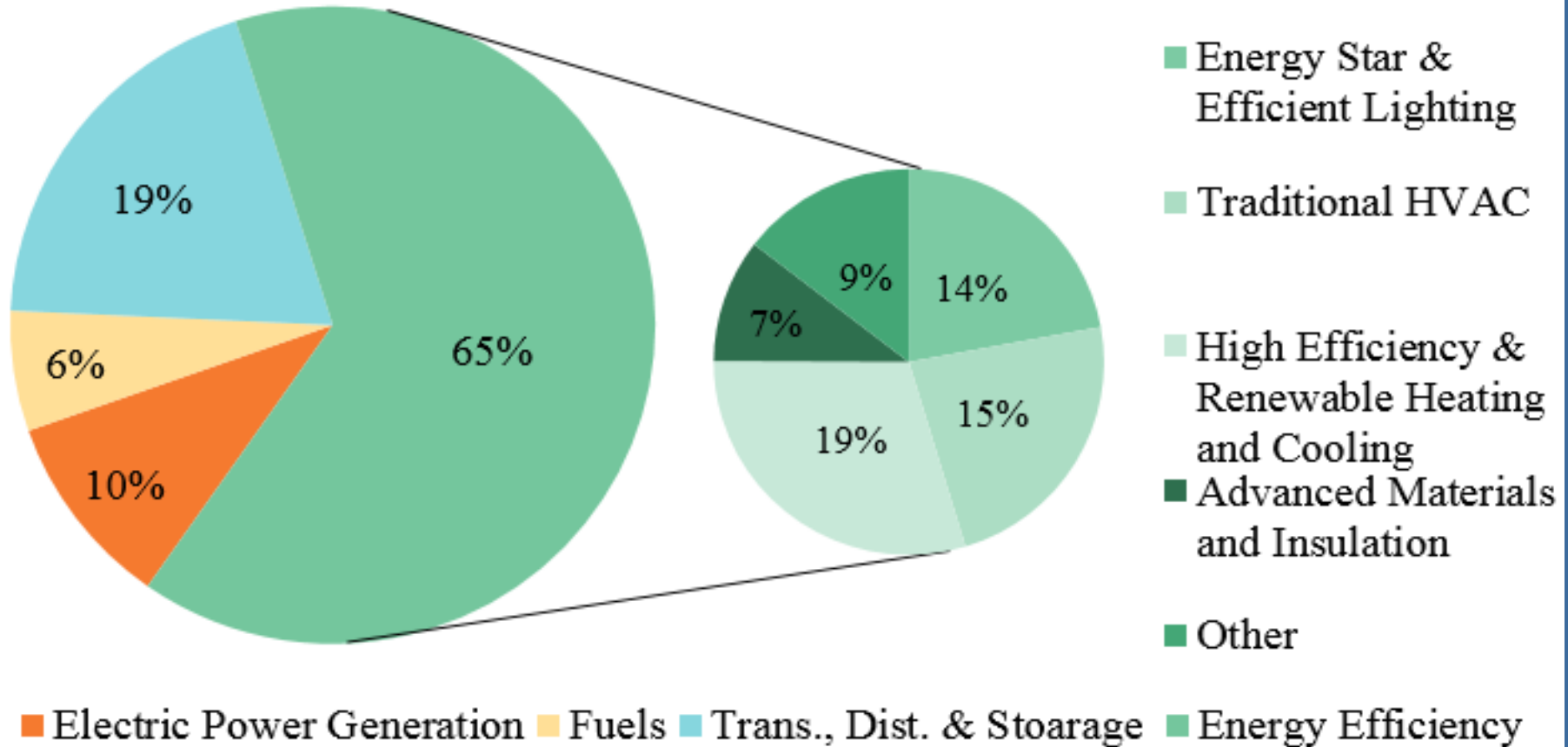
## Energy Use per \$ Gross State Product 2005-2014



Sources: EIA SEDS data, US Bureau of Economic Analysis, Federal Reserve Economic Data

# Efficiency employs 34,000 in CT

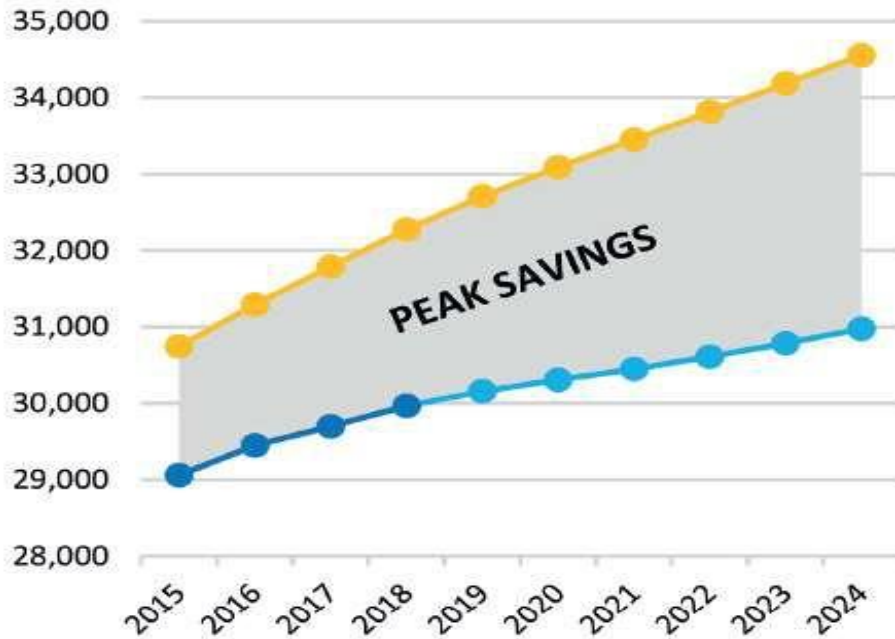
## Connecticut Energy Employment by Major Technology



