

# Cape Light Compact

Tel: (508) 375-6644 • Fax: (508) 362-4136

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

POST OFFICE BOX 427 • BARNSTABLE SUPERIOR COURT HOUSE • BARNSTABLE, MASSACHUSETTS 02630

## Cape Light Compact Governing Board Meeting



**DATE:** Wednesday, August 14, 2013  
**LOCATION:** Rooms 11&12, Superior Courthouse, Barnstable  
**TIME:** 2:00 – 4:30 p.m.

### AGENDA

08-09-13A11:28 RCVD

- 2:00 Public Comment
- 2:10 Approval of Minutes
- 2:15 Presentation by Sullivan, Rogers & Company, on Independent Auditors' Report on Cape Light Compact Financial Statements and Additional Information: Calendar Years 2009, 2010 and 2011
- 3:00 Energy Efficiency Update
  - 1. Overview of 2012 Annual Report
  - 2. Discussion and Potential Vote on C&I Waiver Request
- 3:15 Chairman's Report
  - 1. Update on June Meeting with Assembly of Delegates
  - 2. Demand Letter Sent to C. Powicki of Brewster
  - 3. DPU Letter of July 19, 2013 – taking no action on request for public hearing on Compact
- Administrator's Report
  - 1. Treasurer's Report
- 3:30 Open Session Vote on Entry into Executive Session and Required Declarations of the Chair - M.G.L. c. 30A, Section 21 (a)(10): Power Supply Procurement Strategy Discussion (confidential and competitively sensitive information), and Update on DPU Regulatory Litigation - M.G.L. c. 30A, Section 21(a)(3)

2013 Budgeted (Based on Three-year Plan)

Program	PA Costs					
	PPA	Marketing	Incentives	STAT	EMV	Total PA Costs
<b>Residential (total)</b>	<b>\$617,786</b>	<b>\$583,373</b>	<b>\$9,588,576</b>	<b>\$1,743,262</b>	<b>\$457,652</b>	<b>\$12,990,648</b>
1. Residential Whole House	\$ 414,759	\$ 178,469	\$ 7,742,657	\$ 856,992	\$ 386,456	\$ 9,557,333
Residential New Construction	\$ 20,702	\$ 15,012	\$ 329,250	\$ 137,852	\$ 7,011	\$ 509,826
Residential Multi-Family Retrofit	\$ 20,486	\$ 12,652	\$ 288,414	\$ 38,655	\$ 16,243	\$ 376,451
Residential Home Energy Services	\$ 373,570	\$ 148,805	\$ 7,102,993	\$ 680,485	\$ 343,203	\$ 8,649,056
Residential Behavior/Feedback	\$ -	\$ -	\$ 22,000	\$ -	\$ -	\$ 22,000
2. Residential Products	\$ 108,464	\$ 159,718	\$ 1,780,919	\$ 497,270	\$ 79,806	\$ 2,626,178
Residential Cooling & Heating Equipment	\$ 30,261	\$ 20,424	\$ 493,175	\$ 89,556	\$ 10,558	\$ 643,974
Residential Lighting	\$ 58,883	\$ 109,794	\$ 1,001,994	\$ 272,120	\$ 55,887	\$ 1,498,678
Residential Consumer Products	\$ 19,320	\$ 29,500	\$ 285,750	\$ 135,594	\$ 13,362	\$ 483,526
3. Residential Hard-to-Measure	\$ 94,563	\$ 247,185	\$ 65,000	\$ 389,000	\$ 11,389	\$ 807,137
Residential Statewide Marketing	\$ -	\$ 122,185	\$ -	\$ -	\$ -	\$ 122,185
Residential DOER Assessment	\$ 89,134	\$ -	\$ -	\$ -	\$ 11,389	\$ 100,523
Residential EEAC Consultants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Sponsorship & Subscriptions	\$ 5,429	\$ -	\$ -	\$ -	\$ -	\$ 5,429
Residential HEAT Loan	\$ -	\$ -	\$ -	\$ 300,000	\$ -	\$ 300,000
Residential Workforce Development	\$ -	\$ -	\$ -	\$ 89,000	\$ -	\$ 89,000
Residential R&D and Demonstration	\$ -	\$ -	\$ 65,000	\$ -	\$ -	\$ 65,000
Residential Education	\$ -	\$ 125,000	\$ -	\$ -	\$ -	\$ 125,000
<b>Low-Income (total)</b>	<b>\$190,742</b>	<b>\$68,542</b>	<b>\$2,333,589</b>	<b>\$596,709</b>	<b>\$116,838</b>	<b>\$3,306,419</b>
4. Low-Income Whole House	\$ 133,655	\$ 24,880	\$ 2,333,589	\$ 596,709	\$ 113,868	\$ 3,202,701
Low-Income New Construction	\$ 2,061	\$ 229	\$ 40,000	\$ 1,877	\$ 5,920	\$ 50,087
Low-Income Single Family Retrofit	\$ 110,814	\$ 22,337	\$ 1,844,480	\$ 575,910	\$ 93,323	\$ 2,646,865
Low-Income Multi-Family Retrofit	\$ 20,780	\$ 2,313	\$ 449,109	\$ 18,922	\$ 14,625	\$ 505,750
5. Low-Income Hard-to-Measure	\$ 57,087	\$ 43,662	\$ -	\$ -	\$ 2,970	\$ 103,718
Low-Income Statewide Marketing	\$ -	\$ 20,364	\$ -	\$ -	\$ -	\$ 20,364
Low-Income DOER Assessment	\$ 18,258	\$ -	\$ -	\$ -	\$ 2,970	\$ 21,228
Low-Income Energy Affordability Network	\$ 38,829	\$ 23,297	\$ -	\$ -	\$ -	\$ 62,126
<b>Commercial &amp; Industrial (total)</b>	<b>\$486,742</b>	<b>\$110,505</b>	<b>\$11,090,318</b>	<b>\$1,426,476</b>	<b>\$477,762</b>	<b>\$13,591,802</b>
6. C&I New Construction	\$ 89,348	\$ 9,947	\$ 1,702,588	\$ 281,028	\$ 143,037	\$ 2,225,948
C&I New Construction	\$ 89,348	\$ 9,947	\$ 1,702,588	\$ 281,028	\$ 143,037	\$ 2,225,948
7. C&I Retrofit	\$ 342,285	\$ 38,107	\$ 9,387,730	\$ 1,145,447	\$ 325,135	\$ 11,238,704
C&I Retrofit	\$ 159,738	\$ 17,784	\$ 6,186,759	\$ 659,118	\$ 183,270	\$ 7,206,668
C&I Direct Install	\$ 182,547	\$ 20,323	\$ 3,200,972	\$ 486,329	\$ 141,865	\$ 4,032,036
8. C&I Hard-to-Measure	\$ 55,109	\$ 62,450	\$ -	\$ -	\$ 9,591	\$ 127,150
C&I Statewide Marketing	\$ -	\$ 62,450	\$ -	\$ -	\$ -	\$ 62,450
C&I DOER Assessment	\$ 50,537	\$ -	\$ -	\$ -	\$ 9,591	\$ 60,128
C&I EEAC Consultants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
C&I Sponsorships & Subscriptions	\$ 4,571	\$ -	\$ -	\$ -	\$ -	\$ 4,571
<b>GRAND TOTAL</b>	<b>\$1,295,269</b>	<b>\$762,419</b>	<b>\$23,012,483</b>	<b>\$3,766,447</b>	<b>\$1,052,252</b>	<b>\$29,888,870</b>

