

## **Energy Smart Industrial**

Utility Focus Group Meeting November 15, 2022

Facilitator:

**Kyle Barton** Energy Smart Industrial Program Mgr Energy Efficiency Bonneville Power Administration

### Attendees

Name: Alan Fraser Amanda Wagnon Ashley Stahl Bill Hough Billy Curtiss Brandy Neff Dawn Senger David Harris Don Newton Eric Miller Graham Goodman Jason Bird Jen Langdon Kelsey Lewis Lori Froehlich Maurilio Lopez Ryan Westman Tara Maynard

Company Name: Tacoma Power Springfield Utility Board City of Centralia Eugene Water & Electric Board Eugene Water & Electric Board Pacific Northwest Generating Coop City of Richland Springfield Utility Board Flathead Electric Benton Rural Electric Assn Seattle City Light Idaho Falls Power Cowlitz PUD Snohomish PUD Clark Public Utilities Franklin PUD City of Milton-Freewater Grays Harbor PUD

Name: Brice Lang Eric Mullendore Jennifer Wood Kyle Barton Mike Palmer Shelley Layton Steve Martin Tony Simon

#### Energy Smart Industrial

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Company Name:

Energy Efficiency Rep, Bonneville Power Admin Acting Programs Manager, BPA Contracted Program Support Spec for BPA Program Manager, BPA Contracting Officer Technical Rep, BPA Program Support Spec, Cascade Energy Operations Manager, Cascade Energy ESIP Manager & ESIP, Cascade Energy

K. Barton: Welcomed everyone and reviewed the meeting agenda. Invited Steve Martin to bring us this quarter's <u>Safety Update</u>, Steve...

Agenda	Energy Smart Industrial		
Welcome and Overview <ul> <li>Safety Update</li> </ul>	Kyle Barton	11:00 – 11:10	
<ul> <li>ESI Program Updates</li> <li>Areas of focus for FY 2023</li> <li>Evaluation Update</li> </ul>	Steve Martin Todd Amundson	11:10-11:30	
UFG Open Forum	Eric Miller, Tony Simon, all	11:30-11:50	
Wrap-up and Reminders	Kyle Barton	Remaining time	

# S. Martin: Our team is back in the field with 450 site visits done this past fiscal year; that is slightly below pre-COVID averages (525-550 site visits) – with NO recordable safety incidents. Safety is important to everyone on this call.

The Measurement and Verification (M&V) Safety Policy was changed five (5) years ago – where the ESI team no longer measures on "live-energized" equipment.

The ESI team is aware of and follows each site-specific job safety plan – being fully aware of potential hazards, etc. And Cascade Energy wanted you to know that we have a monthly safety training to ensure our team receives the appropriate training on an annual basis.



#### Steve M. (cont): This month's Safety Moment Topic is Hard Hats

Let's briefly talk about the hat's inner suspension – if worn too tight may cause a headache or be uncomfortable; too loose and it can fall off. We often wear a hard hat in the field for three (3) main reasons:

- The site requires it (esp. when around heavy equipment)
- Overhead hazards
- Working within the arc flash boundary

The ESI team is also mindful to be wearing or have available all other Personal Protection Equipment (PPE) that is necessary when visiting industrial sites.



Hats come in several shapes, colors and styles – with front brim (most popular worn) or full brim (usually needed when working outdoors). They also come in different electric ratings or "classes" some examples are:

- Class C conductive hard hats (no volt protection)
- Class E electrical hard hats for high-voltage (up to 20,000 volt protection)
- Glass G general hard hats for low-voltage (up to 2,200 volt protection)



The ESIPs and TSPs wear Class E hard hats due to working within arc flash boundaries.

Steve M. (cont): The natural tendency is to assume your hard hat will protect you; however, we must inspect and potentially replace them. It only takes a few minutes to look for subtle wear or obvious damage (cracks, dents, etc.).



Hard hats do not last forever. Several companies have safety policies that require replacing your hard hat after a specific time period, such as every 2 or 5 years after the manufacture date (look under the brim or inside for the circular/imprinted stamp, see photo example).



Cascade's hard hat safety policy is to remove or destroy after 5 years or earlier, if there's visible damage or any question about its protection. Encourage you to check with your organization to find out their hard hat retirement policy.

If you have any safety topics that you would like us to cover, please let us know.

Now let's talk about some of ESI's area of focus for FY2023. The BPA-Cascade ESI team met in-person on Thursday, October 13; it had been nearly three years. The team talked about the opportunities for this second half of the rate period and came up with three (3) big areas.

Steve M. (cont): The first area of focus – Supporting the Bonneville Energy Efficiency Tracking System (BEETS) launch.

