

Cape Light Compact JPE Executive Committee & Governing Board Meeting

DATE: Wednesday, September 19, 2018
LOCATION: Cape Light Compact Offices – MV Conference Room
261 Whites Path, Unit 4, South Yarmouth
TIME: 2:00 – 4:30 p.m.

AGENDA

2:00 PM Public Comment

Approval of Minutes

Chairman's Report

Fiscal Report, Peter Cocolis

2018 Energy Efficiency Program

1. Vote to Approve \$541,000 for Bourne Public Schools
2. Vote to Approve \$253,550 for Falmouth High School
3. Vote to Approve \$161,133 for the Harwich Fire Station, Police Station, Town Hall and Community Center.

Discussion on Proposed Cape & Vineyard Electrification Demonstration Offering, 2019-2021 Energy Efficiency Plan

2019-2021 Energy Efficiency Plan, Cape Light Compact Enhancements

Administrator's Report

Board Member Update (Reserved for Updates on Member Activities the Chair Did Not Reasonably Anticipate Would be Discussed – No Voting)

**Cape Light Compact JPE
Governing Board
Open Session Meeting Minutes
Wednesday, July 11, 2018**

The Cape Light Compact JPE Board of Directors met on Wednesday, July 11, 2018 in the Martha's Vineyard Conference Room at the Cape Light Compact JPE Offices at 261 Whites Path, Yarmouth, MA 02664 at 2:00PM.

Present Were:

1. Peter Doyle, Barnstable Alternative
2. Colin Odell, Brewster
3. Peter Cocolis, Executive Committee, Chatham
4. Brad Crowell, Dennis
5. Fred Fenlon, Eastham
6. Paul Pimentel, Edgartown – **By phone**
7. Ronald Zweig, Vice-Chair, Falmouth
8. Thomas Donegan, Executive Committee, Provincetown
9. Leanne Drake, Sandwich
10. Richard Elkin, Wellfleet
11. ChristiAne Mason, Wellfleet Alternative
12. Sue Hruby, West Tisbury – **By phone**
13. Joyce Flynn, Chair, Yarmouth

Absent Were:

1. Michael Hebert, Aquinnah
2. David Anthony, Secretary, Barnstable
3. Robert Schofield, Executive Committee, Bourne
4. Timothy Carroll, Chilmark
5. Robert Hannemann, Duke's County
6. Valerie Bell, Harwich
7. Wayne Taylor, Mashpee
8. Richard Toole, Executive Committee, Oak Bluffs
9. Martin Culik, Orleans
10. Jay Grande, Tisbury
11. Jarrod Cabral, Truro

Members/Alternates

Physically present: 11

Present by phone: 2

Legal Counsel:

Jeffrey Bernstein, Esq., BCK Law, P.C.

Staff Present:

Austin Brandt, Senior Power Supply Planner

Briana Kane, Planning and Evaluation Manager

Joanne Nelson, Comptroller
Melissa Allard, Senior Administrative Coordinator
Phil Moffit, Residential Program Manager

Public Present:

None Present.

Joyce Flynn called the meeting to order at 2:10 PM. Joyce Flynn recognized Paul Pimentel of Edgartown and Sue Hruby of West Tisbury who were remotely participating because physical attendance at the meeting would be unreasonably difficult.

PUBLIC COMMENT:

There were no members of the public present.

CHAIRMAN'S REPORT:

Joyce Flynn reminded Board members to identify two or three events that the Compact can participate in this Fall..

FISCAL REPORT, PETER COCOLIS:

Peter Cocolis reviewed the 2018 Energy Efficiency and Operating Budget. Peter Cocolis stated that everything was on track. The only issue seen is the budget amount for legal services may not be enough for the rest of the year and the amount may need to be adjusted. Richard Elkin offered to help Peter Cocolis with doing budget projections.

RECAP OF THE 2017 ENERGY EFFICIENCY TERM REPORT, BRIANA KANE:

Briana Kane reviewed the 2017 Plan Year Report Update PowerPoint along with some additional handouts that explain how the Benefit Cost Ratio ("BCR") is calculated.