2013 Actuals (January Through June)

Program	PA Costs					
	PPA	Marketing	Incentives	STAT	EMV	Total PA Costs
<b>Residential (total)</b>	<b>\$272,337</b>	<b>\$214,825</b>	<b>\$2,581,818</b>	<b>\$527,881</b>	<b>\$150,594</b>	<b>\$3,747,155</b>
1. Residential Whole House	\$ 135,982	\$ 62,144	\$ 2,081,363	\$ 243,403	\$ 100,049	\$ 2,622,921
Residential New Construction	\$ 6,965	\$ 3,444	\$ 20,769	\$ 20,970	\$ 8,273	\$ 60,421
Residential Multi-Family Retrofit	\$ 6,893	\$ 2,849	\$ 9,825	\$ 12,317	\$ 4,215	\$ 36,098
Residential Home Energy Services	\$ 122,104	\$ 55,851	\$ 2,050,769	\$ 210,116	\$ 87,561	\$ 2,526,401
Residential Behavior/Feedback	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2. Residential Products	\$ 36,493	\$ 37,167	\$ 499,963	\$ 91,340	\$ 50,545	\$ 715,508
Residential Cooling & Heating Equipment	\$ 10,181	\$ 4,209	\$ 272,659	\$ 24,148	\$ 8,651	\$ 319,848
Residential Lighting	\$ 19,811	\$ 24,821	\$ 200,269	\$ 42,243	\$ 21,006	\$ 308,150
Residential Consumer Products	\$ 6,500	\$ 8,137	\$ 27,035	\$ 24,949	\$ 20,888	\$ 87,510
3. Residential Hard-to-Measure	\$ 99,883	\$ 115,214	\$ 491	\$ 193,139	\$ -	\$ 408,727
Residential Statewide Marketing	\$ -	\$ 43,564	\$ -	\$ -	\$ -	\$ 43,564
Residential DOER Assessment	\$ 80,344	\$ -	\$ -	\$ -	\$ -	\$ 80,344
Residential EEAC Consultants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Sponsorship & Subscriptions	\$ 19,539	\$ -	\$ -	\$ -	\$ -	\$ 19,539
Residential HEAT Loan	\$ -	\$ -	\$ -	\$ 191,199	\$ -	\$ 191,199
Residential Workforce Development	\$ -	\$ -	\$ -	\$ 1,940	\$ -	\$ 1,940
Residential R&D and Demonstration	\$ -	\$ -	\$ 491	\$ -	\$ -	\$ 491
Residential Education	\$ -	\$ 71,649	\$ -	\$ -	\$ -	\$ 71,649
<b>Low-Income (total)</b>	<b>\$69,670</b>	<b>\$13,811</b>	<b>\$379,657</b>	<b>\$104,161</b>	<b>\$44,419</b>	<b>\$611,718</b>
4. Low-Income Whole House	\$ 44,968	\$ 3,276	\$ 379,657	\$ 104,161	\$ 44,419	\$ 576,481
Low-Income New Construction	\$ 693	\$ 47	\$ 606	\$ 957	\$ 748	\$ 3,051
Low-Income Single Family Retrofit	\$ 37,283	\$ 2,755	\$ 279,241	\$ 93,388	\$ 41,338	\$ 454,004
Low-Income Multi-Family Retrofit	\$ 6,991	\$ 475	\$ 99,810	\$ 9,817	\$ 2,333	\$ 119,426
5. Low-Income Hard-to-Measure	\$ 24,702	\$ 10,535	\$ -	\$ -	\$ -	\$ 35,237
Low-Income Statewide Marketing	\$ -	\$ 7,765	\$ -	\$ -	\$ -	\$ 7,765
Low-Income DOER Assessment	\$ 20,086	\$ -	\$ -	\$ -	\$ -	\$ 20,086
Low-Income Energy Affordability Network	\$ 4,616	\$ 2,770	\$ -	\$ -	\$ -	\$ 7,386
<b>Commercial &amp; Industrial (total)</b>	<b>\$244,528</b>	<b>\$36,300</b>	<b>\$940,072</b>	<b>\$275,346</b>	<b>\$82,597</b>	<b>\$1,578,842</b>
6. C&I New Construction	\$ 30,061	\$ 2,041	\$ 442,552	\$ 74,809	\$ 24,903	\$ 574,366
C&I New Construction	\$ 30,061	\$ 2,041	\$ 442,552	\$ 74,809	\$ 24,903	\$ 574,366
7. C&I Retrofit	\$ 115,161	\$ 7,817	\$ 497,520	\$ 200,537	\$ 57,693	\$ 878,727
C&I Retrofit	\$ 53,743	\$ 3,648	\$ 121,628	\$ 114,092	\$ 32,142	\$ 325,253
C&I Direct Install	\$ 61,418	\$ 4,169	\$ 375,892	\$ 86,444	\$ 25,551	\$ 553,474
8. C&I Hard-to-Measure	\$ 99,306	\$ 26,443	\$ -	\$ -	\$ -	\$ 125,749
C&I Statewide Marketing	\$ -	\$ 26,443	\$ -	\$ -	\$ -	\$ 26,443
C&I DOER Assessment	\$ 82,170	\$ -	\$ -	\$ -	\$ -	\$ 82,170
C&I EEAC Consultants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
C&I Sponsorships & Subscriptions	\$ 17,136	\$ -	\$ -	\$ -	\$ -	\$ 17,136
<b>GRAND TOTAL</b>	<b>\$588,535</b>	<b>\$264,837</b>	<b>\$3,901,546</b>	<b>\$907,388</b>	<b>\$277,610</b>	<b>\$5,937,716</b>

Source:  
G:\12-001 Compact Efficiency 2012\2013-2015 EEP\20121102 & 12.20 DPU 12-107 Proceeding\2013.02.21 Compliance Filing\DPU 12-107\_CLC\_Ext. 4  
COMPLIANCE\_2013-2015 08-50 Tables\_Expanded\_2013.02.13.xlsx

1

# Cape Light Compact

Fiscal Year 2009, 2010 and 2011  
Financial Statement Audit Exit Conferences

August 14, 2013

Presented by: Chris Rogers, CPA, Shareholder

# Agenda

2

- Background
- Engagements summary
- Financial statement structure
- Reporting entity
- Financial statement summaries (2009 – 2011)
  - ▣ Opinions
  - ▣ Financial highlights
  - ▣ Significant footnotes
  - ▣ Additional Information
- Reports on IC Over FR and Compliance
- Management Letter
- Questions

# Background

- Since inception (1997) all Cape Light Compact funds have been included in the annual audit of Barnstable County's financial statements
  - ▣ These audits did not include the preparation of separately issued financial statements for the Compact
- July 2012 - Presentation to Compact Governing Board on Compact Audit and Attestation Recommendations
- September 2012 – Compact Board votes to proceed with Recommendations
- March 2013 – Report on Applying Agreed Upon Procedures presented to the Board

# Engagements Summary

4

- Audits began February 2013
- Multiple drafts issued for each year beginning early June 2013
- Final documents issued August 2013
- Information was provided timely and was well organized
- Management and staff responsive to all inquiries
- No disagreements with management

# Financial Statement Structure

5

- Auditors' opinion (p 1-2)
- Management's discussion and analysis (p 4-8)
- Financial statements and notes (p 10-19)
- Additional information (p 21-24)
  - ▣ Combining statements of net assets and revenues, expenses and changes in net assets
  - ▣ Reconciliation of audited EE operating expenses to the annual DPU report

# Reporting Entity

6

- Financial statements include the direct financial activities of the Compact, such as:
  - Energy efficiency programs funded by:
    - Energy efficiency/system benefit charges
    - EERF charges
    - RGGI proceeds received via the Commonwealth
    - Forward capacity market
  - Opt-in green program
- Financial statements do not include:
  - Federal and state grants received by Barnstable County but administered by the Compact
    - These funds have been reported as governmental funds in Barnstable County's annual audited financial statements



