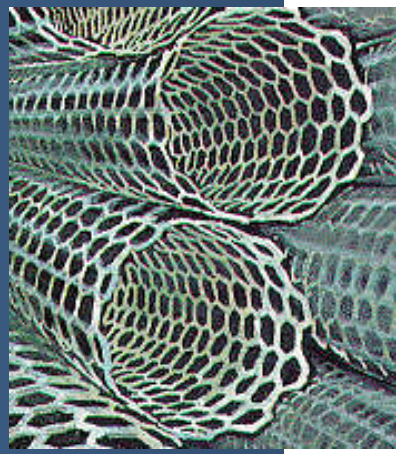
U.S. Department of Energy
Energy Efficiency and Renewable Energy
Bringing you a prosperous future where energy is clean, abundant, reliable, and affordable

Save ENERGY Now

A Discussion of New ITP Tools and Resources for Industry

July 12, 2011



Outline of Presentation

- Goals of ITP Tools program
- Current challenges
- The Energy Management "Toolkit"
- New tools planned for calendar year 2011
- Additional tool development activities

Goals of ITP Tools Program

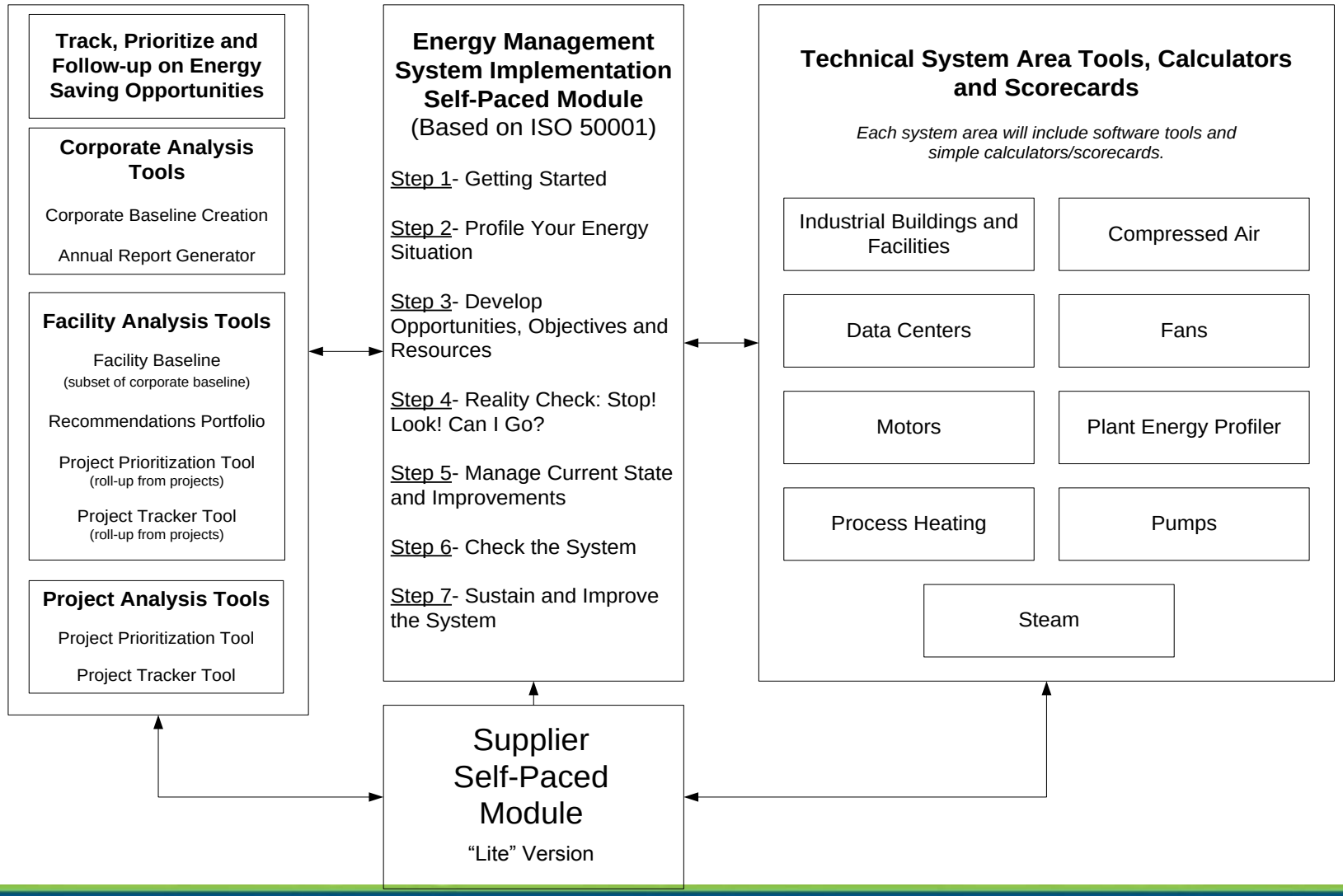
Support a reduction in industrial energy intensity of 25% in 10 years by offering software tools and resources for analyzing energy use and identifying energy efficiency measures.

