

# Cape Light Compact Update:

## *The Next Energy Efficiency Plan and Smart Grid*



**Cape Light  
Compact**

*Working Together Toward A Smarter Energy Future*

# Agenda for Presentation



- 2016-2018 Energy Efficiency Plan – Enhanced offerings and new opportunities
- Grid Modernization

# Cape Light Compact



- 21 towns and 2 counties on Cape Cod and Martha's Vineyard working together to serve customers through delivery of:
  - proven energy efficiency programs
  - effective consumer advocacy
  - competitive electricity supply and green power options
- Model for other community choice aggregation programs in MA and nationally
- DPU approved the updated Aggregation Plan in May 2015



# Background on 3-Year Energy Efficiency Plan



- 2008 Massachusetts Green Communities Act (GCA) mandates *“electric and natural resource needs shall first be met through all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply.”*
- The Compact works collaboratively with seven other statewide Program Administrators (PAs) to provide cost-effective energy efficiency programs. These programs are most commonly known as Mass Save®.
- As a result of the GCA, the seven statewide PAs have very aggressive savings goals that need to be met.
- 2016-2018 is the third 3-year Energy Efficiency Plan filed by the Compact.
- The Compact has held several Community Outreach Forums since May to seek customer input

# Overview of Compact Programs



Residential	Low-Income	Commercial & Industrial
Non Low-Income - (61% or greater of state median income)	Up to 60% state median income	Businesses – including non-profits, churches, etc.
Multi-Family – 5+ units on property	Fuel Assistance recipients	Industrial
	Customers who receive other low-income benefits	Municipal

# Current Compact Residential Programs



**1. Chimney Balloon**  
**\$35 rebate** A removable, reusable, and durable device that helps to stop airflow, odor, and debris from flowing through your chimney.

**Cape Light Compact's Home Energy Assessment**  
Includes **Free** energy efficient light bulbs, **Free** air sealing, and will cover 75% of the cost up to \$4,000 to install recommended insulation for eligible homes. Please call **(800) 797-6699** to schedule your free home energy assessment today!  
Additional benefits for income qualified customers.

**6. Solar Domestic Hot Water**  
**\$500-1500 rebate** for solar domestic hot water heating systems. Rebate amount depends on number of household members. Pre-approval required and must replace electric hot water heater.

**2. Heating Systems, Controls, & Water Heaters**  
**\$100-1200 rebate\*** for oil & propane heating systems.

**Mass Save® HEAT Loan Program**  
The HEAT Loan Program provides loans up to \$25,000 with 0% interest and terms up to 7 years for approved measures.\*\* To apply for the loan you must own a one to four-family home and have a home energy assessment. To view eligibility requirements, please visit [www.capelightcompact.org/heat](http://www.capelightcompact.org/heat).

**7. Appliances**  
**\$50 rebate** for recycling your second refrigerator or freezer.  
**\$50 rebate** for a new ENERGY STAR® Most Efficient qualified refrigerator.  
**\$20 rebate** for a new ENERGY STAR® qualified freezer.  
**\$40 rebate** for an ENERGY STAR® Room Air Cleaner.

**3. Central Air Conditioning**  
**\$250-500 rebate** for central cooling and minisplit heat pump systems.

**4. Efficient Thermostats\***  
limit 2 per customer (oil & propane)  
**\$25 rebate** for 7-day programmable thermostat.  
**Up to \$100 rebate** for Wi-Fi thermostat with Wi-Fi Connection enabled.

**5. Heat Pump Water Heaters** **\$750 rebate** for qualified electric hot water replacements.



**8. Dehumidifier** **\$30 rebate** on ENERGY STAR® certified dehumidifiers.

**9. Clothes Dryer**  
**\$50 rebate** for ENERGY STAR® certified electric clothes dryers.

\*Natural gas equipment related rebates are available through GasNetworks at [www.gasnetworks.com](http://www.gasnetworks.com).

\*\*Subject to lender approval.

[www.capelightcompact.org/ResRebates](http://www.capelightcompact.org/ResRebates)



## Additional Programs:

- New Construction
- Multi-Family
- Lighting & Products

# Enhanced Residential Home Energy Services Offerings



*Home Energy Services provides energy audits for existing 1-4 family homes that provides recommendations for insulation (also called weatherization) and air sealing as well as installations for efficient lighting to replace inefficient ones.*

## Continue Current CLC Enhancements

75% up to \$4,000 for weatherization

100% up to \$4,000 for:

- Customers between 61-80% of state median income
- Year-round tenants (who pay own electric bill)

Serve customers with natural gas heated homes who prefer to be served by the Compact, in addition to homes that heat with other fuels (electricity, oil, propane, wood, etc.)

