

August 24, 2015

Lori Lewis, Ph. D.  
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**RE: Eversource Review of the Commercial and Industrial (C&I) New Construction and Baseline and Code Compliance Study**

Dear Dr. Lewis,

Eversource is pleased to submit these written comments with regard to a draft evaluation report: *C-19: Commercial & Industrial New Construction Baseline and Code Compliance Study* (draft study), completed by DNV-GL. The draft study was submitted to Eversource on July 24, 2015 with a request for comments to be provided by August 24, 2015

The primary purpose of the draft study was to provide insight into Commercial and Industrial new construction practices. Specifically, the study sought to:

- Identify the value of improving the accuracy of the baseline used to calculate energy savings estimates;
- Produce an estimate of state code compliance at the time of construction.

The draft study estimated that code compliance for 50 commercial building permitted between 2010 and 2013 is 75% “based on reasonable estimates for missing data and sample weighted by strata counts”. Despite the reported lack in overall code compliance, the Study found that the average equipment efficiencies were above federal minimum guidelines and that lighting efficiencies (LPDs) exceeded code standards<sup>1</sup>. In addition, the study recommended that the baseline for energy efficiency measures supported by the utility program be equivalent to the requirements of ASHRAE 2013.

Eversource appreciates the analysis that DNV-GL conducted. Furthermore, Eversource largely agrees with the findings and recommendations in the draft Study. However, Eversource would like to offer one minor but critical edit to the draft study. The draft study recommends that the baseline for energy efficiency measures supported by (the) utility programs be equivalent the

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<sup>1</sup> Lighting Power Density (LPD), measured in Watts per square foot.

requirements of ASHRAE 2013. Eversource understands that the rationale for this recommendation is that some installed equipment exceeds minimum code standards. However, Eversource believes that this recommendation should be changed to “utility program administrators *should consider* raising baselines for energy efficiency measures supported by the utility program *based on additional analysis and where appropriate*”. While this edit may appear to be subtle, Eversource believes it is warranted based on the following.

- The draft study was based on a relatively small sample of 50 buildings. In addition, certain measures were present at only few sites. Eversource does not believe it is appropriate to make a blanket recommendation based on a small number of data points.
- The draft study pointed out inconsistencies between utility program participation data and customer surveys regarding utility program participation. These inconsistencies cast doubt on the accuracy of the draft study finding that non-participants were exceeding utility rebate thresholds for certain measures.
- Participation in this study was voluntary, and it is possible that participants in this study were biased towards energy efficiency and therefore, were more likely to install measures that exceeded code. This bias would clearly taint the draft study, and the results should not be extrapolated across the entire population without conducting additional analysis.
- Eversource recognizes that raising thresholds could potentially drive customers to higher levels of efficiency. However, prematurely raising thresholds could have the deleterious effect of driving customers away from energy efficiency upgrades. Distributors tend to stock equipment based on current standards, and equipment may not be available or too costly for certain types of higher efficiency equipment. Therefore, a customer may opt out of participating in a program if thresholds are set beyond feasible reach. Also, incentives serve as a gateway for customers to get involved in the energy efficiency programs; once they are involved in the programs, they may opt to install additional energy efficiency measures.
- Eversource recognizes that it appears that there may be some level of free-ridership based on this study. To that point, Eversource already includes free-ridership and spillover factors in the savings calculations<sup>2</sup>. Market transformation programs typically have both free-ridership and spillover components (market effects) and quantifying and separating these market effects can be challenging<sup>3</sup>. The scope of this study was limited in that it only inventoried energy efficiency measures but did not attempt to quantify market effects or to understand consumer purchasing decisions. Therefore, Eversource does not believe that this study should include a blanket recommendation to increase thresholds.

Eversource does take this recommendation seriously and will work with the Energy Efficiency Board (EEB) and EEB C&I sub-committee to make necessary adjustments to thresholds (and

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<sup>2</sup> See the Connecticut Program Savings Documentation (PSD).

<sup>3</sup> *Free Ridership and Spillover: A Regulatory Dilemma*

William P. Saxonis, New York State Department of Public Service, Albany, NY

incentives) based on this study and other available data. However, Eversource respectfully requests that this study recommendation is tempered to allow the opportunity for additional analysis prior to adjusting thresholds.

Thank you for the opportunity to provide these constructive comments. Please feel free to reach out to me if you have any clarifying questions on these comments.

Very truly yours,

*Joseph Swift*

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