Better Buildings, Better Plants

SUMMIT

MAY 17-19 2022

Learn more: betterbuildingsolutioncenter.energy.gov/summit
INDUSTRIAL SECTOR MEET-UP

Wednesday, May 18th, 2022
9:00 AM - 10:30 PM ET
Leslie Jones
ICF – Communications and Outreach Manager for Energy Efficiency Programs
Today’s Presenters

• John O’Neil
  • U.S. Department of Energy - Better Plants Program Manager

• Bruce Lung
  • BGS, LLC - Senior Technical Advisor working with DOE’s Advanced Manufacturing Office and Better Plants Program
John O’Neil
U.S. Department of Energy - Better Plants Program Manager
Welcome to the Industrial Meet-up and housekeeping

Virtual recognition for Goal Achievers and Project and Practice Award winners

Better Plants Program Update

Fireside chat

Q&A
Suggested Industrial Sessions

**Better Plants–Industrial Track Agenda**

**Wednesday**
- **Industrial Sector Meetup**
  [9:00am – 10:30pm]
- **Challenge the Champions – An Energy Management Faceoff**
  [11:00am – 12:30pm]
- **Best of the Betters: 2021 Better Project Presentations**
  [2:00 – 3:30pm]
- **Best of the Betters: 2021 Better Practice Presentations**
  [2:00 – 3:30pm]

**Thursday**
- **Industrial Decarbonization Round Robin**
  [10:30am – 12:00pm]
- **Choose Your Own Solution: Can You Decarbonize this Industrial Facility?**
  [1:30 – 2:30pm]
Program Update and Partner Recognition

John O’Neil
U.S. Department of Energy
“Better Plants partners are essential to re-establishing U.S. manufacturing leadership and meeting President Biden’s goal of a carbon-neutral economy by 2050. They’re proving that industrial energy efficiency and sustainability measures pay off – often with high returns at relatively low risk – and that a decarbonized industrial sector is within reach. Every Btu of energy avoided helps reduce our collective carbon footprint and address climate change. Every dollar saved can be reinvested in improving our infrastructure, training workers, and hiring new ones.”

Dr. Carolyn Snyder - Deputy Assistant Secretary for Energy Efficiency, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy

Over 50 Better Plants Partners committed to reducing emissions by joining the Better Climate Challenge

Better Plants, AMO, and LBNL launched Phase II of the Industrial Technology Validation (ITV) Pilot

Expanded virtual In-Plant Trainings and created a VINPLT Training Hub through ORNL

How Much Have Our Partners Saved?

Over the length of the program, Better Plants partners have saved a cumulative 1.9 QBtu in energy and 116 million metric tons of CO2. That’s equivalent to:

More energy than the state of Wisconsin uses in one year.

GHG emissions of over 25,100,000 passenger vehicles driven for one year.

1.9 QBtu energy savings

2% average annual energy intensity improvement rate

$9.3 billion cost savings

Better Plants partners account for 13.8% of the U.S. manufacturing footprint.
Welcome New Program Partners!
Welcome New Challenge Partners!
Congratulations to **Deschutes Brewery** for achieving their program goal of 10% reduction in energy intensity by 2021!
Congratulations to Nestlé Health Science for achieving their program goal of 20% reduction in energy intensity by 2028!
Congratulations to Legrand North America for exceeding their third Challenge goal of 13% reduction in energy intensity by 2021!
Congratulations to the 2022 Better Practice Award Winners!

**3M:** For developing a corporate Energy Manual—Manual 81—to outline minimum design requirements for new spaces, processes, and utility systems intended for use by 3M and its approved suppliers and implemented projects have delivered savings of 6,676,000 in MMBtu and 272,000 tons in CO2.

**Electrolux:** For creating the Green Bond Framework to finance sustainability projects and improve product energy efficiency, and for the Long-term Incentive Program, which links employee compensation with sustainability and climate-related action.

