

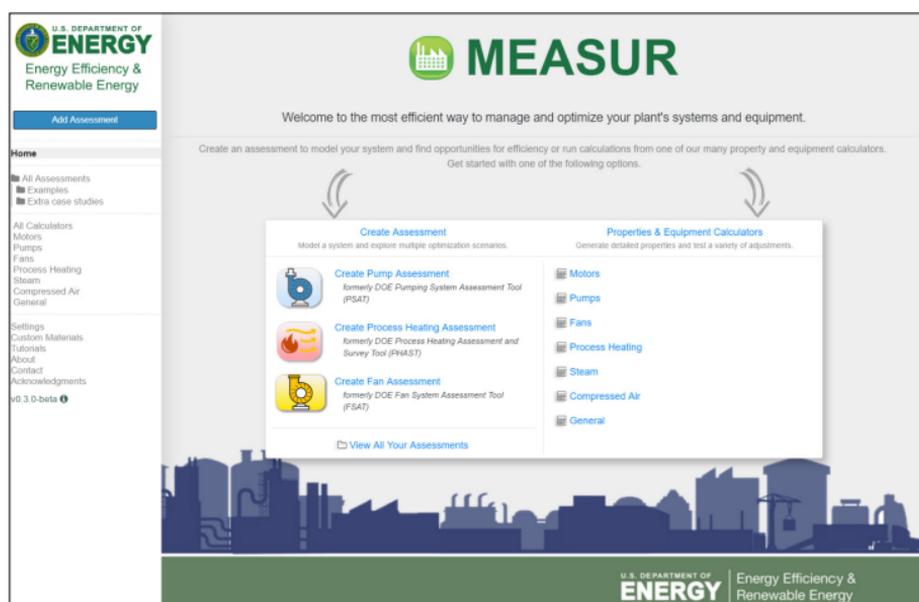
## DOE Energy Software Tools

DOE's Advanced Manufacturing Office offers a host of software tools to promote the identification and implementation of energy saving opportunities and energy management practices, including:

Energy Systems Analysis	Energy Management
PSAT (Pumps)	50001 Ready Navigator
FSAT (Fans)	Energy Footprint Tool
Compressed air (AirMaster+)	PEP (Plant Energy Profiler)
SSAT (Steam)	PWP (Plant Water Profiler)
PHAST (Process Heating)	Energy Performance Indicator (EnPI)
MotorMaster (Motors)	EnPI Lite

### DOE's Newest Resource: MEASUR

The MEASUR tool suite brings together all of the DOE's existing energy systems software to aide manufacturers in improving the efficiency of energy systems and equipment. The tool contains 40+ calculators and system modeling capabilities to analyze major energy systems such as Pumps, Fans, Compressed Air, Steam and Process Heat.



The screenshot shows the MEASUR web application interface. At the top, it says "U.S. DEPARTMENT OF ENERGY Energy Efficiency & Renewable Energy" and "MEASUR". Below that, it says "Welcome to the most efficient way to manage and optimize your plant's systems and equipment." and "Create an assessment to model your system and find opportunities for efficiency or run calculations from one of our many property and equipment calculators. Get started with one of the following options." There are two main options: "Create Assessment" (Model a system and explore multiple optimization scenarios) and "Properties & Equipment Calculators" (Generate detailed properties and test a variety of adjustments). Under "Create Assessment", there are three options: "Create Pump Assessment" (formerly DOE Pumping System Assessment Tool (PSAT)), "Create Process Heating Assessment" (formerly DOE Process Heating Assessment and Survey Tool (PHAST)), and "Create Fan Assessment" (formerly DOE Fan System Assessment Tool (FSAT)). Under "Properties & Equipment Calculators", there are several categories: Motors, Pumps, Fans, Process Heating, Steam, Compressed Air, and General. A sidebar on the left contains navigation links like "Home", "All Assessments", "Examples", "Extra case studies", "All Calculators", "Motors", "Pumps", "Fans", "Process Heating", "Steam", "Compressed Air", "General", "Settings", "Custom Materials", "Tutorials", "About", "Contact", "Acknowledgments", and "v0.3.0-beta".

### Download Links

- DOE Software Tools - [www.energy.gov/AMOTools](http://www.energy.gov/AMOTools)
- Open Source Code - <https://github.com/ORNL-AMO>

[www.energy.gov/AMOTools](http://www.energy.gov/AMOTools)

# MEASUR Tool Suite

## MEASUR Benefits and Features

Multiple Operating Systems	
Both Web and Desktop Interfaces	
Open-Source GitHub Repository	
Auto-Update Capability	
Enhanced Tool Interoperability	
Common Software Engine Library	
Crash Reporting to Assist in Debugging	

## MEASUR Capabilities

- Create assessments for major support systems: pumps, fans, compressed air, process heat and steam
- Compare multiple energy savings projects in a single analysis
- Prioritize energy improvement projects with quick, simple savings analyses
- Generic system diagrams to better understand your energy systems
- Display, print, or export info from the assessments including - inputs, graphs, Sankey diagrams, results, and facility info
- Generate custom graphs and Sankey diagrams for each scenario
- 40+ calculators for understanding and improving efficiency opportunities in specific equipment

## Future Training Opportunities

DOE is exploring and pursuing the following complementary training options::

Online Tool Tutorials	Developed for each tool (online video)
Better Plants In-Plant Trainings	Expanding deployment of In-Plant Training curriculum (classroom and in-field)
Expertise/Certification Training	Exploring 3 <sup>rd</sup> party development and implementation of professional certifications in key systems