



Utilizing Variable Incentive Rates to manage budgets

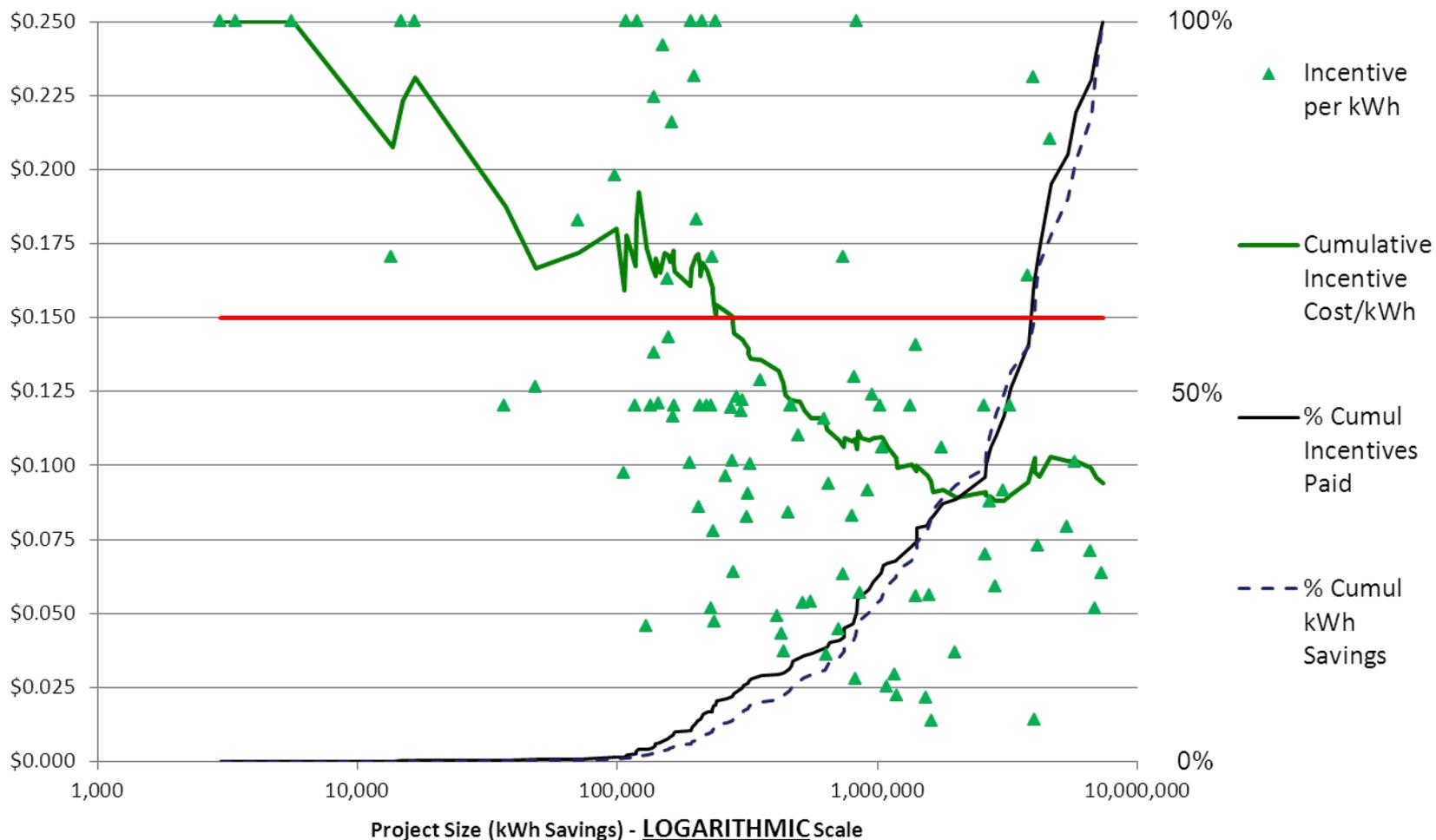
Presented by:
Doug Swier, Conservation Engineer
Cowlitz PUD



Our Challenges

- Meet aggressive future I937 kWh targets.
- BPA funding capped at ~85% of FY10-FY11 .
- Result: Even with ~30% self-funding, need to keep 'portfolio' costs within ~\$0.15/kWh.
- Keep \$0.25/kWh 'advertised' rate – drives activity.
- Two largest customers could dramatically impact our ability to stretch budgets with just one or two large projects.

FY07-FY11 Project History: Sorted by kWh Savings

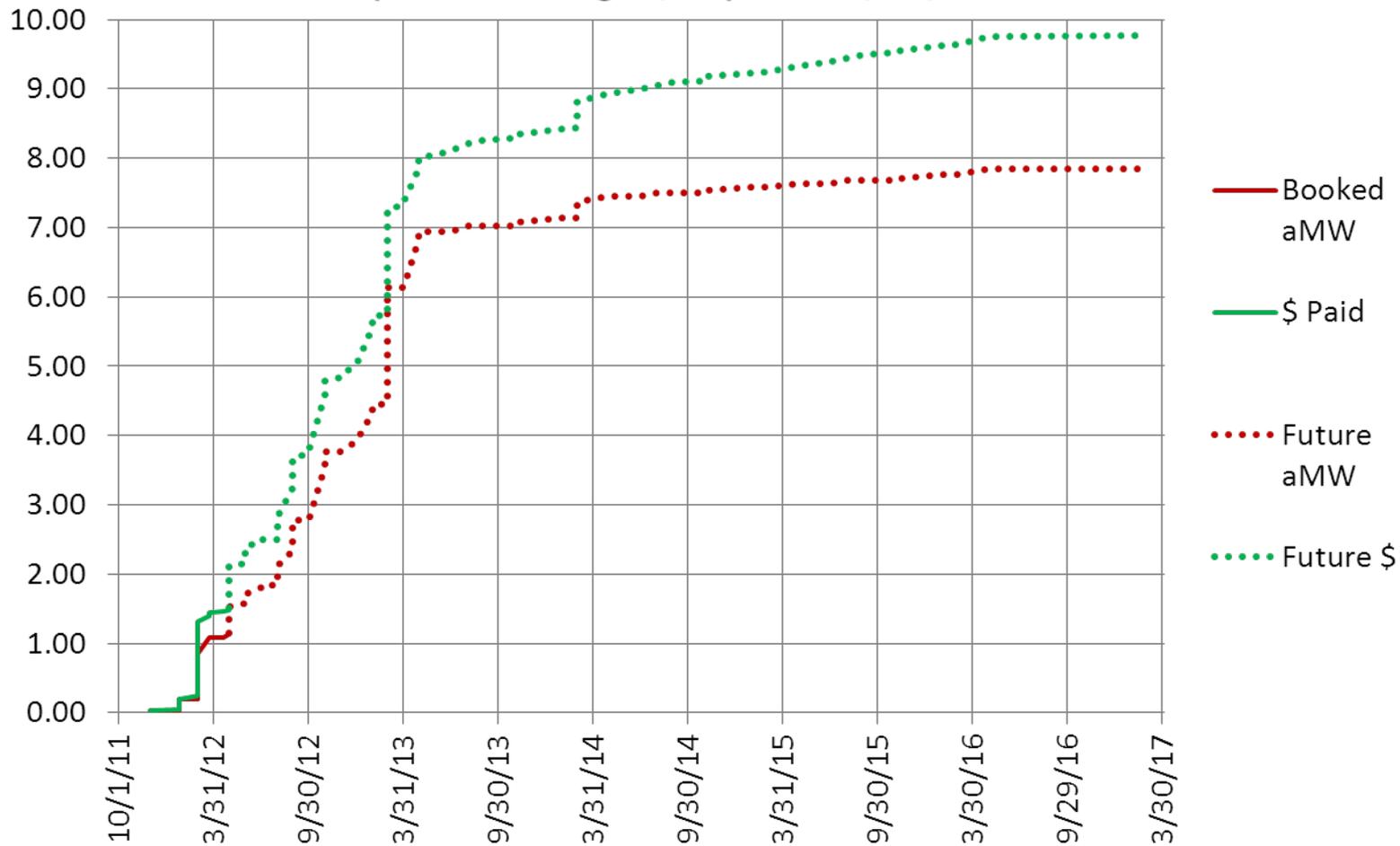


Our Solution

- Initial intent to ‘negotiate’ rates for large projects.
- Consistency? Fairness?
- Settled on traditional \$0.25/kWh for ‘standard’ projects, and \$0.15/kWh for ‘large’ projects (>1 million kWh).
- Cap final incentive at no more than ‘proposed’.