Colin Odell stated that the participant costs seemed low and asked about free ridership and how they apply to costs. Phil Moffitt stated that the Compact uses a statewide model. Thomas Donegan asked whether the Compact or the state is calculating wrong. Briana Kane stated there are impact factors such as evaluations, free ridership and spill over that all Program Administrators ("Pas") use and that the participants' costs are correctly reflected. Richard Elkin inquired whether free ridership was specific to the Compact or if it is statewide. Phil Moffitt replied that it is statewide.

Thomas Donegan asked how the Compact is doing compared to its peers. Briana Kane answered that the Compact's BCRs are right in line with BCRs that other PAs have reported. Thomas Donegan asked if Eversource and National Grid's BCRs include expenditures and bonuses that they receive from the state. Briana Kane replied yes. Thomas Donegan then stated that if they were not included in the BCR that the Compact's BCR would look better. Brad Crowell stated that the cost only includes electric customers and no other fuel types. Therefore, if the Compact were to take credit for the other fuel types its number would be higher.

Briana Kane showed the 2017 Plan Year Benefit Cost ("BC") Model. Briana Kane stated that the Board can use this BC Model to compare the BCR of low income, residential, and commercial between organizations.

2019 – 2021 ENERGY EFFICIENCY PLAN, CAPE LIGHT COMPACT ENHANCEMENTS, PHIL MOFFIT:

Phil Moffit reviewed the 2019 – 2021 Energy Efficiency Plan PowerPoint.

Phil Moffit informed the Board of the proposed new offer of a \$5000 grant to be used for energy efficiency measures/upgrades for organizations (public and non-profit) that recruit 100 residents that complete Home Energy Assessments (“HEA”) in any one year (\$50/head fee). Peter Cocolis asked if the grant comes out of the marketing budget. Briana Kane stated that it currently has been planned as a marketing cost.

Colin Odell asked what percent of audits result in measures being installed. Phil Moffitt responded that it is about 40%. Colin Odell asked if that was within the first year. Phil Moffitt stated the Compact looks at the closure rate year over year. Colin Odell stated that would mean we would need to bring in 200 customers to meet the 100 currently planned to meet the closure rate. Brad Crowell stated that is pretty good leverage to get customers to go from getting an energy audit to going through with getting some or all the measures recommended done to their home or business.

Richard Elkin stated that at his meetings with Outer Cape Energize they share Cape Light Compact information, but don’t know who ends up following through with contacting the Compact. Briana Kane stated that the Compact can’t share personal information or how much the customers spent but could share overall numbers as to how many customers have signed up for energy audits and went through with getting the measures completed. Richard Elkin stated the Compact should reach out to local solar installers because they often have meetings that the Compact could be a part of. Briana Kane asked for the sense of the Board if they still support this program. The sense of the Board was yes. Thomas Donegan stated that the Compact should reach out to church programs because a few on Cape Cod have participated in solar recently. Joyce Flynn stated that Martin Culik was involved in the solar installation at St. Joan of Arc, and he would be a good person to speak with on this issue. Colin Odell stated the Compact should share with organizations and groups such as Habitat for Humanity and Nauset Newcomers.

Phil Moffit recapped his Opower presentation from a previous Board meeting. Opower is interested in working with the Compact and is putting together a price proposal. Thomas Donegan noted that Opower may not be willing to serve Eastham to Provincetown because so many of the houses are second homes. Colin Odell stated that Opower does have the ability to sort through the second homes. Peter Cocolis stated that if there is a way to do a behavioral program that’s great, but with people who go away for long periods of time he asked how that works. Richard Elkin asked if Opower compares a participant on year to year basis. Phil Moffitt will follow up with Opower. Phil Moffitt stated that the estimate for **what?** was 2 million dollars over 3 years. Colin Odell stated that the Compact should keep on researching Opower and programs like it if the Compact’s residential lighting programs go away. The sense of the Board is that they want the Compact to continue doing research on Opower and talk about it again in the fall.

Austin Brandt reviewed the Demand Management slides. Richard Elkin asked how much the small-scale battery storage would cost for customers. Austin Brandt stated that there is no direct cost to customers. Fred Fenlon asked if there are any programs to help customers with natural gas generators for when there is an outage. Austin Brandt replied no, that the Compact tries not to incentivize fossil fuel generation. Richard Elkin asked how this fits into the Compact’s mandate. Austin Brandt stated that it’s not just energy, but energy reduction. Brad Crowell stated that he hopes the Compact can find a way to get credit for this program. Joyce Flynn asked if the program would only be offered to Compact supply customers or any electric customers. Austin Brandt answered that anyone who pays into the energy efficiency fund could participate in the program.

