

Appendix K
General Service Lamps

Appendix K-1: Staff Testimony

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**By Laura Martel
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Introduction

1. What is the purpose of this testimony?

This testimony describes the approach of Efficiency Maine Trust (the Trust or EMT) to applying the lighting provisions in the federal Energy Independence and Security Act of 2007 (EISA) for determining the cost-effectiveness of certain lighting measures in Triennial Plan V.

2. Who is providing this testimony?

The testimony is provided by Laura Martel, Research and Evaluation Manager at the Trust.

3. Ms. Martel, please state your name, title, and business addresses.

My name is Laura Martel, and I am employed by EMT as the Research and Evaluation Manager. My business address is 168 Capital Street, Suite 1, Augusta, ME 04330.

4. Please summarize your educational and professional experience.

I have a Bachelor of Science Degree in Ocean Engineering from Florida Atlantic University and a Master of Engineering degree in Acoustics from Pennsylvania State University. I have over 21 years of technical leadership, project management, and research and evaluation experience. I was hired by EMT in 2014 to design and implement impact and process evaluations for energy efficiency programs. Prior to joining EMT, I was with Lockheed Martin in Manassas, Virginia, where I served in various engineering, management, and technical leadership roles of increasing responsibility.

Background

5. Why is the current status of the lighting provisions in the Energy Independence and Security Act relevant for Triennial Plan V?

EISA established minimum energy efficiency standards for general service lamps (GSLs) sold across the United States. The law was expected to be implemented in two phases and would have resulted in prohibiting the sale of GSLs that failed to meet the minimum efficiency standard by January 1, 2020. However, transitions from the Obama administration to the Trump administration and then to the Biden administration have caused shifts in interpretation about how the EISA lighting provisions will be implemented and the timeline for implementation. As of January 1, 2020, federal law still allowed the sale of incandescent GSLs in Maine and elsewhere.

At some point—after the federal efficiency standards actually go into effect to prohibit the sale of less efficient bulbs, and after a “sell-through” period during which retailers are allowed to deplete their inventories of non-compliant lighting stock—LED bulbs will effectively become the “baseline” technology for GSLs sold in Maine (with certain exceptions). At that point, in most applications LED GSLs

will lose their cost-effectiveness and be ineligible for incentives from Efficiency Maine. Exceptions would apply in limited scenarios, such as certain retrofits in small businesses and low-income households.

The Trust secured the services of a consulting firm to research the status of implementation of the EISA lighting provisions and assist the Trust in forecasting when LEDs would become the baseline for GSLs in Maine. As described in the Apex Analytics memo (attached hereto as [Appendix K-2](#)), there is significant uncertainty about the status of EISA and how and when the lighting provisions might be enforced.

A determination that LEDs have become the baseline for general service bulbs would impact opportunity and budgets for the Trust's programs that incentivize high-efficiency GSLs, including Retail Initiatives, Distributor Initiatives, and Low Income Initiatives.

6. Who conducted the study?

The study was conducted by Scott Dimetrosky, Joe Van Clock, and Jane Colby of Apex Analytics.

Apex Analytics (Apex), located in Boulder, Colorado, has been offering consulting and advisory services since 2011 for planning, potential, and evaluation studies for energy efficiency, load management, and market transformation programs. Apex is a small firm that has seven primary consultants with backgrounds in economics and market research. In addition to consulting and advisory services, Apex has spearheaded the development of the Consortium for Retail Energy Efficiency Data (CREED), a consortium of program administrators, regulators, and governments that is working to make data about retail point-of-sale lighting available for improved program planning and evaluation efforts. Apex also works directly on behalf of energy efficiency program administrators in Massachusetts, Connecticut, Rhode Island, and Illinois, and for public utility commissions in Arkansas and Pennsylvania.

Findings

7. Did APEX Analytics and the Trust find that the baseline for consumer lighting might change during the period of Triennial Plan V?

While the Biden administration seems likely to take steps to improve the required efficiency of GSLs, the extent, timing and enforcement of any changes are uncertain. It is possible a change will occur during the period covered by Triennial Plan V, but it is not clear when these changes would ultimately impact sales of lighting in Maine.

8. If implemented and enforced, when might the Trust expect to see the impact of a new baseline in the Maine lighting market?

Given the multiple paths that might be taken and the uncertain timing for each path, implementation could occur within months or take years. New regulations could include a "sell-through" period, during which time existing inventories could continue to be sold. Beyond implementation and sell-through, enforcement is uncertain—including if and when it will occur. Most paths laid out in the Apex Analytics memo are likely to spur legal challenges, adding further uncertainty to the timing of implementation and enforcement.

When the first phase of EISA went into effect, exceptions in the regulations allowed the continued sale of incandescent lamps. For example, “rough service” A-line incandescent lamps can still be purchased today in Maine stores. It is unclear at this time what, if any, exceptions will remain in place. It will be important to monitor inventory available in Maine stores, as well as the progress of federal standards, to determine the timing of the market transformation.

9. How has the Trust modeled the efficiency opportunity with GSLs and the current programs that incentivize them?

Given the uncertainty identified in the Apex Analytics memo, the Trust finds that it should not assume that the baseline for GSLs will be LEDs at the outset of Triennial Plan V. Moreover, the Trust declines to make preemptive adjustments based on uncertain predictions of future federal regulatory action. The Trust finds that the most responsible approach under the circumstances is to plan for the possibility that, due to any combination of extended federal rulemakings, sell-through periods, and legal challenges, this situation will pertain through all three years of the Plan. If circumstances change and it becomes clear that LEDs are about to become the new baseline, at that time the Trust will notify its Board and the Commission that the Plan budget requires adjustment. It will be easier to adjust utility collections *downward* at that point than it will be to adjust them *upward* after determining that federal implementation is lagging.

To forecast the cost-effective opportunity for retail lighting for the Triennial Plan V period, the Trust assumes that the energy savings and costs for GSL measures remain consistent with the program performance in FY2021. The Trust has modeled program activity for the TPV period constant for FY2023, FY2024, and FY2025 at the same level as FY2021. This modeling will be revisited through the Annual Update process, as necessary.

Please see [Appendix B-1](#) for more detail.

10. How will the Trust adjust to potential future changes in the lighting market?

The Trust intends to continue offering the consumer lighting measures as long as they are cost-effective. EMT will reassess the savings, measure cost, and measure life assumptions with each Technical Reference Manual (TRM) update and will recalculate the cost-effectiveness of consumer lighting measures as appropriate.

Developments with federal regulatory action, market data, and product availability in Maine will inform changes to the TRM assumptions. When market conditions and outlook indicate that consumer lighting measures are no longer cost-effective, the lighting programs can be “turned off” with as little as six weeks’ notice.