Industrial and Manufacturing Sector Meetup

Monday, June 8, 2020
1:00 PM – 2:30 PM
Eli Levine
Department of Energy - Better Plants Program Manager
1. Welcome to the Industrial Meetup and housekeeping

2. Better Plants Program Update

3. Virtual recognition for Goal Achievers and Project and Practice Award winners

4. Group breakouts for trivia, networking, and discussion

5. Reconvene for group discussion takeaways
Follow along with Better Buildings, Better Plants

#BBSummit2020

Twitter:
- @BetterBldgsDOE
- @BetterPlantsDOE

LinkedIn:
- www.linkedin.com/company/better-buildings/
- www.linkedin.com/showcase/better-plants/
To ask questions throughout the session and to also participate in our interactive polls, we will be using a free web app called Slido.

Please follow along with us to access Slido for this session.
1. Please go to [www.slido.com](http://www.slido.com) using your mobile device or web browser.

2. Enter Event Code: `#bbsummit`

3. Select: “Industrial Meetup” Room

4. Let’s try a few poll questions together, now.
Program Update and Partner Recognition

Eli Levine
U.S. Department of Energy
First off – Stay Safe and Thank you!

“Dow starts to make hand sanitizer as coronavirus pandemic continues”

“Steelcase to supply personal protective equipment to healthcare workers”

“General Motors turns shuttered Warren plant into face mask supplier”

“Coronavirus: Parker Hannifin “stepping up to deliver””

“[NSK] helping Ford retool equipment for ventilator, respirator production”

“Textron Aviation begins mask, face shield production”

“L’Oréal will start producing hand sanitizer to help fight coronavirus”

“Commercial Metals Company helps Guadalupe Regional Medical Center conserve protective gear”

“3M outlines actions to support healthcare effort to combat COVID-19”
# Better Plants Online Learning Series

**NEW! Better Plants Online Learning Series**

Starting Thursday, April 16, 2020  |  1:00pm US-ET

**CLICK HERE TO LEARN MORE**

<table>
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<tr>
<th>Webinar Topic</th>
<th>Speaker</th>
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<tr>
<td>1. Better Plants Town Hall</td>
<td>Eli Levine (DOE), feat. Al Hildreth (GM)</td>
<td>04/16/20</td>
<td>RECORDED</td>
<td>Watch Recording</td>
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<tr>
<td>2. Basics of Energy</td>
<td>Thomas Wenning (ORNL)</td>
<td>04/23/20</td>
<td>RECORDED</td>
<td>Watch Recording</td>
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<tr>
<td>3. Lighting, HVAC, and Building Envelope</td>
<td>Thomas Wenning (ORNL)</td>
<td>04/29/20</td>
<td>RECORDED</td>
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<tr>
<td>4. Resources You Should Know: USDA Rural Development Programs and the Department of Commerce Manufacturing Extension Partnership</td>
<td>Venus Welch-White (USDA) and David Stieren (NIST-MEP)</td>
<td>05/07/20</td>
<td>RECORDED</td>
<td>Watch Recording</td>
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<tr>
<td>5. Compressed Air Systems</td>
<td>Thomas Wenning (ORNL)</td>
<td>05/14/20</td>
<td>RECORDED</td>
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<tr>
<td>6. Water Efficiency</td>
<td>Kiran Thirumaran (ORNL)</td>
<td>05/21/20</td>
<td>RECORDED</td>
<td>Watch Recording</td>
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Welcome New Partners!

Program Partners
- Valmont
- Vitro
- City Utilities (Fort Wayne)
- Silgan Closures

Challenge Partners
- Alexandria Renew Enterprises
- McWane
- Lineage
Important Dates to Remember

JUNE 8–11

2020 SUMMIT
A Virtual Leadership Symposium

BETTER PLANTS–INDUSTRIAL TRACK AGENDA

**Monday**
- Industrial Meetup [11:00am – 12:30pm]
- DOE Fireside Chat with the National Labs [3:00pm – 4:30pm]

**Tuesday**
- Pecha Kucha on Industrial Energy Management [11:00am – 12:30pm]

**Wednesday**
- Best of the Betters – 2020 Better Project and Better Practice Presentations [11:00am – 12:30pm]
- Packaged CHP eCatalog and Accelerator Program [1:00pm – 2:30pm]

**Thursday**
- Early Best Practices from the Waste Reduction Pilot [11:00am – 12:30pm]
Tentative In-Person Events

Oak Ridge National Laboratory

Fundamentals of Energy Management Training
August 18-20, 2020

AEE World 2020
September 23-25, 2020
TBD

2020 Technology Days
October 13-15, 2020
Lemont, IL

Argonne National Laboratory
New Tools and Resources
2020 In-Plant Trainings

- Status of INPLTs Scheduled for 2020
- How to stay up to date on INPLT schedule
- Other opportunities for training