UPDATE ON DPU 18-50, EVERSOURCE PERFORMANCE METRICS FOR ITS PERFORMANCE-BASED RATEMAKING MECHANISM, JEFF BERNSTEIN:

Jeff Bernstein presented a PowerPoint reviewing the Eversource Rate Case Compliance Update.

Richard Elkin asked where the Compact stands on serving customers that have natural gas (DPU 16-169). Jeffrey Bernstein stated that it still hasn't been decided yet by the Department of Public Utilities.

ADJOURNMENT:

Motion to adjourn made at 4:16 PM moved by Thomas Donegan, seconded by Peter Cocolis.

Respectfully submitted,

Melissa Allard

LIST OF DOCUMENTS AND EXHIBITS:

- Meeting Notice / Agenda
- 2018 Energy Efficiency Budget
- 2018 Operating Budget
- 2017 Plan Year Update PowerPoint
- 2019-2021 Energy Efficiency Plan PowerPoint
- Eversource Rate Case Compliance Update PowerPoint

Cape Light Compact JPE
2018 Operating Fund 001
Budget Report
As of August 31, 2018

	<u>Budget Amount</u>	<u>Actual Amount</u>	<u>Remaining Amount</u>	<u>Remaining %</u>
<u>REVENUE</u>				
OPERATING FUND CY18-TRANSFERS IN	848,765.00	848,765.00	0.00	0.00%
OPERATING FUND CY18-INTEREST INCOME	0.00	47,153.79	47,153.79	
OPERATING FUND CY18-OTHER REVENUE	0.00	150.00	150.00	
TOTAL REVENUES	848,765.00	896,068.79	47,303.79	
<u>EXPENSES</u>				
OPERATING FUND CY18-ADVERTISING (POWER SUPPLY)	85,000.00	45,076.78	39,923.22	46.97%
OPERATING FUND CY18-AUDIT FEES	11,250.00	937.50	10,312.50	91.67%
OPERATING FUND CY18-BANK FEES	500.00	0.00	500.00	100.00%
OPERATING FUND CY18-BUILDING RENOVATNS/FURNITU	3,500.00	1,134.97	2,365.03	67.57%
OPERATING FUND CY18-COMPUTER EQUIPMENT	5,000.00	0.00	5,000.00	100.00%
OPERATING FUND CY18-CONTRACTUAL	77,805.00	70,976.55	6,828.45	8.78%
OPERATING FUND CY18-CUSTODIAL SERVICES	4,438.00	2,366.40	2,071.60	46.68%
OPERATING FUND CY18-FINANCIAL SOFTWARE SYSTEM	2,800.00	2,800.00	0.00	0.00%
OPERATING FUND CY18-FOOD SUPPLIES	5,500.00	5,020.67	479.33	8.72%
OPERATING FUND CY18-GROUP INSURANCE	19,790.00	15,169.76	4,620.24	23.35%
OPERATING FUND CY18-IN STATE TRAVEL	16,000.00	6,510.97	9,489.03	59.31%
OPERATING FUND CY18-INSURANCE	13,294.50	13,294.50	0.00	0.00%
OPERATING FUND CY18-INTERNET	2,700.00	2,130.07	569.93	21.11%
OPERATING FUND CY18-IT SERVICES	5,000.00	108.02	4,891.98	97.84%
OPERATING FUND CY18-LEGAL SERVICES	263,660.00	211,904.35	51,755.65	19.63%
OPERATING FUND CY18-MEDICARE	2,060.00	1,235.15	824.85	40.04%
OPERATING FUND CY18-MISC FRINGES	585.00	167.15	417.85	71.43%
OPERATING FUND CY18-MISC RENTALS	3,200.00	1,139.24	2,060.76	64.40%
OPERATING FUND CY18-OPEB LIABILITY	7,100.00	0.00	7,100.00	100.00%
OPERATING FUND CY18-OUT OF STATE TRAVEL	1,600.00	516.32	1,083.68	67.73%
OPERATING FUND CY18-OUTREACH/MARKETING SERV	15,000.00	11,334.00	3,666.00	24.44%
OPERATING FUND CY18-PAYROLL SERVICES	2,775.00	1,953.45	821.55	29.61%
OPERATING FUND CY18-POSTAGE	26,000.00	12,791.78	13,208.22	50.80%
OPERATING FUND CY18-PRINTING	12,500.00	8,038.64	4,461.36	35.69%
OPERATING FUND CY18-PROFESSIONAL DEVELOPMENT	254.00	254.00	0.00	0.00%
OPERATING FUND CY18-RENT	22,500.00	15,000.00	7,500.00	33.33%
OPERATING FUND CY18-RETIREMENT	35,447.00	0.00	35,447.00	100.00%
OPERATING FUND CY18-RETIREMENT LIABILITY	5,300.00	0.00	5,300.00	100.00%
OPERATING FUND CY18-SALARIES	129,679.10	85,184.65	44,494.45	34.31%
OPERATING FUND CY18-SALARY RESERVE	5,000.00	0.00	5,000.00	100.00%
OPERATING FUND CY18-SHIPPING/FREIGHT	500.00	49.98	450.02	90.00%
OPERATING FUND CY18-SOFTWARE LICENSES	3,750.00	1,596.43	2,153.57	57.43%
OPERATING FUND CY18-SPONSORSHIPS	35,000.00	28,853.00	6,147.00	17.56%
OPERATING FUND CY18-SUBSCRIPTIONS	5,537.40	5,537.40	0.00	0.00%
OPERATING FUND CY18-SUPPLIES	500.00	24.37	475.63	95.13%
OPERATING FUND CY18-TELEPHONES	4,540.00	2,732.12	1,807.88	39.82%
OPERATING FUND CY18-TREASURY SERVICES	11,300.00	6,543.75	4,756.25	42.09%
OPERATING FUND CY18-UNPAID BILLS	2,000.00	0.00	2,000.00	100.00%
OPERATING FUND CY18-UTILITIES	400.00	270.00	130.00	32.50%
TOTAL EXPENSES	848,765.00	560,651.97	288,113.03	33.94%
CHANGE IN NET POSITION	0.00	335,416.82		

