Energy Smart Industrial

Utility Focus Group Meeting

July 14, 2020

Facilitator:

Michelle Lichtenfels
Commercial & Industrial Sector Lead
Energy Efficiency
Bonneville Power Administration
<table>
<thead>
<tr>
<th>Agenda</th>
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| **Welcome, BPA EE and ESI program updates**  
• COVID update  
• Staffing changes  
• BPA policy on hemp processing facilities  
• EE promotion  
• IM update notifications  
• Proposed updates to EPM offering |  
Michelle Lichtenfels  
Eric Mullendore  
Steve Martin | 11:00 -11:30 |
| **Industrial Lighting Trends** |  
Mike Hughes  
Eric Wilson | 11:30 – 11:50 |
| **Other topics of interest to UFG** |  
All | Remaining time |
BPA Priorities COVID-19 Response Period

Health and safety of workforce and the community
Reliable power and transmission services
Customer service to utility customers
Status of BPA EE and ESI teams

• All BPA EE and ESI staff continue to work remotely

• Field work has resumed on a very limited basis

• Remote alternatives have proven effective, but requires awareness of each end user’s circumstance
Deciding if a site visit is appropriate

Answer these 8 questions before proceeding to a site visit.

1. Are you free from symptoms of COVID-19 or recent exposure to COVID-19, and also comfortable going on the site visit?
2. Is a site visit required to meet savings targets, program objectives, or contract requirements?
3. Are site personnel unable to effectively complete the work without you present?
4. Does the site visit need to be completed at this time?
   - No
   - Yes

5. Can the visit be conducted in a manner that is in compliance with local or federal regulations?
6. Can the visit be conducted in a manner that is in compliance with any client requirements (utility, site/facility)?
7. Can the site visit be conducted consistent with Cascade’s “during the site visit” protocols?
8. Are all transit locations and destination facilities confirmed as “low risk”?

- No
- Yes

Low risk means not having any diagnosed or suspected cases of COVID-19 incidents in the last 14 days AND matching “lower exposure risk” criteria from OSHA.

https://www.osha.gov/Publications/OSHA3013.pdf

DON’T GO

PROCEED WITH CAUTION
During the site visit

**ENSURE**
a 6-foot social distancing boundary

A 6-foot social distancing boundary should be maintained at all times while on the site visit and in transit.

Be alert for site employees who are not following proper social distancing guidelines or who are visibly showing indications of sickness.

**WEAR A MASK**
in public areas

Face masks* should be worn when working in public areas of a facility or when working in proximity to others.

Face masks are not required when working alone in a private or low-traffic area of the facility.

Note that face masks are a supplement to and not a replacement for social distancing requirements.

**MINIMIZE**
contact

Limit the number of people with whom you interact to only those who are essential.

Employee development through on-site mentoring is still important and may continue at this time.

Have conversations with site personnel in quiet environments rather than noisy equipment areas.

**WASH HANDS**
and surfaces regularly

Wash hands as often as possible after touching site surfaces, or use hand sanitizer* if hand washing is inaccessible.

Use sanitizing wipes* to clean any shared surface that is touched.

Use care when sanitizing around electrical connections or circuit boards to protect any exposed electronics.

Avoid touching your face.

**STOP WORK**
if health or safety is at risk

Cascade employees are always allowed to stop work at any time if they feel their health or safety is at risk.

Always report anything about the site visit that made you uncomfortable to your manager or the Safety Committee.
Transitions on ESI team

John Whitchurch will transition off the ESI team on October 1, 2020. Tony Simon will serve all the mid-Columbia utilities beginning in FY 2021.

Bob Brennand will take over for John as ESIP Manager. ESI will begin recruiting a new Puget Sound ESIP and plan a gradual transition with Bob through FY 2021.
Michelle Lichtenfels will be transitioning to a new role as manager of the EE contracts administration team on July 20.

Eric Mullendore will assume responsibility for Energy Smart Industrial and Industrial Sector activities.
BPA policy on hemp processing

• BPA will no longer exclude hemp and hemp-associated load from BPA EE programs in states with USDA approved regulatory plans.

• Energy Smart Industrial may provide program service and direct assistance to facilities engaged in hemp production and processing.

• Please reference BPA’s FAQ document for more information
EE Promotion

Supports local community economic recovery efforts while meeting EE Action Plan objectives.

