

The background of the slide is a blurred industrial scene with a teal overlay. On the right side, there is a close-up of a metallic industrial component, possibly a valve or part of a machine, with bolts and a flange. The overall color scheme is teal and grey.

Energy Smart Industrial

Utility Focus Group Meeting

April 20, 2021

Facilitator:

Eric Mullendore
Industrial Program Manager
Energy Efficiency
Bonneville Power Administration

Attendees

<u>Name:</u>	<u>Company:</u>	<u>Name:</u>	<u>Company:</u>
Alan Fraser	Tacoma Power	Bob Brennand	Cascade Energy, ESIP
Alex Ruiz	Umatilla Electric	Brice Lang	BPA, COTR
Amy Valencia	Franklin PUD	Christian Minor	Cascade Energy, ESIP
Amy Walton	Lower Valley Energy	Eric Mullendore	BPA, ESI Program Manager
Anita Clever	Klickitat PUD	Jennifer Wood	BPA, Contracted Program Specialist
Charlie DeSalvo	Columbia REA	Mark Ralston	BPA, EER
Dan Kinnaman	Grays Harbor PUD	Nathan Kelly	BPA, Engineer
Don Newton	Flathead Electric	Sara York	Cascade Energy, ESI Energy Mgmt Mgr
Eli Volem	Eugene Water & Electric Board	Shelley Layton	Cascade Energy, ESI Program Specialist
Emma Johnson	Seattle City Light	Steve Martin	Cascade Energy, ESI Operations Mgr
Jacob Henry	Lewis PUD	Todd Amundson	BPA, Engineer and Industrial Tech Lead
Jason Bird	Idaho Falls Power		
Jen Langdon	Cowlitz PUD		
Julie Anderson	Franklin PUD		
Kelly Haugh	Big Bend Electric		
Kim Johnson	Okanogan PUD		
Lori Froehlich	Clark Public Utilities		
Matt Walker	Tacoma Power		
Maurilio Lopez	Franklin PUD		
Rich Cole	Grant PUD		
Tara Maynard	Grays Harbor PUD		
Terry Mapes	Benton PUD		
Tim Lammers	Columbia River PUD		
Wade Carey	Central Lincoln PUD		
Wid Ritchie	Idaho Falls Power		

S. Martin: Welcomed all and reviewed the agenda...

Agenda

BPA EE and ESI program updates <ul style="list-style-type: none"> • Safety/COVID updates • FY21 pipeline, end-of-year forecast, and Custom Project lead-time • Energy Management updates 	Steve Martin Eric Mullendore	11:00 - 11:30
Industrial Project Updates <ul style="list-style-type: none"> • Klickitat PUD - Underwood Fruit 	Anita Clever, Christian Miner	11:30-11:45
UFG Open Forum, BPA Evaluation update, and Reminders	All	Remaining time

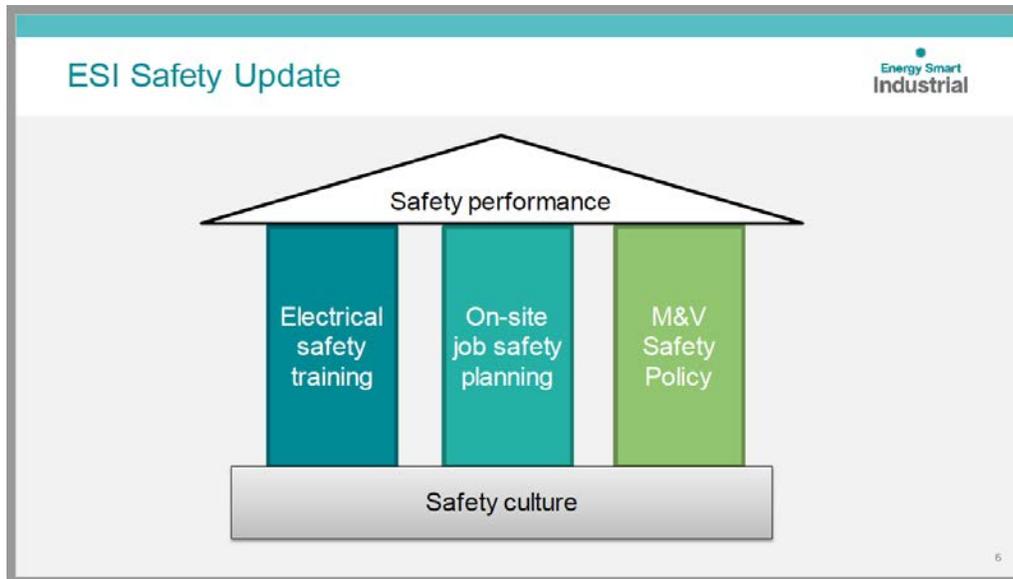
Steve M. cont'd: We take safety seriously – promote safety awareness with our team. Annual safety trainings and each meeting features a safety topic.