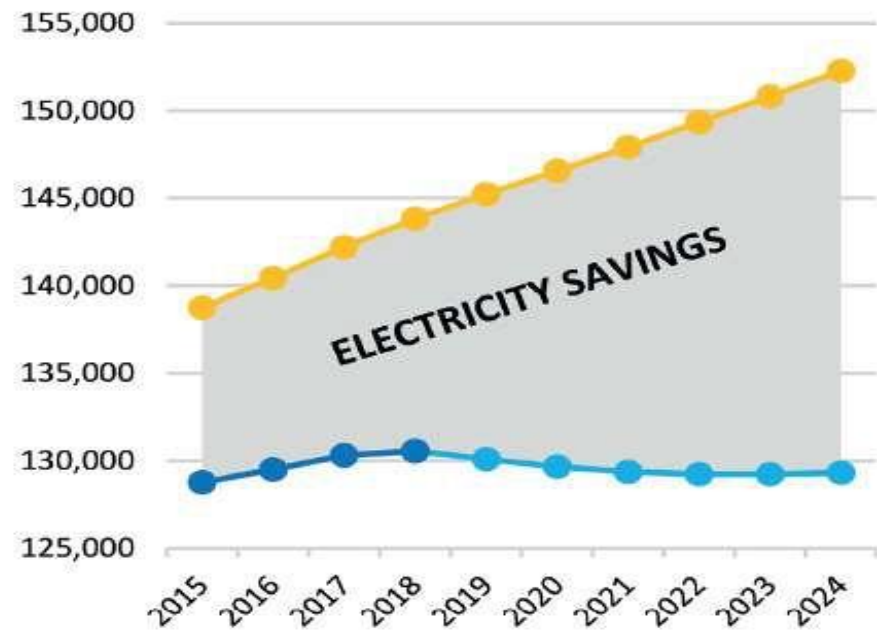
Source: (United States Department of Energy, 2017)


# Check Growth & Reduce Peak


## Summer Peak (MW)




## Annual Energy (GWh)



 The gross forecast of peak demand and energy use

 The forecast minus the impact of EE participating in the Forward Capacity Market (FCM) to date

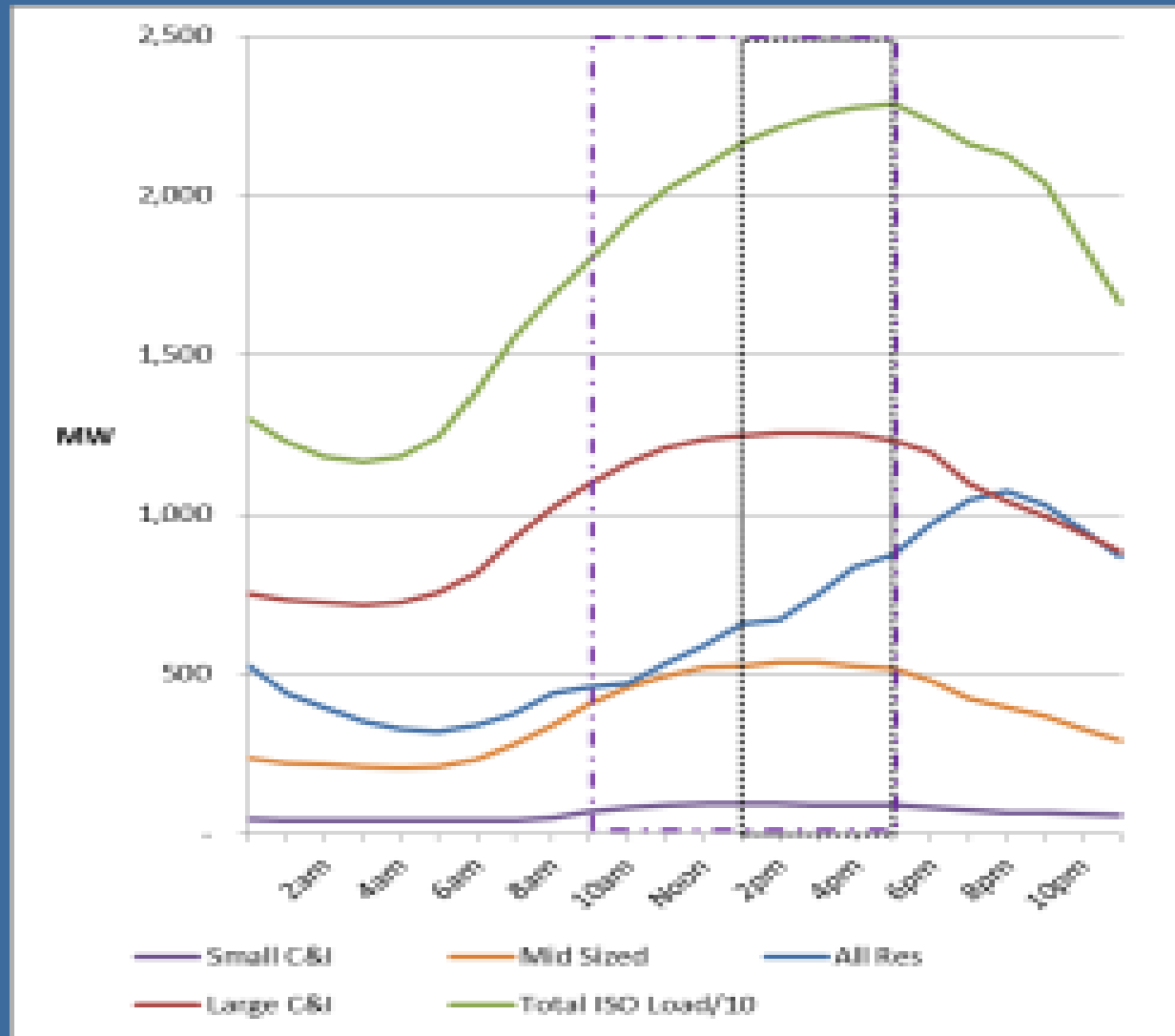
 The forecast minus anticipated EE growth beyond FCM years

ISO-NE: Investment in energy efficiency will decrease overall load growth, but peak demand continues to grow, spreading costs over fewer units.

# Managing Peak Demand is Key

Managing peak demand means customizing solutions for different customer classes. Why?

Because solutions require understanding varied energy profiles at the ISO level, distribution level, and customer level.



