QuickPEP Tool Demonstration

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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
## Industrial Sectors

<table>
<thead>
<tr>
<th>NAICS No.</th>
<th>Industry</th>
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<tr>
<td>325</td>
<td>Chemicals</td>
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<td>321,322</td>
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<td>Food and Beverage</td>
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<td>212</td>
<td>Coal, Metal Ore etc.</td>
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<tr>
<td>3313</td>
<td>Aluminum and Alumina</td>
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<td>336</td>
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<tr>
<td>3272</td>
<td>Glass and Glass Products</td>
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<td>3315</td>
<td>Foundries</td>
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</table>
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

Identify Energy Savings

Opportunities By System

Help/References

QuickPEP Tool

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