<table>
<thead>
<tr>
<th>Host Plant Name / City, State</th>
<th>Energy System Type</th>
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</thead>
<tbody>
<tr>
<td>General Motors / Roanoke, IN</td>
<td>Treasure Hunt Exchange</td>
</tr>
<tr>
<td>Whirlpool Corporation / Clyde, OH</td>
<td>Compressed Air</td>
</tr>
<tr>
<td>Ingevity Corporate / Wickliffe, KY</td>
<td>Multi-System (Fans &amp; Pumps)</td>
</tr>
<tr>
<td>Flowers Foods / San Antonio, TX</td>
<td>MultiSystem - Pumps, Steam &amp; Water</td>
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<tr>
<td>Mitsubishi Electric Automotive America / Mason, OH</td>
<td>Compressed Air</td>
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<tr>
<td>Philadelphia Water Department / Philadelphia, PA</td>
<td>Wastewater</td>
</tr>
<tr>
<td>Saint-Gobain Corporation / Russellville, AL</td>
<td>Multisystem - Fans &amp; Pumps</td>
</tr>
<tr>
<td>Sheboygan Regional Wastewater Treatment Facility / Sheboygan, WI</td>
<td>Wastewater</td>
</tr>
<tr>
<td>Sugar Creek Packing Co. / Washington Court House, OH</td>
<td>Compressed Air</td>
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<tr>
<td>Texas Instruments / Dallas, TX</td>
<td>Compressed Air</td>
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<tr>
<td>Textron / Hurst, TX</td>
<td>Compressed Air</td>
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<tr>
<td>Valmont Industries / Brenham, TX</td>
<td>Treasure Hunt Exchange</td>
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<tr>
<td>PepsiCo (Frito-Lay) / Lynchburg, VA</td>
<td>Steam</td>
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<tr>
<td>Occidental Chemical Corporation / Gregory, TX</td>
<td>Steam</td>
</tr>
<tr>
<td>Autoliv / Ogden, UT</td>
<td>Compressed Air</td>
</tr>
<tr>
<td>Owens Corning / Kansas City, KS</td>
<td>Pumps</td>
</tr>
<tr>
<td>JR Simplot / Vernal, UT</td>
<td>Treasure Hunt Exchange</td>
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Field Validation Pilot

Why Field Validation?

Field validation helps reduce the risk associated with testing new technologies and enables the broader integration of new technology into the industrial and manufacturing space.

This initiative allows for the performance of next-generation energy efficiency technologies to be evaluated in real-world operational settings, for the purpose of advancing research and development in the industrial sector.
New Partner Solutions

**Xerox**
ABANDONED AIR HANDLER REPURPOSING

**Bristol Myers Squibb**
APPLICATION OF PRINCIPLES OF GREEN CHEMISTRY LEADS TO SIGNIFICANT REDUCTIONS IN MATERIAL WASTE

**Saint-Gobain**
COMPRESSED AIR CHALLENGE

**EASTMAN**
EASTMAN CHEMICAL: STEAM REDUCTION IN SOLVENT PRODUCTION

**Celanese**
ENERGY MANAGEMENT ASSESSMENT MATRIX
NARROWS SITE ENERGY REDUCTION PROJECT ACHIEVES SIGNIFICANT ENERGY SAVINGS

**Schneider Electric**
ECOSTRUXURE BUILDING ADVISOR
SCHNEIDER ELECTRIC: DAILY ENERGY MODEL

**GRAND RAPIDS WRRF**
GRAND RAPIDS WRRF: DEMONSTRATING LEADERSHIP IN SUSTAINABILITY THROUGH INNOVATION AND COLLABORATION
New Goal Achievers

Congratulations to **JBT Corporation** for exceeding their program goal of 25% reduction in energy intensity by 2023 and achieving 32.5% reduction by 2020!
New Goal Achievers

Congratulations to NEW Water for achieving their Challenge goal of achieving 35% reduction in energy intensity before 2025, five years ahead of schedule!
New Energy Management Systems Program Participants
Congratulations to the 2020 Practice Award Winners!