# Opinions

7

- Opinions (p 1-2)
  - Unqualified (best opinion available) for all years (2009, 2010 and 2011)
    - FS presented fairly, in all material respects, the financial position and results of operations and cash flows in accordance with GAAP (GASB)

# Financial Highlights - 2009

8

- Statement of Net Assets (p 10)
  - Assets - \$5.3m
    - Cash and cash equivalents - \$3.6m
    - Accounts receivable - \$1.7m
  - Liabilities - \$2.9m
    - A/P and accrued expenses - \$2.7m
    - Net OPEB obligation - \$102k
  - Net Assets – \$2.4m

# Financial Highlights - 2009

9

- Statement of Revenues, Expenses and Change (p 11)
  - ▣ Increase in net assets of \$501k, or 26.3%
  - ▣ Total operating revenues \$10.4m
    - Energy efficiency - \$4.9m
    - Intergovernmental (RGGI) - \$4.0m
  - ▣ Total operating expenses - \$10.1m
    - Energy efficiency programs - \$8.8m, or 87%
    - Grants to CVEC - \$720k, or 7%
  - ▣ Total nonoperating revenues (expenses) - \$196k
    - Forward capacity market - \$329k
    - RECs - (\$133k)

# Significant Footnotes - 2009

10

- Note 5 - Long-term Obligations (p 16)
  - ▣ Net OPEB obligation - \$102k
    - Represents Compact's estimated share of County's annual cost
  - ▣ Compensated absences - \$47k

# Significant Footnotes - 2009

- Note 8 – Related Party Transactions (p 17 – 18)
  - Administrative services agreement with County
  - Grants provided to CVEC (\$720k)
  - County paying for certain Compact activities from General Fund (County) budget - \$189k
  - Subsequent to year-end, Compact funds were used to secure a \$100k line of credit for CVEC
  - Subsequent to year-end, the Compact entered into 2 agreements to purchase RECs from CVEC

# Significant Footnotes - 2009

12

- Note 10 – Commitments (p 18)
  - Compact is committed under several agreements to purchase RECs at fixed prices through March 2012
    - Maximum commitment totals \$7.7m
    - Substantial portion of the RECs are purchased by supplier at cost
  - Compact participates in ISO-NE Forward Capacity Market
    - After June 1, 2010 committed to deliver specified units of EE at a fixed price per unit
      - Penalties are assessed if Compact fails to deliver its capacity supply obligation
    - Prior to June 1, 2010 paid a fixed price based on EE reported to ISO-NE

# Significant Footnotes - 2009

13

- Note 10 – Commitments (continued)
  - Subsequent to year-end, Compact entered into 5-year agreement to purchase all RECs generated by 3<sup>rd</sup> party facility
  - Subsequent to year-end (2012), Compact entered into several agreements to sell REC's it had acquired (or committed to acquire) from a third party
    - Future cash inflows total \$657k.

# Additional Information - 2009

- Additional Information (p 22 – 24)
  - ▣ Combining statement of net assets (p 22) and combining statement of revenues, expenses and changes in net assets (p 23)
    - These statements segregate the Compact's activities between Energy Efficiency, Power Supply Reserve, budgeted operating funds and the Green Program
  - ▣ Reconciliation of audited GAAP EE operating expenses to annual DPU report (p 24)
    - Reconciling items (net change in accrued expenses, accrued payroll, net OPEB obligation and compensated absences) represent differences in basis of accounting (accrual versus modified accrual)



# Financial Highlights - 2010

15

- Statement of Net Assets (p 10)
  - Assets - \$3.9m
    - Cash and cash equivalents - \$1.9m
    - Accounts receivable - \$2.0m
  - Liabilities - \$3.6m
    - A/P and accrued expenses - \$3.3m
    - Net OPEB obligation - \$204k
  - Net Assets – \$322k

# Financial Highlights - 2010

16

- Statement of Revenues, Expenses and Change (p 11)
  - ▣ Decrease in net assets of \$2.1m, or 86.6%
    - Result of lag in receipt of revenues (6 months) from the EE program
    - Experienced by all EE program administrators
  - ▣ Total operating revenues \$12.4m
    - Energy efficiency - \$5.1m
    - EE reconciliation factor (EERF) - \$4.7m
  - ▣ Total operating expenses - \$14.5m
    - Energy efficiency programs – 13.4m, or 93%
    - Grants to CVEC - \$500k, or 3.5%
  - ▣ Total nonoperating revenues (expenses) – (\$39k)
    - Forward capacity market - \$556k
    - RECs - (\$590k)

# Significant Footnotes - 2010

17

- Note 5 - Long-term Obligations (p 16)
  - ▣ Net OPEB obligation - \$204k
    - \$102k current year cost, which represents Compact's estimated share of County's annual cost
  - ▣ Compensated absences - \$45k

# Significant Footnotes – 2010

- Note 8 – Related Party Transactions (p 17 – 18)
  - Administrative services agreement with County
  - Grants provided to CVEC (\$500k)
  - County paying for certain Compact activities from General Fund (County) budget - \$97k
  - Subsequent to year-end, Compact funds were used to secure a \$100k line of credit for CVEC

# Significant Footnotes - 2010

- Note 10 – Commitments (p 18)
  - ▣ Compact is committed under several agreements to purchase RECs at fixed prices through June 2015
    - Maximum commitment totals \$6.1m
  - ▣ Compact participates in ISO-NE Forward Capacity Market
    - After June 1, 2010 committed to deliver specified units of EE at a fixed price per unit
      - Penalties are assessed if Compact fails to deliver its capacity supply obligation
    - Prior to June 1, 2010 paid a fixed price based on EE reported to ISO NE

# Significant Footnotes - 2010

20

- Note 10 – Commitments (continued)
  - ▣ Subsequent to year-end (2012), Compact entered into several agreements to sell REC's it had acquired (or committed to acquire) from a third party
    - Future cash inflows total \$657k.

# Additional Information - 2010

- Additional Information (p 22 – 24)
  - ▣ Combining statement of net assets (p 22) and combining statement of revenues, expenses and changes in net assets (p 23)
    - These statements segregate the Compact's activities between Energy Efficiency, Power Supply Reserve, budgeted operating funds and the Green Program
  - ▣ Reconciliation of audited GAAP EE operating expenses to annual DPU report (p 24)
    - Most reconciling items (net change in accrued expenses, accrued payroll, net OPEB obligation and compensated absences) represent differences in basis of accounting (accrual versus modified accrual)
    - One reconciling item (\$247k) relates to County grant expenses that DPU directed to include in the annual report

# Financial Highlights – 2011

22

- Statement of Net Assets (p 10)
  - Assets - \$4.2m
    - Cash and cash equivalents - \$2.2m
    - Accounts receivable - \$2.0m
  - Liabilities - \$3.3m
    - A/P and accrued expenses - \$2.9m
    - Net OPEB obligation - \$301k
  - Net Assets – \$908k



# Financial Highlights - 2011

23

- Statement of Revenues, Expenses and Change (p 11)
  - ▣ Increase in net assets of \$587k, or 182%
  - ▣ Total operating revenues \$18.4m
    - Energy efficiency - \$5.0m
    - EE reconciliation factor (EERF) - \$11.5m
  - ▣ Total operating expenses - \$18.1m
    - Energy efficiency programs – 16.6m, or 92%
    - Grants to CVEC - \$744k, or 4.1%
  - ▣ Total nonoperating revenues (expenses) – \$218k
    - Forward capacity market - \$699k
    - RECs - (\$479k)

# Significant Footnotes - 2011

24

- Note 5 - Long-term Obligations (p 16)
  - ▣ Net OPEB obligation - \$301k
    - \$102k current year cost, which represents Compact's estimated share of County's annual cost
  - ▣ Compensated absences - \$46k

# Significant Footnotes – 2011

25

- Note 8 – Related Party Transactions (p 17 – 18)
  - Administrative services agreement with County
  - Grants provided to CVEC (\$744k)
  - County paying for certain Compact activities from General Fund (County) budget - \$99k
  - Subsequent to year-end, Compact funds were used to secure a \$100k line of credit for CVEC

# Significant Footnotes - 2011

26

- Note 10 – Commitments (p 18)
  - ▣ Compact is committed under several agreements to purchase RECs at fixed prices through June 2015
    - Maximum commitment totals \$2.8m
  - ▣ Compact participates in ISO-NE Forward Capacity Market
    - Committed to deliver specified units of EE at a fixed price per unit
      - Penalties are assessed if Compact fails to deliver its capacity supply obligation

# Significant Footnotes - 2011

27

- Note 10 – Commitments (continued)
  - ▣ Subsequent to year-end (2012), Compact entered into several agreements to sell REC's it had acquired (or committed to acquire) from a third party
    - Future cash inflows total \$657k.