A	B	C	D	E	F	G	H	I	J	K
PROJECT TITLE	AGRM MT No. (* - cond		OBLIGATED ESTIMATED INCENTIVE PAYMENTS	(LATEST) PREDICTED DATES FOR INCENTIVE PAYMENTS			Estimated INCREMENTAL (in addition to prior year) Annual Busbar Savings	ACTUAL INCENTIVES PAID	ACTUAL PAID DATE	Actual IN (in additi year) An Se
Green Liquor Mix Tank	006-		\$32,541	5/1/12			130,163 kWh/yr			
Water vacuum pump #4 Mud Filter	ECA-		\$159,600	5/1/12			912,226 kWh			
Agreement at Delnk (pymt 1 of 5)	ECA-		\$37,500	7/1/11			1,500,000 kWh	\$19,560	9/1/11	
Agreement at Delnk (pymt 2 of 5)	ECA-		\$62,500	7/1/12			1,000,000 kWh			
Agreement at Delnk (pymt 3 of 5)	ECA-		\$62,500	7/1/13			0 kWh			
Agreement at Delnk (pymt 4 of 5)	ECA-		\$62,500	7/1/14			0 kWh			
Agreement at Delnk (pymt 5 of 5)	ECA-		\$62,500	7/1/15			0 kWh			
Line (pymt 1 of 7, PTS costs)	ECA-		\$14,055	12/1/10			0 kWh	\$14,055	12/15/10	
Line (pymt 2 of 7, Tune-Up Event)	ECA-		\$15,367	4/1/12			423,281 kWh	\$15,367		
Line (pymt 3 of 7, Yr1)	ECA-		\$15,000	3/1/13			176,719 kWh			
Line (pymt 4 of 7, Yr2)	ECA-		\$15,000	3/1/14			0 kWh			
Line (pymt 5 of 7, Yr3)	ECA-		\$15,000	3/1/15			0 kWh			
Line (pymt 6 of 7, Yr4)	ECA-		\$15,000	3/1/16			0 kWh			
Line (pymt 7 of 7, Yr5)	ECA-		\$15,000	3/1/17			0 kWh			
1 Doe (ONLY Paymt 4 of 4)	ECA-		\$159,347	3/1/12			0 kWh	\$50,480	3/2/12	
195600 #12PM Refiner #1 Upgrade	ECA-		\$147,000	5/1/12			1,172,570 kWh			
3ad Water System Upgrade	ECA-		\$409,500	9/1/12			1,767,369 kWh			
Binary Fine Screen Pump 00-6151	ECA-		\$150,500	1/1/12			2,443,945 kWh	\$139,485	1/27/12	1,
4r Line Upgrade	ECA-		\$719,600	3/1/12			3,264,319 kWh	\$1,001,929	3/2/12	5,
5n Air Compressor	ECA-		\$36,400	12/1/11			150,604 kWh	\$26,488	12/1/11	
185640 Refiner #3 Upgrade	ECA-		\$67,508	3/1/12			557,494 kWh	\$68,353	3/23/12	1,
)	ECA-		\$92,016	9/1/12			368,064 kWh			
6 Jockey Pumps	ECA-		\$145,600	5/1/12			656,054 kWh			
7 ss Stuff Box	ECA-		\$77,770	3/1/12			528,389 kWh	\$73,311	3/2/12	

Post-FY11 obligated Indust. & Custom Proj. Agmts (not including IS/CP) as of 4/23/12



Questions ?

For more information, contact:

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Strategic Energy Management

Presented by:

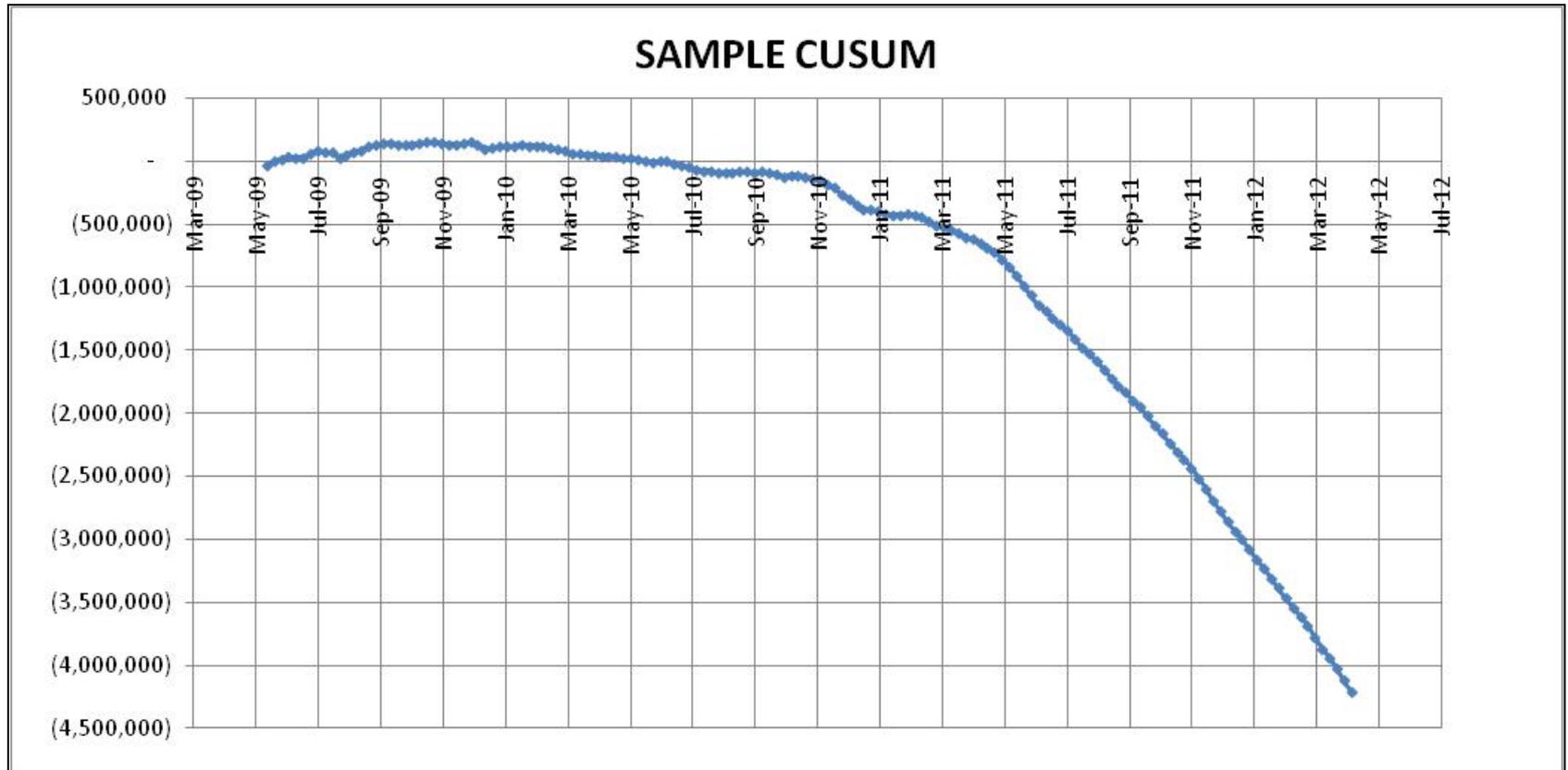
Sam Walker, Industrial Program Manager
Clark Public Utilities