Source: Eversource

# Advance Controls and Two-Way Communications

- Empowering individuals and businesses to recognize the opportunity and receive value of demand response, distributed generation, and energy storage



## Benefits:

- Reduces capacity needs
- Reduces transmission & distribution investments
- Contributes to a more resilient electrical grid





# Mainstreaming Energy Efficiency

- ✓ Externalized costs of other energy sources make efficiency resource appear costly
  - requiring need for optimized mix of actions to correct market imperfections
  - incentives, simple financing, codes, standards
- ✓ Increase automated controls and automated and standardized monitoring and verification tools
- ✓ Improve consumer awareness and standardize valuation of savings opportunity through Energy Star, Home Energy Score
- ✓ Better target segment-specific barriers
  - Improve access to capital in some sectors
  - Compete better against other investment opportunities
  - Ready homes for weatherization

# Better Buildings Best Practices

## Strategies to reduce GHG emissions

Primary Target — There are four primary means to reduce greenhouse gas emissions from the building sector:

- Procure efficiency as a resource
- Increase performance of new and existing buildings
- Reduce peak demand
- Increase efficiency of thermal equipment

Approach — There are various approaches to achieve a target, which range from voluntary efforts to mandatory actions:



Timing — Immediate vs. long-term impacts

Effectiveness Factors — policy design/nuances and consumer responses

Ease of Implementation — political feasibility, equity, economic impacts, and co-benefits

# Example strategies to reduce GHG emissions

Procure energy efficiency as a resource	Increase performance of new and existing buildings	Reduce peak demand (electric efficiency)	Increase thermal efficiency (renewable thermal technologies)
<p><b>Procure efficiency as a resource</b></p> <ul style="list-style-type: none"> <li>Replicate recent procurement per PA 15-107 of a 34 MW energy efficiency commitment to displace other generation sources</li> <li>Invest portion of federal energy assistance funds in efficiency to sustainably close affordability gap</li> </ul> <p><b>Catalyze avoided costs as a financing resource</b></p> <ul style="list-style-type: none"> <li>to repurpose savings to invest in building infrastructure</li> </ul> <p><b>Better measure policy benefits of efficiency</b></p> <ul style="list-style-type: none"> <li>to adapt as market transforms</li> </ul> <p><b>Maintain consistent utility administered investments</b></p> <ul style="list-style-type: none"> <li>to stabilize industry</li> </ul>	<p><b>Reduce waste</b></p> <ul style="list-style-type: none"> <li>Increase application of combined heat and power</li> <li>Improve voltage regulation/optimization</li> <li>Integrate water conservation; increase efficiency of treatment</li> <li>Assess applicability of district heating/thermal loops</li> </ul> <p><b>Lock in efficiency</b></p> <ul style="list-style-type: none"> <li>Provide simple life cycle analyses to account for both operating and installation costs</li> <li>Train for and reward installation of higher efficiency equipment</li> </ul> <p><b>Lead by Example</b></p> <ul style="list-style-type: none"> <li>Insulate and upgrade HVAC in public buildings</li> <li>Promote insurance discounts for well insulated buildings</li> </ul> <p><b>Be prepared</b></p> <ul style="list-style-type: none"> <li>Integrate pre-weatherization costs into financing and include this work in projects</li> </ul>	<p><b>Economic Signals and Incentives</b></p> <ul style="list-style-type: none"> <li>Time of Use Rates</li> <li>Peak Time Rebates</li> <li>Home Energy Score</li> </ul> <p><b>Increase and standardize two-way communication</b></p> <ul style="list-style-type: none"> <li>Deploy advanced meters or comparable data acquisition equipment</li> <li>Promote use of standards to provide a common basis to manage and communicate about electrical energy consumptions and forecasts, such as ANSI/ASHRAE/NEMA Standard 201-2016, Facility Smart Grid Information Model</li> </ul>	<p><b>Advance simple financing and upstream incentives</b></p> <ul style="list-style-type: none"> <li>for insulation, HVAC, and water heating</li> <li>to mainstream availability of most efficient equipment</li> </ul> <p><b>Heat Pump &amp; Solar Water Heaters</b></p> <ul style="list-style-type: none"> <li>Incentivized for most customers</li> <li>Subsidized for low income customers</li> <li>Upstream availability to mainstream</li> </ul> <p><b>Heat Pumps for heating and cooling/conditioning</b></p> <ul style="list-style-type: none"> <li>Target electric homes with marketing and assessments to replace electric resistance heat in near term</li> <li>Replace fossil fuel heating equipment in longer term</li> </ul>



