



Getting Your Energy Savings Out of Storage

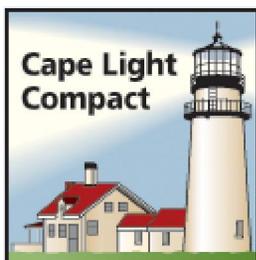
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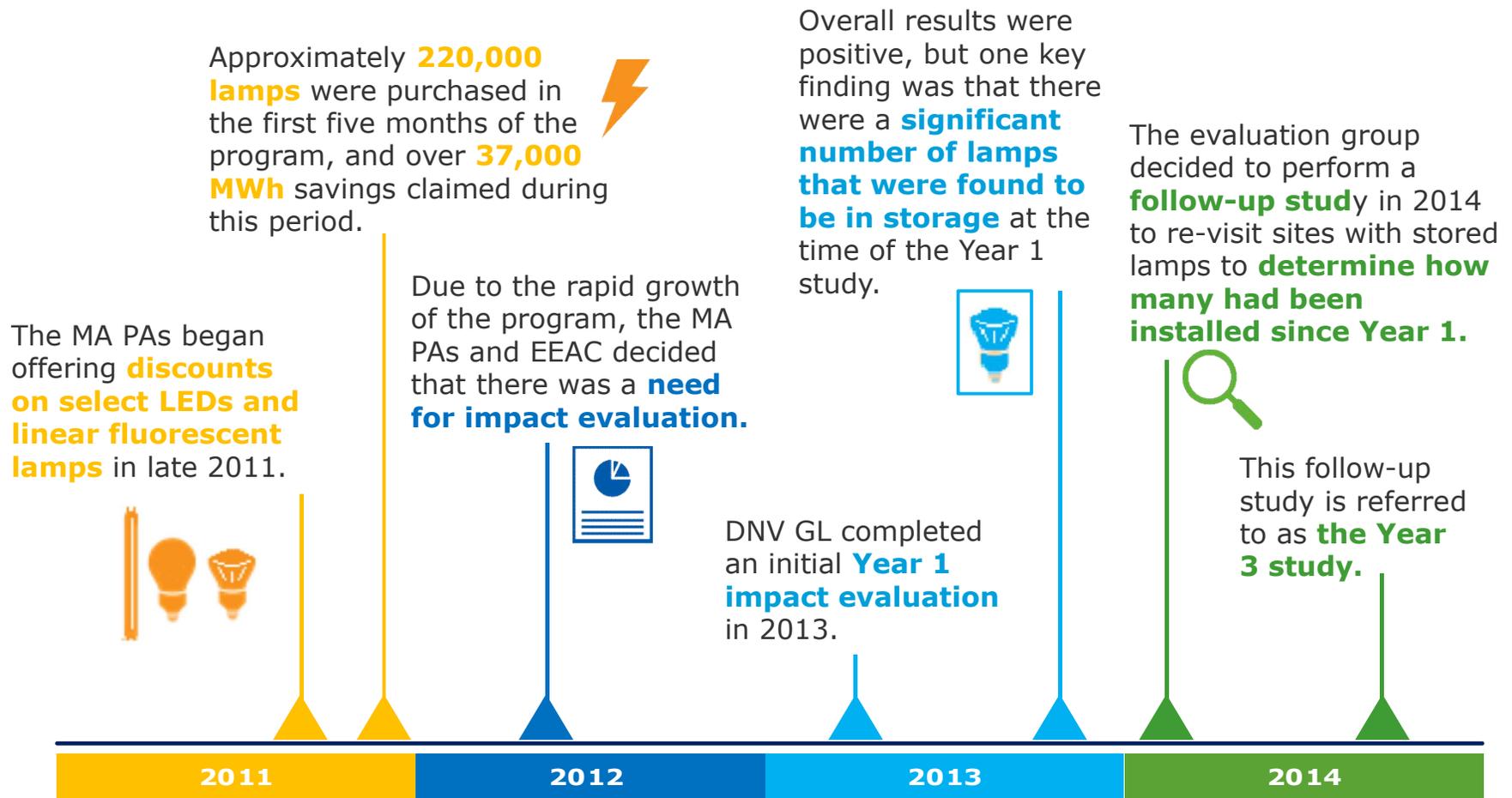
2015 IEPEC Conference — Long Beach, California

Introduction

- Massachusetts Bright Opportunities Lighting Program
- The Massachusetts Program Administrators (PAs)
- The Massachusetts Energy Efficiency Advisory Council

