

Reduced Wattage T8 Projects CEE member experiences

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NSTAR

Why did the customer choose reduced wattage T8's?

- ❖ Person
 - ❖ Independent Contractor

- ❖ Purpose
 - ❖ Retrofit project



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NSTAR Eligibility Requirements

Performance Characteristics for Lamps	32 Watt	30 Watt	28 Watt
Color Rendering Index	≥ 81	≥ 81	≥ 81
Initial Lumens	≥ 3100 Lumens	≥ 2800 Lumens	≥ 2700 Lumens
Lamp Life	≥ 2400 hrs at 12 hrs/start	≥ 2400 hrs at 12 hrs/start	≥ 2400 hrs at 12 hrs/start
Lumen Maintenance	≥ 94%	≥ 94%	≥ 94%
Mean Lumens	≥ 2900 Lumens	≥ 2600 Lumens	≥ 2550 Lumens



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What did the project look like?

- ❖ Size
 - ❖ 2,821 fixtures (6,533 lamps and 2,821 ballasts)
- ❖ Timeline
 - ❖ Began in the fall of 2005, completed in the spring of 2006.



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What problems did they encounter?

- ❖ No occupancy sensors installed
- ❖ No challenges or failures to report to date



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What was the satisfaction level with the project?

- ❖ Utility
 - ❖ Incentive of \$87,261
 - ❖ Energy reduction of 646,375 kWh/yr
- ❖ Customer



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What was the satisfaction level with the project?

- ❖ Utility

- ❖ Incentive of \$87,261
- ❖ Energy reduction of 1,775 kWh/yr

- ❖ Customer



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Efficiency Vermont

Why did the customers choose reduced wattage T8's?

- ❖ People

- ❖ Lighting manufacturers in partnership

- ❖ Purpose

- ❖ Replacement lamps
- ❖ Retrofits



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Efficiency Vermont – From Qualifying Products List

Nominal Wattage	30, 28
Initial Lumens	≥ 2750
Mean Lumens	≥ 2585
Color Rendering Index	≥ 81



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Efficiency Vermont

What did the project look like?

❖ Size

- ❖ State building: 4000 replacement lamps by the end of 2006
- ❖ Private building: 67 fixtures retrofitted

❖ Timeline

- ❖ State building: November 2005
- ❖ Private building: November 2004



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Efficiency Vermont

What problems did they encounter?

- ❖ No occupancy sensors installed
- ❖ One early ballast failure, replaced under warranty.



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Efficiency Vermont

Were both the utility and the customer satisfied?



- ❖ Utility satisfied with the life for relamping, \$15/fixture for the production of 48 kWh/lamp over life

- ❖ Customer



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Other Reduced Wattage Programs

- **EWEB**
 - Qualifying Products List
 - Ambient temperature guidelines
- **LADWP**
 - Custom program based on kWh savings
 - Rebate for lamp-to-lamp replacements and systems



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