

BPA's Energy Smart Industrial Program

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Who is Bonneville?

- Federal Power Marketing Agency – Department of Energy (e.g., WAPA); been around since 1937, 75 years young!
- Service area: Idaho, Oregon, Washington, and portions of Western Montana, California, Nevada, Utah and Wyoming.
- Markets and transmits power generated from the Federal Columbia River Power System¹ (FCRPS) and sold to over 140 utilities in Pacific Northwest (PNW).
- Approximately 2,400 aMW of industrial load is served by PNW utilities.
- BPA's current conservation program is Energy Smart Industrial (ESI). 103 utilities participating

¹The FCRPS includes 31 Federal hydro project dams, 1 non-federal nuclear plant and several small non-federal power plants (and wind generation); approximately 8,000 aMW of carbon-free power!

Northwest Power Act of 1980

- The Northwest Power Act of 1980 mandated the Northwest to make energy conservation a top priority to meet its power needs.
- Congress authorized Idaho, Montana, Oregon and Washington states to form the Northwest Power and Conservation Council.
 - Governors appoint two members to serve on the Council.
 - Headquarter in Portland, Oregon; staff of 65.
 - Develops 20-yr regional power plan (and fish & wildlife plan) to assure reliable power supply and mitigates impacts of Columbia River Basin* hydropower dams. Plan is updated every 5 years.



*Columbia River Basin: A region that includes parts of Washington, Oregon, Idaho, Montana, Wyoming, Utah, Nevada and British Columbia.

