EXPANDED IMPACT: ENERGY EFFICIENCY RESOURCES FOR SUPPLIERS
Presenters today:

Robert Bruce Lung
Industrial Technical Assistance Fellow
U.S. Department of Energy

Tim Kolp
Technical Account Manager
RJR Associates
Webinar Agenda

- Welcome & Introductions

- DOE’s Better Plants Program & Supply Chain Initiative
  - Benefits of Better Plants
    - Technical assistance: account manager, trainings, webinars
    - Recognition
    - Peer-based networking
    - Advanced technology partnerships
    - Other AMO programs
  - Supply Chain
    - Resources
    - TAM Support
    - Success stories (LeGrand, UTC)

- Next Steps
- Q&A
Better Buildings, Better Plants

- Better Plants is a voluntary, public-private partnership program for manufacturers and industrial organizations.

- Through Better Plants:
  - Partners set long-term efficiency goals (25% energy intensity over 10 years)
  - Receive technical assistance and national recognition for their leadership

- Partners can sponsor a supply chain cohort of participating suppliers
  - Join the Better Plants program
  - Set energy saving goals
  - Develop energy management plans
  - Track and report progress

Why Join Better Plants?

**Technical Assistance**

- **Assigned Technical Account Manager**, to help navigate the program and tap into energy-saving resources.

- **In-Plant Trainings**: system-specific workshops led by Better Plants experts that train participants on how to identify, implement, and replicate energy-saving projects.

- **Access** to Industrial Assessment Centers/CHP TAPs/Water Efficiency Tools

- **Supply Chain Engagement**: help partners leverage resources and collectively set, track, and meet energy savings goals.

**National Recognition**

- **Awards** for Goal Achievers

- **Better Buildings Solution Center**

**Peer-to-Peer Networking Opportunities**
Better Plants Overview

Energy savings and program footprint continue to grow

Better Plants Snapshot

<table>
<thead>
<tr>
<th>Accomplishments</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Partners</td>
<td>191</td>
</tr>
<tr>
<td>Approximate Number of Plants</td>
<td>2,600</td>
</tr>
<tr>
<td>Percent of U.S. Manufacturing Energy Footprint</td>
<td>11.5%</td>
</tr>
</tbody>
</table>

Reported Savings

<table>
<thead>
<tr>
<th>Reported Savings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative Energy Savings (TBtu)</td>
<td>600</td>
</tr>
<tr>
<td>Cumulative Cost Savings (Billions)</td>
<td>$3.1</td>
</tr>
<tr>
<td>Cumulative Avoided CO₂ Emissions (Million Metric Ton)</td>
<td>34.7</td>
</tr>
<tr>
<td>Average Annual Energy Intensity Improvement Rate</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

33 new partners, 10 goal achievers in 2016.
What do Suppliers Commit to?

- Set a long-term efficiency goals (25% energy intensity over 10 years)
- Report facility-level energy use to DOE on an annual basis
- Share best practices with DOE.

Process heating INPLT at an ArcelorMittal plant in Nov. 2013.
West Hartford manufacturing firm Legrand reduced its total North American energy use 15.4 percent over a 26.2 day competition in October called the Energy Marathon.

Legrand held the competition at its 22 North American locations as a fun way to have employees find creative ways to reduce the company’s energy usage, including installing sensors and changing personal habits. Daily updates and communications

By Andre de Fontaine

Many companies know the value of managing and saving energy within their own walls. The company and its employees benefit from lower utility bills, better comfort and more efficient working spaces.

This is especially true for manufacturers. These companies view energy as integral to global competitiveness, increased productivity and profitability, as a result, the U.S. manufacturing
Technical Support: Technical Account Manager (TAM)

- Help with energy baselines and data tracking/reporting
  - Corporate-Level Approach
  - Facility-Level Approach
  - Regression-Based Approach
- TAMs facilitate access to all other DOE resources
- TAMs help suppliers develop a roadmap for achieving their goal(s)
Technical Assistance: In Plant Trainings

Existing Training Topics:

- Compressed Air
- Pumping
- Steam
- Process heating
- Fans
- Energy Treasure Hunt Exchanges
- Water/Wastewater Treatment
- Industrial Refrigeration
- Strategic Energy Management