**Armstrong Flooring** - for launching a "Zero-Kilowatt Challenge" that reduced energy usage during the time its Lancaster, Pennsylvania, facility is shut down by over 50%

**Celanese Corporation** - for developing "Energy Sparks" fact sheets covering a wide variety of manufacturing-based energy topics to educate and engage employees

**General Motors** - for creating a Roadmap to track plant energy and water projects from the idea stage to the implementation stage

**Imerys Carbonates North America** - for developing and disseminating dust collector-best practices that have led to reduced compressed air consumption across multiple facilities

**Volvo Group North America** - for developing a Landfill Free certification option for facilities that helped the company landfill only 6% of the waste from North America facilities in FY 2019
Congratulations to the 2020 Project Award Winners!

**Bridgestone Americas, Inc.** - for launching a campaign to eliminate the use of hot water from the tire curing process and replace it with a Nitrogen process, resulting in an annual reduction of over 15,000 metric tons of CO2 emissions and nearly 13 million gallons of water saved, with a 3.6 year payback.

**Electrolux** - for pioneering the use of Sphagnum Moss for industrial water treatment, which improved water and energy efficiency, led to lower maintenance and waste disposal costs, improved water quality, and lowered odor and skin irritation exposure risks to plant personnel.

**Ford Motor Company** - for implementing a series of upgrades and technological improvements to achieve a 50% reduction in energy and water use at its Dearborn Research and Engineering Campus Central Energy Plant.

**Lineage Logistics** - for optimizing the blast freezing process, reducing freeze times by up to 50% and improving blast energy efficiency by up to 20% in a facility freezing beef products.
Congratulations to the 2020 Project Award Winners!

**Ozinga Brothers, Inc.** - for using data loggers to identify significant energy users and optimize equipment efficiency, helping to fine tune production processes and reduce compressor energy use by 65%

**PepsiCo** - for implementing a cogeneration project at its Indianapolis Gatorade facility that led to annual electricity savings of $1 million and a 35% reduction in annual greenhouse gas emissions

**ThyssenKrupp Elevator** - for identifying and implementing improvements to a decades-old structural oven, with a 35% reduction in oven gas consumption and 34% reduction in firing rate and oven hours

**Waupaca Foundry, Inc.** - for installing a blast-air dehumidification system to compensate for high humidity conditions, reducing annual coke usage by 2.5% and representing savings of 16,728 MMBTU and $335,000 per year
Let’s go back to Slido for some more interactive poll questions!

In case you need the instructions again:

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2. Enter Event Code: #bbsummit

3. Select: “Industrial Meetup” Room
Group Breakouts - Trivia

1. We will now separate into virtual breakout groups to test our knowledge of Better Plants and energy efficiency trivia!

2. Each group has already been assigned a designated moderator who will display the Trivia questions and record the group’s answers.

3. When the trivia time is up, you will be summoned back to the main room where we will reconvene and give the correct answers.
Group Trivia

Brainstorm the correct answers with your breakout groups!
Questions

1. What was the Better Plants Program called before it was known as “Better Plants”?

2. How much cumulative money have the Better Plants Partners saved, to date?
   A.) 5.9 Billion   B.) 6.7 Billion   C.) 7.6 Billion

3. At present, the Better Plants Program doesn’t offer which In-Plant Training?
   A.) Energy Treasure Hunts   B.) Compressed Air   C.) Industrial Cyber Security
   D.) Industrial Water Efficiency

4. What’s the average in potential annual savings opportunities identified by each Industrial Assessment Center energy assessment?
   A.) $50,000, B.) $80,000, C.) $130,000, D.) $150,000

5. Where are the annual Technology Days hosted?
6. What pilot program did the Better Plants Program launch in 2019?
   A.) Waste Reduction  B.) Supply Chain  C.) GHG Savings

7. Approximately how much electricity is converted to heat when generating compressed air?
   A.) 25%  B.) 45%  C.) 85%  D.) 95%

8. What companies were featured on DOE’s Direct Current podcast titled “Power Couple”?  
   A.) General Motors and L’Oreal  B.) Harley-Davidson and Charter Steel  
   C.) General Mills and Flowers Foods  D.) Eastman Chemical and Volvo Trucks

9. In pumping systems, if you double the pipe diameter, how much is the friction (pressure drop) reduced?  
   A.) 27%  B.) 45%  C.) 66%  D.) 97%

10. Better Plants partners have achieved 63 goals since the start of the program.  
    Name 5 goal achieving partners:
Answers

1. What was the Better Plants Program called before it was known as “Better Plants”?  
   Save Energy Now or Save Energy Now LEADERS

2. How much cumulative money have the Better Plants Partners saved, to date?  
   B.) 6.7 Billion

3. At present, the Better Plants Program doesn’t offer which In-Plant Training?  
   C.) Industrial Cyber Security

4. What’s the average in potential annual savings opportunities identified by each Industrial Assessment Center energy assessment?  
   C.) $130,000