The ESIPs are becoming familiar with BEETS – supporting the "soft launch" utilities, they've finished entering 17 custom projects. Now we are working on supporting the "hard launch" utilities – custom projects, SEM projects, etc.



The ESI team's goal is to help get approved projects entered into BEETS – by being wellcoordinated with each utility and BPA's invoicing priorities. Once all projects are entered into BEETS, the ESI team will work to retire the ESI HUB Secure File Share system.

Regarding last year's efforts, ESI achieved a 4% return rate, and we hope to maintain that same return rate during the BEETS transition.

The second area of focus, we're aiming to hit BPA's rate period industrial target [24 aMW] while supporting utilities' individual targets (savings, budget and customer service) and priorities that are identified in each Account Plan.



Steve M. (cont): The ESI team is focusing on field work (as mentioned earlier), the ESIPs are back in full force – talking with and supporting sites; found that during the walk-throughs, ESIPs come across projects.

ESIPs are looking beyond traditional retrofit projects, encourage walking the plant and better understanding the site's process. Finding good projects that involve operational changes to existing equipment, persistence has proven to be key.



ESIPs are also leveraging EPMs, and several utilities are considering new EPMs.

We are two-thirds of the way to meeting the rate period target – forecasted to achieve 24 aMW.

Over half custom projects have an approved CPP.

Book savings early - common for projects to be pushed out for different reasons.

- Making sure M&V plans align with BPA's protocols
- End user's clearly know what is needed (cost documentation, etc.)

Steve M. (cont): Here is the FY2023 Pipeline by industry segment...

The top four segments of the pipeline:

- Pulp & paper is expecting a huge year because of new construction, major renovations, and onsite EPMs;
- Food processing and lumber/wood products participate in the SEM cohorts and have capital spending;
- Water/Wastewater utilities provided leads following the W/WW Lunch & Learn series this past spring and we are seeing infrastructure spending.



We've seen big supply chain pressures and this chart is published each month that includes  $\sim$  20 indicators from manufacturers and purchasing groups to give us a sense of supply chain dynamics. We've seen unprecedented times with plant shutdowns and other disruptions that have increased shipping costs and logistics/delivery delays.



Steve M. (cont): But, there is some good news...



Recent trends are indicating improvement to the supply chain issues. A Bloomberg article in October predicts a return to historical levels by mid-2023. October's trend increased caused by logjams in outbound freight from Asia – extending delivery times. We are hopeful, but forecasts reflect longer lead times.

You've asked that we annually we report on a couple of metrics ... first, being the average project size...



The trend is smaller projects (10% decrease); but last year was the third lowest average, due to larger, more complex projects moving to this year as well as ongoing supply chain issues. With the big projects this year, the average should increase up to 500,000 kWh.

Steve M. (cont): The second metric, percent of Option 1 Custom Projects that are submitted as "Completion Report (or CR) Only" – in FY2022, it rose to 65%! Custom Project Proposals (CPPs) can be used if a utility needs assurance the project will meet B/C requirements or you want BPA's preapproval of the M&V plan.



Many utilities have found the program's "due diligence" on cost-effectiveness and forecasted savings will allow projects be submitted without a CPP.

Energy Project Managers have a critical role to help achieve our targets. Some things to remember about the EPM offering:

- Minimum savings threshold is now 200,000 kWh or more
- Salary documentation is no longer required
- Enrollment process is built into BEETS, is simplified



#### Steve M. (cont): Last (third) key area of focus - Boosting SEM Savings



Help existing SEM participants prioritize and implement the most effective opportunities. And recruit a new cohort in the spring of 2023.

Last year's SEM focus...

- Launching the Clean Water Cohort just completed year 1
- Continue to offer a sole delivery option sites better served individually (two sites participated in this option)



 Launched first blended industrial cohort – recruitment began on Nov. 15, 2021. (Eight utilities involved, fantastic group of participants spanning W. Montana to E. Idaho with a few along the I-5 corridor) Steve M. (cont): Let's talk about the accomplishments...this graph represents over 150 SEM projects that have either been completed or are currently underway by this cohort – representing annual savings potential of more than 5 million kWh. There is a full technical potential of more than 12 million kWh.



The fast and steady implementation is encouraging – and prioritizing key project should help these sites finish Year 1 strong.

The SEM team is finalizing the 2023 plan to begin a new SEM cohort. Gauging interest from utilities and end users that weren't ready for last year's cohort, as well as those that have untapped potential. Below is the proposed timeline...



We hope to begin recruitment in January with possible launch in June 2023. Stay tuned, but let your ESIP know if you have a site that should enroll.

Steve M. (cont): Here's a reminder of the characteristics for potential candidates.

- To ensure cost-effectiveness, be sure there's enough consumption and technical potential.
- Prefer organizational and operational stability
- Consider past successes and showing a willingness to try new ideas.



