U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Guide for Better Buildings, Better Plants Program Partners

Taking a Bold Pledge to Reduce the Nation's Energy and Carbon Footprint

November 2011

Pledge Overview

The Better Buildings, Better Plants Program (Better Plants Program) is a national partnership initiative to drive a 25% reduction in industrial energy intensity in 10 years while decreasing carbon emissions and enhancing U.S. competitiveness. The initiative is led by the Advanced Manufacturing Office (AMO) within the U.S. Department of Energy's (DOE's) Office of Energy Efficiency and Renewable Energy (EERE). **Leaders of industrial companies are invited to take a corporate-wide voluntary Pledge to reduce the energy intensity of their industrial operations by 25% or more in 10 years.** By taking the Pledge, companies are recognized as Better Plants Program Partners and, in partnership with DOE, will work to improve energy management and identify the most cost-effective options for energy and carbon savings.

For companies that take the Pledge, DOE will:

- Help them learn about and move toward more rigorous energy management.
- Assign a technical account manager (TAM) and analyze key energy use data and metrics.
- Offer a portfolio of proven tools, trainings, and connections to state and utility resources.
- Promote an understanding of available energy efficient technologies and identify research and development (R&D) needs.
- Provide opportunities for recognition.

Company Pledge

Better Plants Program Partners must:

- Adopt a company wide goal to reduce energy intensity by 25% or more over 10 years
- Complete the following within 12 months:
  - Establish energy use and energy intensity baselines
  - Develop an energy management plan
  - Designate an energy manager
- Take steps to reduce energy intensity, thereby lowering related carbon emissions
- Report energy intensity and energy use data and achievements to DOE annually

In return, DOE expects companies to be active Program Partners, which means providing staff to work with DOE to identify and implement energy savings projects, making energy intensity reductions a priority throughout their organizations, and championing continuous improvement in energy management. This Guide introduces companies to the Better Plants Program in seven steps.

Step 1: Take the Better Plants Pledge

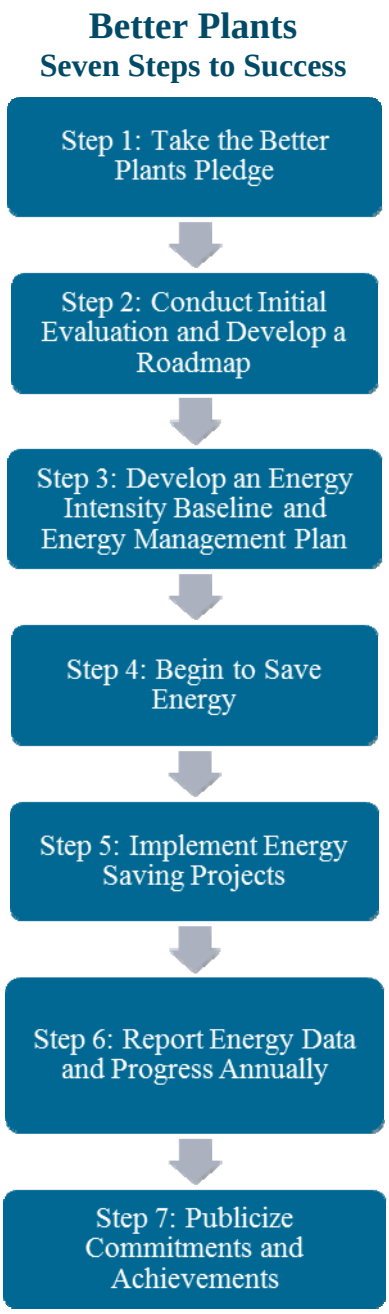
The first step in the process is for a senior executive to sign the voluntary Pledge to reduce the company's industrial energy intensity by 25% or more in 10 years. Once a company makes a corporate-wide commitment, it becomes formally recognized as a Better Plants Program Partner. The Program Partner will designate an energy manager at the corporation who will be DOE's point of contact for the partnership.