- Teach participants how to conduct assessments, use DOE tools, and implement projects
- Open to employees from host plant, peer companies, suppliers
- ~70 INPLTs, 1,000 participants since 2011
- Identified > 3 TBTU and $14 million in energy savings between 2011 and 2015
- Pre-INPLT webinars available on program website
Advanced Technology Partnerships

Better Plants hosts events at National Laboratories to:

**Tour** World-Class Lab Facilities

**View** Demonstrations of innovative Technologies

**Hear** from Experts from the Lab and Industry

**Learn** how to easily partner and leverage technology

**Network** with BP partners and lab technologists
Diagnostic Equipment Program

Helping Better Plants Partners measure operating data to evaluate equipment performance and quantify energy performance improvement

- Free of charge, including shipping
- Use equipment for one day, or up to four weeks
- Some technical assistance with selection and usage
- First come, first serve application
Priority Access to Other Programs:

**Industrial Assessment Centers:**
- Partners have priority access to no-cost energy assessments from DOE’s Industrial Assessment Centers.
- To date IACs have provided more than 134,000 recommendations, resulting in more than 17,600 manufacturers benefiting from the program.
- The average IAC assessment leads to 5–7% implemented energy savings and productivity improvement.

**Combined Heat and Power Technical Assistance Partnerships**
- Identify CHP market opportunities through vendor, fuel, and technology neutral assessments of CHP viability.
- Technical assistance to end-users and stakeholders considering CHP.
What is 50001 Ready?

Three Steps to Becoming 50001 Ready

**Step One: Self-declared implementation of ISO 50001**

50001 Ready Navigator Application
- The Navigator walks you through the process of implementing an energy management system and prepares you to be 50001 Ready.

**Step Two: Analysis of energy and emissions reductions**

Valid Tool to Present Energy Performance
- DOE EnPI Lite Tool is a regression-based calculator for single or all fuels to determine energy savings
- Energy Star Portfolio Manager
- Many utility or energy databasing companies

**Step Three: Submit to DOE for 50001 Ready recognition**

Recognition Program
- Self-attestation of completion of Navigator, executed by leader and executive
- Submit energy performance data

DOE or Utility recognized success for conformance to ISO standards

OPTIONAL
STEP 4 (non-DOE program)
Pursue an ISO 50001 Certification
Move to achieve ISO 50001 Certification or DOE’s Superior Energy Performance (SEP)
Peer-to-Peer Networking

- DOE provides forums for partners to learn from each other
- Better Buildings Summit, IETC, WEEC, ACEEE Summer Study
- In Plant Trainings – open to outside participants
- REEO & NGO events (EE Global)
- Webinars with partner presentations
Better Plants Supply Chain Initiative

- Better Plants partners can extend the benefits of energy efficiency to their suppliers
- Through this initiative, Better Plants partners sponsor a supply chain cohort with participating suppliers to:
  - Join the Better Plants Program
  - Set energy saving goals
  - Develop energy management plans
  - Track and report progress
### Supply Chain Initiative

- 4 Better Plants partners are working with 30 suppliers to set energy-saving goals and track progress
- Suppliers receive DOE technical support, including priority access to free energy audits

<table>
<thead>
<tr>
<th>Legrand</th>
<th>UTC</th>
<th>Lockheed Martin</th>
<th>Honda NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapco</td>
<td>GKN Aerospace</td>
<td>Cascade Engineering Technologies, Inc.</td>
<td>KYB Americas</td>
</tr>
<tr>
<td>Coilplus</td>
<td>Hitchiner</td>
<td>Clearwater Engineering, Inc.</td>
<td>Newman Technologies</td>
</tr>
<tr>
<td>Complete Design &amp; Packaging</td>
<td>MB Aerospace</td>
<td>Cooperative Industries Aerospace &amp; Defense</td>
<td>Asama Coldwater Manufacturing</td>
</tr>
<tr>
<td>Durex</td>
<td>RTI International Metals, Inc.</td>
<td>The Harva Company, Inc.</td>
<td>American Mitsuba</td>
</tr>
<tr>
<td>Lynam</td>
<td>Selmet, Inc.</td>
<td>Research Electro-Optics</td>
<td>NSK Americas</td>
</tr>
<tr>
<td>Magnetic Metals</td>
<td>Weber Metals, Inc.</td>
<td>Savage Precision Fabrication</td>
<td>Mahle Engine Components</td>
</tr>
<tr>
<td>Rowley Spring &amp; Stamping</td>
<td>Jedco, Inc.</td>
<td>Vanguard Space Technologies</td>
<td>Cardington Yutaka</td>
</tr>
<tr>
<td>Stanley Spring &amp; Stamping</td>
<td></td>
<td>Tri-State Plastics, Inc.</td>
<td></td>
</tr>
</tbody>
</table>
### Benefits of Participating