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# Agenda Item #4c

## Comprehensive Energy Strategy

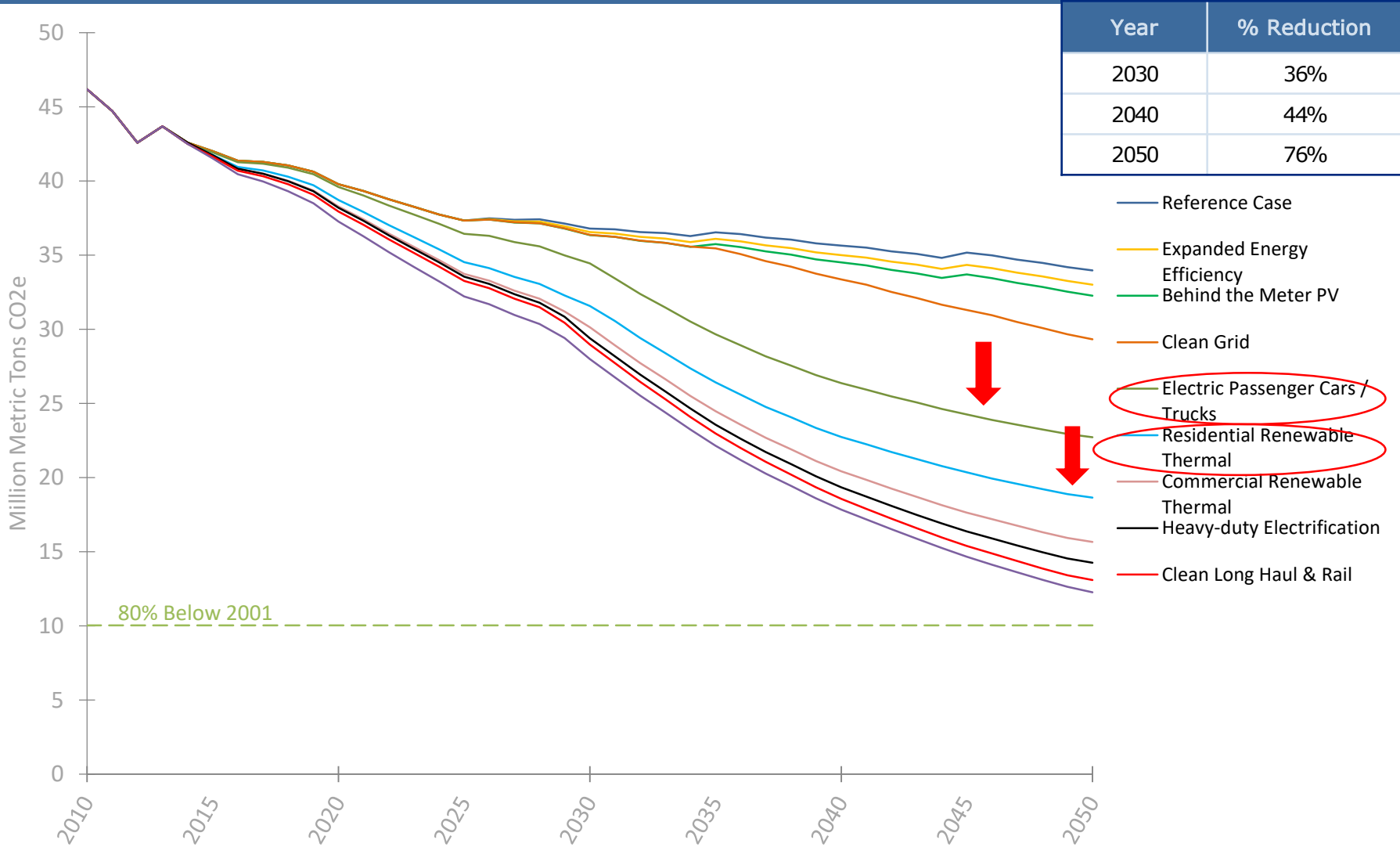


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# Agenda Item #4d

## Strategic Electrification

# Hypothetical Emission Reduction Scenario



# Electrification of Passenger Vehicles

	2015	2030	2050
35% below 2001 levels by 2030			
Approx. # of ZEVs	2,902	296,150	2,392,900
% of Fleet VMT	.1%	18%	92%
% of Sales	5%	64%	100%
45% below 2001 levels by 2030			
Approx. # of ZEVs	2,902	501,830	2,392,900
% of Fleet VMT	.1%	32%	94%
% of Sales	5%	89%	100%

# Residential Renewable Thermal

	2015	2030	2050
35% below 2001 levels by 2030			
Approx. # of Devices	6,000 – 9,000	171,186	847,293
% of Thermal load	.3%	18%	87%
# of Change Outs /yr.		11,400 (.7%)	33,800 (3%)
45% below 2001 levels by 2030			
Approx. # of Devices	6,000 – 9,000	376,896	847,293
% of Thermal load	.3%	39%	87%
# of Change Outs /yr.		25,100 (1.7%)	23,500 (1.6%)

- For this scenario renewable thermal refers to air and ground source heat pumps.
- # of Change outs per year is the # of conventional units that would need to be replaced each year in the 2015-2030 and 2030-2050 periods.





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## Agenda Item #5a

Deep Dive

C&I - Small/Medium/Large Business



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# Agenda Item #5b

## Brief Report Outs from Residential Working Groups



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# Agenda Item #5c

## Brief Report Out from Government Working Group



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# Agenda Item #6a/6b

## Planning for Next Meeting



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# Agenda Item #7

## Adjourn



**Joint Committee of the CT Energy Efficiency Board and the  
Connecticut Green Bank Board of Directors  
Eversource Energy  
107 Selden Street, Berlin, CT  
Room 0-22E, East Building  
Wednesday, January 18, 2017  
1:30-3:30 p.m.**

**MINUTES<sup>1</sup>**

**In Attendance**

Voting Members: John Harrity, Diane Duva, and Norma Glover

Non-Voting Members: Bryan Garcia, Bert Hunter (by phone), Pat McDonnell, and Ron Araujo

Others: Craig Diamond, Marissa Westbrook, Gentianna Darragjati, Steve Bruno, Pam Penna Verrillo, Kim Stevenson, Anthony Clark, Mackey Dykes, Brian Farnen (by phone), Chris Kramer (by phone), Kerry O'Neill (by phone), Glenn Reed (by phone), Nick Zuba (by phone)

**1. Call to Order**

Diane Duva called the meeting to order at 1:43 p.m.

**2. Public Comments**

There were no public comments.

**3. Review and approval of Meeting Minutes for October 17, 2016 meeting**

Upon a motion made by Diane Duva and, seconded by Norma Glover, the approval of the Meeting Minutes from October 17, 2016 passed unanimously.

**4. Other Business**

**a. CT 2017 Energy Legislative Outlook**

Brian Farnen provided an update on the Legislative Outlook. He discussed Residential PACE, explaining that they are working with EDC on the issue. He explained that CPACE has been a great success and that there is just a technical fix. He discussed the Residential Solar Investment Program and a potential legislative proposal to address a World Trade Order dispute between India and the US. He stated that there is USDA funding that the Connecticut Green Bank is going after, but they may need to make another legislative clarification in order to get access to this low-cost capital.

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<sup>1</sup> Materials for this meeting can be accessed at Box.net:

Diane Duva questioned the RSIP incentive for CT manufacturing. Brian Farnen explained that it's in the RSIP Statute, and not something that is actually in use.

**b. Governor's Council on Climate Change**

Diane Duva provided an update on the Governor's Council on Climate Change. She stated that timeline on the report for that group is within a few months. She stated that there is a lot data collection to be gone through. She stated that a lot of good information will come from the report from that group.

Bryan Garcia discussed the Retreat that the Connecticut Green Bank had in January stating that a takeaway from that was that the Connecticut Green Bank needs to find additional ways to help support zero emission vehicles, renewable thermal technologies, and grid modernization.

Norma Glover stated that the Connecticut Green Bank needs to find out how the utilities in other states are working with climate change in those states. She stated that her feeling is that if the utilities are not in on things, then they will not be able to achieve the goals that are set. Pat McDonnell noted that not including the utilities on the council was a missed opportunity by the state.

Diane Duva discussed the pilots that the utilities are doing on grid modernization. She questioned if it would be helpful for the Connecticut Green Bank to see that presentation. She stated that the question can be asked of the utilities.

Ron Araujo discussed the way that they evaluate the program on the utility side. He explained that they look at the cost effectiveness of the programs. He stated that this was presented as part of the Plan Update. He stated that they will probably follow the CES.