To learn more about the program and industrial energy efficiency:

- Read the Better Plants Program Frequently Asked Questions and see the Pledge Form.
- Email questions to BetterPlants@ee.doe.gov.
- Check the DOE Training Calendar for upcoming workshops, trainings, and webinars on energy management and other topics.
- Subscribe to Industrial News Updates to keep informed about AMO's offerings.

Step 2: Conduct Initial Evaluation and Develop a Roadmap

DOE will assign a TAM to organize and coordinate services that will be provided to each Program Partner. Program Partners will receive technical assistance from their TAMs. TAMs will help establish and analyze key energy use data and metrics for the development of baselines and plans, as well as the identification of emerging technologies applicable to plant operations.



In addition, AMO and its partners will offer Program Partners combined assessment and training programs in plant settings. These opportunities will educate participants about conducting energy savings assessments of multiple energy systems and training programs. Program Partners will learn how to identify and prioritize energy saving opportunities by using DOE tools.

The outcome of this evaluation step will be a roadmap of activities the company can pursue in order to meet its Pledge targets, a listing of DOE and other resources the company can tap into, agreement about how the TAM will communicate with the company, and regular progress reviews that measure how well the company is progressing toward the program goal. The TAM will also notify the company when new opportunities, programs, or resources (e.g., training courses, software tools) become available from DOE and others. Additionally, Program Partners will have the opportunity to apply for in-plant trainings that provide guidance on how to identify and prioritize energy saving opportunities, effectively implement and replicate energy saving projects, and integrate assessments into an energy management strategy.

Defining the Pledge Scope and Boundaries

Included in Pledge	Yes	No
Corporate-wide commitment	✓	
Manufacturing or industrial operations	✓	
Energy use in buildings and non-manufacturing facilities	✓	
Energy reductions outside of an entity's operational or financial control (e.g., suppliers, product distributors, etc.)		✓
Energy data from operations both inside and outside of the United States	✓	
Feedstock energy use		✓
Byproducts from feedstock energy used as a fuel source	✓	
Cogeneration	✓	
On-site electricity generation	✓	
Renewable energy purchases from off-site sources		✓
Renewable energy generated on-site	✓	

