

To: Lynn Beck, Katie Smith, Roger Doherty, Michigan Public Service Commission

From: Neil Curtis, Will Supple, Debyani Ghosh, Wayne Leonard, Erin Day, Stu Slote
Guidehouse

Date: February 10, 2021

Re: Michigan Potential Study – February 4, 2021 Stakeholder Meeting Questions and Responses

This memo provides Guidehouse's responses to stakeholder questions presented during the February 4, 2021 meeting.

General

1. Will slides be available for the wider team of stakeholders?
 - a. Yes, with this Q&A document.
2. Will Market Characterization values be available for stakeholder review?
 - a. Yes, when the economic input values are completed, expected March 2021.

Measure Characterization

3. Top 100 Measure questions / comments:
 - Understood that top 100 measures will deliver large majority of savings. However, the measures in that group change over time (not the same 100 today as 5 or 10 years ago). Since this study goes out 30 years, is the "bucket" of other measure savings growing the further you go out in time?
 - Regarding slide 14, note this is out 20 years, not first year: 2017 Michigan Electricity Potential Study, 100 electric measures (including duplicated measures across end uses and equipment sizes) yield 84.1% achievable potential savings in year 20, 2036.
 - Our measure definitions are broader, and therefore capture a broader portion of the savings than what is represented in the 2017 study's top 100 list.
 - a. The bucket of other savings may adjust in size based on the uncharacterized percent calculation. This percentage is based on top 100 measure saturation and sales forecasts. Therefore, the bucket of other measures may grow or shrink depending on forecasted market conditions.
4. Will some measures be modeled to include install labor instead of just incremental cost?
 - a. Retrofit (RET) measures include labor costs.
New construction (NEW) and Replace on Burnout (ROB) are incremental cost only.

5. For measures that provide both DR potential and EWR potential (e.g. smart t-stats), are you addressing the potential together (rather than making it pass separately on EWR and DR)?
 - a. Guidehouse will treat measures that provide both EWR and DR from an integrated perspective and will conduct a joint cost-effectiveness screening of those measures.

Measures

6. How will codes and standards be integrated into the study?
 - When you say we will see the impact of codes and standards, do you mean extra savings potential from advancing codes and standards beyond an assumed baseline set?
 - a. No. The impact of currently expected baseline adjustments due to codes and standards will be tracked and presented. These energy use reductions will not be specifically attributed to utility program activity.
 - My interpretation of the handling of codes and standards is that you will treat those as baseline adjustments, which would decrease energy efficiency potential over time. vs. treating codes and standards as a possible means that utilities could help advance...which would increase EE potential. Is this interpretation correct?
 - a. Yes. This study will only characterize currently scheduled codes and standards changes.
7. Performance-based incentives: overall, if you want to do rebates right and easily and effectively to communicate, we recommend performance-based incentives. Tie rebates to total savings energy, money and/or carbon. Either from reduction below code new OR from test in and out from existing.
 - a. The project scope assesses energy efficiency and demand response potential; program design strategies are outside of the study scope.
8. When you do the surveys, you aren't taking advantage of the survey to verify equipment and breaking that out by market segment. How do you do that within the study?
 - a. The study will use existing baseline studies.
9. What baseline studies will the study reference for density and saturation?
 - a. Michigan Baseline Study 2011: Residential Baseline Report
Michigan Baseline Study 2011: Commercial Baseline Report
DTE Energy 2016 - 2017 Residential Baseline Study
DTE Energy 2016 - 2017 Non-Residential Baseline Study
10. What sectors were in the Baseline studies you used?
 - a. Commercial, Industrial, Residential, varying by study.
11. Even if this potential study is going to be only one input to setting future funding and savings budgets, it will be important that it be the best possible input and that means

there should be some adjustment to the recommendation to address savings potential not captured by the study - new technology, custom C&I, support for building codes & product standards, etc.

- a. The application of emerging technology, custom C&I, codes and standards will be described in the study report.

Modeling

12. Willingness to pay analysis of upstream / midstream programs:

- For customer surveys to inform achievable potential, how do you deal with potential from more effective upstream/midstream programs (for which customer survey responses are not really relevant - since decisions are more driven by stocking practices of distributors and contractors)
 - a. Scenarios will be used to model the effectiveness of best-in-class program designs by benchmarking model parameters such as marketing effectiveness and word of mouth.
- Do you solely use willingness to pay, or do you allow for adjustments for some types of measures for upstream/midstream approaches (which aim to influence sales by influencing stocking and sales practices rather than end use customer investment choices) - which often have much higher market penetration
 - a. Willingness to pay is one input into the model calibration process. Measure parameters may be adjusted during the calibration process.

13. On slide 15, reference case assumptions: Please describe how the 50% incentive level compares to current utility programs. If there is a discrepancy to actual, please explain how the model will be calibrated.

- a. The considered scenarios are draft at this time. The incentive assumptions for the reference case are based on assumed averages. Guidehouse is collecting program performance data from the utilities and may adjust incentive percent assumptions in consultation with the MPSC after review. Differences in incentive levels may be taken into account during the calibration process.

14. Please define "incremental cost" as it is intended to be used to define the reference case.

- a. Incremental cost is the difference between a baseline efficient measure cost and the efficient, incentivized measure cost.

15. Will you run a scenario with a cost of carbon included in the assessment of economic potential? Will there be a sensitivity around more aggressive climate policy?

- a. The scenarios are being drafted in collaboration with the MPSC. The team will consider stakeholder input in finalizing the scenario definitions.

Market Characterization

16. How does the study define income-eligible households?

- a. Low income customers are defined as customers with income up to 200% of the federal poverty level as defined by the U.S. Department of Health and Human Services.
- 17. Is the sales breakdown for the commercial sector allocated by building type?
 - a. The sales breakdown for the commercial sector is allocated to small and large commercial segments.
- 18. Is the industrial sector measured using EUI data or is a different metric used?
 - a. The stock forecast for the industrial sector is based on a statewide sales forecast and an assumed energy use intensity per square foot.
- 19. How are you considering supply change and its impact on peak hour as we add solar to the grid?
 - a. Forecasting generation supply is out of the study's scope. The peak hour definition will not change throughout the study horizon.
- 20. Are you using different line loss rates for energy and peak demand? And are you using marginal line loss rates or average - if the latter because that is all you can get from the utilities; will you consider using multipliers to adjust to marginal?
 - a. Guidehouse will review the line loss data provided by utilities and determine if differentiation between impact types is possible. Guidehouse will match line loss definitions to statewide program evaluation protocols.
- 21. Are you including avoided transmission and distribution costs in the economic analysis?
 - a. Guidehouse will match cost test definitions, including applicable benefit and cost streams, to statewide program evaluation protocols.