**Agenda Action Request
Cape Light Compact
Meeting Date: 9/19/2018**



PROPOSED INCENTIVE FOR *BOURNE PUBLIC SCHOOLS* PROJECT

REQUESTED BY: Margaret Song

Proposed Motion(s)

I move the Board vote to approve an incentive of up to \$541,000 for the Bourne Public Schools. The Compact Administrator is authorized and directed to take all actions necessary or appropriate to implement this vote, and to execute and deliver all documents as may be necessary or appropriate to implement this vote.

Additional Information

The Cape Light Compact Board reviews and approves incentives for individual municipal projects above \$150,000. The proposed motion is to approve an incentive level for the Bourne Public Schools.

The Project facts are summarized as follows:

- Total Project Cost: not to exceed \$541,000
- Total Annual kWh savings: 581,466

The Project includes:

- Lighting upgrades at Bourne High School, Bourne High School Performing Arts Center, and Bourne Middle School
- Energy Management System, Variable Frequency Drives on the pumps, and Remote Terminal Unit controls for Bourne High School.

Record of Board Action

Motion by:	Second by:	# Aye	# Nay	# Abstain	Disposition

Aquinnah

Barnstable

*Barnstable
County*

Bourne

Brewster

Chatham

Chilmark

Dennis

*Dukes
County*

Eastham

Edgartown

Falmouth

Harwich

Mashpee

Oak Bluffs

Orleans

Provincetown

Sandwich

Tisbury

Truro

Wellfleet

West Tisbury

Yarmouth

**Agenda Action Request
Cape Light Compact
Meeting Date: 9/19/2018**



PROPOSED INCENTIVE FOR *FALMOUTH HIGH SCHOOL* PROJECT

REQUESTED BY: Margaret Song

Proposed Motion(s)

I move the Board vote to approve an incentive of up to \$253,550 for the Falmouth High School. The Compact Administrator is authorized and directed to take all actions necessary or appropriate to implement this vote, and to execute and deliver all documents as may be necessary or appropriate to implement this vote.

Additional Information

The Cape Light Compact Board reviews and approves incentives for individual municipal projects above \$150,000. The proposed motion is to approve an incentive level for the Falmouth High School.

The Project facts are summarized as follows:

- Total Project Cost: not to exceed \$253,550
- Total Annual kWh savings: 254,266

The Project replaces fluorescent lighting with LED technology throughout the school.