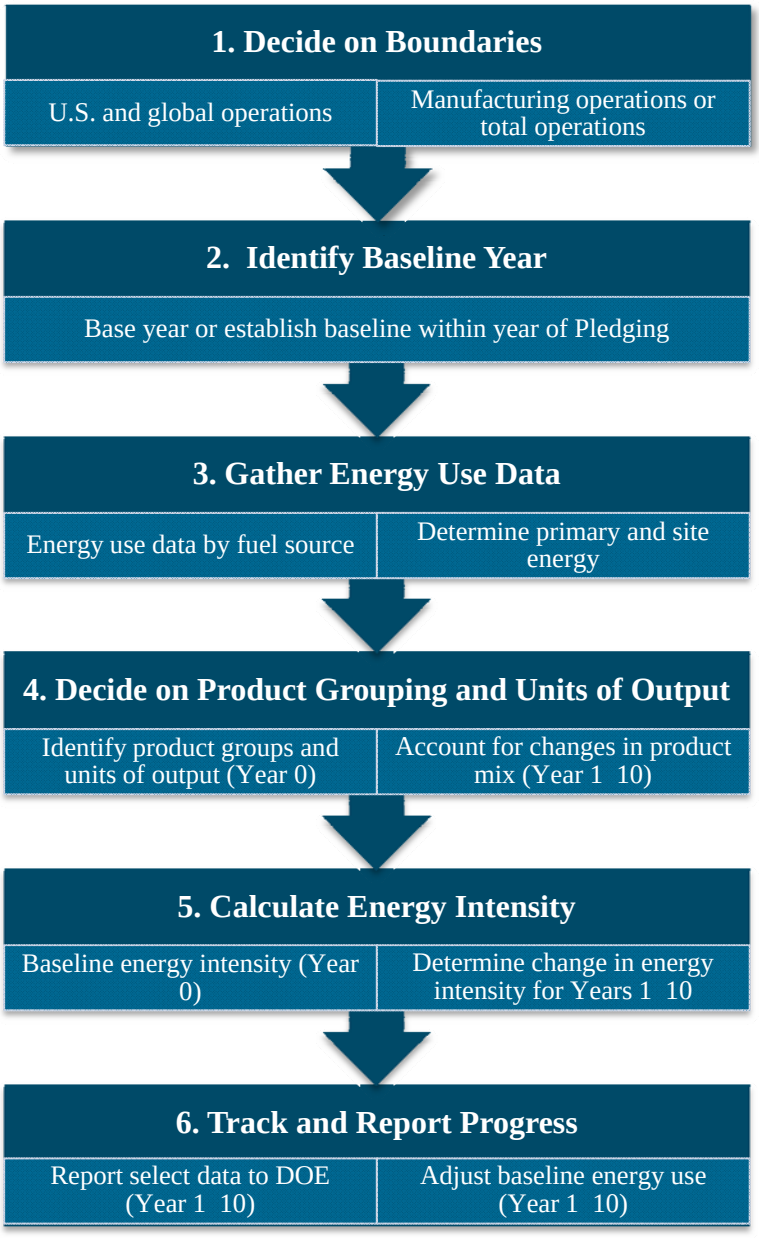
There are some limitations on the services that DOE can offer through this program. For example, AMO will not be providing direct financial assistance, grants, or loans to companies. DOE does, however, reserve the right to openly and competitively offer these services at times. In addition, DOE staff will not be able to conduct actual engineering or other similar work, but can instead provide access to experts that can offer independent assessments or verification of third-party proposals and recommendations.

Step 3: Develop an Energy Intensity Baseline and Energy Management Plan

Within one year of being a Program Partner, a company is required to establish an energy intensity baseline and energy management plan. DOE will offer guidance to help with both. **Energy intensity** is broadly defined as the amount of energy use per "unit of output." Examples of units of output include number of products, mass of products, size or volume of products, or functionality. DOE encourages companies to use physical units of output to determine energy intensity, but will allow companies to use financial units, such as revenue or value of shipments, in certain cases.

Program Partners must develop an energy use **baseline** and track the change in energy intensity throughout their participation in the program. A change in energy intensity is the annual incremental change in plant or organizational energy intensity from one year to the next, as compared to the base year. Companies without an existing baseline must establish both an energy baseline and an energy intensity baseline within one year of signing the Pledge. The baseline must be for the year in which the Pledge was made. Commitment to the Better Plants Program is intended to reduce industrial energy intensity by 25% during a 10-year period. Companies must strive to achieve new reductions within that timeframe, regardless of energy efficiency efforts implemented in the past.

Steps for Developing an Energy Intensity Baseline



DOE wants to ensure that baselines are set in a responsible and defensible manner without causing undue burden on companies and plants. Therefore, AMO is rolling out a new baselining tool in December 2011 that will allow companies to more easily track energy intensity improvements. This baselining and tracking module includes tools for corporate-level baselining and savings tracking, as well as facility-level and project-level tracking of performance and savings. DOE encourages companies to utilize the upcoming baselining tool; however, companies may also use their own methodology or a commercially available methodology.

An **energy management plan** is the corporate blueprint for achieving targeted energy reductions. A Program Partner will develop and maintain an up-to-date energy management plan for internal use only. Companies may use DOE guidelines or other publicly available energy management resources to prepare their plans.