John Harrity discussed the Council on Climate Change, stating that they have stakeholder meetings. He stated that they are a great opportunity to see what folks that don't have a lot of specific information, but that have a strong interest in climate change, where they are at. Bryan Garcia noted that the next meeting of the Governor's Council on Climate Change was set for February 9, 2017 at DEEP in Hartford at 2:00 p.m.

**c. Comprehensive Energy Strategy**

**5. Report-Outs from Sector Working Groups: Emerging Opportunities and Issues to Resolve**

**a. Deep Dive: Residential – Single Family and Multifamily**

Ron Araujo discussed the reports on Single and Multifamily Residential. He discussed the joint goals that were identified. He stated that they are looking to

leverage up rate payer funds, increase financing in the Home Energy Solutions channel, and looking to reduce energy consumption and cost in Multifamily.

Ron Araujo discussed the integration of CHIF, which is now Capital for Change, into the Smart-E Program. He stated that the post-merger activities have been completed. He stated that they are awaiting the first report from Capital for Change.

Ron Araujo discussed tracking component costs on a monthly basis, and that this is ongoing. He stated that they are also tracking the add on measures. He stated that securing the bond process for the Smart-E Program did not make it to the Bond Commission Agenda in 2016, so they do not have an update on that.

Chris Kramer questioned if there had been any thoughts on adding CES items to the goals. Ron Araujo stated that he doesn't have an answer until they see the CES.

Bryan Garcia discussed the Mid-Year Progress Check that the Connecticut Green Bank has implemented and stated that they should revisit the goals for the Joint Committee. Ron Araujo was in agreement, in light of the new CES, when that comes out.

Ron Araujo stated that the Connecticut Green Bank and DEEP have been working together on Single Family for quite some time. He stated that Multifamily will be a bit more work. He stated that they are working to develop a tracking matrix. He stated that they have developed a draft tracking matrix, which ties into the tracking and savings per property basis and different financing in the area.

Kim Stevenson discussed the projects and where they are in terms of financing stating that there's an intense working process following up on the LEAN issues. She stated that they are meeting every few weeks.

Ron Araujo stated that they are conducting a study on the market itself to identify some of the areas that they were not aware of. He stated that they plan to meet on January 24, 2017.

Chris Kramer questioned if there was a way to track the impacts of the partnerships that are now in place, regarding the LEAN process. Ron Araujo stated that they had actually reported that out. He stated that they will continue to track that more going forward. Kerry O'Neill stated that those activities are captured in the tracking template that they have drafted.

Ron Araujo discussed Home Energy Solutions and the add ons. He stated that activity in 2015 was fairly robust. He stated that 2016 they did see a significant decline in activity with regard to customers who were having a visit. He explained that without a visit there was no recommended add on. He explained that they felt that this was due to warmer weather and lower fuel oil prices. He stated that they jumpstarted some of the marketing activity in March. He stated that that did cause an improvement overall. He stated that the price of the visit went up by \$25 as of September 1, 2016. He stated that a lot of customers took advantage of the service prior to the price increase. He stated that they did have a strong showing going into the end of the year.



Glenn Reed questioned the 2015 numbers. Ron Araujo stated that they are looking at cohorts for 2015/2016. Glenn Reed questioned if it was just add-on activity or participation in each. Ron Araujo stated that they are looking at those customers that have audits and had some sort of an upgrade in that year. Marissa Westbrook stated that it is master cohort data, but there is a bit of a lag on the rebates. She stated that the numbers will increase when more rebates are received.

Ron Araujo discussed Multi and Single Family Loan Programs. He stated that they had a comprehensive loan offered through HES and the Smart-E Bundles. He stated that if you disregard January you can see that the activity is fairly consistent, but lower on the HES side as the year went on and an increase on the Smart-E side.

Ron Araujo stated that they are showing a lot of upgrades being done with other financing mechanisms. He stated that they do have good penetration into the market to finance some of the upgrades.

Kerry O'Neill discussed the Smart-E interest rate buy downs. She stated that the credit enhancement component of the Smart-E is what is reserved and set aside on the balance sheet as part of the Loan Loss Reserve Program, not actual losses. Kerry stated that the EEB will no longer pay the origination and servicing fee for C4C Smart-E loans, stating that that will shift over to the Smart-E Program. Bryan Garcia stated that they had allocated \$8.25 million and that they're not seeing any losses. He stated that they're looking to shift those resources where it makes sense to expend federal money.

Ron Araujo explained that they are hosting quarterly contractor events and are trying to bring in other industry partners, such as the Department of Consumer Protection for value for all partners involved.

Ron Araujo discussed the Home Energy Score that is needed to qualify on the Solar incentive side. He stated that they're looking at evaluating HES and the Home Energy Score as the only options, but they would like feedback from the vendors on how this is going.

Ron Araujo stated that they are trying to come up with a common draft intake application for Multifamily and that will be finalized at the meeting on January 24, 2017. He stated that they added the logo to all the presentations so now it appears that it's all part of the Energize CT offering. He stated that they are doing a review of the Connecticut Green Bank website to better align the terminology.

John Harrity questioned the upgrade numbers and why people did not do the upgrades. Ron Araujo stated that they do not know why people did not pursue that measure. Kerry O'Neill stated that they added another tool to the new Smart-E Bundle where you can get the lower 2.99% rate on your recommended upgrades if you go through HES Core Services.

**b. Brief Report: C&I – Small, Medium, and Large Business (including update on SBEA Financing proposal)**

Steve Bruno provided an update on C & I, Small, Medium, and Large Business. He discussed the action items that had been completed. He discussed the Joint CPACE Programs stating that they are still working on those. He discussed different

potential targets such as nursing homes. He also discussed the fact that they are working on capitalization of the Small Business Energy Advantage (SBEA) financing program with Connecticut Green Bank and private capital.

Anthony Clark provided an update on the SBEA. He discussed the proposal from JP Morgan in response to the RFP that the Connecticut Green Bank had sent out. He discussed that there is a significant opportunity to lower the cost per project to the CT Energy Efficiency Fund. He explained that the Green Bank and the utilities are working to ensure robust credit backstops. He also stated that they are looking to ensure that the budget that is already allocated to SBEA remains. He explained that overall the goal is to lower the cost of the program and have more money available.

Diane Duva commented that they need to be sure that they're comfortable with the credit backstops and to potentially ask to use rate payer funds if needed. Anthony Clark stated that the utility has been operating the program with that ratepayer guarantee. Chris Kramer stated that they need to be clear that they are talking about continuation of cost that is currently being covered by the rate payer.