If you can think of customers that meet these criteria, contact your ESIP and he can coordinate the 'next steps.' Up next, Todd is going to talk about Industrial Heat Pumps and provide a status update on BPA's Evaluation efforts.

T. Amundson: Back on August 25, BPA co-hosted the informational webinar on Industrial Heat Pump, or IHP, strategy; a survey in October was invaluable – showing much interest – and we've made some follow-ups.



#### Todd A. (cont): If you have industrial customers that have an interest in IHPs, please reach out to your ESIP. We connected with Jared Leek and are currently performing an IHP market characterization through Q2 of FY2023; although it could be longer.

ESI is following up on the initial interest that came from the webinar – identified and selected a utility to perform a pilot with. We've got scoping studies underway at two sites. We are exploring working with BPA's Energy Efficiency Emerging Tech (or E3T) and federal funding sources.

Jared Leek encouraged us to focus on two levels of technical analysis.

- Pre-feasibility study and
- Project assessment



#### NOTE: COP = Coefficient of performance

Moving on to an Evaluation Update - SEM Persistence Evaluation is ongoing – we've reviewed the draft report, which will soon be returned to the evaluator.

Evalua	ation	Up	date										Ind	gy Smart Ustrial
	FY2022						FY2023							
Evaluation Name	April	May	June	July	August	September	October	November	December	January	February	March	April	May
	Review draft		Results											
Custom Projects SEM Persistence	report		Presentation				_			Ent Onesher				
SEM Persistence (n=15)							Pendanu d	raft report		Est. Results Presentation				
Option 2							neview c	rancreport		rresentation				
Custom Projects										Review dr	aft report		Est. Results Pr	resentation
SEM Process Evaluation					draft report			Findings Presentation						
					Data Collection		aft Report and	Bee	ortand					
			Planning	$\sim$	Analysis	· <u> </u>	Review	Communi	cating Results					

Todd A. (cont): The nonresidential lighting impact evaluation is getting underway; the draft timeline will be out for BPA review in early December 2022.

Let's move on to the Open Forum portion of the presentation and turn things over to ESIP Manager, Tony Simon and Eric Miller from Benton REA.



T.Simon: Thanks Todd, I would like to invite Eric Miller to talk about the City of West Richland's Wastewater Treatment project. Eric...

Eric Miller: Benton REA is a very rural utility and West Richland is half of our account – and the embodiment of our key account. Five or six years ago Tony Simon began engaging with the City of West Richland – and this particular project came on our radar (back in 2018). We've used up our EEI and also used self-funding.

SEM identified several low-cost/no-cost energy efficiency measures, or EEMs, that we began to implement. It is good to remember that not every project saves energy...initially.



Tony S. (cont): Thanks Eric, we want to extend our congratulations on your upcoming retirement and to say thank you. It has been a real pleasure working with you over the years.



- Eric M.: This has been a really good partnership. Bruce Etzel was the first Benton REA representative working with BPA's ESI program and Benton REA participated in the ESI Program's Energy Management pilot.
- Tony S.: You might be able to figure out that this photo was taken during a tour of the new mushroom growing facility. Congratulations again, Eric! Next, I would like to share a project success.



The project consisted of multiple condensers that needed to be upgraded. They are one of the primary components for any refrigeration system – cooling hot ammonia with a combination of fans and water pumps. The upgrades included a larger condenser capacity (allows for lower condensing pressure and compressors operate much more efficiently) and VFDs for the fans (to operate at slower speeds).

Tony S. (cont): We wanted to take extra time to be sure the upgrades were commissioned properly and that staff were trained and comfortable with using the new equipment. Addressing any concerns with operation changes.

So there was a long M&V process (spanned from June to October and included multiple site visits and several phone calls). The timeline is not a complete snapshot; it provides a "day in the life of M&V." We discovered that by taking the extra time, we were able to ensure the condensers ran at their best operating settings and that all setpoints were implemented in the automated control system; to ensure savings persistence.



We could have closed out this project earlier, with less savings and not a thorough analysis; but everyone succeeded in the end - the staff were able to become more comfortable with the new equipment, and make necessary behavior changes.

And this would not have been possible without the ESIPs being out in the field and having a good relationship with the industry.

Over 737,000 kWhs will be saved each year and we are working with site staff on another project that should make their refrigeration system even more efficient.

Steve M.: The ESI program is here to support utility marketing needs. We can add your logo and may be able to insert your specific incentive levels. Talk to your ESIP to get things started.

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Next, Kyle is going to wrap things up and share some reminders.

Kyle B.: Thanks Steve, here are a few upcoming events...that you may wish to attend:



Does anyone have any questions? [No responses]

Kyle B. (cont): Hearing none, then we will adjourn.



Meeting Adjourned: 11:54 am