



ENERGY STAR Challenge for Industry

Build a better world 10% at a time



Steps for Participation

If your company has not yet joined ENERGY STAR, consider joining the partnership and commit to energy management improvements across all your facilities. For more information, visit www.energystar.gov/join.

The ENERGY STAR Challenge for Industry is designed to award recognition to only individual industrial sites. To gain recognition in the ENERGY STAR Challenge for Industry, the site's company must be an ENERGY STAR partner.

Step 1: Identify an energy intensity metric

Start by identifying an energy use intensity metric that will be used to track progress towards the 10 percent reduction goal at each site.

The metric must capture the energy use intensity of the whole site – not individual processes or energy sources – and must account for all forms of energy (solid fuels, electricity, gases, etc.).

All energy should be expressed in British Thermal Units (BTUs), and converted from “site” energy to “source” energy. For more information, see [“Understanding Source and Site Energy”](#) on the ENERGY STAR Web site.

Energy loads at the site will need to be assessed in order to determine the proper metric.

- If 60 percent or more of the site's energy load is directly linked to industrial processes, then the intensity metric should reflect a measure of production – for example, BTU/pound of product. Sites are encouraged to use existing production-based energy intensity metrics as long as they meet the criteria mentioned above.
- If 60 percent or more of the site's energy load is due to non-production process utility systems – such as lighting, heating, and ventilation – then the energy metric should reflect a building metric, such as BTU/square foot. Sites using a building metric are encouraged to use [Portfolio Manager](#), which normalizes for building area and weather.
- For sites with energy loads not meeting either of these criteria, please select a metric most representative of the site's operations and provide a rationale for the metric to EPA.

Sites that wish to normalize production-based energy intensity metrics for other factors are encouraged and permitted to do so.

Step 2: Select an energy tracking method

Sites using a production-based energy intensity metric (BTU/product) are encouraged to use existing energy tracking systems. For sites that currently do not have a tracking system, EPA offers the **ENERGY STAR Energy Tracking Tool**. For industries where an **ENERGY STAR Plant Energy Performance Indicator (EPI)** is available, use the EPI to track and verify performance.

Sites using a building-based energy intensity metric can use EPA's on-line [Portfolio Manager](#) tool to track energy use, or another existing system that normalizes for weather. Within Portfolio Manager, sites must use the “Other” space type category option.

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Step 3: Set a baseline and 10 percent improvement goal

A full twelve-month period must be selected for the baseline year (e.g., April 2011 through March 2012). The baseline year represents your level of performance before the Challenge period.

The baseline for a site taking the Challenge for Industry must begin in the year prior to signing up for the Challenge. The baseline can be based on the immediate past year (e.g., a site signing up for the Challenge in April 2012 could set their baseline as January 1 – December 31, 2011) or another consecutive 12-month period such as the most recent 12 months (e.g., a site signing up for the Challenge in April 2012 could set their baseline as April 1, 2011 – March 31, 2012) or the most recent fiscal year. Sites are encouraged to consider a baseline period consistent with their company's energy data tracking cycle to make improvement calculations convenient.

To determine your baseline energy use intensity, begin by totaling the site's energy use across a full twelve months. If using a production-based metric (e.g., pounds of product), divide the total energy use by the total of that production metric (e.g., BTU/pound of product). If using a building-based metric (e.g., square feet of building area), divide the total energy use by the total of that building metric (e.g., BTU/square foot). The result of either calculation is the average annual energy use intensity for the baseline year.

After the baseline is set, calculate the 10 percent reduction target. For example:

Baseline annual energy intensity = 500 BTU/pound of product
Improvement goal = 10% (i.e., a 50 BTU/pound of product reduction)
Target annual intensity = 450 BTU/pound of product

Step 4: Establish an energy tracking plan

Tracking energy use over time requires some simple planning to assure accuracy. Use the **Challenge for Industry Energy Tracking Plan template** to create a basic plan to ensure proper data management and documentation if your company does not have existing procedures or processes in place.

Step 5: Sign up for the Challenge

Complete the online **Registration Form**.

Step 6: Track energy use and achieve the 10 percent reduction

Execute initiatives, projects, and other strategies to improve energy intensity while measuring their impacts through your tracking system. Use ENERGY STAR resources to help your site improve!

Step 7: Verify savings and apply for recognition

On achieving the 10 percent improvement goal, a Professional Engineer (PE) is required to verify the 10 percent reduction in annual energy intensity, and stamp and sign the **Statement of Energy Improvement**. As part of this process, the PE will review the Energy Tracking Plan, and the data used to calculate the baseline and subsequent improvement in energy performance.

Once the data has been verified, complete the online **Recognition Application Form** and mail the signed and stamped SEI to EPA with 4 month of the ending date for the final 12 month period of data tracked.

When the EPA has approved the application for recognition, you will be sent:

- ★ Letter of Congratulations on EPA Letterhead;
- ★ Certificate of Accomplishment; and
- ★ Communication materials.

Additionally, your site will be recognized publicly on the ENERGY STAR Web site, and a letter will be sent to your company's CEO.

Sites meeting the 10 percent reduction goal earn the right to distinguish themselves as achieving the ENERGY STAR Challenge for Industry.

For more information visit: www.energystar.gov/industrychallenge