Record of Board Action

Motion by:	Second by:	# Aye	# Nay	# Abstain	Disposition

Aquinnah

Barnstable

*Barnstable
County*

Bourne

Brewster

Chatham

Chilmark

Dennis

*Dukes
County*

Eastham

Edgartown

Falmouth

Harwich

Mashpee

Oak Bluffs

Orleans

Provincetown

Sandwich

Tisbury

Truro

Wellfleet

West Tisbury

Yarmouth

Agenda Action Request
Cape Light Compact
Meeting Date: 9/19/2018



PROPOSED INCENTIVE FOR HARWICH TOWN BUILDINGS PROJECT

REQUESTED BY: Margaret Song

Proposed Motion(s)

I move the Board vote to approve an incentive of up to \$161,133 for the Harwich Fire Station, Police Station, Town Hall and Community Center. The Compact Administrator is authorized and directed to take all actions necessary or appropriate to implement this vote, and to execute and deliver all documents as may be necessary or appropriate to implement this vote.

Additional Information

The Cape Light Compact Board reviews and approves incentives for individual municipal projects above \$150,000. The proposed motion is to approve an incentive level for the Harwich Town Buildings Project.

The Project facts are summarized as follows:

- Total Project Cost: not to exceed \$315,000
- Total Annual kWh savings: 176,921
- Estimated National Grid Incentive of \$31,342

The Project includes:

Fire Station – Energy Management System (EMS), Dual Enthalpy Controls, and Demand Control Ventilation (DCV)

Police Station – DCV

Town Hall – EMS upgrade, Dual Enthalpy Controls, and DCV

Community Center – EMS, Dual Enthalpy Controls, DCV, and Variable Frequency Drives

Record of Board Action

Motion by:	Second by:	# Aye	# Nay	# Abstain	Disposition

Aquinnah

Barnstable

*Barnstable
County*

Bourne

Brewster

Chatham

Chilmark

Dennis

*Dukes
County*

Eastham

Edgartown

Falmouth

Harwich

Mashpee

Oak Bluffs

Orleans

Provincetown

Sandwich

Tisbury

Truro

Wellfleet

West Tisbury

Yarmouth

Proposed 2019-2021 Cape & Vineyard Electrification Demonstration Offering



**Cape Light
Compact**

Working Together Toward A Smarter Energy Future

Proposed Cape & Vineyard Electrification Demonstration



- Objectives
 - 700 total non-gas heated participants, tiered services by income
 - Additional incentives for low-income (up to 60%), moderate income (61-80%) and extended moderate income (81-120%) customers
 - Convert oil, propane, electric resistance heat to cold climate heat pumps
 - Install PV systems to support electrification of heating system, reduce GHG emissions, offset increased electricity usage
 - Install battery storage for demand response and resiliency

Proposed Cape & Vineyard Electrification Demonstration



- 2018 Amendments to Green Communities Act:
Amends Energy Efficiency Plan Requirements
 - Explicitly allows for cost-effective energy storage and other active demand management technologies
 - Adds cost-effective strategic electrification
 - Explicitly authorizes renewable funding through EE funds
 - Changes cost-effectiveness requirement from program level to sector level (increases flexibility)
 - Meetings with Department of Energy Resources and the Attorney General indicate Program Administrators' 2019-2021 Energy Efficiency Plans should comply with amendments

Why Cape Cod and Martha's Vineyard?



- Area is constrained by demand with seasonal spikes
 - DPU Mashpee Substation Order identifies Cape Cod and Martha's Vineyard as distribution-constrained areas
- Some of the highest incidence of electric heat
 - Winter and summer peaks may increase as newly retired homeowners make their year-round homes here and climate change causes more extreme temperatures
- Lack of natural gas options in areas
 - Moratorium limits options on Lower & Outer Cape
 - No gas on Martha's Vineyard
- Highly-educated and energy-savvy population
 - Early adopters may be needed to test the concepts
- Vulnerable areas for infrastructure
 - Storm-related outages and peak demand are concerns for municipalities as well as residents and businesses

Efforts Thus Far



- ✓ Battery storage research
- ✓ Battery storage cost-effectiveness assessment
- ✓ PV/SMART research
- ✓ PV cost-effectiveness assessment (in progress)
- ✓ Heat Pump Retrofit Analysis and cost-effectiveness assessment
- ✓ Initial conversations with DOER and Clean Energy Center

