



U.S. Department of Energy
Energy Efficiency and Renewable Energy

industrial technologies program

QuickPEP Tool Demonstration

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February 26, 2009

Agenda

- Introduction
- Plant Energy Profiling
- QuickPEP Demonstration
- New features in Quick 2.0
- Wrap Up

Plant Energy Profiling

- There are different levels of Plant Energy Profiling
 - 10,000 ft level – Overall Plant
 - Phone interview
 - 1-day plant walkthrough
 - **Using QuickPEP**
 - 1,000 ft level – System level
 - Gap Analysis (Qualitative only)
 - 1-day plant walkthrough
 - 3-day plant Energy Savings Assessments (ESA)
 - Using US DOE BestPractices System Tools

10,000 ft approach - The Big Picture in your Plant

- Looking at the forest first
 - Understanding your plant from an energy supply & demand perspective
 - Different supply streams
 - Different energy consumption (conversion) systems
 - Puts everything down on one piece of paper
- Limited resources
 - Time – major constraint
 - Available information

10,000 ft Approach

INPUTS

- Plant description
- Utility supply data – electricity, fuel & steam
- Energy consuming system information
- Scorecard responses



OUTPUTS

- Overall picture of plant energy use
- Summary of energy cost distributions
- Preliminary assessment & comparison
- Areas for energy efficiency improvement
- Energy cost reduction potential

US Department of Energy's

QuickPEP 2.0 Tool

Quick Plant Energy Profiler Tool

ONLINE ONLY

Website

*[http://www1.eere.energy.gov/industry/
bestpractices/software.html](http://www1.eere.energy.gov/industry/bestpractices/software.html)*

Industrial Sectors

NAICS No.	Industry
325	Chemicals
321,322	Forest Products
324110	Petroleum Refining
33111	Integrated Steel
311,312	Food and Beverage
212	Coal, Metal Ore etc.
3313	Aluminum and Alumina
336	Transportation Equipment
332	Fabricated Metals
334,335	Comp. Electronics and Appl.
326	Plastics and Rubber Products
	EAF Steel
313,314,315,316	Textiles
327130	Cement
333	Heavy Machinery
3272	Glass and Glass Products
3315	Foundries

Input Data Options

- Supply information
 - Average utility information
 - Actual utility bill information (worksheet)
- Energy consuming systems
 - Typical systems for that industry selected
 - User checked only
- Energy consumption (Demand) information
 - Average distributions for that industry selected
 - User can change the distributions
 - User can input actual energy consumption information, if available

Input Data Options

- Energy consuming system assessment for potential energy savings opportunities
 - Radio-button selection
 - User can complete a detailed score-card for a system

Output Data

- Case information
- Annual energy purchases: Graphical & Tabulated
- Annual energy consumption: Graphical & Tabulated
- Annual potential energy savings: Graphical & Tabulated

Output Data Options

- Formats
 - On screen display
 - “pdf” file
 - “qpep” file
- Tabulated results in energy (MMBtu) and cost (\$)
- Graphical results can be displayed in either energy or cost units

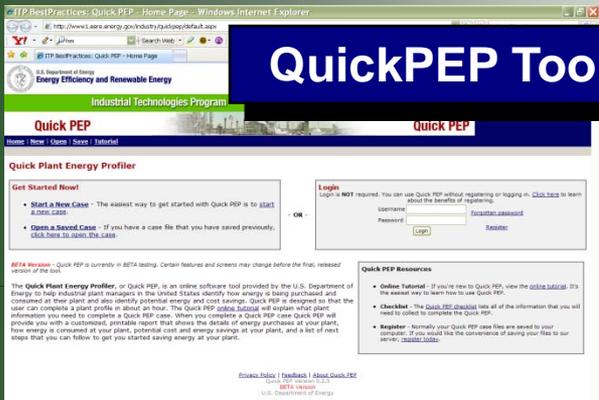
QuickPEP Tool Application



**QuickPEP Tool
Demonstration**

QuickPEP Tool Results

Establish Baselines



QuickPEP Tool

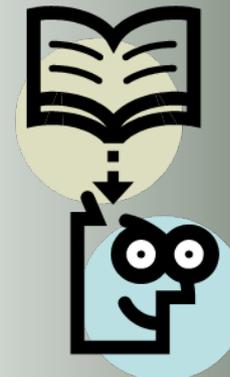
Identify Energy Savings



Opportunities By System

- SSST/SSAT
- 3E+
- N_xEAT
- PHAST
- PSAT
- FSAT
- CHP Tool
- AirMaster+
- MotorMaster+
- CWSAT

Help/References



QuickPEP - Summary & Conclusions

- Use a top-down approach at your plant with QuickPEP as a starting point to:
 - Understand energy flow
 - Identify cost impacts
 - Identify potential energy cost reduction project areas
 - Benchmark plants at a corporate level
 - Benchmark individual systems at the plant level
 - Monitor performance over a period of time

Summary & Conclusions

- Prioritize different energy systems based on energy savings potential and undertake an ESA on each of those systems
- Continue further due diligence to implement energy savings and performance improvement projects

Questions & Answers