High Performance Energy Management

- Participated in first HPEM cohort
 - Eight Clark County customers; six industries
 - 4,300,000 kWh in first year savings
 - \$108,000 in incentives
 - Regional & global significance
 - Support beyond first year

High Performance Energy Management



Energy Project Manager

- Currently co-funding three EPMs
 - 11 custom projects completed
 - 4,500,000 kWh in savings
 - \$112,500 in EPM incentives
 - \$500,000 in other incentives (custom, HPEM)
 - 10 additional projects submitted/accepted

- Shared Food Processor EPM in process

Track & Tune

- One Track & Tune project underway
 - Clean room HVAC and chiller plant
 - 1,200,000 kWh estimated savings
 - Performance Tracking System (PTS)
- Not aggressively promoting T&T, yet

Contact

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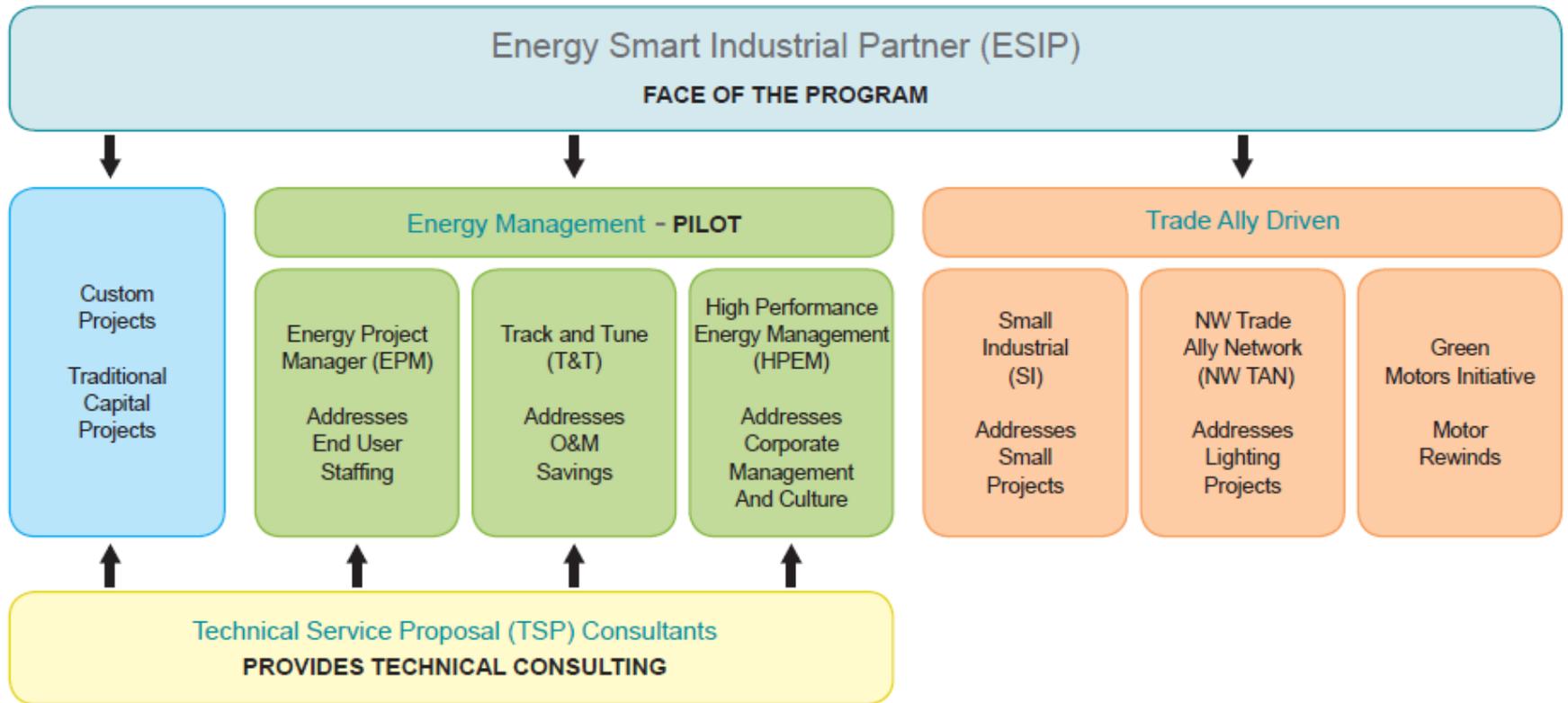


ESI Energy Management

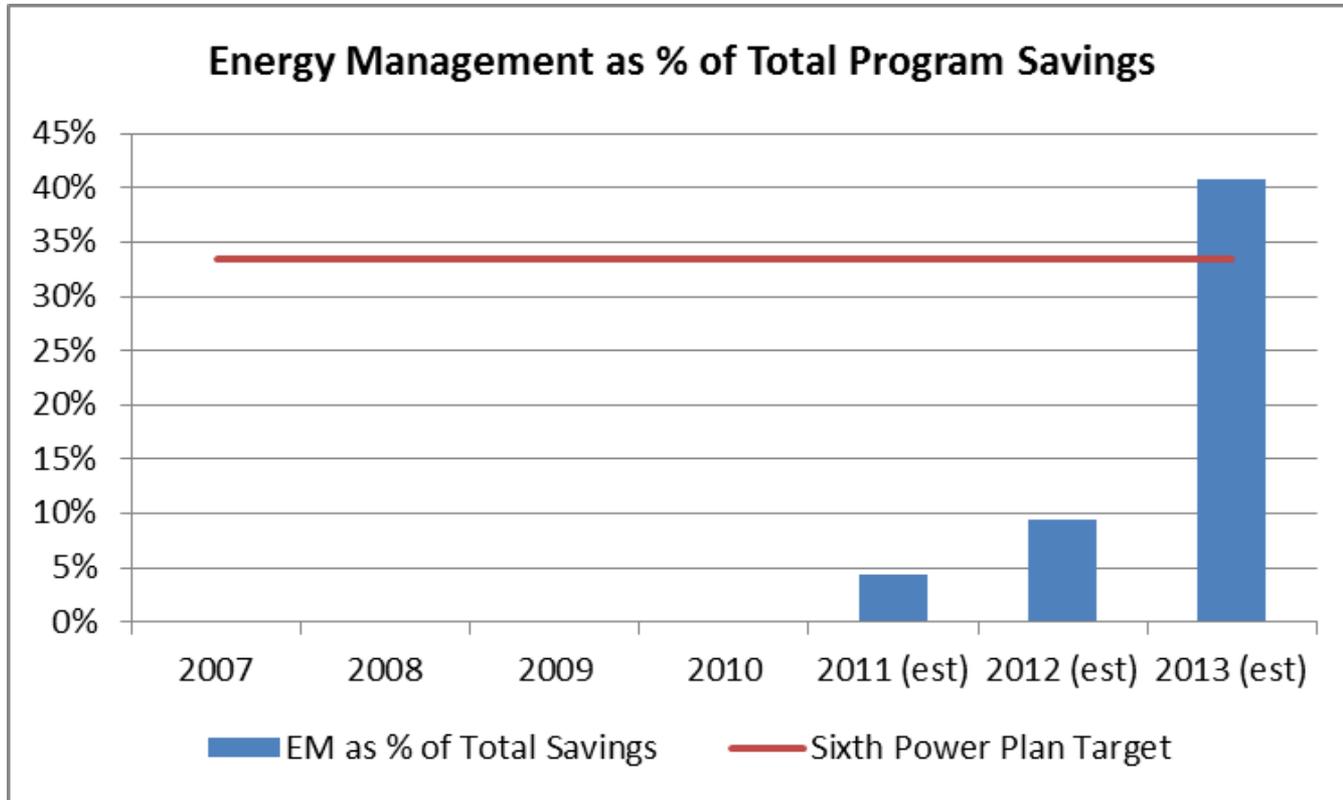
Presented by:
Todd Amundson
BPA Energy Efficiency