Proposed Strategic Electrification Budget



Proposed Budgets, 2019-2021	Heat Pumps	PV	Storage	Total
Cape Light Compact Energy Efficiency Funding	\$5.8M	\$2M	\$7M	\$14.9M
MassCEC	\$1.3	\$2.2M	n/a	\$3.5M
DOER	\$2.0M	n/a	n/a	\$2.0M
Total	\$9.1M	\$4.2M	\$7M	\$20.3M

	Participation Totals by Year
2019	60 (may move to 2020)
2020	240
2021	400

Residential Income Verification Offerings



Household Members	60% State Median Income (SMI)	61 – 80% SMI	81 – 120% SMI
1	Up to \$35,510	\$35,511 - \$47,550	\$47,551 - \$68,760
2	Up to \$46,437	\$46,438 - \$61,915	\$61,916 - \$89,916
3	Up to \$57,363	\$57,364 - \$76,484	\$76,485 - \$111,074
4	Up to \$68,289	\$68,290 - \$91,052	\$91,053 - \$132,230

Building on success: Update on Cape Light Compact's 2019-2021 Three-Year Energy Efficiency Plan

**Cape Light
Compact**



Working Together Toward A Smarter Energy Future

Background on Three-Year Energy Efficiency Plan



- 2008 Massachusetts Green Communities Act (GCA) mandates *“electric and natural gas resource needs shall first be met through all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply.”*
- 2018 Amendments to the GCA:
 - Explicitly allows for cost effective energy storage and other active demand management technologies
 - Adds cost-effective strategic electrification
 - Explicitly authorizes renewable funding through EE funds
 - Changes cost-effectiveness requirement from program level to sector level (increases flexibility)
- Statewide Term Sheet: Department of Energy Resources and the Attorney General indicate Program Administrators’ 2019-2021 Energy Efficiency Plans should comply with amendments (Active Demand Response, Storage, Electrification Goals Required)
- Compact works collaboratively with seven other statewide PAs to provide cost-effective energy efficiency programs. These programs are most commonly known as Mass Save®.

Calendar of Events



Date	Action
November 2017 – February 2018	Stakeholder Engagement Meetings to help inform the 2019-2021 EE Plan
April 30, 2018	Compact & all PAs submitted draft 2019-2021 Statewide EE Plans
September 14, and October 10, 2018	Second draft of Plan submitted Third draft of Plan due
October 31, 2018	Compact & all PAs file final 2019-2021 Statewide EE Plan with Department of Public Utilities

How People Can Provide Feedback:

- Cape Light Compact's online survey – www.capelightcompact.org/eeplan
- Mail or Email – Maggie Downey, Cape Light Compact, 261 Whites Path, Unit 4, South Yarmouth, MA 02664 or mdowney@capelightcompact.org

Overview of Energy Efficiency Programs



Sector	Program	Initiative
Residential	Residential New Buildings	Residential New Homes & Renovations
	Residential Existing Buildings	Residential Coordinated Delivery
		Residential Conservation Services
		Residential Retail
		Residential Behavior & Active Demand Reduction
Income-Eligible	Income-Eligible Existing Buildings	Income-Eligible Coordinated Delivery
Commercial & Industrial	C&I New Buildings	C&I New Buildings and Major Renovations
	C&I Existing Buildings	C&I Existing Building Retrofit
		C&I New & Replacement Equipment
		C&I Active Demand Reduction

Residential is non-income eligible, 61% + of state median income and includes multi-family (5+ units)

Income Eligible is up to 60% state median income, fuel assistance, and other income eligible benefits

Commercial and Industrial is businesses (including non-profits, churches, etc.), industrial, and municipal

CLC Specific Program Enhancements



Working Together Toward A Smarter Energy Future

Recap of Board direction to date:



- Residential
 - Continue with cost effective no cap insulation offer for residential customers
 - Continue offering 100% insulation incentives to our renter and moderate income customers
 - Continue to explore ways to serve our hard-to-reach customers
 - Battery Storage and Active Demand Response
- C&I
 - Municipal up to 100% cost effective incentives
 - Eligible Non-profits 100% cost effective incentives
 - Year-round tenants 100% cost effective incentives
 - Serve Oil, propane, other fuel customers
 - Continue to Offer “Main Streets”

