

Potential Study Scope Draft

The Potential Study will assess the technical, economic, and achievable potential for shifting on-peak electricity usage to off-peak times through demand response programs for all customer classes. The goal is to help the state meet its capacity needs with the resources currently available. Demand response potential will be calculated using data and assumptions for inputs such as customer eligibility, likely participation rates, per customer demand reduction, program costs, avoided costs, etc. This quantitative measure of demand response potential will be used as an input for the state's integrated resource planning processes.

The results of the Potential Study will also be coupled with the conclusions gathered by the concurrent Market Assessment for large commercial and industrial customers. The expectation is that pre-existing demand response programs will not be favored and customers should be able to participate in multiple programs where feasible.

The study will estimate demand response potential for the 20 year period beginning in 2018.

Demand response programs should include both behavioral and direct load control programs.

Study Deliverables

- Quantify the potential demand (MW) savings at system peak for each demand response program
 - Estimate technical, economic, and achievable levels of demand reduction
 - Technical potential is the total potential that could be realized without consideration of customer willingness to adopt measures and without consideration of the cost effectiveness of all available technology
 - Economic potential is a subset of the technical potential that is considered to be cost effective as compared to building new energy resources (such as new generation)
 - Achievable potential is the subset of the technical potential that is considered realistically achievable when taking into consideration real world constraints, including market barriers
 - Identify program designs that would maximize on peak MW savings and associated costs
 - Identify program designs that would maximize customer participation, including optimal rate design and customer communication strategy
 - Include a discrete discussion of the opportunities and considerations particularly affecting low-income residential customers
- Discuss barriers to achieving the identified potential and how they affected the recommend program designs
- Identify cost per MW of potential demand savings
 - Provide net present value costs over the program life
 - Itemize costs per MW of potential demand savings by program type
- Include an assessment of how to fully maximize demand response potential using advanced metering infrastructure already installed in Michigan
- If applicable, propose suggestions for follow-up study for areas not fully developed in this study

Market Assessment Study Scope Draft

The MPSC and MAE seek to assess the potential of demand response programs for large commercial and industrial (LCI) utility customers. Demand response programs shift on-peak electricity usage to off-peak times to help meet capacity needs with the current resources available. By surveying large commercial and industrial customers to determine the parameters of a demand response program that would maximize their participation, the MPSC and MAE hope to have better insight on customers' energy needs so as to inform effective program design.

The Market Assessment will examine the potential for demand response from the LCI customers' point-of-view. This approach will evaluate the customer's capability, desire, and motivation to participate in demand response programs by gathering that information directly from those customers to determine customer interest and capability for participating in demand response programs, identifying any barriers to participation, and evaluating a reasonable and achievable potential for peak load management in Michigan. Information tailored for particular industries or customer segments will be most informative.

Questions should be tailored for particular industries or customer segments.

Study Outcomes

- Identify the most effective demand response program(s) for various types of LCI customers.
- Identify what parameters are important to LCI customers by industry segment such as: financial expectations or constraints, production issues, labor supplies, market barriers, or long-term and short-term issues to address when considering demand response programs
- Identify program designs that would maximize customer participation and per customer demand response potential
- Evaluate potential customer engagement using a variety of potential program designs
- Identify program costs to the utility for administering LCI demand response programs as well as costs faced by LCI customers for participating
- Identify other barriers that may keep customers from participating in demand response programs
- If possible, provide a reasonably achievable demand response estimate for each LCI customer based on their ideal program design and participation level.