Anthony Clark stated that by setting up the facility they could save approximately \$4.5 million in the first three years. He stated that they will be realizing savings every year that the program operates. He stated that if they do not create the credit backstop, it will result in higher recurring annual costs.

Diane Duva questioned if this has to be in place or if there was another option. Anthony Clark stated that it's the Connecticut Green Bank that will create the LLC. He stated that the Connecticut Green Bank Board needs to feel comfortable that the necessary pieces are in place. He stated that the Connecticut Green Bank is willing to take on some of the timing risk, but the full backstop is not something that they will take on.

Bert Hunter explained that JP Morgan is looking at this as a Municipal credit risk, the Energy Efficiency Fund combined with the risk of the Connecticut Green Bank. He stated that they will have to totally re-shop the RFP without the credit backstops in place.

Chris Kramer stated that they're not talking about a large default. He stated that there are currently rate payer funds that cover the costs. He stated that the only question is whether that would continue. He stated that they're talking about continuing rate payer coverage of costs that have already been approved. He stated that any risk along those lines would be fully under the control of the people that control the program currently. Steve Bruno stated that the additional risk is whether the Legislature decides to defund the CEEF and use those funds.

Diane Duva stated that this should be a topic for a future meeting.

**c. Brief Report: Government**

Diane Duva provided an update on the Government Sector. She discussed the Connecticut Valley Hospital Project and the upcoming Department of Corrections Project, which the Connecticut Green Bank is currently working on the financing vehicle. She stated that the next step is getting a Master Lease Agreement in place. Bert Hunter stated that a concern is trying to get enough of an allocation of future

projects approved so that a pipeline of transactions can be worked on. Unfortunately, he noted, the arrangements currently in place involve bond cap limitations. He stated that both projects as presently constructed rely on a mechanism that touches the bond cap. He stated that the Green Bank is working on a financing structure as an alternative that would not impact the bond cap.

## **6. Planning for Next Meeting**

### **a. Identify topics for future 2017 meetings**

Diane Duva stated that a topic for the next meeting is, updating the goals and revisiting them.

## **7. Adjourn**

**Upon a motion made by John Harrity and, seconded by Gentianna Darragjati, the meeting was adjourned at 3:34 pm.**

Respectfully Submitted,

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Eric Brown, Chairperson

## Commercial Metrics for Small Business, Government and Medium/Large C&I

April 19, 2017

### Commercial Sector

#### C&I Sector: Government

1. Improve the Customer Experience. Ensure seamless service delivery that is responsive to State and local governmental and institutional needs, including
  - a. Integration of appropriate Connecticut Green Bank and other related services, especially for those that aren't currently served by Lead By Example (LBE)-Energy Savings Performance Contracts (ESPC); and
  - b. Providing technical support and incentives from the Connecticut Energy Efficiency Fund and the Connecticut Green Bank's capability to finance ESPC projects at scale. Establish and communicate a process for customers undertaking ESPCs to receive technical support through internal utility resources and contracted "owner's representative" services.
2. Establish sustainable and cost-effective financing mechanisms – Develop sustainable and cost-effective funding mechanisms for both the preparatory and permanent project financing needs of government sector energy savings projects.
3. Develop new products to fill market gaps – For example, develop a financing vehicle for aggregation of small-scale comprehensive energy saving projects at municipal or other institutional facilities that are, individually, too big for the Small Business Energy Advantage (SBEA) financing program but too small to be standalone ESPC projects.

#### C&I Sector: Small Business

1. Improve the Customer Experience – Ensure seamless service delivery between services of the Connecticut Energy Efficiency Fund and the Connecticut Green Bank that is responsive to customers' needs, including integration of appropriate Connecticut Green Bank and other allied small business services, especially for those that aren't currently served by Small Business Energy Advantage (SBEA) financing program.
2. Identify and engage alternative capital sources to lower the cost of and increase opportunities for project financing.
3. Examine ways to couple SBEA and C-PACE (or other financing offerings) - Promote more comprehensive projects (especially among higher energy usage customers) and longer-term payback measures.

## Commercial Metrics for Small Business, Government and Medium/Large C&I

April 19, 2017

### C&I Sector: Medium/Large Business

1. Improve understanding of opportunities within this market for deep energy efficiency improvements - Build on available knowledge and analysis to develop effective and sustainable incentive and financing strategies for stimulating deeper energy investments and that meet all cost-effective energy efficiency goals.
2. Increase customer savings and benefits from the C&I Programs - Drive more projects with deeper energy savings, supported with increased financing options (including C-PACE) to help ensure comprehensive investment and closure of financing gaps
3. Cross-leverage Connecticut Energy Efficiency Fund and Connecticut Green Bank programs – Develop and implement communication and marketing strategies to insure maximum cross-leveraging of these opportunities to help achieve the state goals of acquiring all cost-effective energy efficiency and expanded renewable deployment through highly effective leveraging of ratepayer funds.

**Commercial Metrics for Small Business, Government and Medium/Large C&I**

**April 19, 2017**

	<b>Action Item</b>	<b>Measurement of Success</b>	<b>Challenges</b>	<b>Target Completion Date</b>	<b>Status</b>	<b>Satisfies Items</b>
	<b>C&amp;I Government</b>					
1.	Companies allocate spending for technical support and incentives to develop ESPC projects. Ensure CEEF support for ESPC owner's representative via internal or contracted support.	Sufficient Funding available		Ongoing	Ongoing - Companies filed 2017 EE Budget Plan 10-1-16, and also revised budgets on 03-01-17	1, 2
2.	Identify low cost capital sources (non-utility capital) for municipal loans. Similar Goal for SBEA.  Any other products contemplating for future for this sector? Example: pre-development loans.	Pool of low cost funds available for Municipal Loans.  The cost of funds is lower than the utility cost of capital.	Unsecured Loans based on utility bill credit history; Process is consistent with SBEA Loan Process/Payment Plan.	Q3	Both Companies have faced capital constraints and have adopted interim solutions.  Eversource is piloting use of third party capital (M-CORE) to finance Municipal and State Loans. Third party Muni Market rate capital at 5-6% (or lower) is being bought down to 0% which costs less than buying down utility cost of capital. 6 completed project (New Fairfield, Weston, Litchfield, Regional School Dist. 10, Town of Middlebury and Town of Vernon) and nine in the works (Windham Water Works, City of Norwalk, Town of Madison, Town of Woodstock, Regional School Dist.6 and 14, Thompson and Town of Mansfield). Eversource has also	2,3