ESI Energy Management Pilot



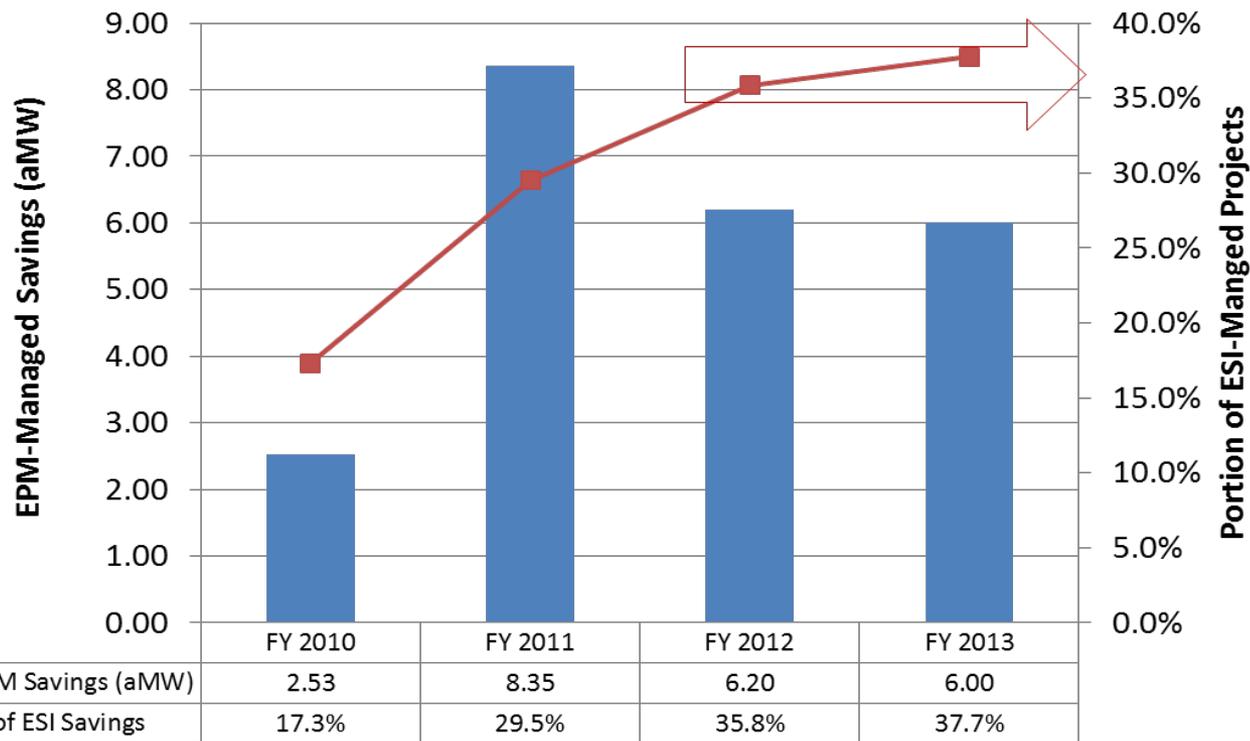
Energy Management Performance vs. Sixth Power Plan Target



Energy Management savings are a combination of savings from HPEM and Track and Tune.

Savings from EPM projects are not included.

Energy Project Managers (EPM): Industrial Energy Resources in Industry



EPMs
Future
Contribution
to ESI
Savings:
30% - 45%

[2012 forecast based on EPM CPPs and pre-CPPs; 2013 forecast based on recent and expected EPM renewals]

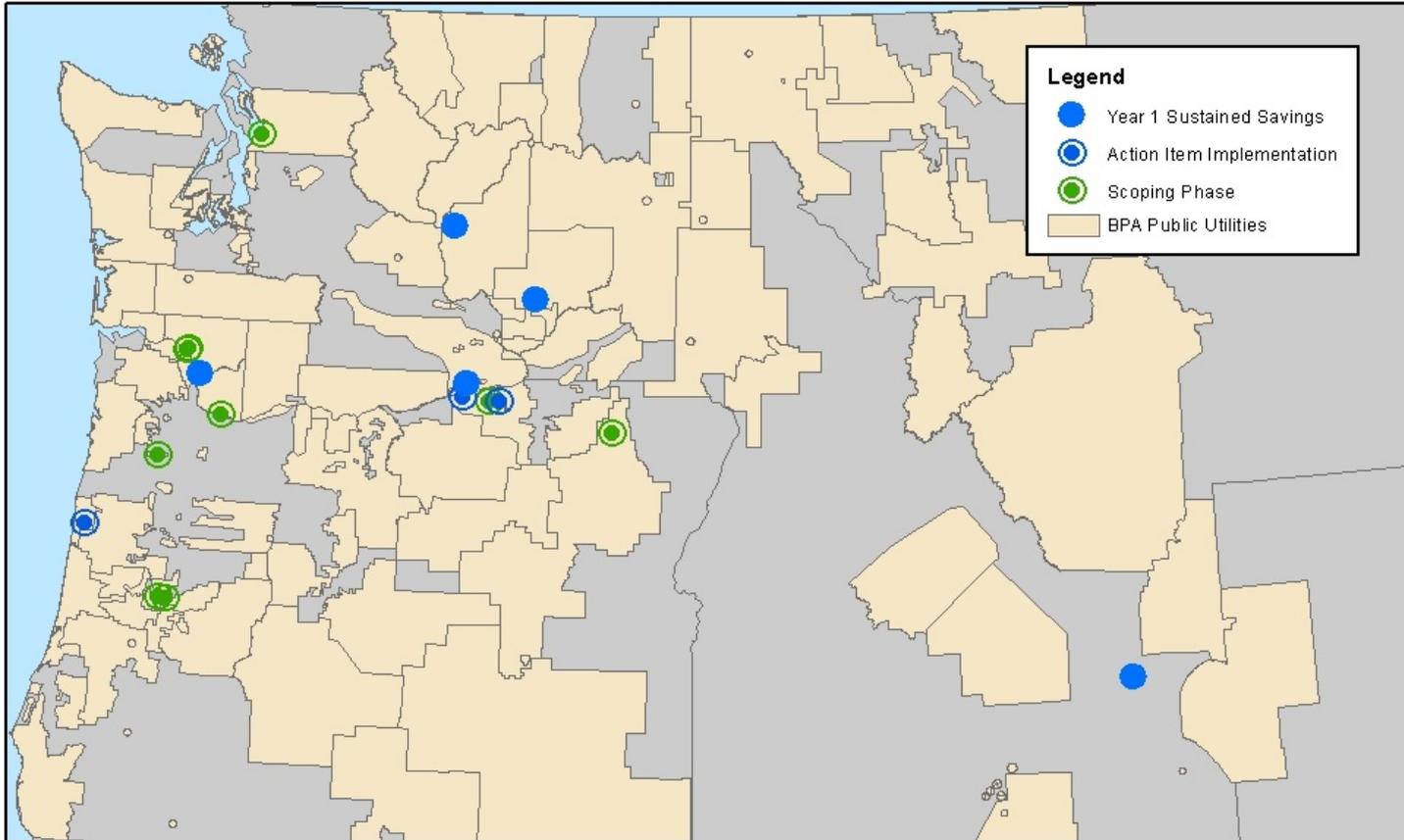
ESI Annual All-EPM Meeting

- First annual All-EPM Meeting held in Portland on January 17, 2012.
- 21 EPMs and HPEM/T&T Energy Champions attended.
- Highlights included recognition of individual EPM achievements, multiple project presentations by EPMs, and elective round table topics.
- 100% of post-meeting survey respondents indicated they would attend a second-annual meeting in 2013.

