

CMLP's role in delivering energy efficiency and its importance in GHG emission reduction

Draft for Discussion

EFTF August 25th Meeting

Purpose: promote discussion on possible issue for EFTF report

- The primary purpose is issue identification and to seek feedback from EFTF members.
- If deemed to be sufficiently important this issue could be addressed further by the consultant that CMLP is engaging to perform its Strategic Initiatives study.
 - Beyond the scope of this presentation to make definitive recommendations on this issue.
- Aspects of this issue were raised at our June Public meeting.

Background: Why focus on Delivery of Energy Efficiency Programs

- In this presentation energy efficiency is defined broadly and encompasses the full range of measures, behaviors, and programs that reduce energy consumption.
- Electric utilities have had a roll in the delivery of energy efficiency programs since the 1980s.
- Energy efficiency is often the least cost “supply source”. In fact, the design of energy efficiency programs is focused on ensuring that they are “cost-effective” or that the value of savings produced are greater than the costs of the program and the costs incurred by customers for the measures.
 - It can be cheaper to invest in conservation (reducing usage) or demand management (reducing or shifting consumption at the time of peak load) than to use existing resources or building new resources.
 - Massachusetts investor-owned utilities programs which pursue all cost-effective energy efficiency are estimated to cost 4.6 cents/kWh over the program lifetime.
- Energy efficiency also avoids CO₂ emissions from fossil fuels that otherwise would be burned.
 - Fossil fuels are typically the “marginal resource”, i.e., the resource that would be displaced by energy efficiency.
- Therefore, energy efficiency has a critical role to play in reducing GHG emissions and achieving aggressive GHG emission reduction targets such as the EFTF may wish to consider.
 - A recent study by an energy efficiency advocacy organization indicated that some states could meet over 25% of the GHG emission reduction goals in the U.S. EPA’s Clean Power Plan with energy efficiency.
 - Furthermore, a low cost source of energy efficiency can be the purchase of a more efficient appliance (e.g., high efficiency natural gas boiler). Some of these investments have long-useful lives, it is important to ensure that energy efficiency receives appropriate attention now to assist Concord in achieving its long-term GHG emission reductions goals at the lowest possible cost.

Focus: Review CMLP's Delivery of Energy Efficiency Programs

- CMLP's energy efficiency programs are developed by Energy New England (ENE) and internally.
- ENE offers a suite of residential services, including on-line request for energy audits, a toll free hotline to request audits or receive over-the-phone technical assistance and receive information about incentives or rebates currently offered by their municipal utility.
 - The audit evaluates a broad range of energy saving opportunities where the end-use is electric (not natural gas, oil or propane) including: (1) insulation; (2) appliances; (3) heating/cooling; (4) window and door weather-stripping and replacement; (5) domestic hot water savings; and (6) efficient lighting.
- In addition, CMLP offers a range of rebates for (1) electric heat weatherization; (2) central air conditioning and heat pumps; and (3) LED lighting.

One issue with ENE administered energy audits is that they only cover electric end uses

- Customers have to call the MassSave program to have an energy audit that is focused on natural gas, oil and propane end-uses.
- Requiring a second call is a barrier to the delivery of energy efficiency. To ensure that customers take advantage of these programs it should be simple for the customer to participate.
 - Customers are likely to focus on the end-uses that represent the biggest cost. For CMLP customers with natural gas heat, this is likely to be natural gas and result in the customer calling the Mass Save program for an energy audit. The Mass Save audits for Concord residents don't address electricity end-uses (e.g., lighting, refrigeration, etc.)
 - Requiring a second audit reduces the likelihood that customers will take advantage of these services and realize the energy efficiency savings offered.
- Currently this could be viewed as a “cost” of being served by a Municipal Light Plant, with many offsetting benefits. Longer-term this barrier should be addressed.

Mass investor-owned utility energy efficiency programs administered jointly and cover all end uses

- These programs are funded through: (1) a .25 cent/kWh System Benefits Charge (SBC); (2) revenues from the Regional Greenhouse Gas Initiative (a CO₂ cap and trade program for the electricity sector); and (3) other possible revenues including an energy efficiency surcharge where necessary.
 - In 2016, the total statewide program funding from electricity customers is about \$692 million, with about 17% from the SBC, 8% from RGGI, 8% from other sources and 67% from additional on-bill charges of about 1 cent/kWh.
 - CMLP is only able to access RGGI Funding through grants.
 - In contrast, CMLP's Energy Conservation Charge is about .52% of the total current charges billed excluding the finance charge and sales tax. This compares to 1.5% for the Underground Surcharge.
 - CMLP raises about \$120,000 through this charge and contributes another \$100,000 from power factor charges. The \$220,000 equates to about .13 cents/kWh, indicating that Mass state programs spend about nine times the amount spent by Concord.
- Clearly, the investor-owned utility programs are much better funded than CMLP's. Obviously, this has an appreciable impact on electricity rates and increases rates for investor-owned utilities.
- It is important to differentiate between electricity rates (cent/kWh) and the total electricity bill (\$). If the energy efficiency measures are cost-effective, over time customers will have higher electricity rates, but pay lower total bills. This indicates that customers will likely be better off since they are paying less for electricity in total and presumably receiving the same or better service.

Energy efficiency programs offered by Mass utilities are highly rated

- The energy efficiency programs offered by Massachusetts investor-owned utilities have for the last five years been ranked first among the 50 states by the American Council for Energy-Efficient Economy (ACEEE). ACEEE is highly regarded energy efficiency advocacy organization and its ranking for the state of Massachusetts is a testament to the quality of the energy efficiency programs offered.
 - The quality of these programs is evident in the depth of service offerings.
- Reflecting the quality of these programs and the level of investment Massachusetts total electricity consumption is forecast to decline by -0.3% through 2025.

CMLP's programs are developed by a well qualified team

- However, given the lower level of investment the scope of programs available to Concord residents is more modest than available to those of investor-owned utilities.
- The Town also benefits from shared resources for the design of energy efficiency programs with CMLP.
- However, there are economies of scale associated with the design, development and delivery of energy efficiency programs.
 - CMLP is able to capitalize on some of these economies of scale through Energy New England.

Issues for discussion

- Is this an important issue for the EFTF?
- If so, does the EFTF think that this issue should be addressed in our report?
- How far should EFTF go in exploring this issue given ongoing work at CMLP (e.g., Strategic Initiatives Consultant)?
- Given likely GHG emission reduction goals, should the EFTF recommend that CMLP consider expanding the scope of its energy efficiency programs?
- Should the EFTF recommend that CMLP explore whether there are more efficient models/methods for the delivery of these programs?