Momentum Savings

Monthly Update
May 25, 2016
Non-residential lighting sales data collection

RTF Market Analysis Subcommittee

Next steps on baseline alignment

Product Flow and Efficiency Mix 101

Feedback on the Intro to Momentum Savings packet
Status Update: Non-res Lighting Data Collection
Quick Context

• **Stock and Flow**
  - Sales data measures flow
  - Quantifiable information

• **Lighting Distributors**
  - Manufacturers too inaccessible
  - Contractors too numerous
The Plan

• Recruit our Allies (StrikeForce!)
  • NEEA (Elaine Miller)
  • Evergreen Consulting
  • Utility lighting program managers
  • BPA

• Persuade Distributors
  • Know our audience
  • Appeal to their hearts
Where We Stand (January – May)

- More participation than ever
  - 2014: 12 distributors
  - 2015: 16 distributors
  - 2016: 23 distributors... and counting
- Good mix of distributors
  - 5 large
  - 4 medium
  - 14 small
- Overall, a great year
Goals Going Forward

• **Mo’ Data, Mo’ Statistical Certainty**
  • Bring in the hold outs
• **Sustainable Research - Retainment**
  • Refine incentives
  • Simplify process
  • Validate trust
• **Normalize Data Collection**
  • They’ll expect us to come knocking
Status Update: RTF Market Analysis Subcommittee
Subcommittee kicking off!

June 10th 9-11
Contact to join: GHerndon@NWCouncil.org

Meeting 1: Fundamentals of Market Analysis
Meeting 2: Lighting Model Development  Tiger Team
Baseline Library Update
First Meeting: Technical Workshop

- **Date:** June 8th
- **Objectives:**
  - Focus on technical modeling in CPA analysis
  - Discuss how having an agreed upon efficiency mix in the baseline might impact implementation of CPAs
- **Desired Outcome:** We make sure that there is no unintended consequence to CPAs from using the same frozen efficiency level
- **Attendees:** Council staff, NEEA planning staff, CPA consultants (EES, Cadmus, AEG, Utility Consulting, Cadeo)
Second Meeting: Process and Next Steps

• Date: TBA

• Objectives:
  • Summarize key takeaways from technical workshop
  • Discuss the process—when, how and other logistics for managing the process to roll out a regional baseline library
  • Present and discuss options for consideration on how to move forward

• Desired Outcome: We gather feedback from the region on how to move forward with developing a regional baseline library

• Desired Attendees: Utility staff who manage CPAs, Council staff, NEEA planning staff, other interested stakeholders

• Webpage: http://www.bpa.gov/goto/BaselineLibrary
Product Flow and Efficiency Mix 101
SOME TERMINOLOGY

INSTALLED STOCK

PRODUCT FLOW
KWH CONSUMPTION

# OF SALES

HIGH

KWH CONSUMPTION

LOW

COUNCIL BASELINE
TOTAL MARKET SAVINGS

KWH CONSUMPTION

HIGH

LOW

MARKET AVG

COUNCIL BASELINE

TOTAL MARKET SAVINGS

TOTAL MARKET SAVINGS

TOTAL MARKET SAVINGS

2010

2011

2012
THE EFFICIENCY MIX

is the distribution of sales that fall within each efficiency level in a given market in a given year.
UNIT ENERGY CONSUMPTION (UEC)
UEC WEIGHTED BY EFFICIENCY MIX
UEC WEIGHTED BY EFFICIENCY MIX
ASHP UNIT ENERGY CONSUMPTION

CONSUMPTION (kWh/YEAR)

HSPF 7.7: 7,487
HSPF 8.5: 7,127
HSPF 9.0: 7,002
HSPF 9.5: 6,881
HSPF 10.0: 6,763
HSPF 10.5: 6,650
HSPF 11.5: 6,436
ASHP UEC WEIGHTED BY EFFICIENCY MIX
ASHP UEC WEIGHTED BY EFFICIENCY MIX