**Flowers Foods:** For expanding an operational upgrade project at a bakery into a series of thirteen energy efficiency projects, resulting in total energy savings of 13,506 MMBtu, $411,695 in utility incentives, and verified energy cost savings of $231,103 per year.

**Ingersoll Rand:** For addressing fugitive emissions from the facility’s use of refrigerants by replacing CFX heat exchangers with more efficient LCX units, resulting in 1,340 annual metric tons of CO2 reduction in the first year of implementation.
Congratulations to the 2022 Better Practice Award Winners!

**LADWP:** For successfully incorporating demand response into its water operations and reducing pumping load during peak periods, resulting in an average demand reduction of 7.1 MW per event and 45 tons of CO2 emissions avoided.

**OxyChem:** For incorporating training materials and tools from a DOE Steam System In-Plant Training throughout the company’s capital project approval process, leading to process changes that resulted in natural gas savings of 132,000 MMBTU and over 7,000 metric tons of CO2 emissions annually.

**Schneider Electric:** For adopting a new method to standardize compressed air leak detection using acoustical imaging technology, resulting in the identification of over 250 leaks, representing over $600,000 in cost savings and 317 metric tons of CO2 reduction.

**Stellantis:** For implementing the Excellent Plant Shutdown approach across five sites and using automated system controls to assist with shutdown/startup performance, improving plant shutdown performance by over 17 MW and 28%.
Congratulations to the 2022 Better Project Award Winners!

**Bendix Commercial Vehicle Systems:** For installing a solar photovoltaic system of 2,612 ground-mounted panels, producing 1.5 million kWh annually and saving 30% of site electricity use, and reducing the site’s carbon footprint by 19%.

**Charter Steel:** For installing a sustainable scrap preheat system that reduced dust in the facility by 73%, annual electricity consumption by 2.25 million kWh, and annual greenhouse gas emissions by 14,000 tons.

**Eastman Chemical:** For developing and implementing an optimization model that provides a facility’s operators with real-time recommendations for powerhouse equipment, leading to energy savings of approximately 960,000 MMBtu a year.

**Lineage Logistics:** For adopting an advanced refrigeration controls platform at a facility to maximize operational efficiency and reduce workload for onsite operators by enabling remote access, reducing annual energy usage by up to 20%.

**Pepsico:** For improving the efficiency of a facility’s water filtration system and recovering, softening, and redistributing a reverse osmosis concentrate, reducing annual incoming water usage by approximately 30 million gallons, or 15%.
Congratulations to the 2022 Better Project Award Winners!

Saint Gobain: For piloting and installing a new recycling technology that grinds and then captures waste gypsum and paper for reuse, reducing annual landfill waste by 15,000 tons and annual costs by over $384,000.

SugarCreek Packing Co: For utilizing reverse osmosis technology to improve a facility steam system, cutting annual natural gas, water, and chemical use by 3.7%, 11.1%, and 43.3%, respectively.

Valmont Industries: For replacing all of a site’s 102 gasoline vehicles with an all-electric fleet of 84 vehicles, resulting in $88,000 in annual gasoline savings and annual avoided CO2 emissions of approximately 94 tons.

Waupaca: For upgrading and then optimizing a facility’s compressed air system, increasing energy efficiency by 13.5% and reducing annual energy usage by 18,000 MMBtu and water usage by 13 million gallons of water.
Celanese Corporation: Sustainability Checklist for Capital Projects
Celanese identified a need to improve the way the sustainability aspects of a project are evaluated early in the project planning process and how sustainability optimization measures are integrated in capital projects. The establishment of the sustainability checklist enables the company to further drive energy reduction and sustainability improvements by providing project engineers with a consistent approach for integrating sustainability in project evaluation.

Zebra Technologies Corporation: Climate-Related Physical Risk Characterization and Analysis
As recommended by The Task Force on Climate-related Financial Disclosures (TCFD), Zebra conducted climate scenario analysis in 2021 using guidance from the Intergovernmental Panel on Climate Change (IPCC) to determine climate risks under the best- and worst-case scenarios for its operations and value chain.