# Enhanced Residential Offerings



Cape Light Compact buys down the interest on loans for efficiency improvements in existing residential dwellings that participate in the home energy assessment and have qualifying measures. The loan is 0%, 2-7 years, and between \$500-\$25,000. Banks do the qualification. No work can be done until approval has been completed.

- HEAT Loan – interest bought down by the Compact

Current HEAT Loan Offering	Proposed Compact HEAT Loan Offering
0% interest loan for eligible energy efficiency improvements	Maintain 0% interest or have sliding scale for interest based on income
	Create financing option for customers not eligible due to low credit scores

- Consider offering incentives to reduce usage during peak days in the summer to decrease costs

# Enhanced Residential Multi-Family (5+ units on a property) Offerings



- Currently the Compact weatherizes:

Condo/apartments	<u>Heating Fuel Type</u>
 	 Electric (Gas through NGRID)  Oil/Propane

- Propose to weatherize oil/propane heated facilities
- Enhanced benefits for increased participation at multi-family sites

# Low-Income Residential Offerings



Statewide, low-income qualification is done through the gas and electric discount rates and fuel assistance. Cape Light Compact found that some people qualified for these services but were not on the rate; therefore, we offered our own verification to access energy efficiency services.

- Continue Compact-specific income verification for low-income customers

Household Members	60% State Median Income (SMI)
1	\$32,618
2	\$42,654
3	\$52,691
4	\$62,727

# Commercial & Industrial Programs



	Small (<100,000 kWh)	Medium (100,000 – 1M kWh)	Large (>1M kWh)
# of Customers	>17,000	>1,100	<90
% of Customers	~94%	~5%	<1%
% of C&I Load	~32%	~38%	~30%



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WWW.CAPELIGHTCOMPACT.ORG

# Small Business Programs



Using Compact Installer	Current Small Commercial Program	Proposed Small Business Program
<b>Eligible Customers</b>	<300 kW per year	<100,000 kWh per year
<b>Incentive*</b>	Up to 80%	Up to 80%-90%
<b>Assessment</b>	<ul style="list-style-type: none"> <li>• Site specific screening</li> <li>• No instant savings measures</li> <li>• Proposal sent to customer 1-2 weeks following assessment</li> <li>• Installations completed</li> </ul>	<ul style="list-style-type: none"> <li>• Instant savings measures available at time of assessment (i.e. lighting &amp; smart strips)</li> <li>• Proposal given at time of assessment</li> <li>• Installations completed</li> </ul>

*\*Custom & prescriptive incentives available for using your own installer*

# Medium Business Programs



Current Medium Commercial Program	Proposed Medium Business Program
> 300 kW annual demand	100,000 kWh – 1 million kWh annually
Use your own installer	Use Compact installer? Own installer?
Custom applications – up to 50% incentive	Incentive?
Prescriptive applications – 70% average incentive	Roll-out phasing of programs designed for specific industries (lodging, grocery, healthcare, etc.)
	Access to industry experts for segment specific measures



# Large Business Programs



- New and Enhanced Benefits:
  - Dedicated Compact staff liaison
  - Site-specific energy needs better served
  - Develop short/long term efficiency plans
  - Minimum 50% incentive for eligible measures



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# Enhanced C&I Programs



- Municipalities – 7% of total C&I customers
  - Incentives (up to 100%) for equipment maintenance training to ensure savings
- Non-profits
  - Governing Board is discussing offering enhanced incentives to non-profits meeting certain criteria

# Calendar of Events



Date (all 2015)	Action
April 30	Compact & all PAs submitted draft 2016-2018 Statewide EE Plan
May – September	Meetings/outreach to community on Compact specific proposed offerings
September 18	Second draft of Plan due
September-November	Presentations to Boards of Selectmen/Town Council/County Commissioners
October 31 (on or before)	Compact & all PAs file final 2016-2018 Statewide EE Plan with Department of Public Utilities