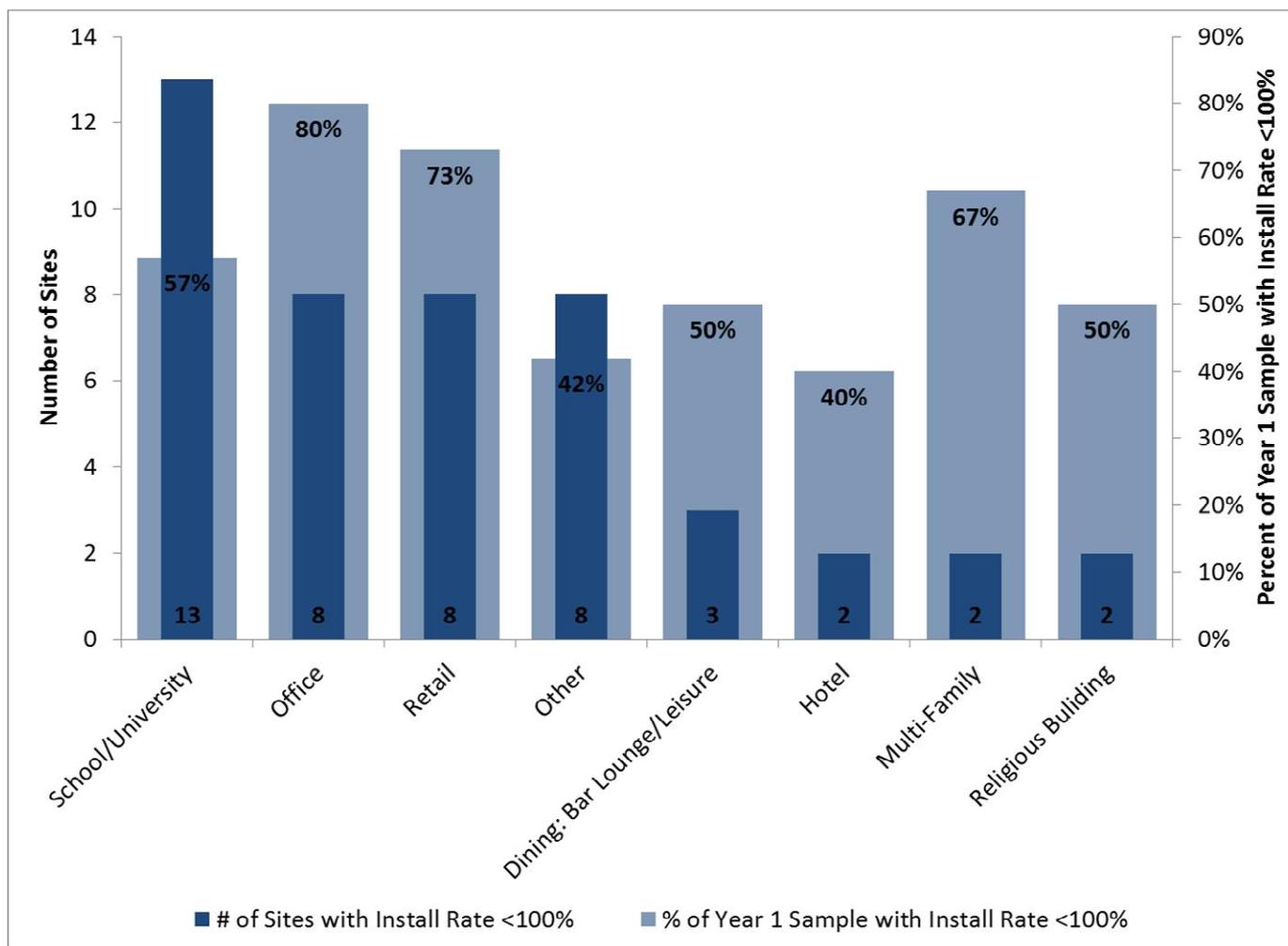


Bright Opportunities Program



Summary of Year 1 Evaluation

- Year 1: DNV GL evaluated 81 sites (66 LED, 15 fluorescent)
- 46 sites (37 LED, 9 fluorescent) had install rates less than 100%
- 31 sites had some number of lamps in storage at the time of the Year 1 study



Year 3 Evaluation



DNV GL attempted to **re-visit each of the 31 sites** identified above as having had lamps in storage.



DNV GL successfully **returned to 23 of the 31** sites that were targeted, including **18 LED and 5 fluorescent sites**.



Visually **inspected** newly installed lamps.
Compared these lamps to the documented purchases (type, quantity).

