The Cape Light Compact
Energy Efficiency Plan

Overview and Current Status

Presented to the
Massachusetts Electric Restructuring Roundtable

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Synapse Energy Economics
Similarities With MA Utilities’ Plans

• Program goals:
  – Achieve cost-effective energy savings.
  – Support low-income customers.
  – Equitable allocation of funds.
  – Adequate support for capturing lost opportunities.
  – Due emphasis to market transformation.
  – Facilitate the competitive market for efficiency products & services.

• Program designs -- based primarily on collaborative programs.

• Low-income program -- designed by low-income advocates.

• NEEP programs -- Compact will adopt NEEP programs.

• New construction -- Compact will adopt Energy Star Home.

• C/I programs -- Based on those of MA utilities.
Differences With MA Utilities’ Plans

- Consistency with organizational mission. Promoting efficiency and lowering bills is one of the central goals of the Compact.

- Program marketing. The Compact will exploit its extensive network of local contacts to promote the program.

- Shareholder incentives. The Compact is not seeking incentives. This frees up as much as 10% to 12% of the program budget.

- Fuel choice. For space heating and water heating, customers will be offered choice of efficient electric, efficient gas, heat pumps, or solar water heaters.

- Customer representation. The Compact offers many avenues for customer input to the programs.

- The Compact allocates funds to towns based on contribution.
Energy Efficiency Program Administration

- Consumers and town governments provide local input, primarily through Selectmen and other representatives.
- The Compact Governing Board provides policy and budget guidance, as well as general oversight.
- The Energy Efficiency Subcommittee of the Board provides technical and policy advice.
- Barnstable County staff will provide fiscal management and administrative support.
- Program Management Contractor will provide day-to-day management, including management of program vendors.
- Program vendors will be hired to deliver energy efficiency products and services to customers.
Structure of Program Administration

Consumers/Member Towns

- Legal & Technical Support
- Compact Governing Board
- Monitoring and Evaluation Contractor
- Compact Energy Efficiency Subcommittee
- Barnstable County Fiscal & Administrative Service

Management Contractor For Energy Efficiency Programs

Vendor Vendor Vendor
List of Efficiency Programs Offered

• Residential Programs
  – Low-Income Single-Family
  – Low-Income Multifamily
  – Low-Income New Construction
  – Residential New Construction
  – Residential Appliances
  – Residential High Use

• Commercial/Industrial Programs
  – New Construction and Rehabilitation
  – Medium and Large C/I Customers
  – Small C/I Customers
  – Government Agencies
Summary of Low-Income Programs

• Low-Income Single Family:
  – Space heat -- building shell, thermostat.
  – Water heat -- Appliance Maintenance Program
  – Lighting -- AMP.
  – Refrigeration -- AMP.

• Low-Income Multi-Family:
  – Lighting.
  – Refrigeration.

• Low-Income New Construction:
  – Energy Star Rating
  – Space Heat -- building shell, thermostat.
  – Appliances -- Energy Star.
  – Lighting -- NEEP.
Summary of Other Residential Programs

- Residential New Construction:
  - Energy Star Rating.
  - Appliances -- Energy Star.
  - Lighting -- NEEP.

- Lighting and Appliances:
  - Compact Fluorescent Lightbulbs and Fixtures -- NEEP.
  - Clothes Washers -- NEEP.

- High Use Customers:
  - Water Heat -- Through Lighting & Appliances Program.
  - Lighting, Clothes Washers, Refrigerators -- Through Lighting and Appliances Program.
Summary of Commercial & Industrial Programs

• New Construction and Rehabilitation.
  – Based on MECO’s Design 2000 Program.

• Medium and Large C/I.
  – Based on MECO’s Energy Initiative Program.

• Small C/I.
  – Majority of Compact’s C/I customers.

• Government Agencies.
  – Services similar to three programs above.
  – Marketed through Compact’s network of local, municipal agencies.

• NEEP Motors.
  – Marketed through all other C/I programs.
Program Budget Assumptions

- Sales in Compact territory in 1997 were 1,580 GWh, roughly 44% of Com/Electric’s sales.
- Estimated sales for 2000 times the 2.85 $/MWh efficiency surcharge leads to a total annual Compact budget of $4.7 million.
- Roughly $1.2 million in funds have been set aside for Com/Electric IRM payments and ECS costs.
- Marketing and administration budgets are loosely based on those of MA utilities.
- Funds are allocated to Residential and C/I programs based on sales to those customers.
- Funds are allocated to low-income customers based on the 0.25 $/MWh amount required by legislation.
## Summary of Program Budget