Track and Tune Facts

- There are currently 11 contracted T&T projects, with a projected aggregate first-year savings of 20 million kWh.
- Two T&T projects booked first-year savings in FY 2011.
 - Cost Effectiveness: PTS + Action Item Cofunding = \$0.030/kWh.
- Several subsectors and systems are represented:
 - Industrial Refrigeration (food processing, distribution centers)
 - Compressed Air (pulp and paper)
 - Fans/Blower Systems (grain processing)
 - Future (Wastewater, High-Tech HVAC)

Track and Tune: Expanding Market Acceptance of O&M Approach



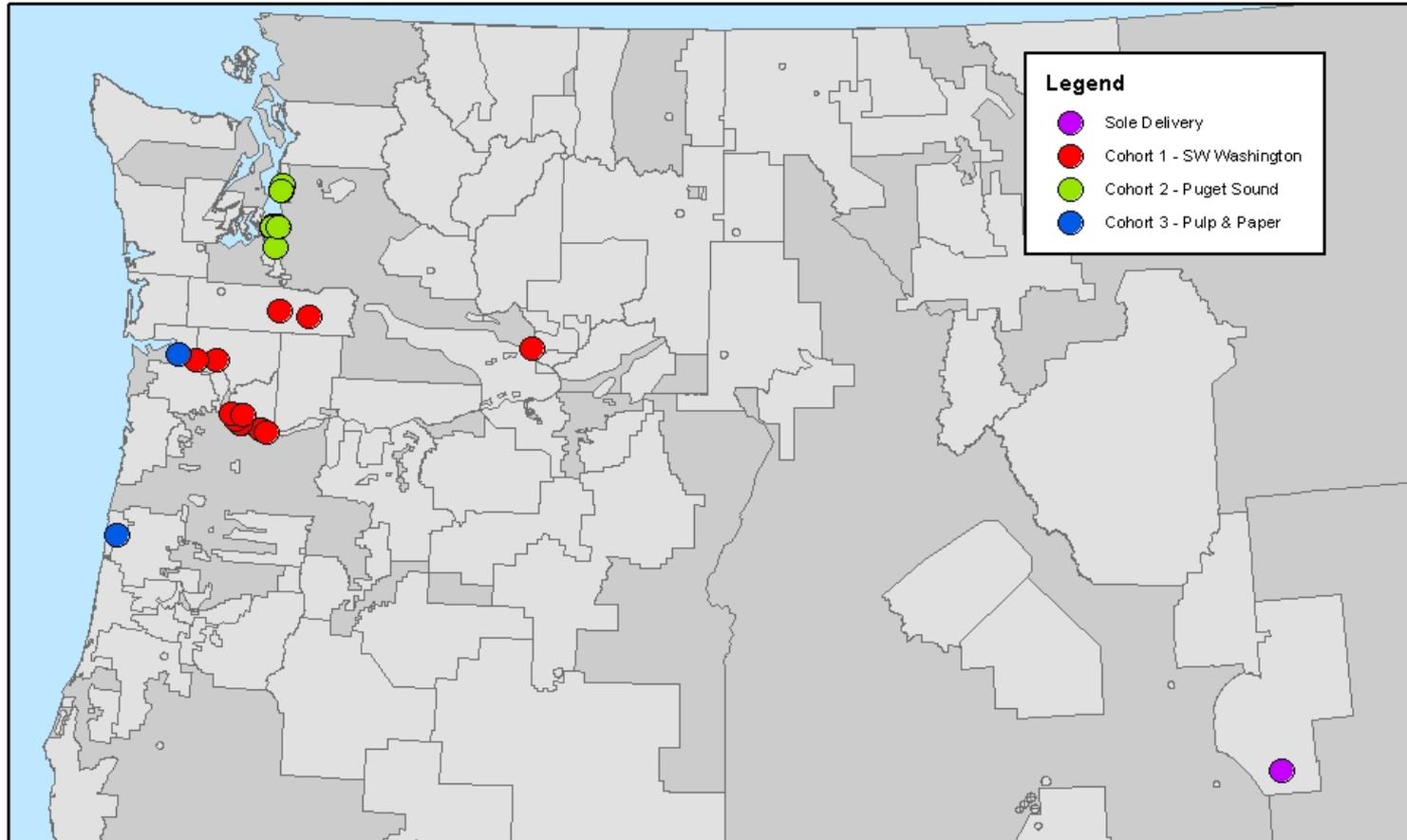
9 Tune-ups complete – 5 end users have completed action item implementation

HPEM Facts

- There are currently 25 contracted HPEM projects, representing over 190 aMW of connected load.
 - Cohort #1: SW Washington (13 companies, 31 aMW)
 - Cohort #2: Puget Sound (11 companies, 70 aMW)
 - Cohort #3: Georgia Pacific (2 mills, 90 aMW)
- Assuming a modest five-year potential of 4% savings (net Custom Projects), this translates to 8 aMW of resource acquisition.

HPEM:

Enhancing Energy Management Systems with Large End User



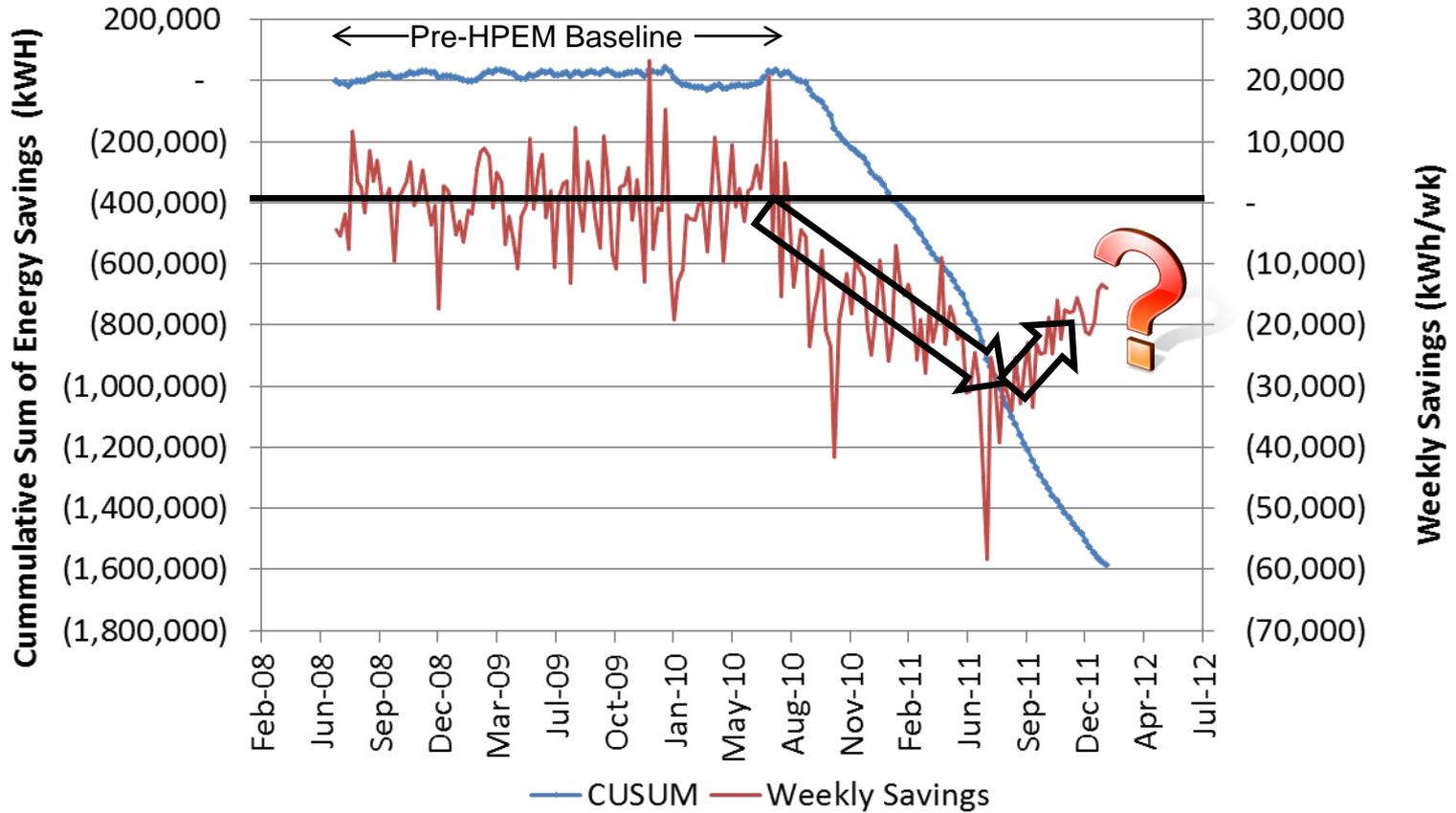
25 contracted end users across 10 utility territories

HPEM and Track and Tune: Benefits to Participation

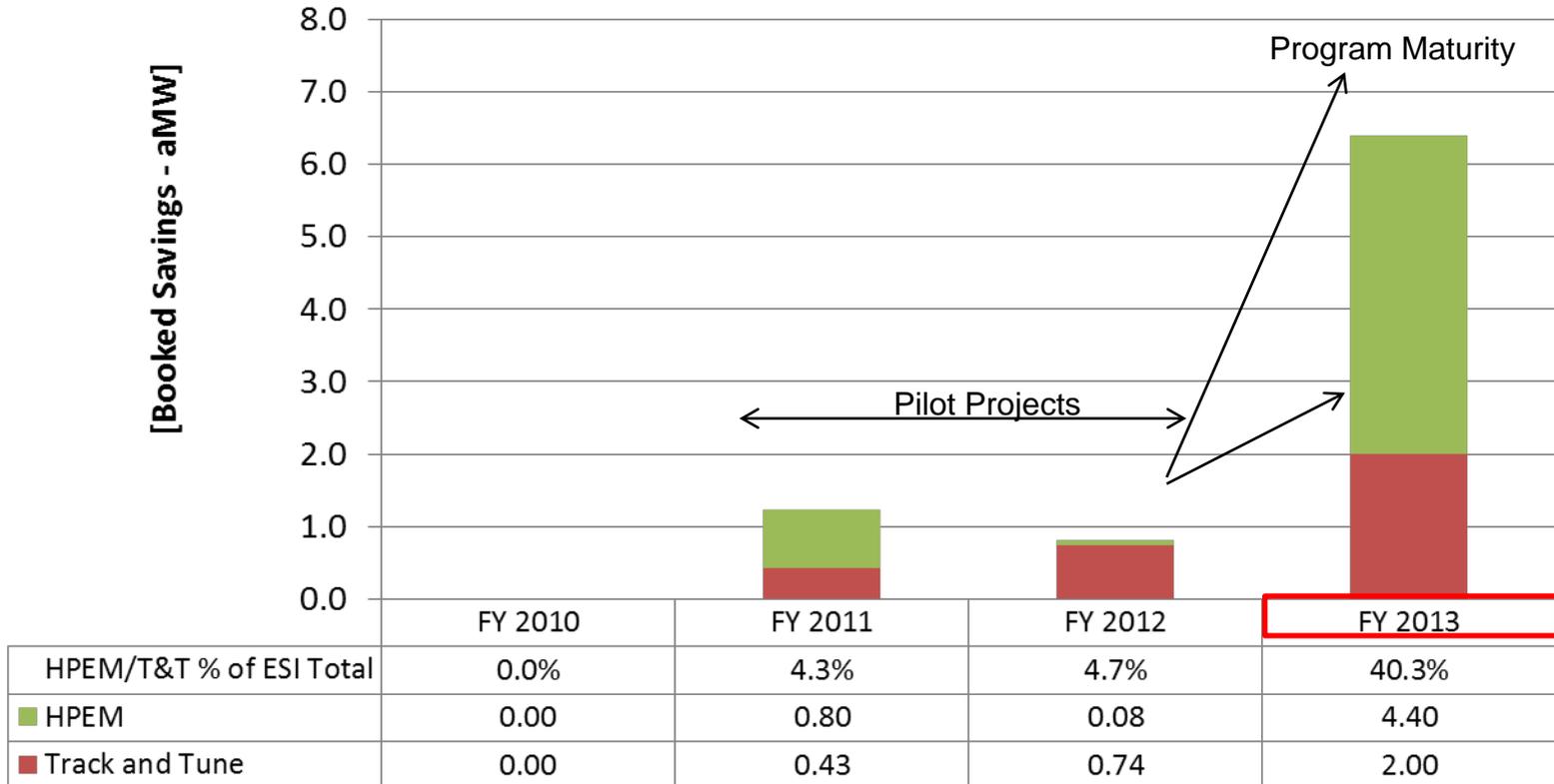
- HPEM and T&T help address new channels of efficiency opportunity, with lower impact to EEI budgets.
 - Engage end users that are capital-constrained, or seek a more comprehensive and ambitious approach to energy savings.
 - First-year acquisition cost typically in the \$0.025-\$0.075/kWh range
- Builds on long-term relationship between end user and utility.
- End users value coaching and MT&R model.

Whole Facility Energy Monitoring

Regional Food Processor - HPEM MT&R Energy Summary



Energy Management Pilot: Building a Pipeline of Low-Cost Acquisition



FY2011 booked savings – FY2012 and FY2013 projected savings

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Energy Smart Industrial: Collaboration for Success in Industrial Energy Savings

Presented by:

Jennifer Eskil, Industrial/Agricultural Sector Lead
BPA Energy Efficiency



The Great Regional Success Story

Industrial Targets and Achievements

Fiscal Year	Target (aMW)	Total Achieved (aMW)
2007	10.0	7.0
2008	10.0	7.0
2009	10.0	9.6
2010	13.0	13.53
2011	17.5	28.94
2012	7.0	Projected: 14.0
2013	7.0	Projected: 18.0
2014	8.0	Not available