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					<p>increased self-funding for financing SBEA and Municipal loans</p> <p>United Illuminating is currently rationing the capital for the municipal and state customers. United Illuminating is piloting the use of third party capital (M-CORE) to finance Municipal Loans not requiring on bill repayment.</p> <p>The Companies have also utilized a PURA distributed generation/EE loan product with Bank of America on projects larger than \$1M and reduce kW demand. The subsidized rate is 1% below prime or customers lowest interest rate and subsidized through Federally Mandated Congestion Charges.</p> <p>Both companies, UI and Eversource, and CT Green Bank are collaborating to develop a longer term, sustainable, and cost-effective option for the Green Bank to source more and lower cost capital for municipal and small business customers. CT Green Bank launched an RFP in December 2016 that attracted more than \$300M of potential loan capacity. In Q1 2017, CT Green Bank and the Companies</p>	
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					reviewed proposals in consultants with the EEB C&I Committee and selected a capital provider. CT Green Bank and the Companies are outlining the structure, servicing and operations requirements, and documentation required to recapitalize the SBEA program with a target launch in H2 2017.	
3.	Update the Master Agreement between CEEF and state for state agencies to provide improved flexibility.	Master Agreement in place for both Eversource and UI	Financing cap imposed; resolution tied to item above	Q1	Complete; though cap imposed, highlighting need for items above and below.	2,3
4.	Develop new products to fill market gaps: Example 1: develop financing for projects too large for SBEA and too small for ESPC  Example 2: Develop a financing vehicle for aggregating smaller, long-term, comprehensive energy saving projects for multiple municipalities that don't fit the Small Business Energy Advantage (SBEA) financing mechanism that ensures that energy savings from one town do not offset financing measures for another town.	Products in place for pre-development financing, for mid-sized projects, and for aggregated projects.	CT Green Bank researching potential solutions.	Q2 2018	CT Green Bank's role is to close financing gaps that private investors and banks will not address.  Next steps are to have CT Green Bank take on the role of financing a mid-sized program for small business customers and municipal and state customers. Additionally, develop a timeline.  For municipalities and state facilities – current Green Bank strategy is to use the modified SBEA program (under development per the above) to act as an aggregation facility for	2,3



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					<p>smaller long term comprehensive energy savings projects and roll these into a term facility for the relevant municipalities.</p> <p>For regular C&amp;I/non-municipalities – current Green Bank strategy is to develop a “product extension” of the modified SBEA program (under development per the above) – this will follow by some period of time after the modified program is launched.</p>	
5.	Issue Green Bond [revenue bonds] or other financing vehicle for LBE ESPC project for Department of Correction District 1;	Financing documents being drafted	Financing constraint; Pending completed project technical studies/scope	Q1	Department of Correction District 1 ESPC project waiting for financing. On August 11, 2016 the Office of the Treasurer (OTT) and the OPM Secretary designated \$50M of bonding capacity for the DOC project to allow the CT Green Bank to move forward with a capital lease with DOC. CT Green Bank is drafting lease agreement and other financing and legal documents. DEEP is preparing interagency documents to provide for flow of payments between agencies.	2

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6.	CT Green Bank will continue to identify other financing vehicles for large projects [including ESPC] that do not involve bonding or other financing vehicles that trigger debt designation, both for municipal projects and state projects [might be different vehicles].			Q2	CT Green Bank is researching other financing mechanisms and legal agreements to be prepared for pipeline of new projects and to assess how debt capacity needs to be requested.	2
7.	Execute on the PURA Distributed Generation/EE Loan with the Bank of America that provides an interest rate buy-down for this sector [usually for municipal performance contracts]	Execution	Execution dependent on projects completing technical studies/scope	Ongoing	CT Green Bank assessing viability for using for other performance contracts by using with Clean Renewable Energy Bonds for a project that will benefit the City of Meriden. [currently electric only projects with demand savings qualify for the interest rate buy down portion]	2

	<b>Action Item</b>	<b>Measurement of Success</b>	<b>Challenges</b>	<b>Target Completion Date</b>	<b>Status</b>	<b>Satisfies Items</b>
	<b>Small Business</b>					
1.	Joint Projects with C-PACE to finance projects with longer term (i.e., greater than 4 year paybacks).  CEEF funds would be provided	Joint C-Pace Projects with CT Green Bank and the Utilities that include measures that have greater than 4 year paybacks.	Identification of Projects	Q2 2017	Continued communication and dialogue on the process. Continue to work together to further develop process on best points to intersect the CEEF and Green Bank promotion.	1, 2

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	for EE rebates on qualifying measures plus interest rate buy-downs on the EE customer portion of projects up to 4 years and less than \$100K.					
2.	Identify low cost capital sources (non-utility capital) for SBEA loans. Similar Goal for Muni.	Pool of low cost funds available for SBEA Loans. The cost of funds is lower than the utility cost of capital.	Unsecured Loans based on utility bill credit history; Process is simple and sold by contractors	Q1 2017	Companies and Green Bank are pursuing solution that applies to muni, state, and small business customers. See update in government sector section.	2,3

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	<b>Medium / Large Business</b>					
1.	Target Segments (i.e., Nursing Homes) to identify and develop a comprehensive project with financing options.	Completion of a joint Nursing Home Project which combines utility incentives plus C-PACE project financing.		Q4 2017	<p>Joint collaborative projects are being evaluated to maximize the potential for deep energy retrofits (i.e., Stamford Town Center, Bridgeport Diocese, etc.).</p> <p>Companies, Green Bank and DEEP are working together on outreach and engagement. The most recent roundtable in April 2017 drew representatives from approximately 20 health care facilities. The Companies, Green Bank and DEEP are meeting April 20<sup>th</sup> to coordinate on project development following the roundtable.</p> <p>Will continue to work together and support process for joint projects. Nursing homes are a tough market and will take time to bring project to fruition.</p>	1, 2
2.	Develop a tool / cut-sheet for a comprehensive project offering with financing options.	Simple and unified comprehensive / financing offer		Q2 2017	<p>Utilities have begun pulling together existing tools / cut-sheets to share to develop a comprehensive project offering that includes financing options.</p> <p>Ongoing</p>	2,3