Electrical safety training – for ESI team and TSP team.

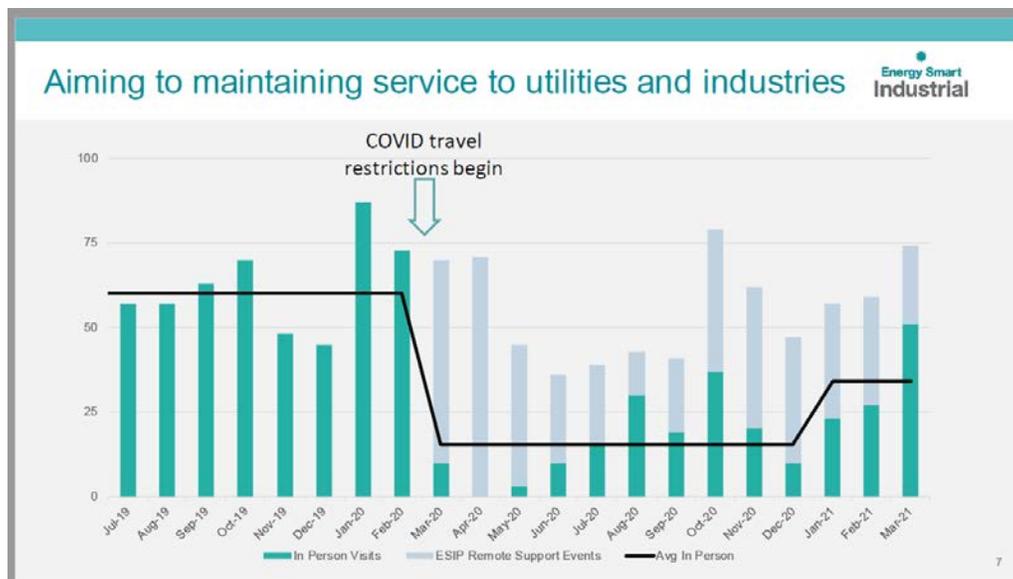
On-site job safety planning

Enhanced M&V Safety Policy – changed the way we view of power readings...we have not had to ask for an exception in the past 3 years. Significant improvement in safety practices; not had any negative experiences.

Safety Performance – 11 years of no injuries for all of the ESI team.



Steve M. cont'd: 21 months of site visits...endeavor to maintain high level of engagement; increased 2x – March increased 50+ because of SEM cohort kick-off.



Steve M. cont'd: Look ahead, Continued COVID precautions: vaccinations more prevalent – four key pillars.

ESI's safety commitments

- Coordination with utility staff before site visits
- On-site mask wearing and social distancing for the protection of others
- Staff performing site visits have no known symptoms or exposures
- Compliance with local, state, and federal regulations

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Steve M. cont'd: Pipeline and year-end closeout. Custom project pipeline is largest ever 10.5 aMW! Move left to right...avg CP has lifecycle of one year. Most projects should be beyond CPP approval and getting close to Post M&V. Really focused on projects being installed, commissioned and into M&V. Target to complete 90% of these projects. We have 65 projects that are either small industrial or will be CR-only. Most of the projects have equipment purchased – incentives at the end of the project is a great incentive to get it done.

FY21 Option 1 Custom Project Pipeline: 10.5 aMW!

Targeting >90% completion of these projects

65 Projects 2.4 aMW	67 Projects 5.4 aMW	61 Projects 2.7 aMW
Project Assessment (PAR) 120 days	Purchase, Install, Commissioning 210 days	Post M&V 150 days
CPP Approved		CR Approved

↑
Includes data collection, analysis, and Completion Report

↑
Utility review and submittal

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Steve M. cont'd: Custom Project Return Rate – first year or two – 1 in 5 were returned... each return = added work. Recent efforts... 2020 Quality Control effort lead by Eva Urbatsch. So far only 1 project was returned...less than 2% in FY2021. Our objective to hold at this level.