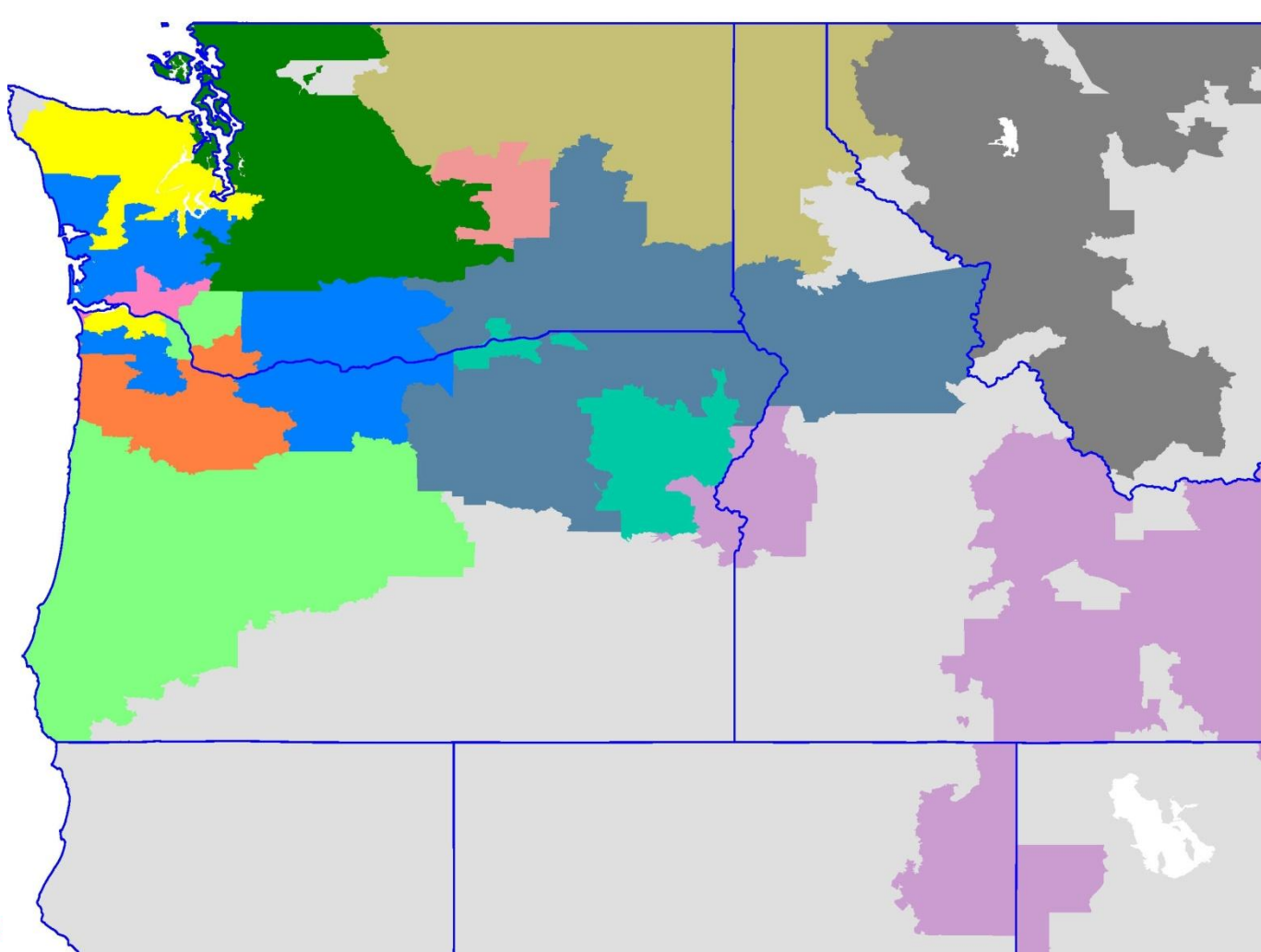
ESI Program History

- The Energy Smart Industrial (ESI) program was created in response to the Council's 6th Power Plan.
- Program was designed in **four months**
 - Launched October 1, 2009.
- A comprehensive, “one-stop-shopping” program for utilities to offer industrial end users.
 - Full array of custom projects
 - Operations & Maintenance
 - Small industrial measures
 - Program-related admin support
 - Incentives
 - Lighting staff
 - Technical assistance