Energy Management Planning Resources

- Access DOE's resources on energy management planning: www.eere.energy.gov/industry/bestpractices
- Use the Quick Plant Energy Profiler to profile and baseline your plant's energy use and identify ways to reduce energy consumption: http://www1.eere.energy.gov/industry/quickpep_ml/
- Access DOE's *Steps for Developing an Energy Intensity Baseline*: http://www1.eere.energy.gov/industry/saveenergynow/leader_baseline_guidelines.html
- Fill out the *Energy Intensity Assessment Matrix* to track energy intensity changes by product group*:* http://www1.eere.energy.gov/industry/saveenergynow/docs/energyintensityassessmentmatrix.xls&charset=utf-8&qt=url:eere.energy.gov/industry/saveenergynow
- Check out the following resources for developing an energy management plan:
  - AMO's Getting Started Web page: http://www1.eere.energy.gov/industry/bestpractices/corporate_energy.html
  - U.S. Environmental Protection Agency's ENERGY STAR® Guidelines: http://www.energystar.gov/index.cfm?c=industry.bus_industry

Step 4: Begin to Save Energy

Through the Better Plants Program companies have access to software tools, training, incentives, technical information, and more. Tools will be organized through a more dynamic and user-friendly online portal. AMO is revamping its suite of online tools and resources to:

- Support continuous improvement in energy management through International Organization for Standardization 50001 and Superior Energy Performance (SEP).
- Enable stakeholders to more easily track energy intensity improvement and report annually.

- Accommodate plants and companies at different levels of maturity in energy management.

Meeting the goal of reducing energy intensity by 25% in 10 years will be challenging for many companies, making long-term strategies necessary. To advance energy efficiency throughout industry, DOE collaborates with industry, associations, universities, and other stakeholders to fund R&D projects that seek breakthroughs in new technologies, manufacturing platforms, and industrial processes.

Saving Energy Resources

- Download software tools: http://www1.eere.energy.gov/industry/bestpractices/software.html
- Attend trainings on software tools: http://www1.eere.energy.gov/industry/bestpractices/training.html
- Read fact sheets and tip sheets for technical advice: http://www1.eere.energy.gov/industry/bestpractices/technical.html
- Explore case studies that highlight energy savings achieved by other companies: http://www1.eere.energy.gov/industry/saveenergynow/case_studies.html
- Scan the Energy Technology Solutions catalog: http://www1.eere.energy.gov/industry/pdfs/itp_successes.pdf
- Search the Industrial Assessment Center database for more than 113,700 energy saving ideas: http://iac.rutgers.edu/database/
- Access combined heat and power resources from eight DOE Regional Application Centers: http://www1.eere.energy.gov/industry/distributedenergy/

To learn more about funding opportunities:

- Search for solicitations offered by AMO: http://www1.eere.energy.gov/industry/financial/solicitations.html
- Search for federal grants that offer R&D opportunities: http://www.grants.gov/
- Find out how to partner with DOE's national laboratories and universities on R&D projects: http://www1.eere.energy.gov/industry/financial/laboratory_partnerships.html.

Step 5: Implement Energy Saving Projects

After identifying energy saving opportunities, DOE resources can help energy leaders/managers sell projects to their companies' corporate financial executives, find incentives for investments, identify alternative sources of funding, and implement projects.

For help with energy projects:

- Review the September 2011 Tuesday Webcast for Industry on how to create corporate support for energy efficiency projects: http://www1.eere.energy.gov/industry/pdfs/september_2011_webcast_for_industry.pdf
- Read tips on how to gain management support for projects: http://www1.eere.energy.gov/industry/bestpractices/energymatters/pdfs/em_volume23.pdf
- Search for financial solicitations offered by AMO: http://www1.eere.energy.gov/industry/financial/solicitations_active.html
- Search AMO's State Incentives and Resource Database to identify incentives for industry offered by states, utilities, and others: http://www1.eere.energy.gov/industry/states/state_activities/incentive_search.aspx
- Contact your trade associations, business organizations, or utility for information on industrial programs.