Steve M. cont'd: SEM Update: COVID delayed the launch of a new water energy coaching cohort this past winter...Municipal Water entity ... reach out to your ESIP... Hybrid format – largely web-based with some on-site work.

SEM Update

Recruiting for FY2022 Cohorts

- September 2021: Remote Clean Water Cohort
- February 2022: Mixed Industrial SEM Cohort (Remote)

Customer interested in SEM now? Let your ESIP know – “tune-up” style non-cohort SEM is an option!

Steve M. cont'd: ESIPs are focused on being proactive with managing the CP pipeline with end users and utilities. Systems are properly commissioned.
 Providing regular updates on project completions. If you have any end-of-year biennium budget issues, reach out to your EER.
 Endeavoring to avoid the hockey stick – mad rush on getting projects done just before the EOY.
 Hand over to Eric Mullendore...

ESIP focus for the end of FY 2021



- Proactively engage end-users in **managing** the Custom Project pipeline
- Provide regular **updates** to utilities on project completion status and incentive forecasts
- Minimize the **end-of-biennium** project submittal rush

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E. Mullendore: New channel to communicate upcoming changes to the Energy Management measures – new website: <https://www.bpa.gov/EE/Sectors/Industrial/Pages/New-Energy-Management.aspx>

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

Energy Management in 2022-2023

- Residential
- Commercial
- Industrial
- ESIP Program
- Case Studies and Project Successes
- Custom Projects
- Energy Project Manager
- Strategic Energy Management
- Small Industrial
- Lighting
- Compressed Air
- Efficient Motors
- Industrial Utility Focus Group
- New Energy Management**
- Forecast
- Ancillary
- Utility Distribution

Energy Efficiency New Energy Management

BPA will expire the Energy Project Manager, or EPM, measure and release a new EPM measure that will be effective on April 1, 2022. The new EPM measure is applicable to the Industrial and Commercial sectors.
 BPA will also refine the Strategic Energy Management, or SEM, measure and release a new SEM measure that will be effective on April 1, 2022. The new SEM measure removes a number of documentation requirements and the higher incentive rate previously available for projects with documented costs. The optional Performance Tracking System (PTS) will be separated out to become a new measure.
 Check this page for updates about the upcoming EPM, SEM and PTS measures.

Energy Project Manager

BPA has supported a version of the EPM measure since 2009. While the details have changed over time, the core intent has remained consistent. Rather than focusing incentive payments on an equipment upgrade project or a change in equipment operation that saves energy, the EPM measure provides milestone payments to help overcome staffing-resource barriers.

The EPM measure requires the development and implementation of a Comprehensive Site Plan by a site's designated energy project manager, with the goal of achieving additional verified energy savings beyond what would have been achieved without the involvement of the energy project manager. The savings and costs for each project in the Comprehensive Site Plan are reviewed and approved through the typical process specific to each measure type, but BPA tracks projects with EPM involvement to assist in the evaluation of their impact.

As described in the notice for Section 5.2.1, in the April 2021 Implementation Manual release, DPA will sunset the existing EPM measure and releasing a new EPM measure, effective April 1, 2022. The guiding principles behind the changes were to streamline the offering with reduced administrative costs and expand its use to more end-users, including smaller and non-industrial sites.

- A list of the IM language for the new EPM measure is available
- An FAQ document is available.

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Eric M. cont'd: Draft IM Language for EPM... this is a draft... we are interested in your feedback. Either existing or new end user – streamline measure and lower the threshold for participation and identified opportunities – 200,000 kWh...

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

Draft IM Language

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

This document includes a draft of the Energy Project Manager, or EPM, measure that BPA intends to make available effective 4/1/2022. BPA may revise this language pending stakeholder feedback, which can be submitted via your Energy Efficiency Representative.

Energy Project Manager
Basis for Savings

The Energy Project Manager, or EPM, measure provides a payment to help overcome on-site staffing resource barriers. The payment is associated with development and implementation of an EPM Comprehensive Site Plan by a site's designated energy project manager, and which results in verified energy savings.