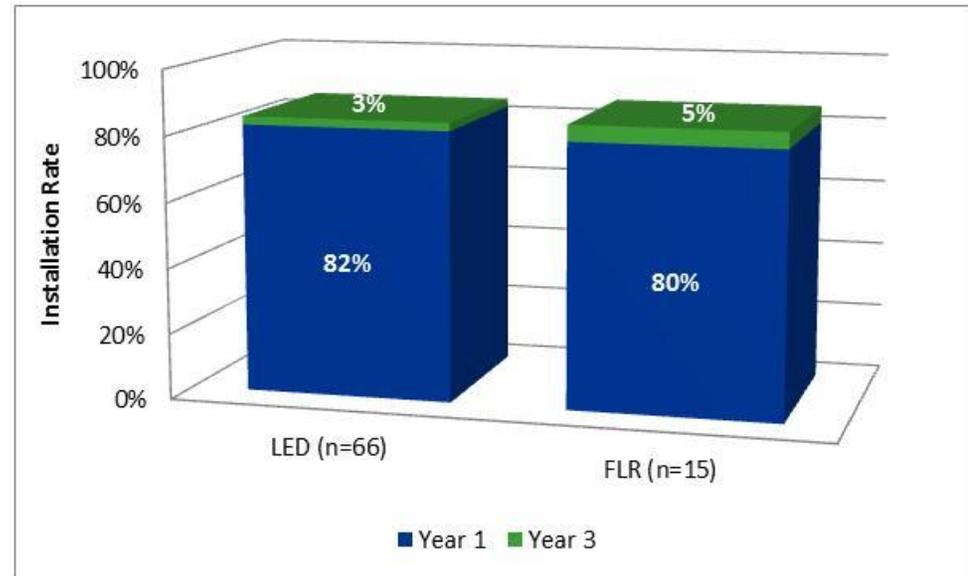


Interviewed facility staff to learn more about their remaining in storage lamps.

Year 3 Evaluation

Year 3 Results

- For LEDs, the Year 3 installation rate was found to be 85% as compared to the Year 1 installation rate of 82%.
- For fluorescents, the Year 3 installation rate was found to be 85% as compared to the Year 1 installation rate of 80%.
- Overall energy savings realization rates improved slightly.



Energy Savings (kWh) Realization Rate

	Year 1	Year 3
LED	101.9%	103.4%
Fluorescent	89.1%	92.4%

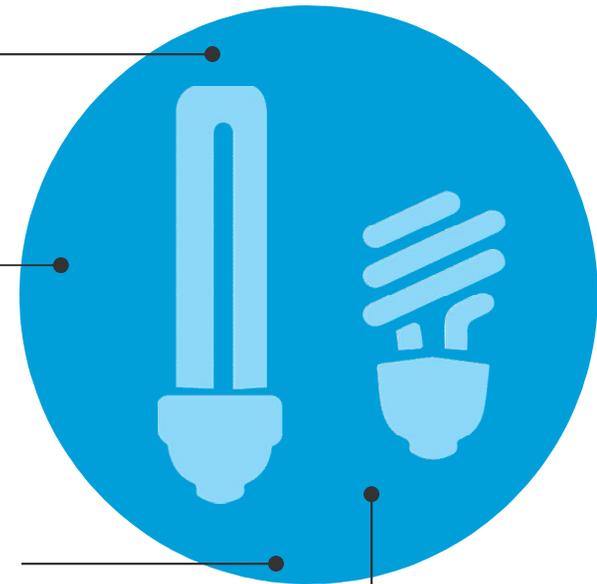
Summary of Lamps for Re-visited Sites

- Two sites with no additional bulbs installed – *No expected additional savings*
- Six sites with some bulbs installed – *No expected additional savings*
- Many in-storage bulbs will remain there until current program bulbs burn out.

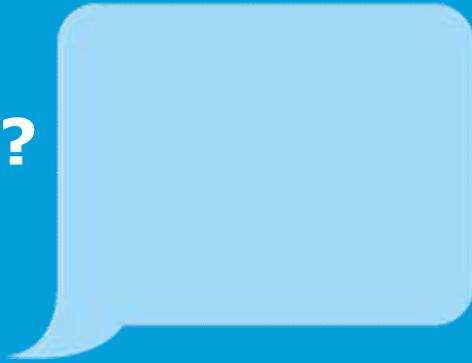
Year 3 Classification	Number of Sites	Average Number of Days between Purchase and Year 1 Visit	Number of In Storage Bulbs - Year 1	Average Number of Days between Purchase and Year 3 Visit	Number of In Storage Bulbs - Year 3
All Bulbs Installed	12	254	919	917	0
No Additional Bulbs Installed	2	252	14	1,029	14
Program Bulbs Removed	1	358	846	1,057	0
Replaced Program Bulbs	1	212	3	822	0
Some Bulbs Installed	6	353	2,732	935	747
Total	22	284	4,514	934	761

Conclusions and Recommendations

- Install rates increased for both LED and fluorescent lamps by **3% and 5%**, respectively between Year 1 and Year 3.
- We recommended that the **MA PAs utilize the Year 3 results** since the potential for additional savings due to increased installation rates is limited after Year 3.
- Continue to utilize existing **QA/QC efforts** to help improve installation rates over time.
- Consider **continuous evaluation** of this program as it matures.



Questions?



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