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3.	Develop an enhanced process flow model	Simple and unified process flow model		Q2	The focus had been on the SBEA and medium/large businesses Financing.	1,2,3
4.	Identify other cost effective segment and other project opportunities.	Identify segment, projects and complete a joint project in alignment with the findings from above. Create a summary report on Joint Projects.		Q3	Utilities and CT Green Bank have pulled together their studies, segment efforts and are developing a process for sharing cost effective project opportunities.	2,3

## Residential Metrics for Single Family and Multi-Family

April 19, 2017

### Residential Sector: Single-Family

1. Identify coordinated strategies for expanding comprehensive loans for the 2016-2018 period. Calibrate incentive and buy-down levels to achieve more comprehensive projects while reducing program costs.
2. Pursue all cost-effective energy efficiency in the residential sector, using financing and increasing the amount of private sector capital where effective (and a simplified approval process where possible and appropriate), to leverage up ratepayer funds and achieve more and deeper savings.
3. Increase financing in the HES/HPwES channel to meet needs and drive deeper energy savings and more projects.
  - a. Increase HES projects with completed follow-ons per the C&LM plan, using financing as one of the tools to increase completed follow-ons.
  - b. Increase the adoption of the Smart E-bundle and CHIF comprehensive loans

### Residential Sector: Multi-family

1. Reduce energy consumption and costs in multifamily properties consistent with goals in the Connecticut Green Bank's plan and the Conservation and Load Management plan. (MMBTU's per unit).
2. Establish, align and fund financing programs to fill current unmet needs and gaps including projects driven by energy efficiency improvements where capital improvements are a subcomponent. Complete the tasks from the work plan from the May 2015 Lean event.
3. Fund and complete a market analysis of certain sectors to quantify and qualify this segment and identify gaps, opportunities and best ways to serve by the end of 2016. Hard to reach sectors include certain rural areas and non-subsidized, non-rent restricted multifamily housing that is privately owned and serving low-income tenants (also referred to as naturally occurring affordable properties).

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<b>Single Family</b>					
Fully Integrate CHIF into the Smart-E lending program.	CHIF is a Smart-E approved lender. CHIF will have been trained/integrated by the CGB. CHIF will be providing loans for both non- credit and credit challenged customers statewide and will be offering the Bundle. CHIF will be included in the dashboard, website and all marketing materials.	CHIF, now known as C4C has completed working through post-merger activities and are awaiting their first reports as Smart-E lender.	Original Target Q1-2016; C4C as a Smart-E lender became active effective December 1,, 2016	Fully launched December 1, 2016. C4C Smart-E loans now showing under Smart-E on EnergizeCT dashboard	1, 2
Track loan activity vs. goals monthly (all loans, comprehensive loans, measures, etc.)	Utilizing the monthly financing cost comparison report data and the energy efficiency dashboard – graphically show an increase in Smart-E loan activity (quantity) for single measure and comprehensive loans.		Ongoing monthly	Ongoing/ Monthly Review	2,3
Track component costs on a monthly basis (average incentives, buy-down costs, financing costs, program costs, etc.)	Utilizing the monthly financing cost comparison report data – graphically show a decrease in overall financing costs for single measure and comprehensive loans.		Ongoing Monthly spreadsheet	Ongoing/ Monthly Review	1,2,3

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Track add-on measures monthly, including which ones receive financing	Utilizing the energy efficiency dashboard data, graphically show an increase in add-on measures and comprehensive jobs.		Ongoing monthly	Ongoing/ Monthly Review	2, 3
Secure GLGF bond proceeds for Smart-E	CGB has successfully secured GLGF bond proceeds to provide further support for Bundle/comprehensive loan buy-downs		Original target Q2-2016; Estimated – unknown, due to current budget environment	Legislative Finance Revenue and Bonding Committee removed the GLGF in the 2017 legislative session. CGBrestructured ARRA-SEP funds to shift to IRBs to support Smart-E.	3

Deleted:



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<b>Action Item</b>	<b>Measurement of Success</b>	<b>Challenges</b>	<b>Target Completion Date</b>	<b>Status</b>	<b>Satisfies Item</b>
<b>Multi-Family</b>					
Develop a Tracking Matrix for multi-family (similar to residential) to include all methods being utilized to finance energy improvements to multifamily housing. This includes HES and HES-IE incentives for multi-family and CGB, CHFA, DOH financing, etc.	Develop a matrix depicting multi-family financing from CEEF, CGB sources, others as available (i.e., LIME, C-PACE, CHFA, DOH, HUD, others). Track activity ongoing once developed.		Q1-2016 for development , ongoing for tracking and reporting	A multi-family tracking matrix is developed.	1
Track savings per property financed on a monthly basis (energy savings per unit)	Utilizing company tracking system data – graphically show an increase in the savings per unit (ie., MMBTU/unit, MMBTU/Square Foot-where possible) for financed multi-family projects.		Ongoing, beginning Q2-2016	Companies and CGB met and are working to establish a joint tracking matrix	1
Create a matrix that aligns funding programs and gaps and develop solutions to fill in the gaps (for example; earlier involvement in CHFA projects, SBEA vendors perform some multi-family services, financing alternatives to CPACE, which	Completed matrix of gaps and solutions, and action plan to close the gaps.		End of Q1, 2016 for the Matrix of gaps  End of Q4, 2016 for the	Ongoing and complete  Joint utility – CGB contractor	2

**Residential Metrics for Single Family and Multi-Family**

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<p>doesn't work well below \$100K or for FHA financed or HUD insured properties, a large portion of the MFH market)</p>			<p>action plan to close the gaps</p>	<p>meeting held March 2<sup>nd</sup>. An integrated program with EE Incentives and Financing matrix presented.</p>	
<p>Fund and complete a market analysis of certain sectors to quantify and qualify the multifamily segment in a meaningful way. For example (small multi-family, condo's, other building structures and property types, etc., tenant paid vs. owner paid, affordable vs. market rate.</p>	<p>RFP is issued by Q1, 2016; vendor selected Q2, 2016 and study completed Q3, 2016. Use the analysis to update the solutions to the gaps identified above.</p>		<p>Develop and issue an RFP by the end of Q4, 2016 Complete study by the Q1, 2017</p>	<p>Companies and CGB meeting in 2<sup>nd</sup> quarter to define the SOW</p>	<p>2,3</p>