An EPM payment is an additional payment above and beyond other payments provided by BPA for verified energy savings, e.g. payments and savings associated with completed UES, non residential lighting, Strategic Energy Management and custom projects.

For this measure, the following definitions apply:

1. An EPM is a designated individual who helps support development and implementation of the EPM Comprehensive Site Plan.
 - a. The EPM provides project-specific, on-site support.
 - b. An EPM may be an end-user's direct employee or contractor.

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Eric M. cont'd: The IM is more conversational; FAQ includes more detail to help ones better understand. Commercial EPMs – Utilities will be owners and managers of those efforts and relationships. Living documents, questions and responses submitted will cause us to update this document.

I wanted you to know about the channels that we are using to share updates and proposed changes.

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

FAQ

Energy Project Manager FAQ

BPA has updated a version of the Energy Project Manager, or EPM, measure since 2019. While the details have changed over time, the core intent has remained consistent: rather than focusing resource payments on an incumbent design team or a design team's consultant that build design, the EPM measure provides resource payments to help overcome staffing resource barriers.

The EPM measure requires the development and implementation of a Comprehensive Site Plan by a site's designated energy project manager with the goal of achieving additional verified energy savings beyond what would have been achieved without the involvement of the EPM. The savings are reviewed and approved through the familiar process specific to each measure type, but BPA tracks projects with EPM involvement to assist in the analysis of EPM impact.

As described in the notice for action in 2.1, in the April 2021 Implementation Manual, or IM, release, BPA will expand the existing EPM measure and release a new EPM measure effective April 1, 2022. The guiding principles behind the changes were to streamline the offering with reduced administrative costs, and expand its use for non-residential, including smaller and non-industrial sites. A draft of the IM language for the new EPM measure is available [here](#).

The following FAQ is intended to provide additional context for the EPM measure. The Implementation Manual that becomes effective April 1, 2022 shall use precedence over this FAQ if any descriptions are contradictory.

1. Are EPM incentives intended to replace incentives offered for custom, non-residential lighting, Strategic Energy Management or Unbundled Energy Savings, or UES, projects?

No. An EPM payment is an additional payment above and beyond other payments provided by BPA for verified energy savings, e.g. payments and savings associated with completed UES, non-residential lighting, Strategic Energy Management, and custom projects.

Projects identified in the Comprehensive Site Plan will be reviewed and approved through the standard approval used for the project type (e.g. UES, custom, etc.). Custom Plans have been reviewed and approved, the project will be eligible for the standard EPM payment.

BPA does not attribute any savings to the EPM measure directly, as all savings are booked through other measures.
2. What is an energy project manager?

For the purposes of qualifying for Energy Efficiency Incentive, or EEI, funding from BPA, an EPM is a designated individual who helps support the development and implementation of the EPM Comprehensive Site Plan. The EPM provides project-specific, on-site support. An EPM may be an end-user's direct employee or contractor.
3. What discretion do BPA utilities have in defining eligible EPMs?

BPA utilities may choose to further limit the EPM offering by targeting specific end-users, facility types, load sizes, or other factors that meet the utility's strategic goals. Utilities may also decide to require a contract with the end-user, linking the EPM use and scheduled below offering ends user incentives. BPA does not require such an agreement for the purpose of qualifying for an EEI incentive.
4. What is a Comprehensive Site Plan?

The EPM Comprehensive Site Plan is a written plan that describes choices an end-user makes on internal custom, UES, lighting, and all other energy savings opportunities and projects at the site. The Plan may be a single or multi-year plan, but must identify at least 200,000 kWh in eligible savings opportunities and include at least one non-lighting project.

An eligible site may consist of a single building, facility, municipality, or it may include multiple contiguous buildings, such as an industrial or medical campus.

The Comprehensive Site Plan is a living document that will be updated as projects are completed and as new projects are identified. The Comprehensive Site Plan will be identified at the time EPM involvement and final payment terms will be submitted each time an EPM payment is requested for completed projects.

The IM details the minimum requirements for a Comprehensive Site Plan, but EPMs and utilities may find that writing more detail is useful for project management purposes. BPA has created an online handbook for the Comprehensive Site Plan that includes all required information and a list of additional sectors that have proven useful for EPM engagement in the past.
5. How will BPA support EPMs working in the industrial sector?