# Additional Information - 2011

28

- Additional Information (p 22 – 24)
  - ▣ Combining statement of net assets (p 22) and combining statement of revenues, expenses and changes in net assets (p 23)
    - These statements segregate the Compact's activities between Energy Efficiency, Power Supply Reserve, budgeted operating funds and the Green Program
  - ▣ Reconciliation of audited GAAP EE operating expenses to annual DPU report (p 24)
    - Most reconciling items (net change in accrued expenses, accrued payroll, net OPEB obligation and compensated absences) represent differences in basis of accounting (accrual versus modified accrual)
    - One reconciling item (\$200k) relates to County grant expenses that DPU directed to include in the annual report

# Report on IC over FR, Compliance and Federal Award Programs

29

- Document structure
  - ▣ Report on internal control (IC) over financial reporting (FR), compliance and other matters
    - Required by Government Auditing Standards
    - No opinion provided
    - Must report the following:
      - Any significant deficiencies or material weaknesses in internal control over financial reporting
      - Material noncompliance related to laws, regulations, contracts and grant agreements
    - Results
      - No findings for 2009, 2010 and 2011

# Management Letter

30

- One management letter prepared for all years
- Does not identify the strengths of the financial systems
- Summary
  - ▣ 3 comments
    - 1 informational



# Management Letter

31

- Chart of Accounts (p 1)
  - ▣ County provides accounting and financial reporting services
    - Compact's chart of account structure designed with some characteristics of County government
      - Differs from Compact's operations
    - Current structure focused on reporting by function; miscellaneous account used when activity cannot be grouped by function
  - ▣ We identified several instances whereby "miscellaneous" expense accounts were used for the purchase of RECs and grants to CVEC
    - These activities are an integral part of operations and should be reported separately in the general ledger
  - ▣ We recommend chart of accounts be structured in a manner that is customized to the Compact's operations

# Management Letter

32

- “Mil-Adder” Funds (p 2)
  - ▣ We identified the following regarding “Mil-Adder” funds:
    - Investment income is not being allocated to the fund (as prescribed by Section 15.3 of the Competitive Electric Supply Agreement (CESA))
    - Although not required by the CESA, Board formally votes the use of “mil-adder” funds related to the annual operating budget, grants to CVEC and various other operating expense
      - Represents 92.8% of expenses between 1/1/09 – 12/31/11
      - Remaining 7.2% (i.e., legal expenses related to DPU proceedings and opt out notices) were discussed at Board meetings but not formally voted
      - We believe a formal vote on the use of all “mil-adder” funds would strengthen controls over disbursements
  - We recommend:
    - Investment income be allocated to the “Mil-adder” fund monthly
    - Procedures be implemented whereby the Board formally votes the use of all “mil-adder” funds (i.e., budget process)

# Management Letter

33

- Pension Accounting and Financial Reporting (p 3)
  - GASBS 68 revises/establishes new financial reporting requirements related to pension benefits
    - Required to recognize long-term obligation for pension benefits
    - Also requires:
      - More comprehensive measure of annual pension costs
      - Conditions on the use of discount rate
      - Requirement to use entry age method and each service period's cost is determined by level % of pay (attribution method)
  - We recommend management familiarize itself with GASBS 68 and prepare for its implementation

# Questions



THE COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF PUBLIC UTILITIES

DEVAL L. PATRICK  
GOVERNOR

ONE SOUTH STATION  
BOSTON, MA 02110  
(617) 305-3500

ANN G. BERWICK  
CHAIR

RICHARD K. SULLIVAN, JR.  
SECRETARY OF ENERGY  
AND ENVIRONMENTAL AFFAIRS

JOLETTE A. WESTBROOK  
COMMISSIONER

DAVID W. CASH  
COMMISSIONER

July 19, 2013

VIA FIRST CLASS MAIL

Chris Powicki  
2042 Main Street  
Brewster, MA 02631

RE: Petition for a public hearing in the Town of Brewster

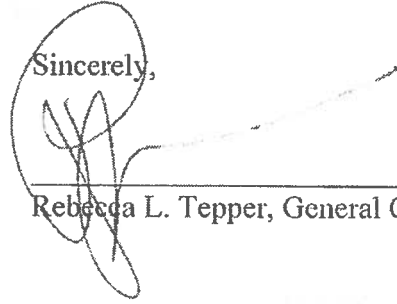
Dear Mr. Powicki:

On July 10, 2013, the Department of Public Utilities ("Department") received a petition ("Petition") signed by you and other customers. The customers state that they take electric supply service from a municipal aggregation program operated by the Towns of Aquinnah, Barnstable, Bourne, Brewster, Chatham, Chilmark, Dennis, Edgartown, Eastham, Falmouth, Harwich, Mashpee, Oak Bluffs, Orleans, Provincetown, Sandwich, Tisbury, Truro, West Tisbury, Wellfleet, and Yarmouth, acting together as the Cape Light Compact ("Compact"). G.L. c. 164, § 134(a). The Petition requests that a public hearing be held by the Department in the Town of Brewster regarding a change in electric supply rates for the Compact effective July 1, 2103.

The Petition cites to G.L. c. 25, § 4A in support of the request for a public hearing. General Laws c. 25, § 4A relates to the timing and location of a public hearing that has been ordered by the Department. If the Department, pursuant to another statute, has ordered or is required to order a public hearing on a petition of a company seeking approval of a change in rates or reduction in or discontinuance of service, G.L. c. 25, § 4A allows certain persons to request that the public hearing be held in a specified municipality or service territory. The Compact is a group of municipalities that jointly agreed, through an inter-governmental agreement, to operate a municipal aggregation program pursuant to G.L. 164, § 134(a), as approved by the Department. The Compact is not a company seeking approval of a change in rates in the context of G.L. c. 25, § 4A. *See, e.g.*, G.L. c. 159B, § 6B; G.L. c. 164, § 94; G.L. c. 165, § 2; 220 C.M.R. § 5.00. Thus, G.L. c. 25, § 4A does not apply to a change in rates

by the Compact. Further, even if G.L. c. 25, § 4A were to apply to the Compact, the Compact has not filed a petition seeking approval of revisions to its municipal aggregation plan, and the Department has not ordered a public hearing on the Compact's change in rates for effect July 1, 2013. Therefore, because G.L. c. 25, § 4A does not apply in this instance, the Department will take no action on the Petition.

