REACHING OUTSIDE OUR WALLS

WHAT
A scalable education and training platform that helps suppliers reduce their energy use and costs

HOW
Johnson Controls has adapted its successful Energy Hunt Program into a set of training materials for suppliers that help reduce energy use and costs through employee awareness and engagement, equipment scheduling, energy management, lighting, HVAC and compressed air

WHO
Johnson Controls’ trained Energy Champions work directly with Johnson Controls suppliers
BUILDING ON OUR SUCCESS
Energy Performance

GOALS
25% Reduction in Energy Intensity 2009 to 2019

CHALLENGE COMMITMENT
97 Facilities (including 90 manufacturing plants)

SAVINGS TO DATE
21% Cumulative (vs. baseline) 8% Annual (2014)
CREATING A RIPPLE EFFECT

**Start**

**Express Interest**
- Alignment
  - Acknowledge and agree to terms of Program
  - Align key leaders
- Communication and preparation
  - Engage right stakeholders, including: Plant Maintenance, Facilities Management, Production Management, Production Floor, and General Staff (e.g. Human Resources)
  - Communicate Program to stakeholders
- Pre-work
  - Plan event
  - Collect and assess initial data

**+1 month**

**Complete Workshop**
- Opportunity identification
  - Introductions
  - Initial brainstorm
  - Walk through facility
- Prioritization and action planning
  - Estimate savings and prioritize top actions
  - Develop list of facility improvement measures and plan of action

**+2 months**

**Implement Measures**
- Detailed planning
  - Conduct any necessary follow-up analysis and planning, including an implementation schedule
- Implementation
  - Start implementing operational changes immediately
  - For work that requires additional planning and/or technical assistance, identify approach and qualified vendors as appropriate

**+6 months & beyond**

**Report Actions**
- Action summary
  - Supplier shares list of implemented measures with Johnson Controls
  - Supplier provides other feedback
- Ongoing communication and engagement
  - Supplier continues to engage employees, building on what they’ve learned
  - Supplier implements Program in additional plants
  - Participate in webinars and discussions with peer organizations
## System-specific measures

### Lighting
- Adjusting settings and levels
- Identifying cost-effective upgrades

### Heating, Ventilation and Air Conditioning (HVAC)
- Optimizing use
- Maintaining and cleaning the system

### Compressed Air
- Finding and eliminating leaks
- Identifying the best use and alternatives

## Cross-cutting measures

### Employee Awareness and Engagement
- Identifying key stakeholders
- Maintaining equipment
- Identifying and closing leaks

### Equipment Scheduling
- Turning off equipment when not in use
- Setting back temperatures

### Energy Management
- Understanding utility bills and rates
- Reducing costs
ELEMENTS OF THE PROGRAM

- A one day, on-site Supplier Efficiency Workshop ("Workshop") for selected supplier staff which provides training on the identification of no-cost and/or low-cost Facility Improvement Measures ("FIMs") in the areas of:
  - Employee Awareness and Engagement;
  - Equipment Scheduling;
  - Energy Management;
  - Lighting;
  - HVAC; and
  - Compressed Air.
- Training materials, including presentation slides, check lists, templates, survey forms and other relevant content
- Interactive brainstorming session during the Workshop to identify no-cost and/or low-cost FIMs specific to the facility
- A walk-through of the facility with supplier staff to identify and validate no-cost and/or low-cost FIMs
- A debriefing of the facility walk-through to plant staff and leadership, including the list of identified FIMs and recommended next steps to conclude the Workshop
SUPPLIER RESPONSIBILITIES
As a participant of the Program

- Provide basic facility information, including square footage, floor plan, hours of operation, occupancy, etc.
- Furnish at least one year of monthly facility utility expense information (for a baseline)
- Identify the team members participating in the Workshop

- Actively participate in the Workshop (one day commitment), including escorting Johnson Controls staff during the facility walk-through
- Implement at least two facility improvement measures (FIMs) out of the identified list of FIMs within six months of date of the Workshop provided the FIMs have a simple payback of less than two years
- Inform Johnson Controls about the specific FIMs that were implemented within six months of date of the Workshop
DRIVING MEASURABLE RESULTS

1. **Save money**: Reduce energy costs (typical range is 5-10% savings for measures with less than a two year payback)

2. **Enhance sustainability**: Reduce operational footprint, conserving resources and reducing emissions

3. **Access training**: Increase energy efficiency awareness and education for supplier staff

4. **Manage risks**: Reduce business and operational risk

5. **Increase engagement**: Share best practices with others by networking and collaborating with other Johnson Controls suppliers and stakeholders

6. **Scale impact**: Apply process to other facilities and continue to add scope to assessments for continuous improvement
CASE STUDY: WOLVERINE TUBE

Where they started

WOLVERINE TUBE, INC.

Preferred Supplier
20+ Years

Copper Tubing and other Heat Transfer Products
Shawnee, OK

36 Year-old Manufacturing Facility

CARBON DISCLOSURE PROJECT
Supply Chain Responder Since 2009

325 Thousand Square Feet

575 Employees
Engaged core team of 8 Wolverine plant personnel.
CASE STUDY: WOLVERINE TUBE

What they achieved

COMPRESSED AIR SYSTEM
- Discovered that 40% of compressed air was lost in leaks
- Conducted employee training to increase awareness
- Institutionalized a leak tag program
- Made one compressor redundant

RESULTS: 3% Electric baseline SAVED

TURN IT OFF PROGRAM
- Conducted employee training to increase awareness
- Addressed lighting, fans, HVAC and process equipment
- Installed occupancy sensors in offices

RESULTS: 1.5% Electric baseline SAVED

WATER LEAKS
- Conducted employee training to increase awareness
- Created a “Water Leak Chart”

RESULTS: 1% Water baseline SAVED
A GREAT PROGRAM!
Drove our costs down without capital expense.
Changed our culture regarding how we look at energy.
Since this program, we have looked at six other energy savings opportunities.

Mark Brown
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LET'S TALK

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