Energy Trust of Oregon’s High Performance T8 Market Transformation Model
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What is a High Performance T8?

• HP T8: 32 watt has higher lumens and uses lower ballast factor ballast
  • 10-20% savings over “Standard” 32 w T8s
• “Standard” T8 lamps (i.e. “First Generation” 700-series and “Extended Life” 800-series)
Major Changes in Federal Standards

• Linear fluorescent lamp minimum standard 89 lm/w July 2012:
  • No more T12’s or “Standard” T8 lamps
• Pending linear fluorescent ballast standard in 2014 may eliminate less efficient T-8s
Key Questions for Market Transformation

• Did market transformation result in more savings than the program’s rebated installations?
  • Savings due to program spillover over the life of the program?
  • Savings due to federal standards?
• Would the MT have happened without Energy Trust’s influence (and that of our peers)?
Major Model Assumptions

- Current MT savings coming from T12 replacements
- HPT8 impact on high-bay market is not included in study
- MT impacts are due to an earlier adoption of the standard than would have happened without program
- Energy Trust of Oregon and its peers influenced market adoption and changes in federal standards
- We are counting only savings in Energy Trust service territory
Influence Piece of the Puzzle

• Were Energy Trust and its peers highly influential on decisions regarding efficiency and/or timing of the Federal standard?
  • 8 of 9 experts involved in the federal standard change felt that incentive programs were influential on decisions regarding the federal standard and when it would be implemented
  • Modal response to when the standard would have changed without program efforts was 2017
Regional Influence

• Lighting distributors: all 5 felt that ETO influenced market through incentives

• Market experts: 5 of 6 felt that ETO influenced the market though education and training and 4 of 6 felt it was through incentives

• Supported by a 2009 survey of 60 Lighting trade allies:
  • Over 80 % said ETO was a “major” or the “most important” influence in the adoption of HPT8’s
T12 Retrofit Market

HPT8/T8 Fixtures Installed as T12 Retrofits

Total Standard T8 and HPT8 Retrofit Market
HPT8 Market Units
HPT8 Energy Trust Program Units
HPT8 Baseline Market Units
Pieces of the Puzzle

- HPT8 sales and fixtures replaced
  - ETO lighting retrofit data and distributor interviews
- T12 installed stock and replacement rates
  - Comprehensive Commercial Building Stock studies 2002 and 2007
- Oregon specific lighting sales and installed base of T12’s
  - Lighting Market Assessment 2009
- HPT8 baseline
HPT8 Oregon Market Share (% of T12 retrofits/year)
Oregon T12 Retrofit Market

Installed T12 Stock

Annual T12 Retrofit Projects • Cumulative T12 Retrofit Projects • Installed T12 Stock
Baseline HPT8 Market Share (% of T12 retrofits/year)