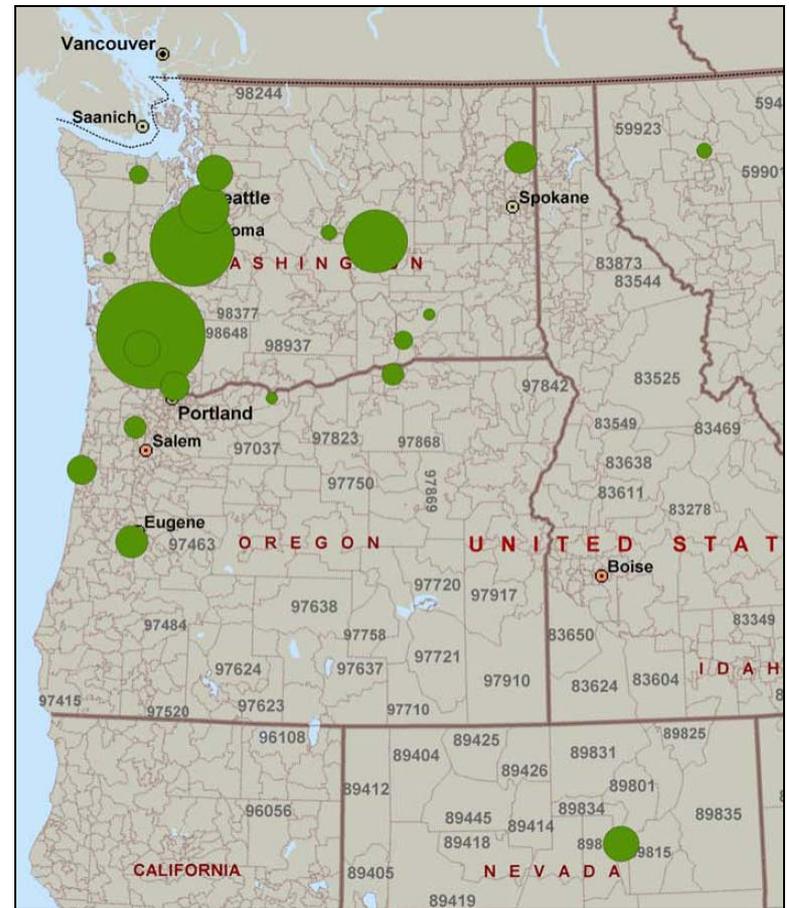
Historical Background

Hurdles We Faced...

- Industrial conservation targets were not met.
- BPA management of project pipeline.
- BPA processes/accountability and dedicated roles.
- BPA marketing and standardization.
- Time – only had four months to design new program.
- Program had to overlay with agency rate case and Post-2011 decisions.

Additional Hurdles...Faced

- 80% of regional Industrial load in top 20 utilities' service territories.
- Large, diverse region.
- Widely varying utility sizes, EE maturity, and needs.
- Some caution around a new 'program'



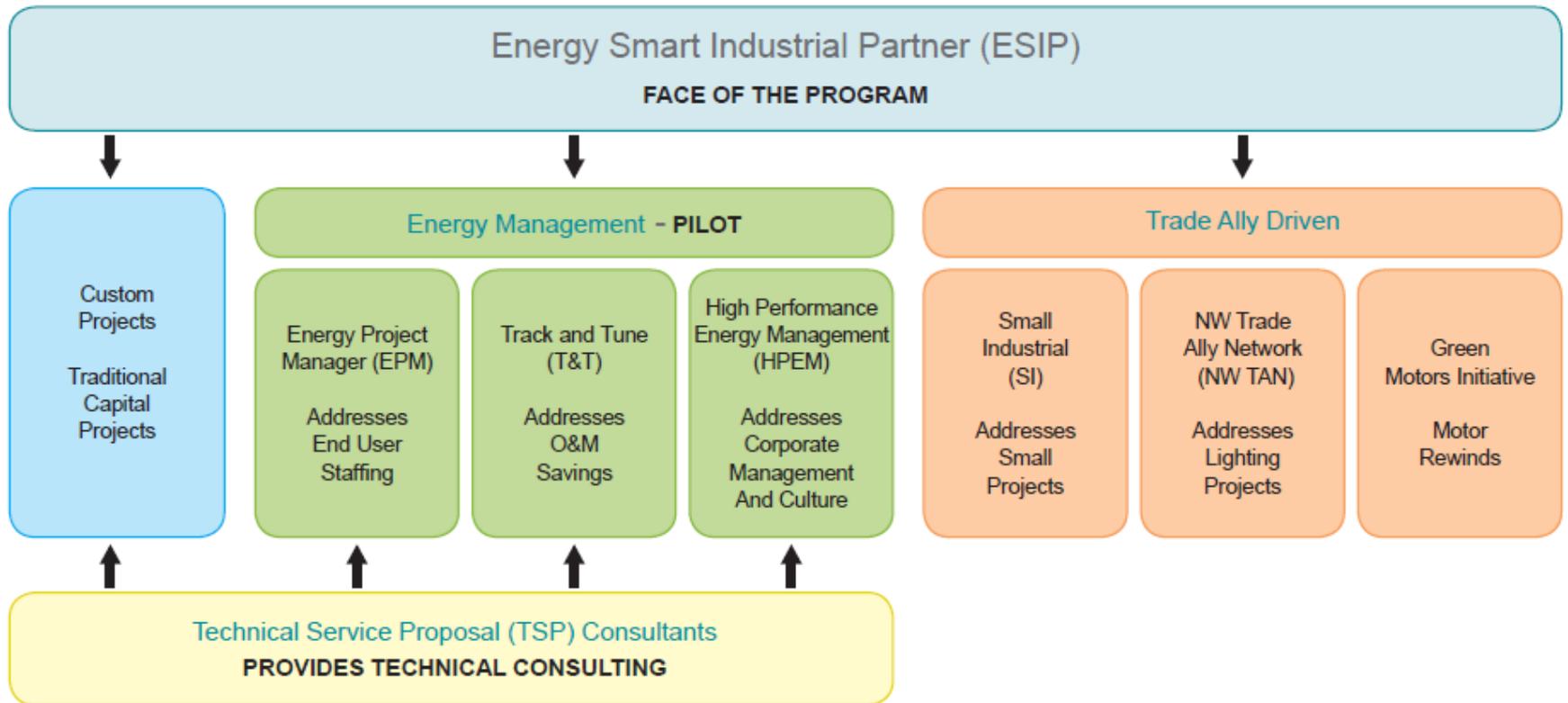
Elements that Made it Work

- Established the Energy Smart Industrial (ESI) Utility Focus Group (UFG).
 - BPA shared program development in real-time to UFG
 - UFG members provided feedback and input
 - Advised on processes
- Designed/implemented flexible, regional program.
- Established the rule to work through utility (not around).
- Boots on the ground make for strong relationships.
- Be responsive to end user needs.

Approach to Market

- Over 20 initial in-person visits to utilities by BPA and Program Partner providing ESI Program overview.
- Rapid response to initial program information and designating single point-of-contact (Energy Smart Industrial Partner = 'ESIP') to enrolled utilities.
- ESI program components designed and available for a broad range of needs, and fits any sized utility, end user, and project.
- Close collaboration and communication with utilities on Energy Management pilot component outreach.