## We Want Your Feedback:

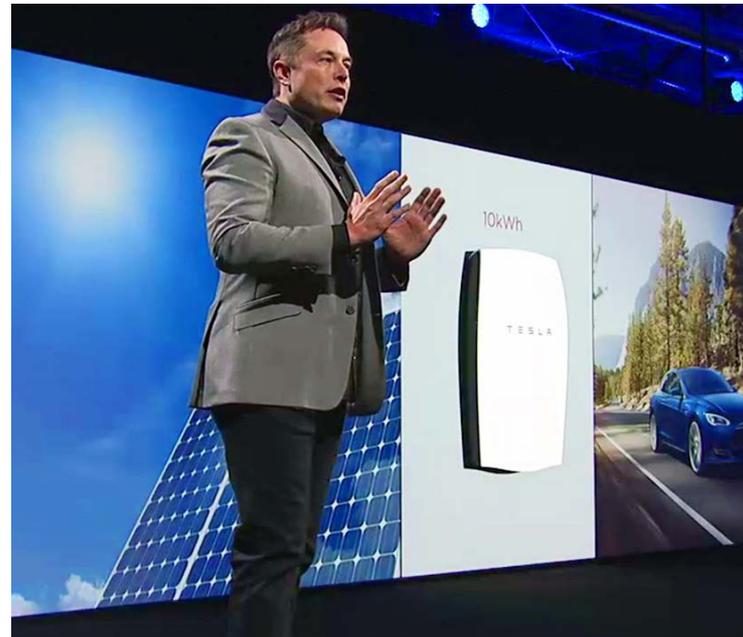
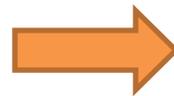
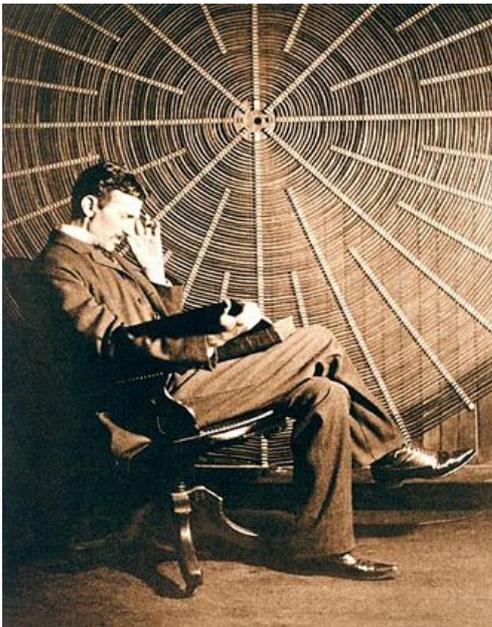
- Cape Light Compact's online survey – [www.capelightcompact.org/eeplan](http://www.capelightcompact.org/eeplan)

# Grid Modernization



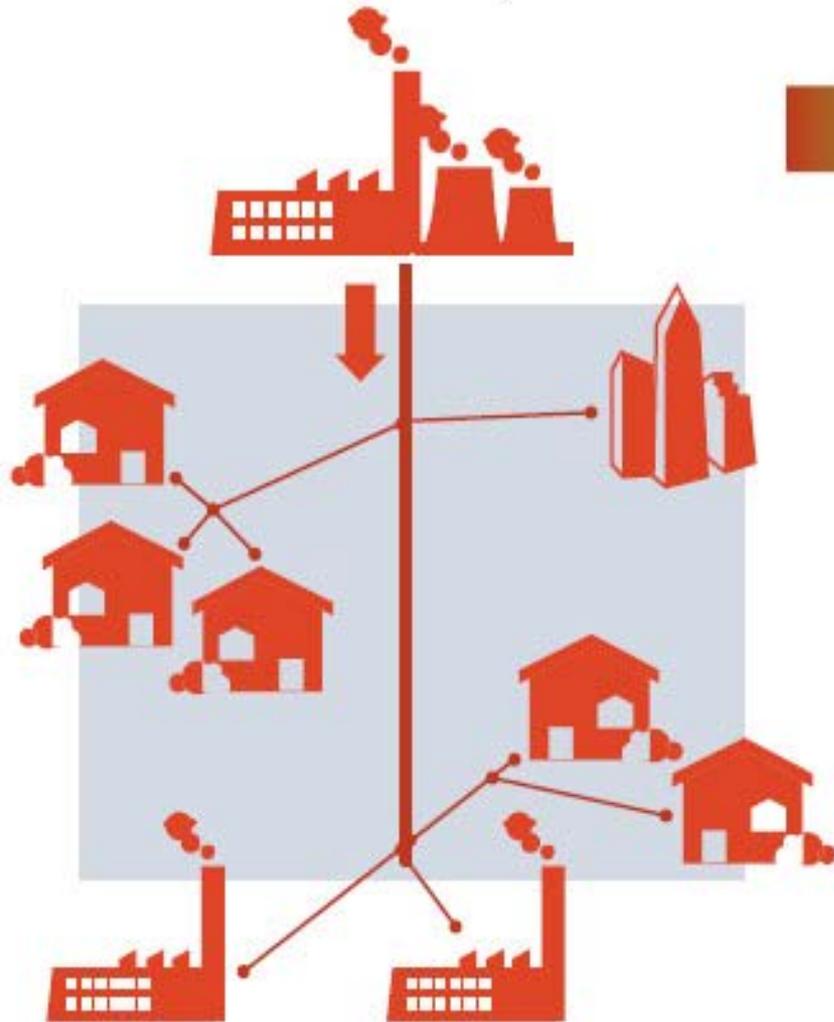
What are we talking about?