Lineage Logistics: Data Science Team Drives Energy Savings in Cold Storage
Since its inception, Lineage Logistics’ data science team has evaluated and supported the implementation of energy-saving projects that address racking configuration, warehouse operations algorithms, blast freezing, control system optimization, and rate structure selection.
50001 Ready Program Engagement

- **2500+ Users**
- **3000+ Projects**
- **21 Partners**
  - 8 Program Administrators (utilities, public benefits administrators, energy service providers)
  - 12 Program Implementers (consulting firms)
## 50001 Ready Industrial Sites

<table>
<thead>
<tr>
<th>Cree Lighting</th>
<th>Daimler</th>
<th>Detroit Diesel Corporation</th>
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<tbody>
<tr>
<td><img src="cree-logo.png" alt="Cree Logo" /></td>
<td><img src="daimler-logo.png" alt="Daimler Logo" /></td>
<td><img src="detroit-diesel-logo.png" alt="Detroit Diesel Logo" /></td>
</tr>
<tr>
<td>Gränges Americas</td>
<td>General Motors</td>
<td>JLG Industries, Inc.</td>
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<td><img src="granges-logo.png" alt="Gränges Logo" /></td>
<td><img src="gm-logo.png" alt="General Motors Logo" /></td>
<td><img src="jlg-logo.png" alt="JLG Logo" /></td>
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<tr>
<td>Pöppelmann USA LLC</td>
<td>Quad/Graphics, Inc.</td>
<td>Roseburg Forest Products</td>
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<td><img src="quad-logos.png" alt="Quad Graphics Logo" /></td>
<td><img src="roseburg-logo.png" alt="Roseburg Logo" /></td>
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50001 Ready Recognized Sites from April 2021-Present
The SEP 50001 program recognizes organizations for demonstrating leadership and sustained excellence in energy management. Verified improvements in energy performance from ISO 50001 are shown, along with any elevated recognition.

Des Moines Water Works
Campus: FWTP, MWTP, SWTP
Des Moines, IA
- 2nd cert. cycle
- 5.9% over 3 years
- GOLD recognition

Detroit Diesel Corporation
Detroit, MI
- 3rd cert. cycle
- 5.8% over 3 years
- PLATINUM recognition

New River Valley Plant
Dublin, VA
- 4th cert. cycle
- 6.3% over 3 years
- PLATINUM recognition

Trane Technologies
Monterrey
- 2nd cert. cycle
- 12.5% over 2 years
- Certified since 2018
The SEP 50001 program recognizes 3M for demonstrating leadership and sustained excellence in energy management across 12 facilities. Verified improvements in energy performance from ISO 50001 are shown, along with any elevated recognition.

<table>
<thead>
<tr>
<th>Location</th>
<th>Improvement</th>
<th>Recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ames, IA</td>
<td>4.2% over 1 year</td>
<td>GOLD</td>
</tr>
<tr>
<td>Brookings, SD</td>
<td>1.2% over 2 years</td>
<td>GOLD</td>
</tr>
<tr>
<td>Clinton, TN</td>
<td>16.1% over 1 year</td>
<td>GOLD</td>
</tr>
<tr>
<td>Cynthiana, KY</td>
<td>2.5% over 2 years</td>
<td></td>
</tr>
<tr>
<td>Midway, TN</td>
<td>0.9% over 2 years</td>
<td>SILVER</td>
</tr>
<tr>
<td>Nevada, MO</td>
<td>4.1% over 1 year</td>
<td>GOLD</td>
</tr>
<tr>
<td>Valley, NE</td>
<td>1.8% over 2 years</td>
<td>SILVER</td>
</tr>
<tr>
<td>Brockville, ON</td>
<td>6.3% over 2 years</td>
<td></td>
</tr>
<tr>
<td>Commercial Facility Lab &amp; Sales: Montreal, QC</td>
<td>23.9% over 3 years</td>
<td></td>
</tr>
<tr>
<td>London Oxford: London, ON</td>
<td>1.8% over 3 years</td>
<td></td>
</tr>
<tr>
<td>Morden, MB</td>
<td>25.0% over 3 years</td>
<td></td>
</tr>
<tr>
<td>Perth, ON</td>
<td>2.4% over 3 years</td>
<td></td>
</tr>
</tbody>
</table>
The SEP 50001 program provides elevated recognition to **3M** for exceeding ISO 50001 and SEP 50001 requirements at 20 additional facilities. Verified improvements in energy performance from ISO 50001 are shown.