Sincerely,



---

Rebecca L. Tepper, General Counsel



---

ATTORNEYS AT LAW

---

The firm has attorneys also admitted  
to practice in District of Columbia,  
Idaho, New York and Vermont

ONE GATEWAY CENTER, SUITE 809  
NEWTON, MASSACHUSETTS 02458  
617.244.9500

FACSIMILE: 617.244.9550  
E-MAIL: [bckboston@bck.com](mailto:bckboston@bck.com)  
WEBSITE: [www.bck.com](http://www.bck.com)

July 3, 2013

***VIA CERTIFIED MAIL  
RETURN RECEIPT REQUESTED***

Mr. Christopher Powicki  
2042 Main Street  
Brewster, Massachusetts 02631

***Re: Demand Letter/Remarks to the Barnstable County Assembly of Delegates***

Mr. Powicki:

As you know, we are counsel to the Cape Light Compact (the "Compact"). We have been directed by the Compact Chairman to present you with the following demands concerning your recent public presentation regarding the Compact:

***1. The Compact demands that you cease and desist using the logo of the Compact.***

You must cease and desist from using the Compact's logo. Your unauthorized use of the Compact's logo constitutes service mark infringement in violation of federal trademark law and common law service mark rights and this letter constitutes the Compact's demand that you cease and desist using its logo. Since its inception, the Compact has continually used its logo to advertise and market its power supply program and energy efficiency program activities. For nine years, the Compact has marketed its energy efficiency program to customers on the Cape & Vineyard using its logo in all of its outreach material, at energy fairs, in educational trainings for the local workforce, on its website and on local news programs. As a result, Compact customers and the general public on the Cape & Vineyard are familiar with the Compact and its outreach activities.

You recently used the Compact's logo on the first slide of your June 19, 2013 presentation to the Barnstable County Assembly of Delegates (the "Presentation"). The Compact did not prepare the Presentation, did not provide information to you for use in the Presentation and did not authorize you to use its logo in your Presentation. The Compact's logo appears on the same page that you identify yourself, your consulting firm and your contact information. Your use of the Compact's logo in this manner is likely to cause or may have caused actual confusion about the source or sponsorship of the material in the Presentation and

the affiliation of the Compact and Water Energy & Ecology Information Services. You have misappropriated the Compact's logo by using it in the Presentation. Such use is prohibited by the federal Lanham Act, 15 U.S.C. § 1051 et seq. and constitutes common law service mark infringement in Massachusetts. *Planned Parenthood Federation of America, Inc. v. Problem Pregnancy of Worcester, Inc.*, 398 Mass. 480 (1986).

Please be advised that if you do not cease and desist from using the Compact's logo, the Compact will undertake all appropriate steps and explore all remedies available to protect its logo and enjoin you from further service mark infringement. We demand that you retract all copies of the Presentation you have disseminated, remove the Compact's logo from the Presentation and refrain from any future unauthorized use of the Compact's logo.

**2. *The Compact demands that you cease and desist making false allegations about the regulatory oversight and administration of the Compact's power supply program.***

You must cease and desist from making false allegations against the Compact regarding administration of the power supply program. While this letter is not intended to be a refutation of every error, misrepresentation, or distortion of fact contained in the Presentation, we do call your attention below to several broad claims made in the Presentation that are untruthful. In addition, please see the attached Fact Sheet for additional information. Since its inception, the Compact has properly sought and obtained the necessary Department of Public Utilities ("DPU") approvals for operation of its power supply program, including the collection of an adder to fund power supply program operations.

- You repeatedly state that the Compact imposes mil charges with no public hearing, input, or scrutiny.

Your statements are wrong. The DPU held a public hearing in the Town of Barnstable on June 1, 2000 to review and take comment on the Compact's Aggregation Plan (which discusses the collection of a mil charge) and initial form of electric supply agreement (which included two adders). The Compact also published legal notices in the Boston Globe and the Cape Cod Times to provide public notice of the Aggregation Plan filing. In addition, in each subsequent DPU proceeding to review a Compact electric supply agreement, the DPU requested public comment on the Compact's filings, the Compact published legal notices in the Boston Globe and the Cape Cod Times to provide notice to the public and the Compact formally served notice on all of its member communities. See the attached Fact Sheet.

- You repeatedly state that use of a mil adder in Compact supply agreements violates the Aggregation Plan.

Your claim is unfounded. The Aggregation Plan states that Barnstable County will provide funding for the Compact's power supply program and that the Compact will collect a mil charge (or fractions thereof) in the event that Barnstable County funding is no longer available. While Barnstable County funded the power supply program, from early on in the program operation it was clear that this funding was not sufficient to maintain the power supply program



operations. Thus, in accordance with the spirit and intent of the Aggregation Plan, the Compact's electric supply agreements have contained various provisions to collect an adder.

The Aggregation Plan requires the Compact to provide public notice and a public hearing (i.e., public process) if the Compact utilizes an adder for power supply program funding and to obtain a vote of the Governing Board. The Aggregation Plan does not define the type of public hearing required and the DPU imposed no requirement on the type of public hearing in its approval of the Aggregation Plan. Further, the plain language of the Aggregation Plan does not specify that the Compact must provide public notice/public hearing and obtain a Governing Board vote *for each and every instance* in which the dollar amount of the adder changes or for every supply contract entered into by the Compact that contains a provision for an adder. Nor, for that matter, did the DPU impose this kind of condition in its approval of the Aggregation Plan. And such a requirement would be clearly impractical given the dynamic nature of pricing on a quarterly or six month basis.

The Compact first collected an adder under its default service pilot program approved by the Department in D.T.E. 01-63. In D.T.E. 01-63, a *public comment period* was available and the Compact published legal notices in the Boston Globe and the Cape Cod Times regarding the pilot program. The Compact also served notice of its petition for approval of this program upon the Chairmen of the Boards of Selectmen in each of the Compact's 21 member communities. See D.T.E. 01-63, Notice of Filing and Request for Comments (August 24, 2001) and Cape Light Compact Return of Service (September 11, 2001). Pursuant to the DPU's directive in D.T.E. 01-63, the Compact filed its default service supply agreement (that includes an adder) with the DPU on March 15, 2002 and copied the service list for D.T.E. 01-63. In this filing, the Compact represented that the Compact's Governing Board unanimously voted to approve the default service supply agreement on March 13, 2002. The agreement was and still is publicly available for review at the DPU. The DPU approved this supply agreement on March 22, 2002.

Similar mil adder provisions appear in the Compact's electric supply agreements entered into after the default service pilot program. The Compact has never sought to hide this from its Governing Board, the DPU or the general public. The Compact Governing Board is routinely briefed on the Compact's power supply program, its power supply procurements and the resulting contract awards. If the DPU had concerns about the Compact's compliance with the Aggregation Plan, it would have expressed those concerns in its approval orders in D.T.E. 01-63, 03-61 and 03-99 (Default Service Pilot Project) or D.T.E. 04-32 (Retail Electric Supply Agreement). It did not. In fact, the DPU expressly approved the Compact's adder in its approval order in D.T.E. 04-32. D.T.E. 04-32 (May 4, 2004), page 20. Moreover, the Compact has never sought confidential treatment of this provision to avoid public disclosure. The Compact's electric supply agreements dating back to 2000 have been filed with DPU and are available for public review. See the attached Fact Sheet.

Additionally, other than compliance with the price benchmarks during the standard offer period, the DPU has never dictated any conditions upon the Compact's collection or use of the mil adder. Notably, the Presentation fails to recognize the benefits to consumers from the Compact's use of the mil adder. The Compact has used the mil adder to support its power

supply procurement efforts, to intervene in various regulatory proceedings to protect consumer interests on Cape Cod and Martha's Vineyard, to erode NSTAR's competitive advantage in the retail supply of electricity and to offer programs such as *Cape Light Compact Green<sup>SM</sup>* and develop other renewable energy programs and policies. In particular, through use of mil adder funds, the Compact has participated in DPU proceedings that resulted in significant savings for consumers, such as \$25 million to lower bills on Cape Cod and Martha's Vineyard from the sale of the Canal Electric generating plant in Sandwich, Massachusetts, \$111 million in net savings produced from three of NSTAR Electric's long-term renewable energy contracts and \$5.7 million in savings for NSTAR's electric distribution customers (including Compact customers) from the Compact's settlement with NSTAR in an NSTAR Green program proceeding.