- The “smart grid” or grid modernization = use of increased remote data collection and automation to increase efficiency of grid, allow for two-way power flows (not just generator-> user), and increase reliability



# Grid Modernization

Today's Electricity



Tomorrow's Choices

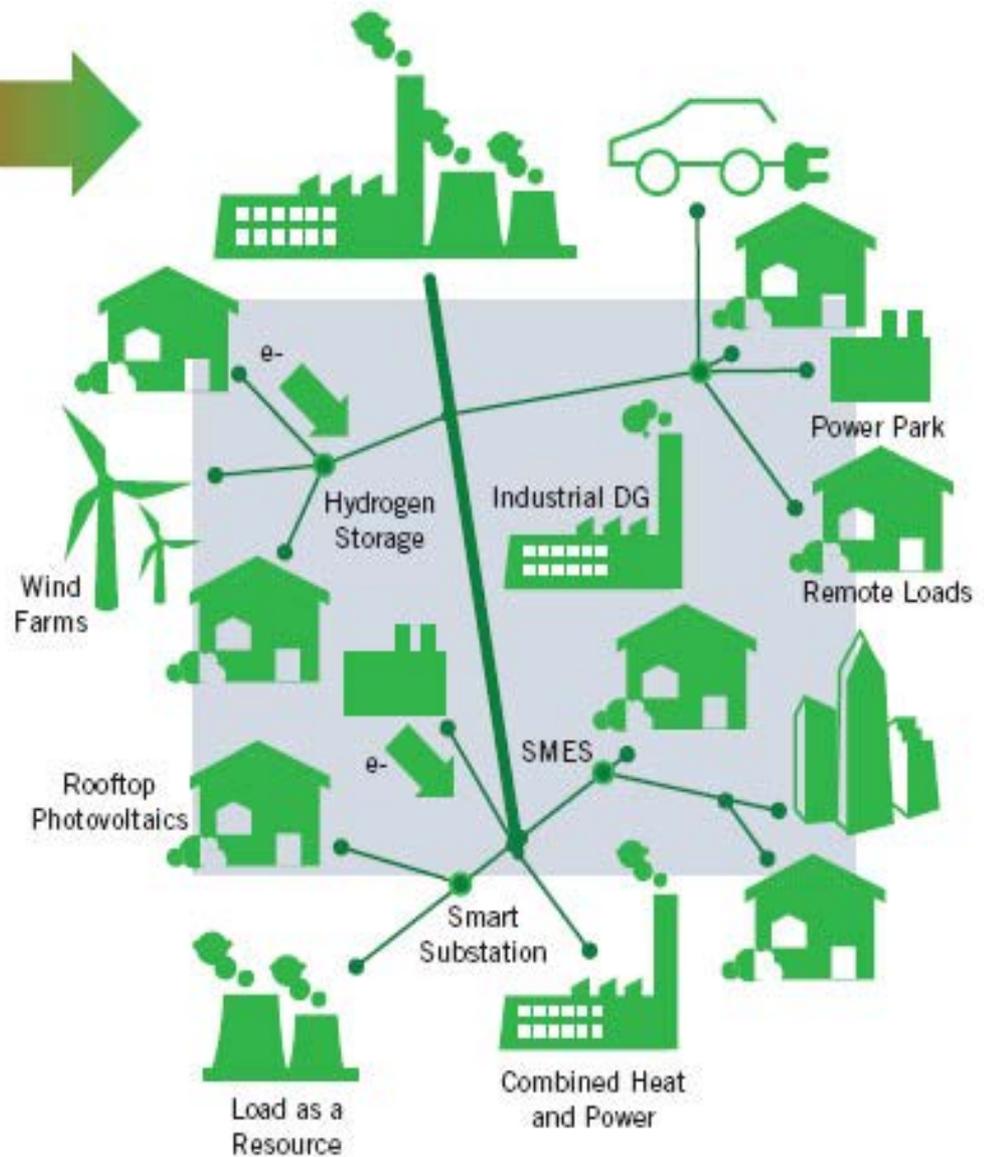


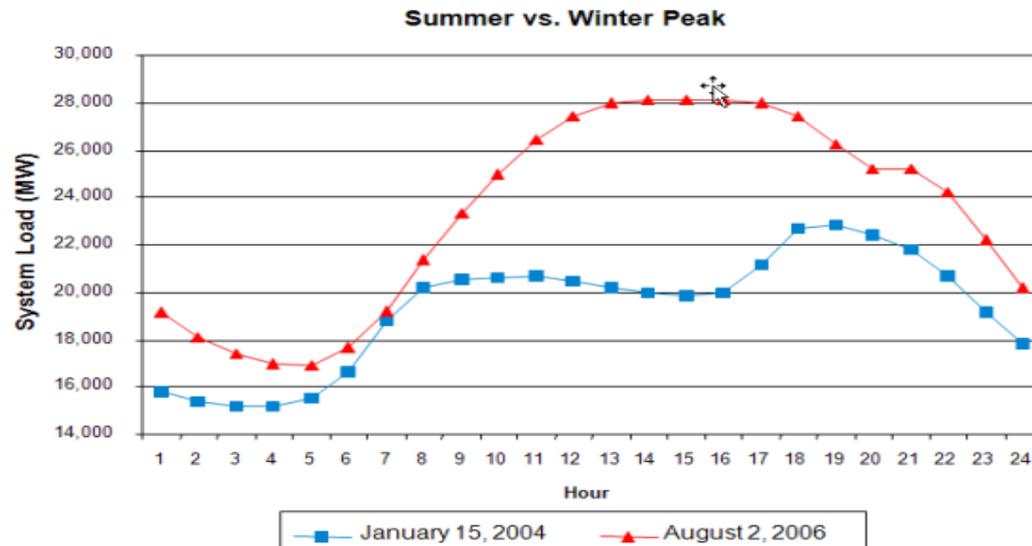
Fig. 1. The IEEE's version of the Smart Grid involves distributed generation, information networks, and system coordination, a drastic change from the existing utility configurations.

# DPU – Grid Mod Objectives



1. Reduce the effect of outages
2. Optimize demand, which includes reducing system and customer costs
3. Integrate distributed energy resources
4. Improve mobile workforce and asset management

New England  
all-time peak  
demands –  
average 2014  
load ~ 14,500  
MW



# Utility Approaches



- Eversource
  - Focus on grid-facing technologies
  - Strong emphasis on reliability
  - Not convinced residential/small business customers will benefit from TOU/advanced metering
  - Point out that – 2% of their customers = 80% of C&I usage, and 80% of their customers = 6% of C&I usage
- National Grid
  - Calls their plan “utility of the future”
  - Want to be “platform provider” – like iPhone analogy
  - More of an all of the above approach
  - AMI for ~ 15,000 in Worcester
  - Exploring batteries as well

# What Could This Mean for the Cape?



- Power supply – TOU?
- Greater focus on kW vs. kWh
- Geo-targeting
- Integration of renewables
- Energy storage (batteries)
- EVs?
- **Crucial question – metering/data availability?**



# Next Steps for the Compact



- Communicate Compact's position on Grid Mod to Eversource
- Participate in Eversource's Grid Mod Plan at the DPU – which was filed in August 2015
- Explore ways the Compact can integrate Grid Mod components into its energy efficiency programs
- Collaborate with other Cape and Vineyard Stakeholders on Grid Modernization