<table>
<thead>
<tr>
<th>Location</th>
<th>Performance</th>
<th>Recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen, SD</td>
<td>5.7% over 2 years</td>
<td>PLATINUM</td>
</tr>
<tr>
<td>Alexandria, MN</td>
<td>0.2% over 1 year</td>
<td>SILVER</td>
</tr>
<tr>
<td>Brownwood, TX</td>
<td>5.2% over 2 years</td>
<td>SILVER</td>
</tr>
<tr>
<td>Columbia, MO</td>
<td>2.3% over 3 years</td>
<td>SILVER</td>
</tr>
<tr>
<td>Cordova, IL</td>
<td>4.7% over 3 years</td>
<td>GOLD</td>
</tr>
<tr>
<td>Corona, CA</td>
<td>5.5% over 3 years</td>
<td>SILVER</td>
</tr>
<tr>
<td>Cottage Grove, MN</td>
<td>2.8% over 3 years</td>
<td>GOLD</td>
</tr>
<tr>
<td>Decatur, AL</td>
<td>6.5% over 1 year</td>
<td>GOLD</td>
</tr>
<tr>
<td>Guin, AL</td>
<td>0.3% over 1 year</td>
<td>SILVER</td>
</tr>
<tr>
<td>Hartford City, IN</td>
<td>4.1% over 3 years</td>
<td>GOLD</td>
</tr>
<tr>
<td>Hutchinson, MN</td>
<td>0.6% over 2 years</td>
<td>GOLD</td>
</tr>
<tr>
<td>Little Rock, AR</td>
<td>1.4% over 1 year</td>
<td>GOLD</td>
</tr>
<tr>
<td>Menomonie, WI</td>
<td>3.0% over 3 years</td>
<td>GOLD</td>
</tr>
<tr>
<td>New Ulm, MN</td>
<td>9.2% over 3 years</td>
<td>GOLD</td>
</tr>
<tr>
<td>Pittsboro (NC)</td>
<td>1.0% over 3 years</td>
<td>SILVER</td>
</tr>
<tr>
<td>Prairie du Chien, WI</td>
<td>1.2% over 2 years</td>
<td>GOLD</td>
</tr>
<tr>
<td>Rockland, MA</td>
<td>7.5% over 2 years</td>
<td>GOLD</td>
</tr>
<tr>
<td>Springfield, MO</td>
<td>1.5% over 1 year</td>
<td>GOLD</td>
</tr>
<tr>
<td>Tonawanda, NY</td>
<td>0.8% over 1 year</td>
<td>GOLD</td>
</tr>
<tr>
<td>Wausau, WI</td>
<td>1.8% over 1 year</td>
<td>GOLD</td>
</tr>
</tbody>
</table>
The SEP 50001 program recognizes Cummins for demonstrating leadership and sustained excellence in energy management across 10 facilities. Verified improvements in energy performance from ISO 50001 are shown.