Support access to these tools for all audiences – those just starting through those needing more sophisticated understanding.

Current Challenges

- Develop a systematic, self-paced approach to industrial energy management based on recent ISO 50001 standard
- Create a suite of resources that encourages a continuous improvement culture and energy savings opportunity tracking/ROI demonstration
- Upgrade existing tools to a more user friendly and up-to-date format (upgrade old software platforms, address security, mobile apps, etc)

Overall Energy Management Toolkit Structure



Energy Management Toolkit

- Enables a systematic approach to corporate, facility and/or plant energy management

- Will consist of:
  - Corporate, Facility and Project analysis tools focused on enabling the identification, tracking and follow-up of energy savings opportunities

  - Full and Lite versions of a Self-Paced Module
    - Full version is focused on helping plants develop an Energy Management System based on the new ISO 50001 standard
    - Lite version is focused on supply chain companies and companies new to energy management

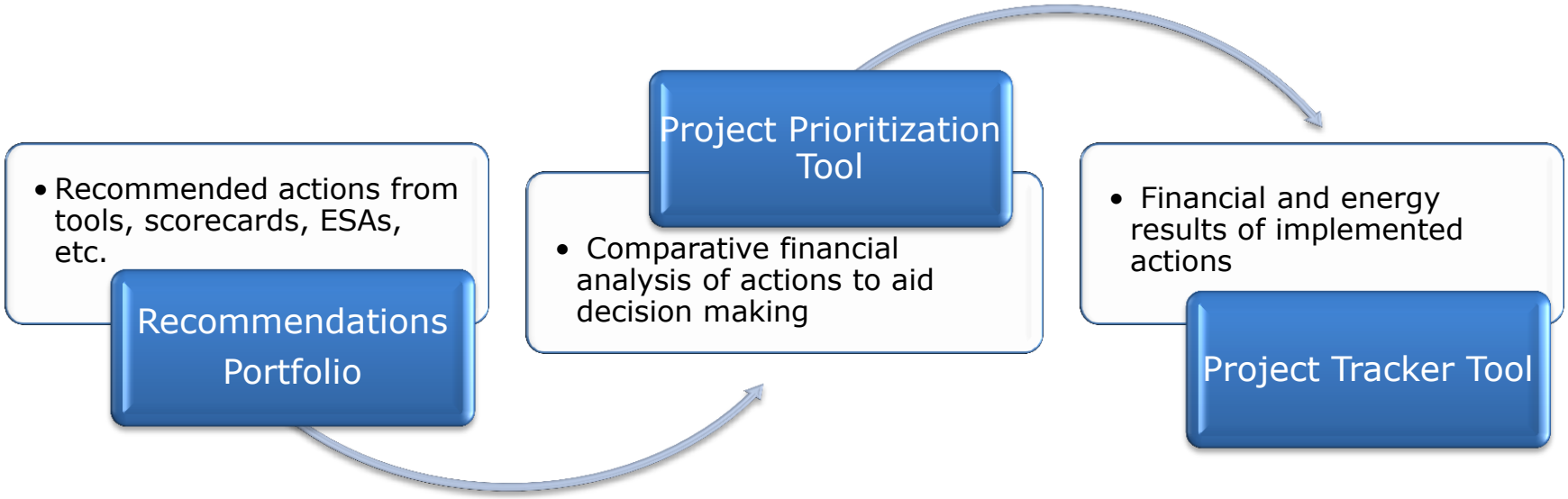
  - System area tools, calculators and scorecards (simple and expert tools)

Energy Management Toolkit

- User will be able to access resources:
  - Systematically, self-paced
  - Individually (go straight to tools they want to use)

