



September 5, 2019

TO: Dave Jacobson, Connecticut Energy Efficiency Board Evaluation Administrator
Lisa Skumatz Connecticut Energy Efficiency Board Evaluation Administrator

FROM: Jeremy Kraft, EMI Consulting

DATE: September 5, 2019

RE: C1644 - Energy Opportunities Net-to-Gross Study, EMI Consulting Response to Program Administrators Comments

The following memo provides EMI Consulting's responses (**in bold**) to the comments provided by the Connecticut Program Administrators in response to their review of the draft Energy Opportunities (EO) Net-to-Gross Study. These responses are in addition to edits made in-line in the revised report.

UNITED ILLUMINATING COMMENTS (WITH EMI RESPONSES):

1. The Companies would like to see further explanations regarding the use of "new" definitions within the context of CT Energy Efficiency Programs; "Like Spillover" and "Unlike Spillover". We would like to see further explanation of these terms in the Final report and also how they are to be used. We would request further explanation in that whole section on Spillover.
 - a. **EMI Consulting has added additional explanation to the report.**
2. In the past we have seen NTG studies utilize "Participant Spill-over" and "Non-Participant Spillover" with the latter being an indication of program influence outside of the programs, for entities that did not receive incentives through the program.
 - a. How should the PAs apply these two different spillover effects? Are they additive?
 - i. **During study design, EMI Consulting elected to not pursue non-participant spillover as the past Connecticut EO Net-to-Gross Study studies indicated negligible amounts for the EO Program, instead focusing research resources elsewhere.**
3. The Companies would also like to better understand the questioning of participants in regard to both gas and electric controls.
 - a. Did the respondents understand the differences between standard practice controls and those incented by the program?
 - i. **It is possible that respondents were not aware of the specific differences in equipment given the technical nature of controls and further probing may have yielded**

different responses. However, consistency checks built into our survey corroborate the responses provided to the efficiency question.

- b. As controls are a fast-evolving measures, where controls are advancing rapidly through the use of enhanced feedback mechanisms (digital metering), we want to ensure that participants understood the changes in available technologies.
 - i. **Agreed. Future NTG studies may need to include additional questions or explanations regarding controls projects or rely more heavily on trade partners.**
4. For the Upstream Analysis Methods section. Why were just 12 Eversource participants surveyed? Why weren't any UI/CNG/SCG participants surveyed?
 - a. **During sample design, contact information on upstream participants were not available from UI. The upstream program surveys were for electric measures only, so it was not applicable to CNG/SCG customers.**
5. For recommendation 1. The Companies request a clarification. Do we apply an 89% NTG to all gas measures?
 - a. **Yes. EMI Consulting has clarified report text.**
6. For recommendation 4. The Companies generally agree with the recommendation but also emphasize the importance of targeting underserved and hard-to-reach customer segments in addition to past participant re-engagements. We need to continue focusing on program parity efforts.
 - a. **Agreed. We recommend that future process evaluations explore this customer segment.**
7. Recommendation 5. The Companies are seeking clarification regarding the intent of this recommendation. Is it suggesting that program staff increase customer-focused marketing across the board, or that we specifically focus on marketing other programs to upstream program participants?
 - a. **We suggest the former: increase customer-focused marketing. Again, we recommend that future process evaluations explore effective channels and targets.**
8. Recommendations 7 and 8. Since the period covered by this evaluation the Companies have increased the amount of collection on end-user information through distributors.
 - a. **Acknowledged. We have updated the report text.**

EVERSOURCE COMMENTS (WITH EMI RESPONSES):

1. Controls free-ridership. Controls had the highest free-ridership of any downstream measure. From the survey instrument, it is not clear that respondents would have understood the difference between the optimized controls that we incent, vs. the standard controls required by code. This distinction is not just a matter of high-efficiency vs. low-efficiency, which is how the survey questions are phrased. For example, code requires controls with fixed temperature setback schedules, but we only incent optimized controls that dynamically account for indoor and outdoor temperature and humidity along with occupancy schedules to optimize temperature settings. This may have resulted in respondents showing up as a free-rider because they would have purchased standard controls without our incentives, even though those would not have been eligible for incentives under our programs.
 - a. **It is possible that respondents were not aware of the specific differences in equipment given the technical nature of controls and further probing may have yielded different responses. However, consistency checks built into our survey corroborate the responses provided to the efficiency question.**
2. Unlike spillover. The survey instrument asked if respondents had installed any other types of energy-efficient equipment on their own, without a rebate, and for those who answered yes, the survey asked if the equipment installed was eligible for an incentive through the program—and just 15% of respondents indicated affirmatively. However, it can be difficult for customers to make the determination of eligibility. If respondents knew the equipment was eligible for an incentive, it is unclear why they wouldn't have taken the incentive. It seems likely that many respondents thought equipment was ineligible— even though it may have been eligible—which could have led to an understatement of unlike spillover.
 - a. **We acknowledge that under-reporting of spillover is possible as participants assuming additional equipment was ineligible. However, we believe the impact of this validity bias is mitigating by the inverse – that is, participants reporting that ineligible equipment was eligible and that any net errors are minimal.**