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Improvement</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbus Engine Plant</td>
<td>5.5%</td>
<td>2 years</td>
</tr>
<tr>
<td>CEFS Columbus</td>
<td>6.4%</td>
<td>3 years</td>
</tr>
<tr>
<td>Rocky Mountain Engine Plant</td>
<td>8.2%</td>
<td>3 years</td>
</tr>
<tr>
<td>Cummins Tech Center</td>
<td>1.6%</td>
<td>2 years</td>
</tr>
<tr>
<td>Planta Filtración</td>
<td>19.4%</td>
<td>3 years</td>
</tr>
<tr>
<td>Cummins Tech Center Charleston</td>
<td>5.8%</td>
<td>2 years</td>
</tr>
<tr>
<td>Seymour Engine Plant</td>
<td>6.1%</td>
<td>3 years</td>
</tr>
<tr>
<td>Jamestown Engine Plant</td>
<td>5.2%</td>
<td>2 years</td>
</tr>
<tr>
<td>CEFS Juarez</td>
<td>13.2%</td>
<td>3 years</td>
</tr>
<tr>
<td>NRP SLP</td>
<td>12.7%</td>
<td>3 years</td>
</tr>
</tbody>
</table>
CEM Energy Management Leadership Award Winners: 2021

The Clean Energy Ministerial bestowed international recognition to several DOE program partners in 2021. These organizations shared case studies and the business case for ISO 50001 certification through the CEM’s annual case study competition.

JW Marriott in Washington, DC won the program’s top distinction: 2021 Award of Excellence in Energy Management.

2021 Energy Management Insight Awards winners:

- 3M
- AstraZeneca – Gaithersburg, MD
- Des Moines Water Works
- Iron Mountain Data Centers
- Lawrence Berkeley National Laboratory
Calling All Global Leaders in Clean Energy
The Clean Energy Ministerial invites your organization to compete for a prestigious award

Submission Deadline: 2 June 2022
www.cleanenergyministerial.org/EMAWards
You can find the documents supporting:

- The Better Plants program
- Trainings, tools, & technical resources
- Expanded savings Initiatives
- Research, innovation, and technology
- Complementary programs
- Media resources
New Publications and Guidance Documents

• Wastewater Tip Sheet Series
• Understanding your Electric, Gas, and Water Bills
• Demand Response in Industrial Facilities
• Renewable Guidance for Industry
• UN Sustainable Development Goals
• Trailblazers and Goal Achievers: How Better Plants Partners Achieved Ambitious Energy Goals

Find these guidance documents and more in the Better Plants Resource Library!
Low Carbon Tools and Calculators

The Department of Energy and Oak Ridge National Lab have developed several tools to help jump start organizations’ journey to **lower carbon emissions**. Partners are encouraged to take advantage of these free tools and calculators, below, to plan projects, calculate carbon emissions, and determine the impact of electrification.

**Carbon Inventory Calculator**
This calculator lets the user **determine carbon dioxide emissions** for given combustion fuel, biofuel, refrigerant charge, purchased gases, purchased electricity from the grid. It also helps to calculate the emissions fuel use for transportation.

**Electrification Impact Calculator**
Use this calculator to estimate **potential cost and CO₂ emissions savings** resulting from changing from fuel-based equipment to electrical equipment (output rates determined by the EPA and Electronic Code of Federal Regulations).

**Low Carbon Action Plan Tool**
DOE has developed this Action Plan Tool, which you can use to **think through your low carbon strategy and develop low carbon pathways** for your plants and account for carbon emissions from onsite fuel consumption and purchased energy.

[Click here to access](#) [Carbon Inventory Calculator](#) [Click here to access](#) [Electrification Impact Calculator](#) [Click here to access](#) [Low Carbon Action Plan Tool](#)
Software Tools - Updates to VERIFI

- **Utility Dashboard and Analysis Tool**
  - Corporate and facility-level views
  - Enter utility bills and see total energy use in a new way
    - Calendarization of energy data
    - Annual cost, energy use, and limited carbon emissions overview
  - Analyze your data and generate a Better Plants Annual Reporting Form or other custom reports
  - Will replace EnPI tool and other DOE facility-level utility analysis tools

- **Available for “Alpha” testing**
  - Updates currently about every two weeks
  - Updates may impact functioning of existing data

Software Tools - Updates to MEASUR

- **Energy savings analysis**
  - Open source
  - Cross-platform tool
  - Technology and vendor agnostic