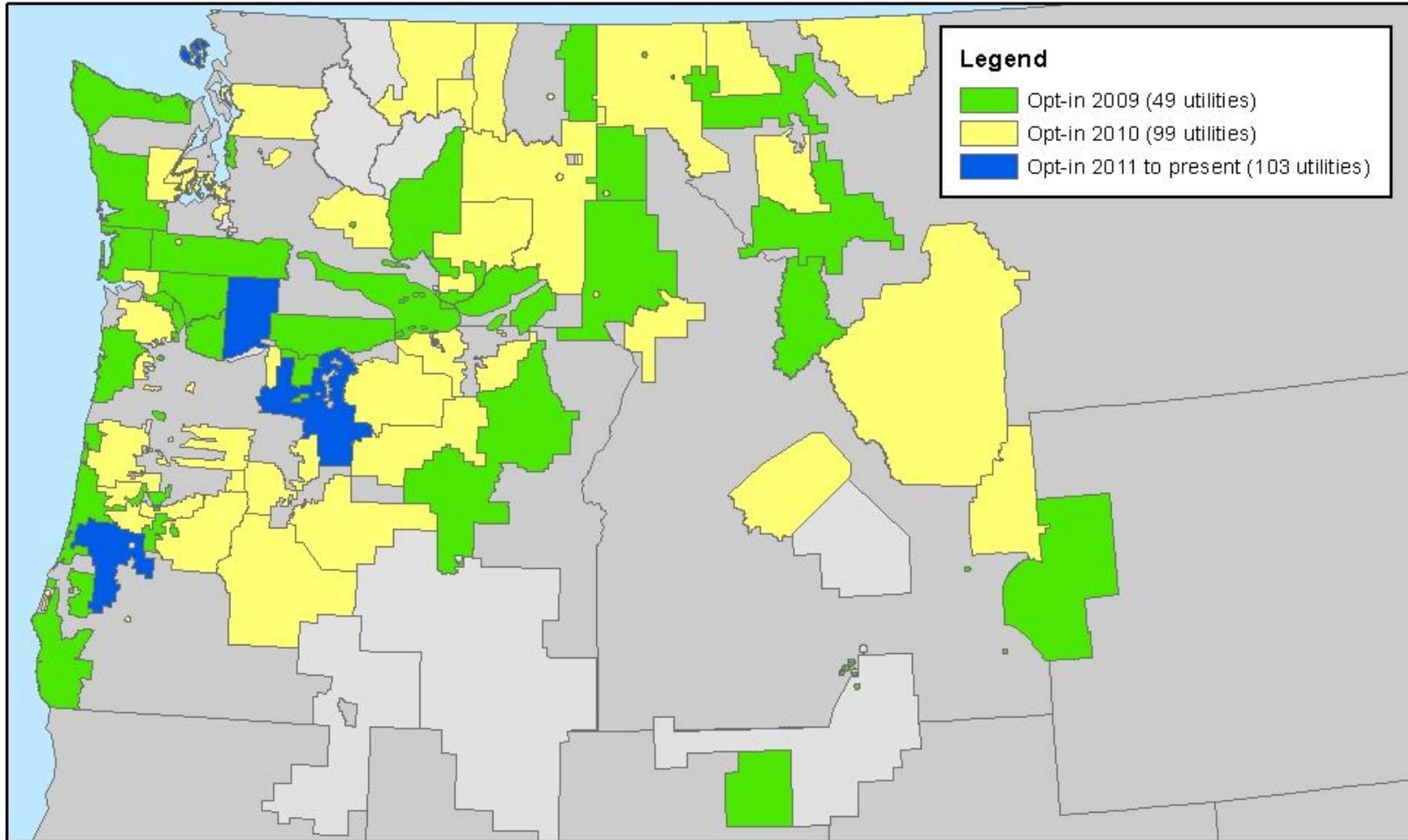
ESI Program Components



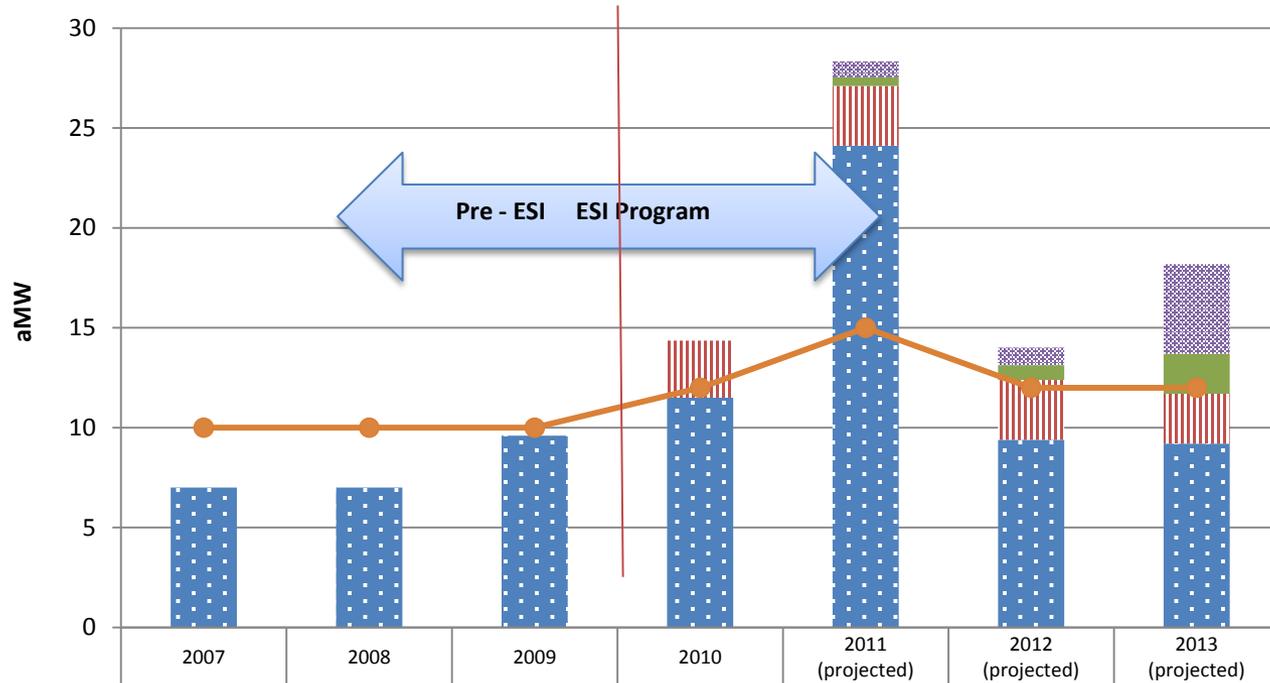
Collaboration, Does it Work?

Yes!

ESI Program Opt-in Progression



ESI Program – The Results



	2007	2008	2009	2010	2011 (projected)	2012 (projected)	2013 (projected)
HPEM (aMW)	0	0	0	0	0.8	0.88	4.49
Track & Tune (aMW)	0	0	0	0	0.43	0.74	2
Deemed Lighting (aMW)	0	0	0	2.86	3	3	2.5
Custom Projects (aMW)	7	7	9.6	11.5	24.11	9.39	9.2
Goal (aMW)	10	10	10	12	15	12	12
Total Savings	7	7	9.6	14.36	28.34	14.01	18.19

The Vision Going Forward

- ESI program **must** be viewed as complete package for utility to select components that work for them.
- Relationships are critical (i.e., communication / trust / accountability)
- Continued close collaboration between ESI, utilities and end users:
 - Routine dialog and information provided on project and EEI forecasts for all program components.
 - Review and management of IM changes into the market.
 - Discussion and consideration on new, more efficient approaches
- Continued, valuable input from utilities to BPA on program improvement needs.

Industrial/Ag BPA Collaborations

- Ag Efficiency Resource Conservation and Development (RC&D) Program
- American Council for an Energy-Efficiency Economy (ACEEE)
- Assn. of Clean Water Agencies (ACWA)
- Centre for Energy Advancement of Technical Innovations, (CEATI) International Inc.
- Commercial & Industrial Trade Ally Network (C&I TAN)
- Compressed Air Calculator
- Consortium for Energy Efficiency (CEE)
- Green Motors Program
- ISO50001 Technical Committee #257
- Northwest Energy Efficiency Alliance (NEEA) Advisory Board Committee
- Northwest Industrial EE Summit
- Oregon and Washington Industrial Energy Leader's Awards
- U.S. Dept of Energy – Superior Energy Performance (US DOE-SEP)
- Washington Pulp & Paper Foundation (WPPF)

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