The Energy Smart Initiative Program will continue to support EPMs working at industrial sites. The updated EPM will be able to serve as the main point of contact for industrial EPMs, and will establish a working frequency commensurate with site needs and opportunity size.

BPA will make Comprehensive Site Plans open initial submission by utilities for compliance with all requirements. BPA will make Comprehensive Site Plans open subsequent submissions for full requirement compliance, with a specific focus on confirming the requested EPM disbursement aligns with eligible project terms.
5. How will BPA support EPMs working in the commercial sector?

Utilities will manage the relationship with EPMs working in the commercial sector, with BPA customer service engineers offering additional supports to the extent that they have capacity to do so.

BPA will make Comprehensive Site Plans open initial submission by utilities for compliance with all requirements. BPA will make Comprehensive Site Plans open subsequent submissions for compliance with all requirements with a specific focus on confirming that the requested EPM disbursement aligns with eligible project terms.

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Industrial Projects Updates

Energy Smart
Industrial



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Anita C.: Klickitat PUD is located in Goldendale, WA. I am the Key accts/Energy Services. Underwood Fruit is a large fruit packing and cold storage company and employer. FY2016 did a few projects, cherry processing did a nice lighting and air compressor and dryer. 2017 affected by a fire...had a refrigeration upgrade and fast acting doors in another.

Underwood Fruit - Background

Energy Smart
Industrial

1. Underwood Fruit owns and operates multiple controlled atmosphere, fruit storage facilities in the Columbia Gorge and recently built a new cold storage and packing facility.
2. Advent of the project - How did this project develop?
 - a. In 2017 a fire forced Underwood to make major technology investments.
3. How the facility works – Order fulfillment
 - a. The new facility houses an automated “shuttle to fetch pallet” system.
 - b. Underwood is only the third installation of the system, and the first for the fruit industry, by Advance Storage Products of Huntington Beach, California.
4. Key drivers of the project
 - a. Terry Beckwith and Tim Ladoucier - Subject matter experts
 - b. Comfort level with ESI - Previous successes with VFD and compressor projects

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C. Minor: I am the ESIP for Klickitat PUD...

Shuttle to fetch pallet system – pears will ripen from when picked to when it gets to the store and then to peoples' homes. Lots of automation – first in the fruit industry. Terry Beckwith – Director of Facilities since 1969; Tim Landoucer –



Left pic – photo of site; Middle pic – conference room...original sign (circa 1904) on wall was rescued from the fire; Right pic – shows the new pallet automation.

Christian M. cont'd: Project milestone – lots of office space (HQ) in addition to cold storage and warehouse. Commissioning Memo advised how to adjust refrigeration system i.e., set-points to suction pressure, condensing pressure and evaporator fan speed – brought 70% energy savings – prior to M&V was to begin.



Christian M. cont'd: Measures... Efficient evaporators made up the largest area of savings. Final project numbers a little over 1 million kWh – reduced the simple payback by 2 years with help from Anita and Klickit at PUD.

Underwood Fruit – Measures



- 1. Oversized Condenser** - 5,683 kWh/year
- 2. Efficient Evaporators** - 629,627 kWh/ year
- 3. Condenser Fan VFDs** - 13,572 kWh/ year
- 4. Evaporator Fan VFDs** - 336,383 kWh/ year
- 5. Air Compressor VFD** - 101,471 kWh/ year

Total Savings and Economic Impact

- 1,086,736 kWh/ year
- Two-year reduction in simple payback

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Christian M. cont'd: Project takeaways... experienced SMEs with institutional knowledge and very familiar to the ESI program; relationships with utility team and the incentives they provide really push things along. M&V – Underwood's customers are not necessarily local – but rather all over the US. Commissioning really maximize the savings (70%).

Underwood Fruit – Project take-aways



- 1. Institutional knowledge & program familiarity** – Both make for great energy Champions!
- 2. Utility influence** – Deep relationships and incentives make a difference in new construction design decisions
- 3. M&V** –
 - Fruit storage M&V is challenging if done before normal operating storage levels are achieved.
 - Remote data collection, if possible, aids in the M&V process.
 - Commissioning helps maximize energy savings!

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Christian M. cont'd: Big Check Ceremony in May 2020 – Project Success Poster.