- **7 Assessment Modules**
  - Pumps, Fans, Process Heating, **Compressed Air**, Steam, **Wastewater**, and Treasure Hunt
  - Baseline and What-if Analyses (Novice & Expert Views)
  - Explore energy, cost, and **carbon emissions** impact of projects

- **Other Modules**
  - **Motor Inventory** (others coming soon)
  - **Data Analysis** (daytype & visual analyses)

- **70+ Standalone calculators**

- **Key User Features**
  - Similar workflow for all assessment modules
  - Graphs & Figures!
  - Easy unit system switching and translation functionality
  - Accessible help text and examples

https://www.energy.gov/eere/amo/measur
With the social distancing challenges presented by the COVID-19 pandemic, the Better Plants team piloted a cohort of **Virtual In-Plant Trainings (VINPLTs)** at the end of 2020 as a means of continuing these interactive training workshops.

After piloting two very successful sessions on Industrial Refrigeration and Wastewater Treatment operations, Better Plants and Oak Ridge National Lab decided to expand VINPLT offerings in 2021 and 2022.

The list on the right features past VINPLT training topics that the team has hosted:

<table>
<thead>
<tr>
<th>Past VINPLT Training Topics</th>
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<tbody>
<tr>
<td>Industrial Water Efficiency 2022</td>
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<tr>
<td>50001 Ready Virtual In-Plant Trainings 2022</td>
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<tr>
<td>Motor Systems</td>
</tr>
<tr>
<td>Drinking Water</td>
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<tr>
<td>Compressed Air</td>
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<tr>
<td>IAC Activated Sludge WWTP</td>
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<tr>
<td>Fundamentals of Wastewater Treatment Processes</td>
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<tr>
<td>Fan Systems</td>
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<tr>
<td>Water Efficiency</td>
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<td>Steam Systems</td>
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<tr>
<td>Pumping Systems</td>
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<tr>
<td>50001 Ready 2021</td>
</tr>
<tr>
<td>Process Heating</td>
</tr>
<tr>
<td>Ammonia Refrigeration</td>
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<tr>
<td>Wastewater Treatment 2021</td>
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</table>
Virtual In-Plant Trainings (VINPLTs)

"I just wanted to reach out and express my praises again for this 50001 Ready Virtual In-Plant training. The instructions, demonstrations, and instructor were really straightforward and helpful. It made everything much more approachable and easy to understand. I’ve been familiar with the ISO standards prior to the training but this event opened my eyes to many more ideas and ways to improve our systems at my company. I really hope that I can take this training and apply it to our energy program so that we can continue to get results and improve our energy efficiency. I do feel very confident that I will be able to thanks to this phenomenal training."

- Tyler Rodley, Plenco

"Thank you for organizing the ammonia refrigeration In-Plant Training webinar! Our team believes that this will have a huge impact on our energy systems and help save our company both energy and money. Having the opportunity to go through this training as an entire company will have a tremendous impact on our savings. Our executive team is very much looking forward to learning about our results in our final report."

- Alex Floyd, Tyson Foods

"The DOE virtual In-Plant training on fan systems has been outstanding. Each instructor is a true expert in their field, and all aspects have been well-planned and professional - from the slides and recordings to the Q&A and Kahoot quizzes. Our facilities run lean and don’t always have the capacity to spare time for training. This virtual format has allowed me to work training into my schedule, and we plan for more colleagues to attend in the future now that we see the value. We hope that DOE will continue hosting these trainings, even after in-person events begin again."

- Ann Dougherty, PE, Roppe Holding Company

Better Plants and ORNL are continuing the VINPLTs throughout the remainder of 2022.

For questions on upcoming topics or on how to register for a training, please reach out to your TAM or contact Wei Guo.

guow@ornl.gov

https://bptraining.ornl.gov/
ITV Pilot - Objectives

The purpose of the Industrial Technology Validation (ITV) Pilot is to identify, install, and monitor technology performance in **real world installations** and communicate the results through case studies.