- You repeatedly state that the Compact has failed to file agreements with DPU for regulatory review and go so far as to suggest the Compact is acting as a rogue aggregation.

Your suggestion is baseless. In D.T.E. 04-32, DPU imposed no requirement on the Compact to submit future electric supply agreements for review and approval. In addition, after the end of standard offer electric service in Massachusetts, there was no longer a statutory price benchmark to govern the provision of power supply under a municipal aggregation program. As a courtesy, since the original approval order in 2004, the Compact has filed with DPU copies of all of its electric supply agreements, all of which were substantially similar in form to the agreement approved by the DPU in D.T.E. 04-32. The DPU never determined that a formal proceeding was necessary to review the agreements, despite having these agreements on file. Indeed, this Firm contacted the DPU in 2010 to confirm that the Compact was properly filing its electric supply agreements and that no further review was necessary. This Firm then submitted the Compact's 2010 electric supply agreement in a letter filing as directed by the DPU. See the attached Fact Sheet.

**3. *The Compact demands that you cease and desist making personal and defamatory attacks on the Compact Administrator.***

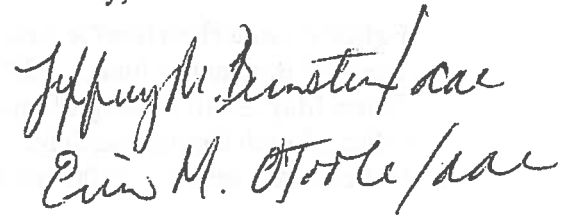
You must cease and desist from making claims against the Compact Administrator that are categorically false and show a reckless disregard for the truth. Throughout the Presentation you refer directly to the Compact Administrator, Margaret Downey, and at times state or suggest that she is solely responsible for all manner of wrongdoing regarding operation of the Compact's power supply program. Most egregious is your assertion on page 19 that Ms. Downey provided false testimony to DPU in D.T.E. 04-32. *This claim is unequivocally false.* The DPU asked the Compact to describe any and all differences in the Compact's current *funding mechanism* with the funding mechanism described in the initial Aggregation Plan. D.T.E. 04-32, Compact Response to DTE-1-12 (April 6, 2004). On behalf of the Compact, Ms. Downey represented that there were no differences between the Compact's funding mechanism in 2004 and the funding mechanism described in the Aggregation Plan. *Id.* Ms. Downey's response was absolutely true. The Aggregation Plan identified funding from Barnstable County and use of a mil adder as part of the *funding mechanism* for the power supply program. That *same funding mechanism* was used by the Compact in 2004 for the power supply program. The DPU did not ask Ms. Downey

Christopher Powicki  
July 3, 2013  
Page 5

for any changes in the amounts funding the Compact's power supply program -- instead, it asked her if the *funding mechanism* was the same. Furthermore, the DPU was unquestionably aware of the Compact's use of an adder in the 2004 electric supply agreement as a funding mechanism because it expressly acknowledged and approved the adder in its approval order. D.T.E. 04-32 (May 4, 2004) at 20.

As we directed in our March 25, 2013 letter, you must cease and desist disseminating false information regarding the Compact, its Board members and staff. Continued efforts by you to disseminate such materially false information about the Compact will leave the Compact no choice but to consider legal action. If you have questions regarding the Compact's power supply program filings with the DPU, please contact this Firm.

Sincerely,



Jeffrey M. Bernstein  
Erin M. O'Toole  
Counsel to the Compact

JMB:EMO/drb  
Enclosure

cc: Cape Light Compact Governing Board (w/encl.)(via email)  
Mark D. Marini, DPU Secretary (w/encl.)(via email)  
Audrey Mark, Esq., Interim General Counsel, Office of the Inspector General  
(w/encl.)(via email)  
Anna Blumkin, Esq., General Counsel, Department of Energy Resources (w/encl.)(via  
email)  
Jesse Reyes, Esq., Division Chief, Energy and Telecommunications Division, Office of  
the Attorney General (w/encl.)(via email)  
Barnstable County Assembly of Delegates (w/encl.)(via email)

**FACT SHEET ON  
CAPE LIGHT COMPACT  
POWER SUPPLY PROGRAM  
PUBLIC NOTICE AND APPROVALS**

The DPU maintains records of all filings, and creates an online docket for each proceeding. The DPU docket search website is

[http://www.env.state.ma.us/DPU\\_FileRoom/frnDocketListSP.aspx](http://www.env.state.ma.us/DPU_FileRoom/frnDocketListSP.aspx). If documents referenced below are not available to view on the online docket, the Secretary of the DPU will provide a copy of any non-confidential information filed in a docket upon request.

**1. AGGREGATION PLAN APPROVAL (2000)**

**DPU Proceeding:** D.T.E. 00-47.

**Public Notice/Hearing/Comment** (as applicable or required by DPU): public hearing in Town of Barnstable June 1, 2000; legal notices published in Boston Globe and Cape Cod Times May 2000; posting of legal notice in the Town Hall of each Town and the county office of each County participating in the Compact. See DPU Legal Notice and Order of Notice dated May 15, 2000 and Cape Light Compact Return of Service dated May 25, 2000.

**Supply Agreement:** form of electric supply agreement with Select Energy filed with the DPU on May 8, 2000, including a mil adder provision. [Note the Compact never entered into a final agreement with Select Energy as market conditions were such that Select Energy was not willing to commence provision of service under the form of agreement.]

**Approval Order:** D.T.E. 00-47 (August 10, 2000).

**2. DEFAULT SERVICE PILOT PROJECT (2002-2004)**

**DPU Proceedings:** D.T.E. 01-63; D.T.E. 03-61; D.T.E. 03-99.

**Public Notice/Hearing/Comment** (as applicable or required by DPU):

D.T.E. 01-63: public comment period available in DPU proceeding; legal notices published in the Boston Globe and Cape Cod Times; service upon the Chairmen of the Boards of Selectmen, the Mayors and the City Clerks in each of the Compact's 21 member communities. See DPU Notice of Filing and Request for Comments dated August 24, 2001 and Cape Light Compact Return of Service dated September 11, 2001.

D.T.E. 03-61: public comment period available in DPU proceeding; legal notices published in the Boston Globe and Cape Cod Times; service upon the Chairmen of the Boards of Selectmen, the Mayors and the City Clerks in the Compact's 21 member communities. See DPU Notice of Filing and Request for Comments dated June 13, 2003 and Cape Light Compact Return of Service dated June 24, 2003.

D.T.E. 03-99: public comment period available in DPU proceeding; legal notices published in the Boston Globe, Cape Cod Times and service upon the Chairmen of the Boards of Selectmen, the Mayors and the City Clerks in the Compact's 21 member communities. See DPU Notice of Filing and Request for Comments dated October 28, 2003 and Cape Light Compact Return of Service dated November 7, 2003.

**Supply Agreement:** default electric supply agreement with Mirant Americas Retail Energy Marketing, LP, including mil adder provision, filed with the DPU on March 15, 2002; contract extension request filed with the DPU on June 2, 2003; default electric supply agreement with Mirant Americas Retail Energy Marketing, LP, including mil adder provision, filed with the DPU on October 17, 2003.