- Site index will be provided
  - Example- User will be able to access simple calculators individually via the system area pages or view and all at once via the site index
  - Example- User will able to access all analysis tools via the self-paced process or individually via the site index
  - Example- Recommendations Portfolio, Project Prioritization Tool, and Project Tracker Tool will be available as part of the facility-plant-corporate analysis tools and also as the "Implementation Portfolio"

Implementation Portfolio



New Tools Planned for 2011

Tool	Planned Release Date	Description
Investment Payment Calculator- mobile application	August	A mobile application calculator that estimates the financial returns related to investments in energy savings projects.
Suite of small tools	August	A suite of 16 simple calculators that enable the user to quickly identify potential energy savings opportunities.
ePEP with active recommendations and links to DOE resources	October	The current ePEP (in beta testing until September) with links to system-focused tools and resources.
Self-Paced Module	October	A toolkit designed to take the user from the decision to implement an energy management system to successful implementation and beyond.
Recommendations Portfolio	October	A tool that enables users to track all recommended actions from tools, scorecards, ESAs, etc.
Project Prioritization Tool	November	A tool that enables comparative financial analysis of actions to aid decision making.
Buildings Profiler Tool	November	A new version of ePEP (in beta testing until September) that focuses on commercial buildings.

New Tools Planned for 2011 (cont'd)

Tool	Planned Release Date	Description
Supplier Self-Paced Module	December	This module will help companies learn the basics of better energy management- including understanding what kinds of energy they use, how they use it and how much of it they use. The module will also help companies improve their understanding of energy costs and increase their awareness of options to reduce current energy consumption.
Supply Chain Module	December	This module will focus on providing supply chain companies access to the tools needed to get started in energy management.
Baseline Tool/Energy Intensity Tracker	December	A tool to help companies and/or plants establish an energy baseline and then track subsequent progress in energy use reductions.
Building envelope Self-Paced Module	December	A version of the self-paced module that will be targeted toward commercial buildings. This module will focus less on ISO 50001 certification.

Energy Management System Implementation
Self-Paced Module

Feedback Sitemap Download Structure

Step 1 Getting Started > Step 2 > Step 3 > Step 4 > Step 5 > Step 6 > Step 7 Sustain And Improve The System

STEP 1.1 MAKE THE BUSINESS CASE

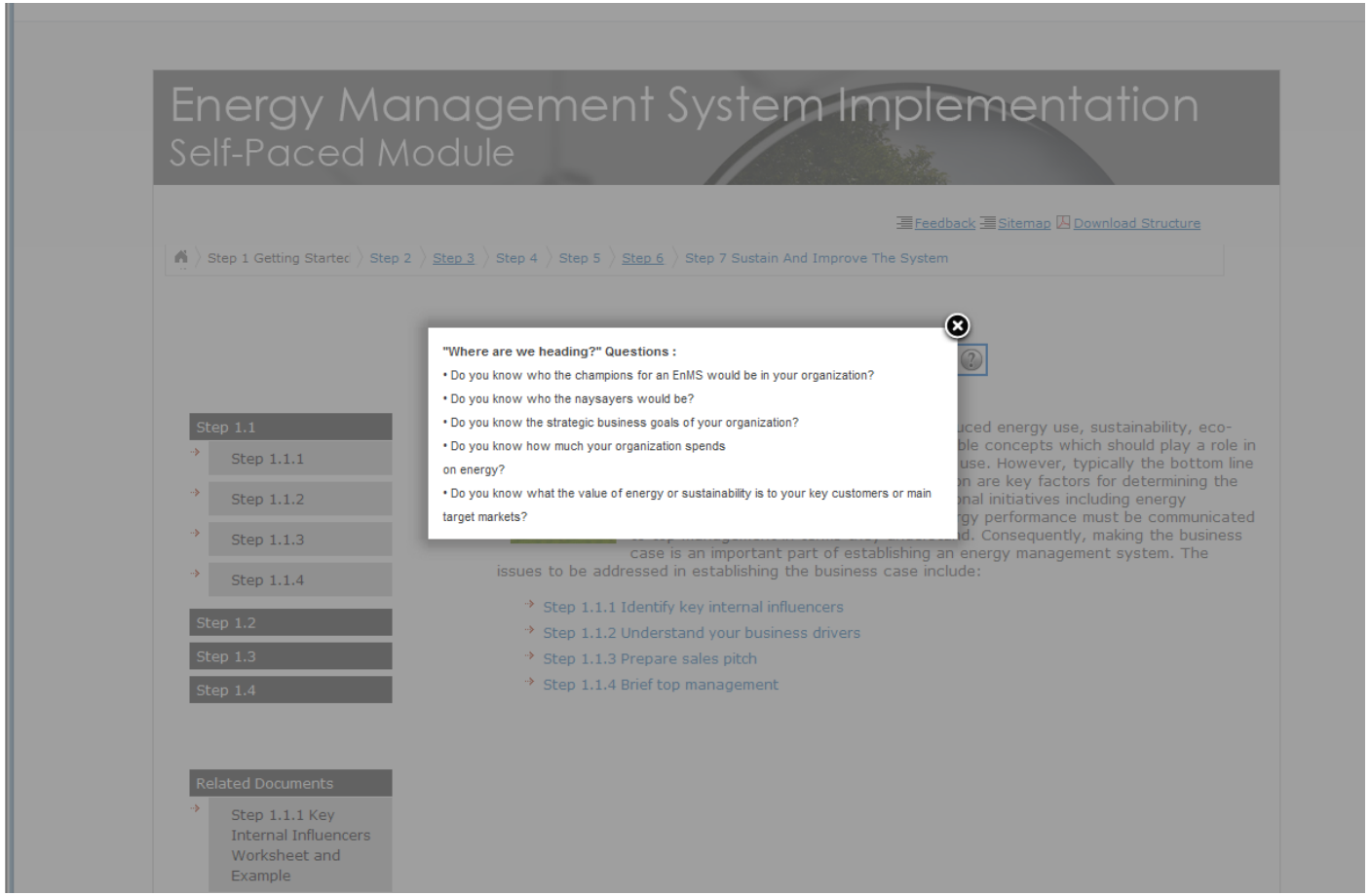
- Step 1.1
  - Step 1.1.1
  - Step 1.1.2
  - Step 1.1.3
  - Step 1.1.4
- Step 1.2
- Step 1.3
- Step 1.4