- Validate the potential of a selected technology
- Verify performance improvement claims
- Project cost savings and scalability
- Produce a publicly available M&V report for each validation
ITV Pilot – Phase I

- Launched in late April/early May 2021
- 5 applications selected with demonstrations led at Better Plants partner sites

**Key Technologies**

- **Membrane System for Black Liquor Concentration**
- **Electrochemical Water Treatment & Electrocoagulation for Oil and Hydrocarbon Removal**
- **Cooling Tower Side Stream Particle Precipitator**
- **Side Stream Particle Precipitator and Water Enhancement System Evaluation**

*Images of pilot site with various equipment and workers.*
ITV Pilot – Launching of Phase II

- Validate innovative GHG-, energy-, water-, and waste-reducing technologies to decarbonize industry with support from DOE National Lab experts
- Focused on incubators and innovators
- Participation in the Better Plants program is not required
- Applications can be submitted jointly by a technology teamed with a host site or individual technology applications will also be considered.

Accepting applications through June 30th 2022

Apply at: https://betterbuildingssolutioncenter.energy.gov/better-plants/industrial-technology-validation-pilot
Other Industrial Savings Initiatives

**Water Savings**
Transporting and treating water in an industrial facility requires energy. Additionally, the efficient use of water can also lead to a more reliable water supply, reduced risk, and improved water quality. Through the Water Savings Network, Better Plants partners set goals to save water and receive recognition and tailored technical support.

**Waste Reduction**
The Waste Reduction Network helps partners reduce waste, improve energy performance, and reduce operating costs. This network allows industry leaders to demonstrate what is achievable in waste reduction while helping DOE understand real-world problems and solutions, which aids other organizations in creating or improving their own waste programs.

**Supply Chain Efficiency**
Around 40-60% of a manufacturing company’s energy and carbon footprint can reside upstream in its supply chain. Better Plants works with partners through the Supply Chain Initiative to encourage their suppliers to leverage program resources and collectively set, track, and meet energy goals.
Many people realize that energy efficiency can save energy and money, but energy-saving projects often yield additional, quantifiable benefits beyond energy and cost savings. However, the non-energy benefits of energy efficiency are frequently omitted from energy efficiency assessments in buildings and industrial plants before projects or practices are implemented.

Explore this [blog](http://example.com) on the Better Buildings Solution Center to learn more about the multiple benefits of energy efficiency, as well as the full [white paper](http://example.com) developed by DOE’s Advanced Manufacturing Office found five key areas of additional benefits from energy efficiency.
Tackling low-hanging fruit in energy efficiency may not seem important, but for the energy-intensive manufacturing industry, it can have a significant impact on energy and cost savings. Watch the video below to hear how **LED lighting saves Steelcase nearly $200,000 annually** in energy costs – along with some surprising added benefits for their production line.

Take 5 minutes to [watch this conversation](#) between Mary Ellen Mika of Steelcase and Kelly Speakes-Backman, Acting Assistant Secretary for Energy Efficiency and Renewable Energy, to learn how tackling low-hanging fruit in energy efficiency can cut costs while reducing carbon emissions for you and your supply chain.
Put your industrial facility on the right path toward carbon reduction with three tips from Mani Balakrishnan of Zebra Technologies. Carve out 6 minutes to watch his conversation with Kelly Speakes-Backman, Acting Assistant Secretary for Energy Efficiency and Renewable Energy, and hear how science-based targets and climate risk assessments can help your organization and supply chain cut carbon emissions now.

Take 5 minutes to watch this conversation on the Better Buildings Solution center and check out the Decarbonization Download Homepage to learn about other carbon reduction strategies.
Better Plants on Social Media

@BetterPlantsDOE

www.linkedin.com/showcase/better-plants/
Q & A

Submit Questions

www.slido.com event code #DOE, Industrial Sector Meet-up
Thank You!

Provide feedback on this session in the Summit App!

Download the Whova app to your mobile device or use the QR code to access the web version.