**Approval Order(s):** D.T.E. 01-63 (October 23, 2001); D.T.E. 01-63 (March 22, 2002); D.T.E. 03-61 (July 15, 2003); D.T.E. 03-99 (November 21, 2003).

### 3. COMPETITIVE ELECTRIC SUPPLY (2005)

**DPU Proceeding:** D.T.E. 04-32.

**Public Notice/Hearing/Comment** (as applicable or required by DPU): public comment period available in DPU proceeding; legal notices published in the Boston Globe and Cape Cod Times; service upon the Chairmen of the Boards of Selectmen, the Mayors and the City Clerks in the Compact's 21 member communities. See DPU Notice of Filing and Request for Comments dated March 12, 2004 and Cape Light Compact Return of Service dated March 23, 2004.

**Supply Agreement:** three forms of agreement (Consolidated Edison Solutions, FPL Energy Power Marketing, Inc. and Strategic Energy, LLC), each including a mil adder provision, filed with the DPU on March 3, 2004.

**Approval Order:** D.T.E. 04-32 (May 4, 2004).

### 4. COMPETITIVE ELECTRIC SUPPLY (2006 – present)

**Supply Agreement:** competitive electric supply agreement with Consolidated Edison Solutions, including mil adder provision, filed with the DPU on January 26, 2006; competitive electric supply agreement with Consolidated Edison Solutions, including mil adder provision, filed with the DPU on May 12, 2010.

**DPU Action:** DPU stamped grant of request for confidential treatment of price and financial security information dated March 6, 2013.

**Agenda Action Request  
Cape Light Compact  
Meeting Date: 8/14/13**



- 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

**WAIVER OF INCENTIVE CAP  
MONOMOY HIGH SCHOOL  
New Construction Comprehensive Design Approach Project**

***Proposed Motion(s)***

*1) I move the Board vote to approve the waiver of the \$300k incentive cap (2 towns at \$150k per town) for the Monomoy High School New Construction Comprehensive Design Approach Project, thereby allowing a total project incentive of \$563,336.*

***Additional Information***

The Cape Light Compact caps its incentive for individual municipal projects at \$150k, with the proviso that the CLC Board may waive that cap as it deems appropriate. The proposed motion is to approve a waiver for the Monomoy High School Project, which will serve both the towns of Chatham and Harwich. The Project facts are summarized as follows:

- Comprehensive Design Electric Energy Efficiency Measures include:  
High Efficiency Roof Top Units, Lighting and Controls, Daylighting, LED Site Lighting, Ventilation Controls, Advanced Workshop Dust Collection Controls, Kitchen Hood Exhaust Controls, Variable Speed Science Fume Hoods
- Total Annual kWh savings: 554,673 kWh
- Total Summer / Winter kW demand savings: 142 summer/ 80 winter kW
- Overall Electric Payback Period: 6.0 years simple payback
- Total Electric Incremental Project Cost: \$563,336

***Record of Board Action***

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



**nationalgrid**

**Monomoy High School**

75 Oak Street  
Harwich, MA

**Comprehensive Design Analysis Report**

Prepared by

**Demand Management Institute**

300 Chestnut Street  
Needham, MA

August 8, 2013

*New Construction*



Table of Contents

Page

Project Contact Information.....1

Executive Summary .....2

    Acknowledgement.....9

    Facility Description .....10

Analysis Methodology .....14

Energy Conservation Measures.....16

    ECM 1: High Efficiency DX RTUs .....17

    ECM 2: Efficient Lighting Design.....20

    ECM 3: Lighting Controls – Occupancy Sensors .....22

    ECM 4: Lighting Controls – Daylighting .....25

    ECM 5: LED Site Lighting.....27

    ECM 6: High Efficiency Split Systems.....29

    ECM 7: Displacement Ventilation .....31

    ECM 8: Advanced Woodshop Dust Collection Controls.....34

    ECM 9: Kitchen Hood Exhaust Controls .....36

    ECM 10: Occupancy Sensor Ventilation Control.....38

    ECM 11: High Performance Windows .....40

    ECM 12: Energy Recovery .....42

    ECM 13: Advanced Science Fume Hoods .....44

    ECM 14: Condensing DHW Boilers .....46

    ECM 15: Condensing HVAC Boilers .....48

    ECM 16: DX Reheat.....50

    ECM 17: Roof Insulation.....52

Comprehensive Design Analysis.....54

Appendices

- Appendix A: Original TA Study Proposal
- Appendix B: Minimum Requirements Document
- Appendix C: Incentive Summary
- Appendix D: eQuest Output Summary Tables
- Appendix E: Additional Supporting Information



## Facility Description

Figure 2  
 eQuest Model 3D View of School



The designed high school is a two-story building with approximately 168,075 ft<sup>2</sup> net floor area. The designed building will house classrooms, administrative offices, cafeteria, kitchen, library/media center, and a gymnasium. The programmed building population is 839 people (700 students and 139 faculty/staff members).

School hours are assumed to be weekdays from 8:00AM to 3:00PM, with typical after-school activities ending at 10:00 PM. The auditorium is assumed to be lightly used during the school day and for after-school activities and weekend performances. Table 3 below summarizes the start and end of major occupancy times. Spaces are assumed to be lightly used outside of these main hours.

Table 3  
 Occupancy Summary

Space Type	Occupancy	
	Begin	End
Gym	9:00 AM	10:00 PM
Auditorium	8:00 AM	5:00 PM
Classroom	8:00 AM	3:00 PM
Offices	8:00 AM	5:00 PM

The administrative offices, gym, auditorium, and a portion of the classrooms (served by RTU-2 and 3) are expected to be used throughout the summer. Summer vacation extends from approximately June 27<sup>th</sup> to August 23<sup>th</sup>.

### Comprehensive Design Analysis

Table 30 below presents a summary of the comprehensive design analysis. The CDA includes only measures that qualify for an incentive independently (based on the utility screening tools) or that have a short enough payback to not warrant an incentive (typically 1.5 years or shorter). Based on the estimated savings and paybacks, ECMs 1, 2, 3, 4, 5, 7, 8, 9, 10, 13, 14, and 15 are assumed to be included in the CDA.

Table 30  
Comprehensive Design Analysis Summary

ECM No.	Description	Summary of Energy and Cost Savings					
		Electricity				Natural Gas	
		kWh	Sum. kW	Wint. kW	\$	Therms	\$
CDA	Comprehensive Design Analysis	554,673	142.16	79.86	\$93,906	9,660	\$11,109
		Summary of Implementation Costs and Economic Results					
		Total Cost Savings	Base Case Cost	Proposed Case Cost	Incremental Cost	Simple Payback Before Incentive	
		\$105,015	\$2,080	\$11,825	\$613,019	5.8	

#### Base Case

The base case for the CDA analysis assumes that ECMs that qualify for an incentive independently are not implemented. For all applicable systems and equipment, the baseline building meets the minimum efficiency requirements of the energy code and/or National Grid’s baseline document. Equipment and systems not impacted by ECMs that are part of the CDA are modeled to reflect the actual design (same as the design case).

#### Design Case

The design case assumes that all ECMs are implemented but only claims savings for the measures that independently qualify for an incentive. See the “Energy Conservation Measures” section for a detailed description of each measure.

#### Energy Savings

Overall, the CDA reduces electric energy use by 44% and gas energy use by 23%. The total energy reduction (electric and gas) is 33% compared to the base case on an MMBtu basis. The total energy cost savings is 40% compared to the base case. Chart 18 illustrates the sources of energy savings and penalties associated with the interactive CDA.