<table>
<thead>
<tr>
<th>Program/Expenditure</th>
<th>Total Costs</th>
<th>Percent of Program</th>
<th>Percent of Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residential Programs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-Income Single Family</td>
<td>292</td>
<td>9%</td>
<td>70%</td>
</tr>
<tr>
<td>Low-Income Multi-Family</td>
<td>81</td>
<td>3%</td>
<td>20%</td>
</tr>
<tr>
<td>Low-Income New Construction</td>
<td>41</td>
<td>1%</td>
<td>10%</td>
</tr>
<tr>
<td>Total Low-Income</td>
<td>415</td>
<td>13%</td>
<td>100%</td>
</tr>
<tr>
<td>New Construction</td>
<td>311</td>
<td>10%</td>
<td>23%</td>
</tr>
<tr>
<td>Lighting and Appliances</td>
<td>538</td>
<td>17%</td>
<td>40%</td>
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<tr>
<td>High Use</td>
<td>490</td>
<td>15%</td>
<td>37%</td>
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<tr>
<td>Total Non Low-Income</td>
<td>1,340</td>
<td>42%</td>
<td>100%</td>
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<tr>
<td>Total Residential</td>
<td>1,754</td>
<td>55%</td>
<td>na</td>
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<tr>
<td><strong>Commercial &amp; Industrial Programs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Construction</td>
<td>361</td>
<td>11%</td>
<td>25%</td>
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<tr>
<td>Medium and Large Customers</td>
<td>143</td>
<td>4%</td>
<td>10%</td>
</tr>
<tr>
<td>Small Customers</td>
<td>561</td>
<td>18%</td>
<td>39%</td>
</tr>
<tr>
<td>Government Agencies</td>
<td>289</td>
<td>9%</td>
<td>20%</td>
</tr>
<tr>
<td>NEEP Motors</td>
<td>76</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>Total Commercial &amp; Industrial</td>
<td>1,430</td>
<td>45%</td>
<td>100%</td>
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<tr>
<td><strong>Total Program Costs</strong></td>
<td>3,184</td>
<td>100%</td>
<td>90%</td>
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<tr>
<td>Public Education &amp; Marketing Campaign</td>
<td>100</td>
<td>na</td>
<td>3%</td>
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<tr>
<td>Compact Technical Support</td>
<td>94</td>
<td>na</td>
<td>3%</td>
</tr>
<tr>
<td>Evaluation and Monitoring</td>
<td>141</td>
<td>na</td>
<td>4%</td>
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<tr>
<td><strong>Total Costs of Efficiency Plan</strong></td>
<td>3,519</td>
<td>na</td>
<td>100%</td>
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<tr>
<td>Funds Set Aside for Com/Elec DSM</td>
<td>1,183</td>
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<td>na</td>
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<tr>
<td>Total Efficiency Funds Available</td>
<td>4,702</td>
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## Program Cost-Effectiveness Results

<table>
<thead>
<tr>
<th>Program</th>
<th>Energy System Test</th>
<th>Societal Test</th>
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<tbody>
<tr>
<td><strong>Residential Programs:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-Income Single-Family</td>
<td>1.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Low-Income Multi-Family</td>
<td>1.8</td>
<td>3.1</td>
</tr>
<tr>
<td>Low-Income New Construction</td>
<td>na</td>
<td>na</td>
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<tr>
<td><strong>Total Low-Income</strong></td>
<td><strong>1.8</strong></td>
<td><strong>3.0</strong></td>
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<tr>
<td>Residential New Construction</td>
<td>2.1</td>
<td>1.6</td>
</tr>
<tr>
<td>Residential Lighting and Appliances</td>
<td>7.0</td>
<td>1.9</td>
</tr>
<tr>
<td>Residential High-Use Customers</td>
<td>3.4</td>
<td>1.4</td>
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<tr>
<td><strong>Total Non-Low-Income Residential</strong></td>
<td><strong>4.8</strong></td>
<td><strong>1.7</strong></td>
</tr>
<tr>
<td><strong>Total Residential Programs</strong></td>
<td><strong>3.8</strong></td>
<td><strong>1.9</strong></td>
</tr>
<tr>
<td><strong>Commercial and Industrial Programs:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C/I New Construction</td>
<td>2.8</td>
<td>1.6</td>
</tr>
<tr>
<td>C/I Medium and Large Customer</td>
<td>2.6</td>
<td>1.8</td>
</tr>
<tr>
<td>C/I Small Customers</td>
<td>1.4</td>
<td>1.3</td>
</tr>
<tr>
<td>Government Agencies</td>
<td>1.9</td>
<td>1.7</td>
</tr>
<tr>
<td>NEEP Motors Initiative</td>
<td>7.0</td>
<td>3.1</td>
</tr>
<tr>
<td><strong>Total Commercial and Industrial Programs</strong></td>
<td><strong>2.2</strong></td>
<td><strong>1.7</strong></td>
</tr>
<tr>
<td><strong>Total Compact Programs</strong></td>
<td><strong>3.0</strong></td>
<td><strong>1.8</strong></td>
</tr>
</tbody>
</table>
Energy Savings and Costs, by Program

Cost of Saved Energy ($/MWh)

Amount of Saved Energy (GWh)

Levelized Avoided Costs

0 20 40 60 80 100 120 140 160

C/I Small Cust.
C/I Government.
C/I New Const.
Res. New Const.
Res. LI Multi-Fam.
Res. LI Single Fam.
C/I Med. & Large
C/I Motors
Res. LI Single Fam.
Res. High Use
C/I Med. & Large
Res. LI Multi-Fam.
Res. New Const.
C/I Small Cust.
C/I Government.
Cumulative Present Value Costs and Benefits

[Bar chart image]
Schedule for Implementing the Compact Plan

• Draft plan was completed in August 1998.

• Compact has held a series of meetings with towns, DOER, Com/Electric and other interested parties. Comments have been reflected in the current draft.

• Compact issued RFP for Management Contractor in February 1999, and received proposals from 3 highly-qualified bidders.

• Compact will submit final plan to DTE as soon as the power supply negotiations have been completed.

• Compact will develop administrative infrastructure and begin marketing the programs in the third and fourth quarter of 1999.

• Programs will be operational by the beginning of 2000.