5. Where are the annual Technology Days hosted?  
   The DOE’s National Labs
6. What pilot program did the Better Plants Program launch in 2019?
   A.) Waste Reduction

7. Approximately how much electricity is converted to heat when generating compressed air?
   C.) 85%

8. What companies were featured on DOE’s Direct Current podcast titled “Power Couple”?  
   B.) Harley-Davidson and Charter Steel

9. In pumping systems, if you double the pipe diameter, how much is the friction (pressure drop) reduced?
   D.) 97%

10. Better Plants partners have achieved 63 goals since the start of the program. Name 5 goal achieving partners: See Next Slide
Answers Cont.

1. 3M (Challenge)
2. AT&T
3. Bentley Mills (Challenge)
4. BPM, Inc.
5. Bradken
6. Bucks County Water & Sewer Authority (Challenge)
7. C.F. Martin and Co. (Challenge)
8. CalPortland
9. Cardington Yutaka (Challenge)
10. Celanese International Corporation (Challenge)
11. Celanese International Corporation (Challenge)
12. Comau
13. Complete Design & Packaging
14. Cummins, Inc. (Challenge)
15. Daikin Applied Americas
16. Eaton Corporation
17. Encina Wastewater Authority (Challenge)
18. Expera Specialty Solutions
19. General Dynamics
20. General Mills (Challenge)
21. General Motors (Challenge)
22. Graphic Packaging
23. HARBE C (Challenge)
24. Holcim (Challenge)
25. Ingersoll Rand (Challenge)
26. Ingevity
27. J.R. Simplot Company Food Group (Challenge)
28. JBT Corporation
29. Johnson & Johnson
30. Johnson Controls (Challenge)
31. Johnson Matthey
32. Kingspan Insulated Panels
33. Legrand North America (Challenge)
34. Legrand North America (Challenge)
35. Lennox International (Challenge)
36. Lockheed Martin
37. Los Angeles Bureau of Sanitation
38. Metal Industries
39. Navistar
40. NEW Water (Challenge)
41. Nissan North America (Challenge)
42. OSRAM SYLVANIA
43. Owens Corning
44. Patrick Cudahy
45. Patriot Foundry & Castings
46. Procter & Gamble
47. Roche Diagnostics Operations
48. Schneider Electric (Challenge)
49. Shaw Industries
50. Sherwin-Williams
51. TE Connectivity (Challenge)
52. Texas Instruments
53. ThyssenKrupp Elevator
54. Toyota (Challenge)
55. United Technologies Corporation (Challenge)
56. Verso Paper
57. Victor Valley Wastewater Reclamation Authority (Challenge)
58. Volvo Group (Challenge)
59. Weyerhaeuser
Group Breakouts - Discussion

1. We will now return back into our virtual breakout groups to participate in group discussions.

2. The group moderator will display discussion questions and take notes on the group’s thoughts.

3. When the discussion time is up, you will be summoned back to the main room where we will reconvene and go over some of the highlights from our breakout discussions.
Discussion Questions

1. What steps is your organization taking, technically and behaviorally, to mitigate COVID-related concerns?

2. How do you see your energy program evolving in the “new normal” and specifically, how is your organization now prioritizing, financing, and implementing energy projects?
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<td>BEHIND THE METER DISTRIBUTED ENERGY RESOURCES: BEST PRACTICES FOR INTEGRATING DERS INTO COMMERCIAL BUILDINGS</td>
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<td>PROGRAM DESIGN WITH EVERYONE IN MIND: LOW-INCOME SOLAR PROGRAM STRATEGIES</td>
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<td>July 14</td>
<td>THE DYNAMIC DUO: UNLEASH PUBLIC SECTOR ENERGY SAVINGS WITH FINANCING AND TECHNICAL ASSISTANCE</td>
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<td>NEXT-GENERATION BUILDING PERFORMANCE POLICIES: MAXIMIZING ENERGY SAVINGS AND ENVIRONMENTAL IMPACTS</td>
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<td>CASE IN POINT: OREGON'S RECENT EFFORTS TO REDUCE PLUG LOAD ENERGY CONSUMPTION</td>
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<tr>
<td>July 28</td>
<td>EVERYONE HAS A DATA CENTER: HOW TO BE AN ENERGY CHAMPION FOR YOURS</td>
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REGISTER NOW
Additional Questions?

Please Contact Us

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Better Buildings Solution Center
https://betterbuildingssolutioncenter.energy.gov/

Better Plants Inquiries
BetterPlants@ee.doe.gov

Summit Program Support
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