Step 6: Report Energy Data and Progress Annually

Each year, Program Partners must submit the Pledge Annual Reporting Form to report changes in energy intensity from the base year, primary energy use by type, and energy intensity improvements. A change in energy intensity is defined as the annual incremental change in energy intensity from the current year compared to the baseline year. Energy intensity must be based on primary energy use, which considers energy lost off-site during the generation, transmission, and distribution of electricity. Companies validate their own data; external validation by third parties is not required.

Reporting Requirements

Program Partners:
Report annually on primary energy use by fuel type, change in energy intensity based on primary energy use, number of participating plants, and more.

All data and information reported to DOE are confidential and treated as proprietary information. On an annual basis, DOE will make public certain aggregate, program-wide metrics, including total energy savings, average energy intensity improvement across all companies, and the percentage share of manufacturing energy footprint represented by Program Partners. DOE obtains company permission before using any data or information in case studies or other publications.

Reporting Resources

- Download the Pledge Annual Reporting Form (Years 1–11): http://www1.eere.energy.gov/industry/saveenergynow/docs/pledgeannualreportingform.xls
- Download DOE's *Steps for Developing an Energy Intensity Baseline*: http://www1.eere.energy.gov/industry/saveenergynow/leader_baseline_guidelines.html
- Access DOE's *Energy Intensity Assessment Matrix*: http://search.nrel.gov/cs.html?url=http://www1.eere.energy.gov/industry/saveenergynow/docs/energyintensityassessmentmatrix.xls&charset=utf-8&qt=url:eere.energy.gov/industry/saveenergynow
- Read the Pledge Frequently Asked Questions: http://www1.eere.energy.gov/industry/saveenergynow/pdfs/leaderpledgefaq.pdf

Step 7: Publicize Commitments and Achievements

Program Partners receive national recognition. Upon joining the program, partners will receive a welcome letter from DOE and be recognized on the Department's website. Companies that achieve an annual improvement rate equal to or better than 2.5% receive additional recognition, including a congratulatory letter from DOE and inclusion in an annual press release that highlights partner accomplishments. Upon achieving their 10-year target, Program Partners receive a letter and plaque from DOE.

Companies have unlimited opportunities for active participation and recognition. Promotional materials containing the Better Plants brand, advertising guidelines, and templates are available to help companies publicize their participation in the Pledge program, both internally and externally. Energy leaders/managers may want to share these materials with their corporate communications or public affairs departments.

Companies can promote energy efficiency beyond their own facilities by reaching out to their supply chain. Companies may also volunteer to speak at conferences and other events, write articles for newsletters and journals, or recruit other companies to join the program. DOE will provide resources to help a company explain the benefits of being a Program Partner to its suppliers and others.

Promotional Resources

- Review promotional materials, including a sample press release and text for websites
- Read the Better Plants *Branding Guidelines* document
- Let your technical account manager know if you would be available for speaking opportunities and media inquiries.

Companies participating in the Better Plants Program can also consider increasing their commitment by joining the Better Buildings, Better Plants Challenge—a national, multi-sector energy efficiency leadership initiative. Participating in the Better Plants Challenge provides higher-level recognition for companies that commit to enhanced levels of transparency and innovation in their approaches to energy efficiency and make a significant, near-term investment in an energy saving project or set of projects. To join the Challenge, companies are required to complete the following:

- Announce an energy efficiency goal.
- Announce an energy efficiency market innovation, which may include an energy savings capital set aside program, scalable approaches to SEP certification, supply chain engagement, emerging technology deployment, or other innovative solutions to persistent energy efficiency barriers.
- Conduct a near-term showcase project, which is defined as a significant energy savings project or set of projects at a single facility.
- Report and make public on an annual basis corporate-wide energy use, energy improvement, and energy efficiency investment data.
- Report and make public on a quarterly basis data on showcase projects and market innovations.

Companies that join the Challenge will be referred to as Challenge Partners. Companies interested in the Challenge level should contact Andre de Fontaine at DOE (andre.defontaine@ee.doe.gov; 202-586-6585).

Contact Information for Better Plants

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