Table 2  
Summary of Energy Conservation Measures

ECM No.	Measure Description	Annual Savings		Total Savings Value	Incremental Cost	Payback Period			Included In CDA?
		Electrical kWh	Gas therms			Electric years	Gas years	Total years	
1	High Efficiency DX RTUs	22,705	0	\$3,844	\$65,902	17.1	-	17.1	Y
2	Efficient Lighting Design	189,761	(3,950)	\$27,584	\$123,865	3.9	-	4.5	Y
3	Lighting Controls - Occupancy Sensors	32,862	(719)	\$4,737	\$28,275	5.1	-	6.0	Y
4	Lighting Controls - Daylighting	77,677	(1,255)	\$11,707	\$86,590	6.6	-	7.4	Y
5	LED Site Lighting	100,172	0	\$16,959	\$105,951	6.2	-	6.2	Y
6	High Efficiency Split Systems	4,142	0	\$701	\$13,838	19.7	-	19.7	N
7	Displacement Ventilation	8,636	849	\$2,439	\$28,837	19.7	29.5	11.8	Y
8	Advanced Woodshop Dust Collection Controls	2,412	0	\$408	\$2,924	7.2	-	7.2	Y
9	Kitchen Hood Exhaust Controls	7,592	1,272	\$2,748	\$15,000	11.7	10.3	5.5	Y
10	Occupancy Sensor Ventilation Controls	6,037	1,394	\$2,626	\$9,745	9.5	6.1	3.7	Y
11	High Performance Windows	(32)	1,726	\$1,979	\$42,361	-	21.3	21.4	N
12	Energy Recovery	(3,229)	2,446	\$2,266	\$82,099	-	29.2	36.2	N
13	Variable Speed Science Fume Hoods	7,215	257	\$1,518	\$3,147	2.6	10.6	2.1	Y
14	Condensing DHW Heaters	0	4,378	\$5,035	\$22,500	-	4.5	4.5	Y
15	High Efficiency Condensing Boilers	(4,032)	9,975	\$10,789	\$120,284	-	10.5	11.1	Y
16	DX Reheat	3	25	\$29	\$37,000	-	-	-	N
17	Envelope Insulation	465	1,830	\$2,183	\$72,238	-	34.3	-	N
ALL	All Measures	552,100	16,032	\$111,908	\$860,554	9.2	46.7	7.7	
CDA	Comprehensive Design Analysis	554,673	9,660	\$105,015	\$613,019	6.5	-	5.8	

PA Rates: \$0.1693 per kWh, \$1.150 per therm of natural gas

Figure 1a  
Monthly Energy Use Comparison of Base Case and Design Case

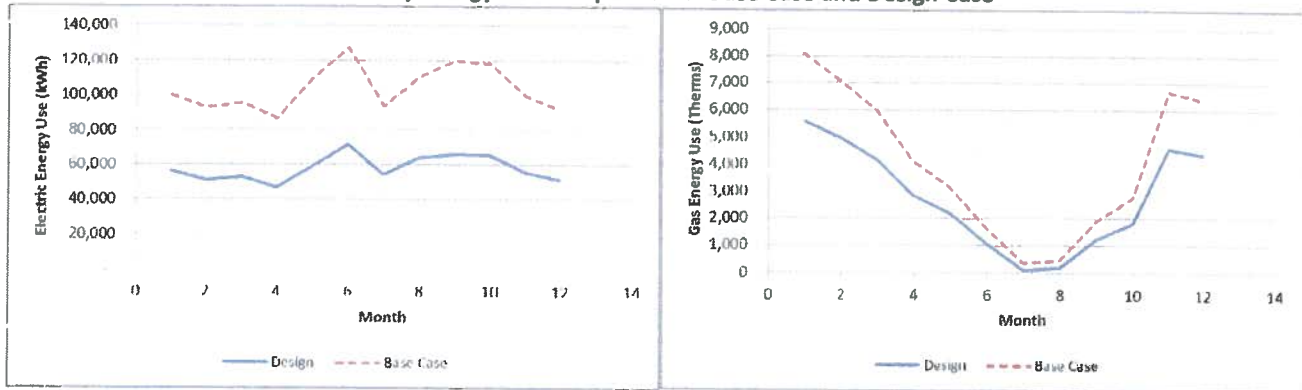
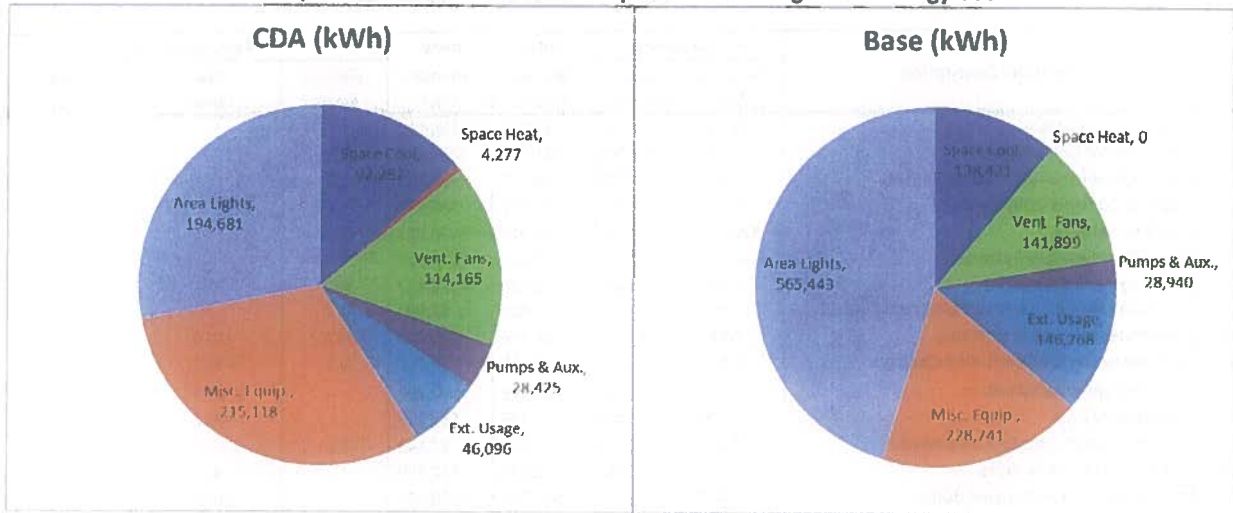


Figure 1b  
Comparison of Base Case and Design Case Energy Use

	Electricity (kWh)				Heating Fuel (1,000,000 x Btu)			
	Proposed	Base	Delta	%Delta	Proposed	Base	Delta	%Delta
Space Cool	92,282	138,431	46,149	33%	-	-	-	0%
Heat Reject.	-	-	-	0%	-	-	-	0%
Refrigeration	-	-	-	0%	-	-	-	0%
Space Heat	4,277	-	(4,277)	-	3,075	3,604	529	15%
HP Supp.	-	-	-	0%	-	-	-	0%
Hot Water	-	-	-	0%	225	662	437	66%
Vent. Fans	114,165	141,899	27,734	20%	-	-	-	0%
Pumps & Aux.	28,425	28,940	515	2%	7	7	0	5%
Ext. Usage	46,096	146,268	100,172	68%	-	-	-	0%
Misc. Equip.	215,118	228,741	13,623	6%	-	-	-	0%
Task Lights	-	-	-	0%	-	-	-	0%
Area Lights	194,681	565,443	370,762	66%	-	-	-	0%
<b>Total</b>	<b>695,045</b>	<b>1,249,722</b>	<b>554,677</b>	<b>44%</b>	<b>3,306</b>	<b>4,272</b>	<b>966</b>	<b>23%</b>

Figure 1c  
Comparison of Base Case and Comprehensive Design Case Energy Use







## Monomoy High School Building Project SharkCam

<http://www.truelook.com/clients/monomoy-webcam/>

Construction date: 18 July 2013

75 Oak Street      Harwich