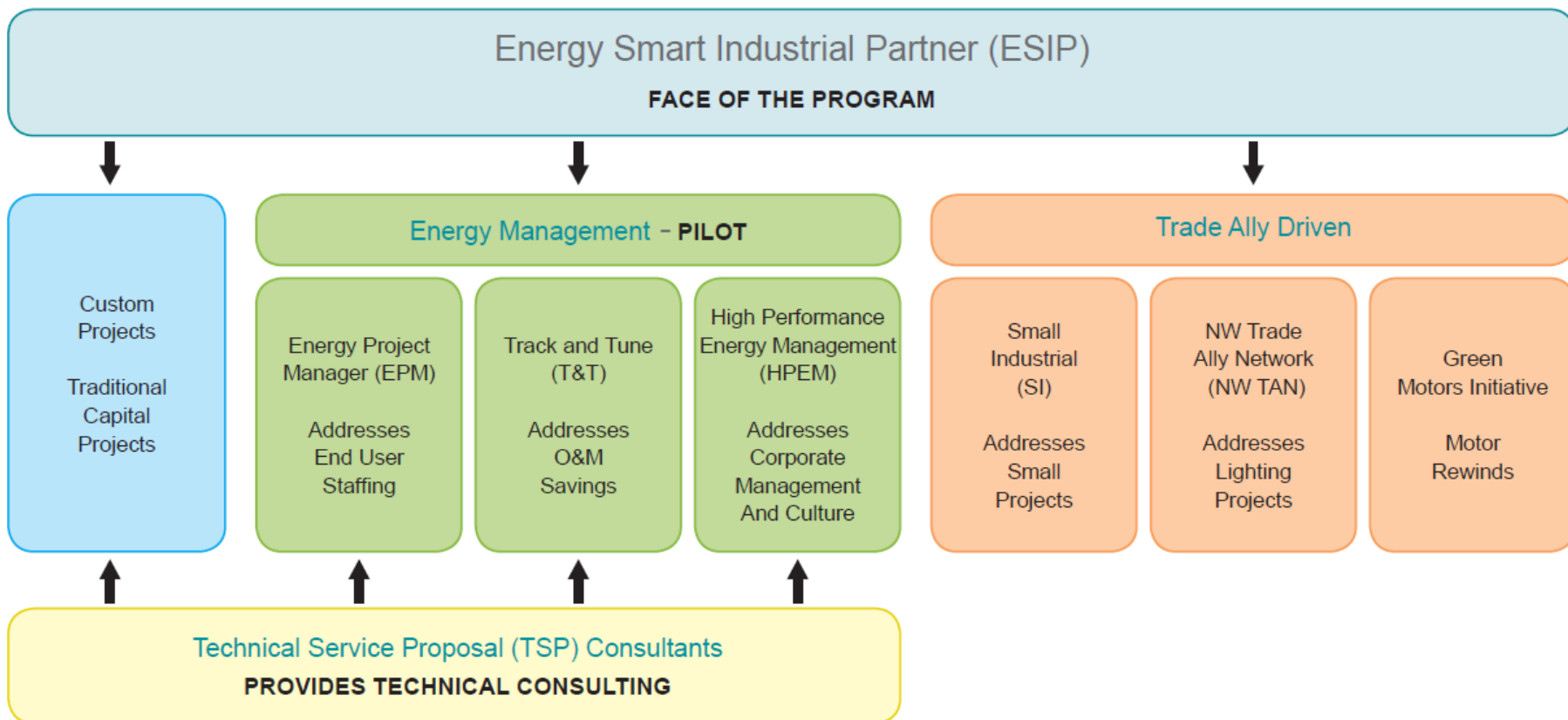
ESI Program Regional Roll-out

- Enrollment: 103 utilities, that's nearly 90 percent!
- Industrial load: ~2,200 aMW or nearly 99 percent representation.
- ESI component participation: 83 utilities using one or more; of which 43 are considered *first-timer's*.
- Broad marketing collateral developed to aid in regional outreach and ESI program recognition.
- ESI TrakSmart was developed: Project tracking tool from pre-to-post information. Provides quick, accurate, project details and potential energy savings.

ESI Program's Regional Coverage



ESI Program Components



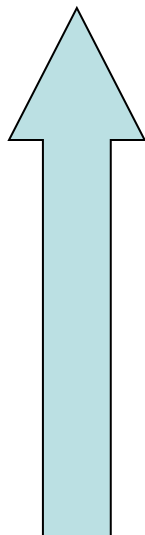
Custom Projects

Capital Improvement projects that receive utility incentives based on measured and verified energy savings.

- Pumps
- Fans
- Compressed Air
- Refrigeration
- Lighting
- Motors
- Variable Frequency Drives
- Control Upgrades
- Process Upgrades
- Water/Wastewater
- Data Centers

Whole Plant Energy Management Tiers²

Integrated Energy Management



General Energy Management

Level 3 (Integrated Plant Management)

- Adoption of an Energy Management Plan
- Advanced Operations and Maintenance (O&M) approach
- Benchmarking of energy intensity relative to similar systems or operations

T&T/HPEM

Level 2 (Energy Project Management)

- Assigned responsibility for energy (e.g. Energy Engineer)
- Tracking of energy as a controllable expense
- Inclusion of energy projects in capital planning

EPM

Level 1 (Plant Energy Management)

- Good Preventative Maintenance Practices
- Consideration of energy in Operations and Maintenance (O&M) activities
- Some application of new technologies

²Source: System Optimization Measures Guide for 6th Power Plan, SEG, 03/23/2009

Trade Ally Driven

Projects that are typically vendor developed and driven

- **Small Industrial**
 - Provides project development and support for small energy savings projects that are typically vendor driven
 - Typically uses approved calculations and tools to determine savings
- **Lighting Trade Ally Network**
 - Coordination and training of lighting vendor and installers on incentive requirements
 - Provides technical assistance that is vendor neutral
- **Green Motors Initiative**
 - Regional motor rewind certification program

Technical Service Providers

- Provides technical audits and assistance in developing energy efficiency measures.
- Providers have technical expertise for specific system and process types.
 - Examples - Compressed Air, Pumping Systems, Industrial Refrigeration, Conditioned Atmosphere Storage, Waste Water
- Costs can either be covered 100% by BPA or as a cost-share with the facility.

ESI Program Performance/Results

- Program target for FY2010/2011 was 27aMW – yet reported savings exceed 40 aMW; with FY2011 bringing in the most savings!
- Program's average costs: \$0.197/kWh or \$1.72/MW.
- Program's (bulk) incentive rate: \$0.11/kWh.
- All program components had success in the first 2 years:
 - Over 421 custom projects submitted.
 - Nearly 200 small industrial projects developed.
 - HPEM completed first cohort (SW Washington); >0.5 aMW energy savings; 13 end users.
 - 24 EPMs were placed in 18 Different utility territories; delivering over 10.9 aMW.

ESI Program, FY2012/13 and Beyond

- All ESI program components remain available to utilities and their industries (refer to slide 3).
- BPA made sharp reductions to its FY2012 third-party program budgets.
 - The ESI program budget was reduced ~30 percent
 - ESIP staffing was reduced (from 12 FTE down to 8 FTE)
 - TSP (technical services) budget was also reduced

ESI Program Continuity

- The ESI team strives to maintain the solid relationship with all program delivery partners; ensures knowledgeable resources are available to utilities and industries.
- Experienced staff remain in place for all ESI functions.
- ESIP location continues throughout the region; to maintain optimum coverage and customer service.
- ESI team's **key focus**: support utilities in efforts to optimize the effective use of their conservation budgets.

ESI Meets Industry Needs



1-Plum Creek Manufacturing, Columbia Falls MT 2-Boeing, Seattle WA 3-NORPAC, Longview WA
4-SEH America, Vancouver WA 5-Areva, Richland WA

Questions?

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