Bill Impact of Base Plan + Storage

Resi 19-21 Total Cost / mo \$11.77

LI 19-21 Total Cost / mo \$2.03

C&I 19-21 Total Cost / mo \$7.20 – \$194.48

Residential Behavior & Demand Management Offerings



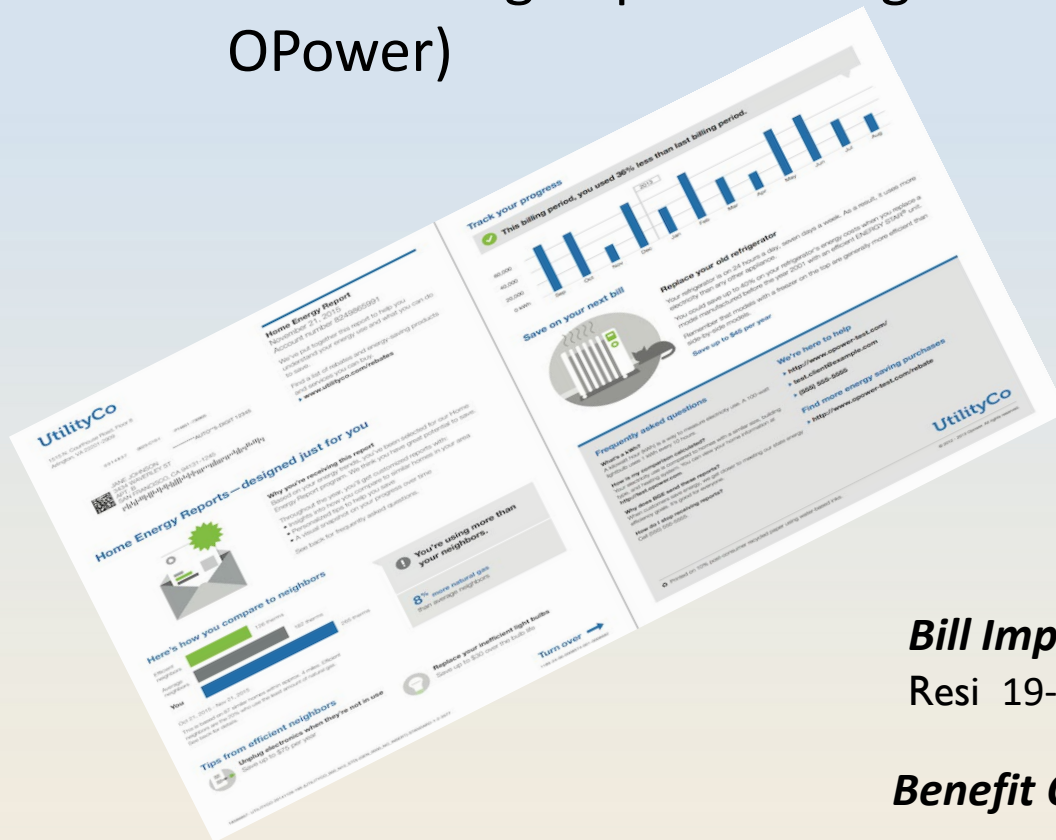
- Behavior & Demand Management
 - Considering implementing a home energy report (e.g., OPower)

Cost: \$2M over 3 years

Cost effective over the 3 years

Contracting should not be an issue

Does the Board wish to pursue this as a measure?



Bill Impact

Resi 19-21 Total Cost / mo \$0.36

Benefit Cost Ratio 2019 – 2021 2.02

Cape & Vineyard Electrification



- Objectives

- 700 total non-gas heated participants, tiered services by income
 - Additional incentives for low-income (up to 60%), moderate income (61-80%) and extended moderate income (81-120%) customers
- Convert oil, propane, electric resistance heat to cold climate heat pumps
- Install PV systems to support electrification of heating system, reduce GHG emissions, offset increased electricity usage
- Install battery storage for demand response and resiliency

Bill Impact Solar and Energy Optimization

Resi	19-21 Total Cost / mo	\$2.02
LI	19-21 Total Cost / mo	\$0.75
C&I	19-21 Total Cost / mo	\$1.27 – \$34.20

Benefit-Cost Ratio

Solar + EO	2019-2021	2.12
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Bill Impacts