<table>
<thead>
<tr>
<th>Benefits to customers</th>
<th>Benefits to suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>- National recognition for your leadership</td>
<td>- Recognition</td>
</tr>
<tr>
<td>- Stronger, more energy efficient suppliers</td>
<td>- Access to DOE resources and expert assistance</td>
</tr>
<tr>
<td>- Year-end DOE reports that allow you to track progress of your suppliers</td>
<td>- Priority access to free energy audits</td>
</tr>
<tr>
<td></td>
<td>- Opportunity to network and learn from peers</td>
</tr>
</tbody>
</table>

**Benefits to customers**
- National recognition for your leadership
- Stronger, more energy efficient suppliers
- Year-end DOE reports that allow you to track progress of your suppliers

**Benefits to suppliers**
- Recognition
- Access to DOE resources and expert assistance
- Priority access to free energy audits
- Opportunity to network and learn from peers
DOE will conduct a series of energy management webinars for participating suppliers. Topics include:

- Overview of energy management systems and guidelines
- Measuring and tracking energy efficiency improvement
- Helpful tools, resources, and best practices

Additionally, a DOE technical account manager (TAM) will be available for individualized coaching.
Benefits of Regression Analysis

- Accurate, “apples-to-apples” comparisons, holding for critical variables:
  - Weather
  - Production factors
- Validates energy savings
- Facilitates energy manager’s efforts to report EE impacts
- Improves comparative analyses for benchmarking
- Helps strategic planning
First Year Highlights: UTC Cohort

- All 7 UTC suppliers set 10-year, 25% energy intensity improvement targets
- 4 energy management webinars conducted
- Good response to IAC assessments:
  - 4 of 5 suppliers received IAC audits
  - One supplier received two IAC audits
  - $995,000 total energy cost-saving opportunities found
- 5 of 5 suppliers completed annual data reports
First Year Highlights: Legrand Cohort

- 8 Legrand suppliers set 10-year, 25% energy intensity improvement targets
- 4 energy management webinars conducted
- Good experiences with IAC assessments:
  - 7 of 8 suppliers received IAC audits
  - $200,000 in energy cost-saving opportunities from 5 audits
- 5 of 8 suppliers completed annual data reports
### Results of Supplier IAC Assessments

#### 2015 Supply Chain Initiative IAC Assessments

<table>
<thead>
<tr>
<th>Summary of Assessments</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Assessments</td>
<td>12</td>
</tr>
<tr>
<td>Number of Recommendations</td>
<td>56</td>
</tr>
<tr>
<td>Average Percent Savings Per Plant</td>
<td>13%</td>
</tr>
<tr>
<td>Average Cost Savings Potential</td>
<td>$119,000</td>
</tr>
<tr>
<td>Average Simple Payback</td>
<td>0.9 years</td>
</tr>
<tr>
<td>Total Potential Savings</td>
<td>$1.1 million</td>
</tr>
</tbody>
</table>
Next Steps

1. DOE will send webinar link and then partnership agreement to all companies on this call
2. Review agreement and sign by_________; contact DOE with any questions in the interim
3. Get recognized for your leadership! With DOE help, build a web profile, send out a press release, communicate internally, etc.
4. TAM will do introductory calls with each participating supplier within a month of signing up
5. Energy management & other webinars will be available after joining
6. TAM will help suppliers schedule IAC assessments within 3 months
7. Suppliers provide energy performance data to DOE about 12 months after signing on
Joining is Easy!

- Simple 2-page agreement lists Partner and DOE roles; explains voluntary nature of agreement
- Should be signed by CEO or a senior executive
- Email scanned copy back to: robert.lung@ee.doe.gov
For more Information

Bruce Lung, robert.lung@ee.doe.gov, 202-586-4411

Eli Levine, eli.levine@ee.doe.gov, 202-586-9929

BetterPlants@ee.doe.gov

Better Buildings, Better Plants:
http://eere.energy.gov/betterplants

Better Buildings Solution Center:
http://betterbuildingssolutioncenter.energy.gov/
Thanks!

Questions/Discussion