Related Documents

- Step 1.1.1 Key Internal Influencers Worksheet and Example

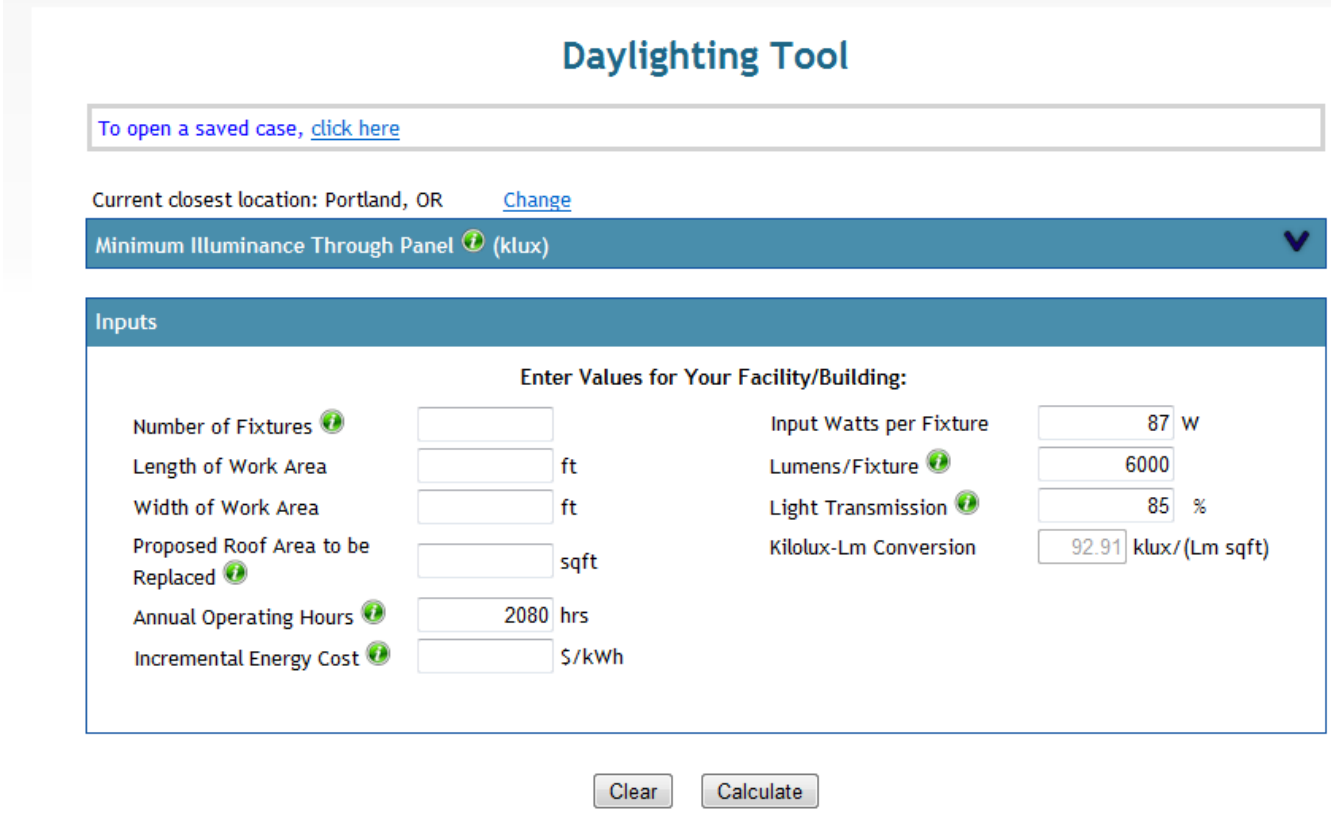
Energy management, energy efficiency, reduced energy use, sustainability, eco-conscious and environmental friendly are noble concepts which should play a role in an organization's efforts to minimize energy use. However, typically the bottom line and the long term viability of the organization are key factors for determining the amount of effort to be placed on organizational initiatives including energy conservation. The benefits of improved energy performance must be communicated to top management in terms they understand. Consequently, making the business case is an important part of establishing an energy management system. The issues to be addressed in establishing the business case include:

- Step 1.1.1 Identify key internal influencers
- Step 1.1.2 Understand your business drivers
- Step 1.1.3 Prepare sales pitch
- Step 1.1.4 Brief top management


Energy Management System Implementation
Self-Paced Module
Feedback
Sitemap
Download Structure
Step 1 Getting Started
Step 2
Step 3
Step 4
Step 5
Step 6
Step 7 Sustain And Improve The System
"Where are we heading?" Questions :
• Do you know who the champions for an EnMS would be in your organization?
• Do you know who the naysayers would be?
• Do you know the strategic business goals of your organization?
• Do you know how much your organization spends on energy?
• Do you know what the value of energy or sustainability is to your key customers or main target markets?
Step 1.1
Step 1.1.1
Step 1.1.2
Step 1.1.3
Step 1.1.4
Step 1.2
Step 1.3
Step 1.4
Related Documents
Step 1.1.1 Key Internal Influencers Worksheet and Example
case is an important part of establishing an energy management system. The
issues to be addressed in establishing the business case include:
Step 1.1.1 Identify key internal influencers
Step 1.1.2 Understand your business drivers
Step 1.1.3 Prepare sales pitch
Step 1.1.4 Brief top management

Small Tools Currently Being Developed

- Upgraded Industrial Facilities Scorecard
- Daylighting tool
- Fans VSD Calculator
- Pumps VSD Calculator
- Boiler Excess Air Tune-up
- Solar Photovoltaic Array
- Outside Air Intake Calculator
- Air Pressure Reduction Calculator
- Air Leak Loss Calculator
- Synthetic Lubricant Savings
- Waste Heat Recovery Calculator
- Vortex Nozzles for Cleaning
- Energy Savings for Low Demand Periods
- Solar Thermal Heating (Flat-Plate)
- Solar Thermal Heating (Parabolic-Trough)
- Notched V-Belt


Daylighting Tool
To open a saved case, click here
Current closest location: Portland, OR
Change
Minimum Illuminance Through Panel (klux)
Inputs
Enter Values for Your Facility/Building:
Number of Fixtures
Length of Work Area
ft
Width of Work Area
ft
Proposed Roof Area to be Replaced
sqft
Annual Operating Hours
2080
hrs
Incremental Energy Cost
$/kWh
Input Watts per Fixture
87
W
Lumens/Fixture
6000
Light Transmission
85
%
Kilolux-Lm Conversion
92.91
klux/(Lm sqft)
Clear
Calculate

Additional Tool Development Activities

- Upgrade of DC Pro
  - Upgraded version is currently in beta testing
  - Will be released in August 2011
- Upgrade of Quick PEP
  - Upgraded version (ePEP) is currently in beta testing
  - Will be released in September 2011
- Upgrade of PHAST 3.0
  - Currently developing draft requirements with tool developer, Arvind Thekdi
  - Planned released in late 2011/early 2012
- Upgrade of SSAT
  - Currently drafting requirements
  - No planned release date