

Better Plants Program

Contract Number
Eli Levine/ORNL/LBNL/ICF
FY 2020

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This presentation does not contain any proprietary, confidential, or otherwise restricted information.

Overview

Timeline

- Better Plants began as Save Energy Now Leader in 2009
- Program was reconstituted to become part of the Better Buildings Initiative in 2011

Budget

	FY 18 Costs	FY 19 Costs	FY 20 Costs	Total Planned Funding (FY 19- Project End Date)
DOE Funded	4M	4M	5.5M	5.5M

Barriers

- Lack of awareness
- Corporate leadership buy-in
- Low cost of energy
- Competing programs

Partners

Better Plants has over 235 partners, representing 3,200 facilities.

Better Plants partners represent 12% of the U.S. manufacturing energy footprint

43 Challenge Level Partners, committing to share data and solutions

Nearly 60 Better Plants partners have already achieved their goal, and 15 have doubled-down on success by re-pledging in the program with a new, ambitious goal.

Project Objectives

AMO Multi-year Program Plan

Target 17.1 Quadruple the number of technology assistance partners who successfully achieve their established program goals and targets; annually or consistent with the established program goal period.

- Equipping manufacturers with decision support software tools, training, and information resources is an effective way to support facilities of all sizes in identifying, analyzing, and implementing energy savings opportunities at the corporate and plant-level.
- Energy system subject matter experts are used to provide advice, training, or guidance to partner facilities

Target 17.2: Expand AMO partner commitments to 25% of large energy user footprint

- AMO provides DOE recognition and technical assistance; its partners provide energy use data and take actions to achieve their goals. This approach raises the public profile of partner companies, brings recognition to the energy champions, and raises corporate awareness of the value of energy optimization
- Technical assistance activities can help individual manufacturers select the appropriate data collection methodology and report energy intensity reduction; demonstrate the viability of improved energy management approaches; and pursue targets for energy efficiency, productivity, waste reduction, and water use.
- This value proposition goes beyond energy management, and includes technical assistance on water use and re-use, waste reduction, and supply chain strategies.

Better Plants Project Objectives

Objective: Drive leadership in energy innovation in the industrial sector through helping industry in setting and meeting ambitious energy efficiency targets, sharing solutions, and facilitating field validation and adoption of energy-saving technologies.

AMO Mission: Better Plants helps fulfill AMO's strategic goals of:

- Improving the productivity and energy efficiency of US manufacturing
- Reducing lifecycle energy and resource impacts of manufacturing goods
- Transitioning DOE supported innovative technologies and practices into US manufacturing capabilities
- Strengthening and advancing the US manufacturing workforce

Better Plants partners join for 5 reasons:

1. Technical Assistance
2. Connections to Labs and Innovation
3. National Recognition
4. Peer-to-Peer Networking Opportunities
5. Workforce development

Through Better Plants, companies **set long-term efficiency goals**. Organizations with publicly stated energy reduction goals:

- Implemented 50% more efficiency and renewable energy measures than organizations without goals.
- Are 2.7 times more likely to increase investments, and say they see brand value and other co-benefits beyond energy savings

Better Plants Technical Assistance

- **Technical Account Manager**
 - Based through ORNL. Help with energy baselines and data tracking/reporting
 - Keep partners informed about available DOE resources and opportunities
- **In Plant Trainings**
 - 139+ In Plant Trainings offered to date, for 2,400 participants
 - Over \$50M in identified savings
 - New Industrial water savings topic was rolled out
- **Field Validation and Diagnostic Equipment Program/Software Tools**
 - Help evaluate system performance, measure energy losses/saving opportunities
 - Free of charge access to borrow various instruments – ~60 loans to date
 - New Plant Water Profiler Tool
- **Toolkits, Tip Cards, Sourcebooks, Cheat Sheets**
 - Dedicated webpages for 13 technology focus areas with best practices, point of contact with expertise, case studies, etc
 - Created Treasure Hunt Exchange Toolkit, Water Management Strategic Primer
- **Financing Navigator**
 - Online tool to help partners find financing solutions. The tool helps users understand the array of financing solutions for energy projects that are available in the market and easily explore which option may be best for them.
- **Water Savings and Waste Reduction**



Connecting Partners to R&D

- Better Plants serves as a gateway to inform our R&D efforts
- Partners have an entry to our National Labs through their Technical Account Manager
 - Some partners, like Volvo North America and Toyota, have hosted their corporate energy meetings at a National Lab, networking with lab experts and exploring possibilities for collaboration
- Better Plants facilitates partners working with Manufacturing USA Institutes and other AMO R&D programs.
- New National Lab Innovation Portal
- More to come in this space!