7,835 kWh/year
TAKEAWAYS

1. THERE ARE MANY EFFICIENCY LEVELS IN THE MARKET, AND THEY’RE ALL PART OF THE MARKET AVERAGE

2. EACH EFFICIENCY LEVEL HAS ITS OWN UEC

3. WE WEIGHT EACH UEC BY SALES DATA TO GET OVERALL AVERAGE UEC
SALES DATA
DISTRIBUTOR SALES DATA
DISTRIBUTOR TYPES

- Maintenance
  Repair & Operations
- Full Line
- Lighting Only
SURVEY REPRESENTATION

- **RELATIVE SIZE**
  - POPULATION
  - SAMPLE

- **DISTRIBUTION AREA**
  - POPULATION
  - SAMPLE

- **BUSINESS MODEL**
  - POPULATION
  - SAMPLE

Legend:
- SMALL DISTRIBUTOR
- MEDIUM DISTRIBUTOR
- LARGE DISTRIBUTOR
- LOCAL
- REGIONAL
- NATIONAL
- FULL LINE
- MRO
- LIGHTING ONLY
SALES IN THE BASELINE YEAR

UNITS SOLD

JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
SEASONALITY AND SALES

Not to scale
TAKE-AWAYS

1. Sales data is the best indicator of product flow and can be collected with creativity and commitment.

2. Sales data can be representative, even when incomplete.

3. We can use market segmentation to inform whether or not our sales data is representative.

4. We can account for seasonal variations by establishing average efficiencies using full year data.
LOCAL VARIATION
IN A BIG-BOX WORLD: MORE SIMILARITIES THAN DIFFERENCES
RBSA DIFFERENCES

VINTAGE OF HOMES

FUEL AVAILABILITY
FOUR RETAILERS DOMINATE RESIDENTIAL LIGHTING
SHARE OF EFFICIENT LAMPS STOCKED BY STORE LOCATION

Home Depot

COEUR D'ALENE, ID
EUGENE, OR
FEDERAL WAY, WA
GRANTS PASS, OR
HELENA, MT
ISSAQUAH, WA
KENNEWICK, WA
LEWISTON, ID
OREGON CITY, OR
PORTLAND, OR
PUYALLUP, WA
TACOMA, WA
THE DALLES, OR
VANCOUVER, WA
WARRENTON, OR

Efficient
Inefficient
Average Share of Efficient Lamps
SHARE OF EFFICIENT LAMPS STOCKED BY STORE LOCATION

Lowe's

Y-axis: 0% - 100%
X-axis: Locations: Auburn, WA, Billings, MT, Bonney Lake, WA, Bozeman, MT, Mill Creek, WA, Monroe, WA, Moses Lake, WA, Nampa, ID, Puyallup, WA, Wenatchee, WA

Legend:
- Efficient
- Inefficient
- Average Share of Efficient Lamps
SHARE OF EFFICIENT LAMPS STOCKED BY STORE LOCATION

Walmart

[Bar chart showing the share of efficient lamps stocked by store location, with locations such as Auburn, WA, Billings, MT, etc., and categories for efficient and inefficient lamps.]
T12s AS % OF ALL LINEAR LAMPS SOLD INTO TERRITORY

All Utilities - 8%

- Portland General Electric Co: 8.20%
- Puget Sound Energy Inc: 7.70%
- Idaho Power Co: 4.30%
- PacifiCorp: 12.30%
- City of Seattle (WA): 5.50%
- City of Eugene - (OR): 6.40%
- PUD No 1 of Clark County - (WA): 9.70%
- NorthWestern Energy LLC - (MT): 9.00%
- Central Lincoln People's Ut Dt: 15.60%
- Inland Power + Light Company: 9.20%
- Flathead: 6.10%
- Lewis County PUD: 19.30%
- Tacoma: 5.70%

Ordered by # of linear lamps sold in 2015
TAKE-AWAYS

1. THERE IS MORE CONSISTENCY THAN DIFFERENCES IN SUB-REGIONAL MARKETS
2. VINTAGE AND FUEL AVAILABILITY ARE DRIVERS OF DIFFERENCE
3. THE AVERAGE IS ONLY AN AVERAGE
Feedback on Intro to Momentum Savings packet
HVAC Research Findings
Brownbag, tomorrow 12pm

HVAC Market
Intelligence Report

www.bpa.gov/goto/HVAC
Questions + Discussion
Next Meeting: June 29th, 9am