• Increased payment rate for commercial HVAC measures including Advanced Rooftop Unit Controls, Connected Thermostats, Ductless Heat Pumps and Air-Source Heat Pumps.
• Increased performance payments to $0.05/kWh (non-SRR) and $0.10/kWh (SRR).
• Effective for measures complete after July 1, 2020.

July 9, 2020 Brown Bag Materials
IM Update Notifications

9.3 VFDs for Onion and Potato Storage Facilities

• Corrected the requirement for customers to retain the equipment or contractor invoice(s).

<table>
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<tr>
<th>DOCUMENTATION DESCRIPTION</th>
<th>RETENTION/SUBMITTAL LOCATIONS</th>
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<tbody>
<tr>
<td></td>
<td>BPA ENERGY EFFICIENCY REPORTING SYSTEM</td>
<td><a href="mailto:EEDOCS@BPA.GOV">EEDOCS@BPA.GOV</a></td>
</tr>
<tr>
<td>End-user identifying information including unique site ID and address (e.g., field location, meter number, GPS coordinates, farm name or legal property description)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Equipment or contractor invoice showing: • Equipment manufacturer • Equipment model number • Size (horsepower) and quantity installed or used • Order or purchase date • Installed cost</td>
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IM Update Notifications

Corrected and simplified documentation requirements for equipment or contractor invoice(s):

• 9.5 Battery Charger Upgrade (BPA-Qualified)
• 9.6 Welder Upgrade (BPA-Qualified)
• 9.7 Water Systems Leak Abatement (BPA-Qualified)
Proposed updates to EPM offering

• Effective October 1, 2021, the current Energy Project Manager offering will be retired (one-year notice.)

• BPA will release a new Energy Project Manager measure at that time.
  o Likely applicable to both Industrial and Commercial
  o Retire the EPM calculator
  o Reduced documentation requirements
  o Draft IM language ready for review
Industrial Lighting Trends
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Agenda

- Applications
- Controls
- Trends: Non-Energy Benefits
LED for Every Application
• Average 40% efficiency gain
• Tailored to lighting needs
• Automatic code compliance
• Flexibility
Occupancy Sensors

- Replace wall switches with occupancy switches in smaller rooms
- Use ceiling or wall mount sensors
- Fixture mount, typically factory installed
Luminaire Level Lighting Controls (LLLC)

- Networked sensors
- Factory integrated
- Individual fixture control
- Assignable/re-assignable
- No control wiring
- Configure via app
- Automatic code compliance

Embedded controls in each luminaire combine presence detection and daylight dimming to save energy
Non-Energy Benefits

- Task Tuning
- Asset Tracking
- Space Utilization
- Indoor Positioning/Wayfinding
- Room Scheduling
- Remote Diagnostics
- External Systems Integration
- Safety
- Futureproofing
Task Tuning to have the correct amount of light

- Luminous flux
- Time (hours)
- L70
What Are the Main Advantages of Asset Tracking?

- Loss Prevention.
- Opportunities for Easy Reporting and Auditing.
- Extends the Life of Assets.
Data collection informs energy optimization and provides occupancy pattern information for better space utilization.

Most companies have average space utilization rates of 60% - 70%.
Indoor Positioning / Wayfinding

- Retail product location assistance
- Wayfinding assistance with app
Scheduling

- The easiest way to save equipment energy is to turn it off
- Who’s doing night-time walk-throughs?
Remote Diagnostics

- Sensing Individual Device Energy Usage
- Graphic Dashboards
- Historical Data

SmartCast® Apps
DATA - ENABLED BUSINESS INSIGHTS
External Systems Integration

- Integration of BMS or HVAC System
Safety & Security

- Uniformity of Illumination
- Reduced Contrast / Shadowing / Glare
- Less Ladder / Lift Time
- Avoiding Trip Hazards
Future Proofing

• Changing Space Needs
Improved Light Quality

- Improved Task Visibility
- Color Distinction
- Reduced Eyestrain
- Visual Comfort
- Improved Work Environment
Impact on Productivity

- Addressing Critical Tasks
- Quality/Process Inspection
- Facility Cleanliness
- Reduced Process Interruptions
Thank you!
Discussion & feedback from Utility Focus Group

- What challenges are you facing?
- What are you hearing from your customers regarding energy efficiency?
- How can ESI help during this time?
Thank you!

For more information, contact:

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Bonneville Power Administration
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Potential topics for October UFG

- Approaches to forecasting EE savings
- Tools to help site staff secure capital budget approval
- Summary of past projects (systems and measure)
- SEM program results
- RTF activities related to industrial measures
- EC motors
- Demand response