The poster features the logos for Underwood Fruit & Winery, Klickitat PUD, and Energy Smart Industrial. It lists several energy efficiency measures and their benefits:

- Over-sized Condenser:** Increased condenser capacity saves energy by reducing the condensing pressure. **>\$55,000 Cost Savings**
- Efficient Evaporators:** Evaporators with larger-than-standard surface area provide the same cooling, using less power. **1,185,000+ kWh Annual Energy Savings**
- Condenser Fan VFDs:** Condenser fan variable frequency drives (VFDs) improve condenser fan efficiency versus fan cycling. **100 Pacific Northwest Homes' Annual Energy Use**
- Evaporator Fan VFDs:** VFD control allows fan speeds to be reduced when target room temperature is achieved.
- Air Compressor VFD:** VFD speed control increases efficiency by reducing compressor power during part load operation.

Two photographs are included: one of the exterior of the pear packing facility at night, and another of Terry Beckwith, Director of Facilities, standing in front of the building.

Pear packing facility in Bingen, Washington – new construction completed in 2019

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T. Amundson: Utility Focus Group Open Forum – anyone like to share their project success story? Or do you have any concerns or questions?

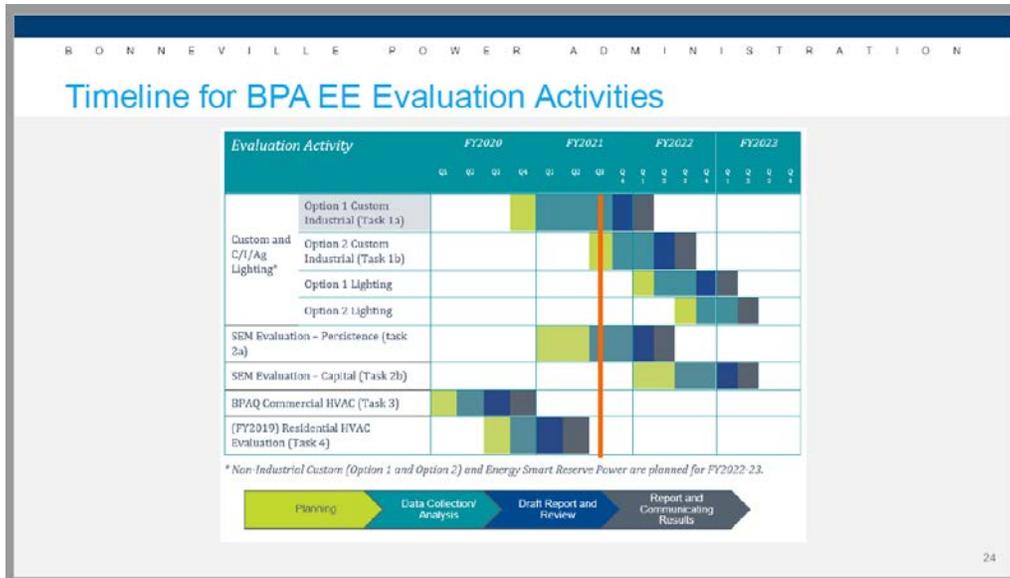
The slide features the Energy Smart Industrial logo in the top right corner. The main title is "Utility Focus Group Open Forum". Below the title, the text reads "Discussion & feedback from Utility Focus Group". A list of discussion points is provided:

- Other project success stories?
- What concerns and opportunities do you foresee as we approach the end of the rate period, and how can ESI help?

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No comments or questions.

Todd A. cont'd: Evaluation updates...Option 1 Industrial CPs nearing the end of the data collection and analysis ¾ through...SEM Evaluation efforts is ¼ of the way through the data collection and analysis process. Option 2 Custom Industrial planning efforts are almost at the halfway point. Any questions?



No questions...

E. Mullendore: Reminders ... One month and a couple of days...register to attend the virtual Efficiency Exchange. Next UFG meeting will be on July 13 – tentative... any concerns or conflicts, please let Jennifer Wood know. Considering migration from GoToMeeting to Microsoft Teams...let us know if you have any concerns with that change.

Wrap-up and Reminders

- Register for Efficiency Exchange!
May 25-27, 2021
- Q4 Utility Focus Group meeting
11:00 – 12:00 PDT, July 13, 2021

Adjourned at 11:55 am.