The screenshot shows the top of the National Lab Innovation Portal website. The navigation bar includes links for Accelerators, Alliance, Better Plants, Challenge, CIP, Communities, Home Energy Score, ISO 50001, and Workforce. Below the navigation bar is the title "NATIONAL LAB INNOVATION PORTAL". The main content area features a large image of a man in a suit looking at a large industrial machine. To the right of the image is a text box that reads: "The U.S. Department of Energy's national labs offer an unparalleled opportunity for public/private partnerships in research, testing, and publication. Through the national labs' user facilities, independent groups can take advantage of equipment and facilities in order to advance their own understanding and work. Interested parties are encouraged to reach out to relevant user facility contacts. Learn about the various methods to work with the labs and which one may be right for you." Below this is a section titled "Better Plants Technology Days: Connecting Industry with the national labs" with a background image of a person wearing a VR headset. At the bottom, there are three columns of text: "Get to Know the National Labs" (DOE's 17 national labs are spread across the country; find the ones closest to you and learn about their core capabilities.), "How to Partner with the National Labs" (Explore DOE's Lab Partnering Service, which provides interested parties a single location to connect with leading national lab technical experts to quickly answer innovation questions and discover opportunities for building partnerships through several mechanisms.), and "National Lab User Facilities" (National lab user facilities are federally sponsored research facilities available for external use to advance scientific or technical knowledge; learn more about user facilities with industrial relevance at various national labs.). Each column has a corresponding button: "Access My National Lab", "Form a Partnership", and "User Facilities".

Advanced Technology Partnerships

Better Plants hosts events at National Laboratories to:

Tour World-Class Facilities

View Demonstrations of innovative technologies

Hear from experts and Industry peers

Learn about research partnerships

Network with BP partners and researchers



All of this also serves to provide field validation and inform AMO R&D efforts

ORNL in 2017



NREL in 2018



**LBNL/LLNL
in 2019**

ANL in 2020

Recognition and Solution Sharing

Better Plants works with partners to amplify their leadership and share successful, replicable solutions.

This year, Better Plants:

- Made 5 Better Practice and 8 Better Project awards
- Recognized goal achievers
- Published several Showcase Projects and Implementation Models
- Traveled to Partners plants
- Nominated partners for awards at IETC, ACEEE and others



General Mills Meets U.S. Department of Energy 'Better Plants Challenge' Goal 4 Years Ahead of Schedule

Fri, 05/17/2019 - 10:10am by General Mills

MINNEAPOLIS, May 17, 2019 (PRNewswire) — In 2012, General Mills set a 10-year goal to improve energy efficiency in the company's 26 largest U.S.-based plants by 20 percent (from FY12-FY22). Friday, the U.S. Department of Energy (DOE) announced that General Mills achieved its goal four years ahead of plan, with a total efficiency improvement of 20.4 percent since fiscal year 2012.



Better Plants Year in Review

235+

Better Plants partners,
across all 50 states

\$6.7B

Cumulative Better Plants
dollars saved

15

Goal-achieving partners who
have 'doubled-down' on success

12%

Better Plants percent of U.S.
manufacturing footprint

1,000

Partner solutions in the
Solutions Center

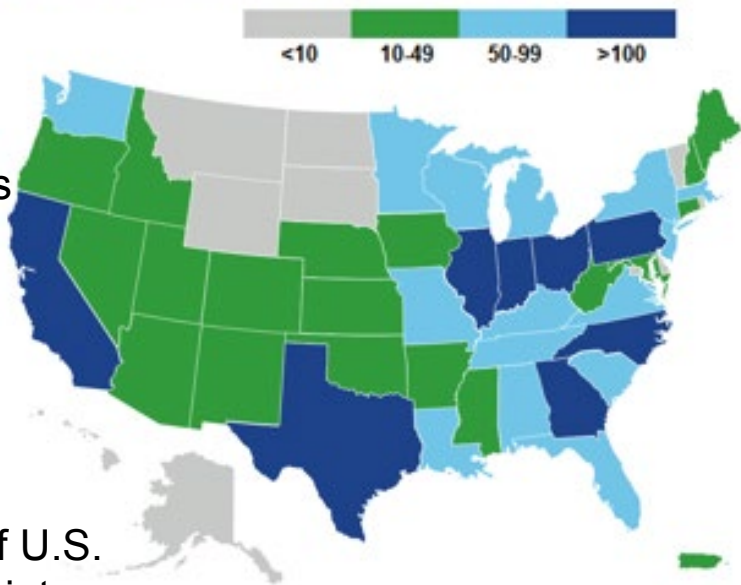
22

New partners

3,200

Number of facilities

Regional Distribution of Better Plants Facilities



Better Plants Challenge



Questions?

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