09.14 filing includes everything but OPower



Residential (R-1)

Years	EERF	Energy Conservation	Avg. Monthly Usage (kWh)	Total Cost (per month)
2018	\$0.01859 +	\$0.00250 x	516 =	\$10.88
2019-2021	\$0.02448 +	x	=	\$13.92
2016-2018	\$0.01802 +	x	=	\$10.59

Low Income (R-2)

Years	EERF	Energy Conservation	Avg. Monthly Usage (kWh)	Total Cost (per month)
2018	\$0.00148 +	\$0.00250 x	488 =	\$1.94
2019-2021	\$0.00317 +	x	=	\$2.77
2016-2018	\$0.00170 +	x	=	\$2.05

C&I Small General Service (G-1)

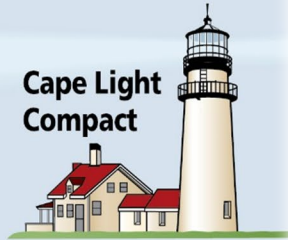
Years	EERF	Energy Conservation	Avg. Monthly Usage (kWh)	Total Cost (per month)
2018	\$0.00530 +	\$0.00250 x	400 - 10,800 =	\$3.12 - \$84.24
2019-2021	\$0.01501 +	x	=	\$7.00 - \$189.11
2016-2018	\$0.01343 +	x	=	\$6.37 - \$172.04

Total Budget (all sectors)

2019	2020	2021	2019-2021
\$44,069,124	\$54,595,241	\$57,679,055	\$156,343,420

Benefit Cost Ratio 2019 – 2021 2.02

Next Steps for CLC Board



- No action needed on Low-Income incentives, set by regulation and statute
 - Affirm total participants = 175
 - Affirm deed-restricted properties only
- Moderate Income Customers (61%-80% SMI)
 - Affirm total participants = 175
 - Provide \$1,000 incentive for Solar/PV
 - 100% of gross system cost funded through HEAT Loan
 - 100% cost of battery storage covered for participating in Demand Response Initiative
 - 100% cost of heat pumps covered via DOER and CEC grants and energy efficiency funds
 - Affirm total participants = 175

Next Steps for CLC Board



- Extended Moderate Income Customers (81%-120% SMI)
 - Affirm total participants = 175
 - No incentive for Solar/PV.
 - 100% of gross system cost funded through HEAT Loan
 - 100% cost of Battery covered for participating in Demand Response Initiative
 - Provide the following Incentives for Cold Climate Air Source Heat Pumps:
 - Electric Heat: \$7,500 from energy efficiency funds (\$6,650 state grants)
 - Oil/Propane Heat: \$7,500 from energy efficiency funds (\$5,750 state grants)
 - Balance funded through HEAT Loan
 - If grants not received, should energy efficiency funds be used?
- Standard Offer Customers Provide
 - Affirm total participants = 175
 - No incentive for Solar/PV.
 - 100% of gross system cost funded through HEAT Loan
 - 100% cost of battery storage covered for participating in Demand Response Initiative
 - Provide the following Incentives for Cold Climate Air Source Heat Pumps
 - Electric Heat: \$3,000 from energy efficiency funds (\$5,400 state grants)
 - Oil/Propane Heat: \$7,500 from energy efficiency funds (\$4,500 state grants)
 - Balance funded through HEAT Loan
 - If grants not received, should energy efficiency funds be used?

Thank You!

April Draft

<https://3jy14ha9u771r7qzn35g0s6c-wpengine.netdna-ssl.com/wp-content/uploads/2018/05/2019-2021-Three-Year-Energy-Efficiency-Plan-April-2018.pdf>

Appendices

<https://3jy14ha9u771r7qzn35g0s6c-wpengine.netdna-ssl.com/wp-content/uploads/2018/05/Appendices-to-2019-2021-Energy-Efficiency-Plan-April-30-2018-No-App-G-Potential.pdf>

September Draft

<https://3jy14ha9u771r7qzn35g0s6c-wpengine.netdna-ssl.com/wp-content/uploads/2018/05/2019-2021-Three-Year-Energy-Efficiency-Plan-April-2018.pdf>

Appendices

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Feedback

Cape Light Compact's online survey www.capelightcompact.org/eeplan

Mail or Email

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**Cape Light
Compact**



Working Together Toward A Smarter Energy Future