DC Pro Software Tool Suite

Industrial Technologies Program

www.eere.energy.gov/datacenters

Quickly diagnose how energy is being used by your company's data center and how you might save energy and money with the Data Center Energy Profiler (DC Pro) software tool suite.
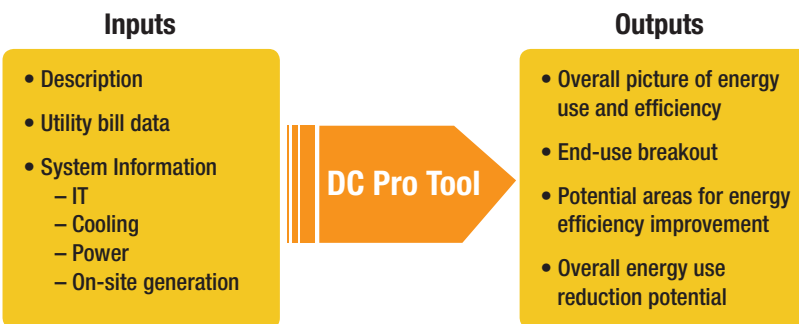
Developed through Save Energy Now, an initiative of the U.S. Department of Energy's (DOE) Industrial Technologies Program (ITP), the tool suite features a profiling tool and a set of system assessment tools to perform energy assessments on specific areas of a data center. It is free and available for download on ITP's Web site.

DC Pro Profiling Tool

Use DC Pro as a first step to identify potential savings and reduce environmental emissions associated with data center energy production and use. DC Pro is a scoping tool that gives you a general idea of where the energy is being used in your data center, identifies the best opportunities for energy savings, and compares the energy use with other data centers.

Based on the information you provide, DC Pro first assesses the energy use of the data center and then generates a report of potential energy savings. The DC Pro tool requires basic information about a data center, such as a description of the facility; utility costs; and system information on IT, cooling, power, and on-site generation. Once you have collected all your data, you can complete an energy use profile in about an hour.

The DC Pro tool features frequently asked questions, a checklist of data you will need to gather to input into the tool, and a tutorial to help you get started.

Inputs

| | DC Pro Tool | Outputs |

Inputs:
- Description
- Utility bill data
- System Information
  – IT
  – Cooling
  – Power
  – On-site generation

Outputs:
- Overall picture of energy use and efficiency
- End-use breakout
- Potential areas for energy efficiency improvement
- Overall energy use reduction potential

The **DC Pro Software Tool Suite** is just one resource offered by DOE to help companies work toward a goal of reducing data center energy consumption 10% by 2011.

Download tools and other resources at:
www.eere.energy.gov/datacenters
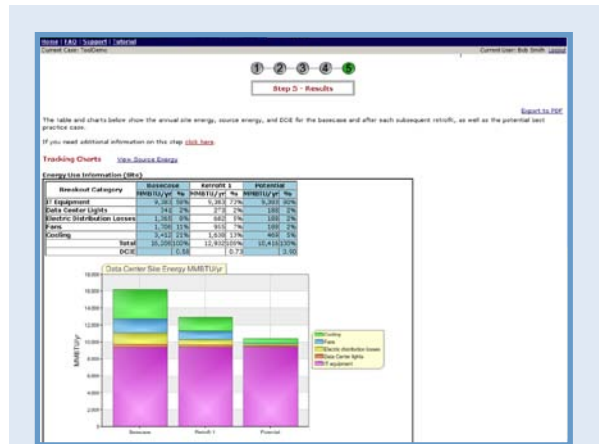
The final step in the DC Pro Profiling Tool process is the results screen, shown above. The tool generates a customized printable report that details:

- Average amount of energy that is purchased or generated on-site, and the cost of that energy
- Annual energy consumption, broken down by each major energy use system
- Potential annual energy and cost savings, categorized by each major energy use system; and how this energy use compares to that of other data centers
- Suggested next steps that could be implemented to save energy and costs.

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Save ENERGY Now

DC Pro Assessment Tools

In addition to the DC Pro Profiling Tool, you can use the following tools to conduct a more accurate assessment of energy efficiency opportunities for major data center systems.

Air Management Tool

Air management in data centers is important both for energy and thermal management. The data center air management tool is intended mainly for raised-floor cooling with hot/cold aisles. Use this tool to:

- Get air management recommendations
- Pinpoint the potential for reducing supply airflow rate and increasing supply air temperature—both of which have an impact on energy use—without affecting the thermal equipment environment in a negative way
- Estimate the percentage of energy reduction for fans and chillers.

Electrical Systems Assessment Tool

This assessment tool is designed to help data center owners assess the potential savings from efficiency actions in the electrical power chain of a data center, such as: transformers; generators; uninterruptible power supply (UPS); power distribution unit (PDU) devices. This tool estimates savings based on typical practice; actual savings will vary based on site-specific conditions.

Additional Resources

These resources can help you conduct your own data center energy use assessment:

- Data Center Energy Assessment Process—use this document as a step-by-step guideline for performing an assessment and see which DOE tools are available to help you with each step
- Master List of Actions for DC Pro—this working master list contains many of the energy efficiency actions addressed by the DC Pro tool suite that you can copy and paste into your data center assessment report
- Standard Report Template for Conducting a Data Center Energy Efficiency Assessment—this fill-able document provides a template for your own data center assessment report, including the type of data that should be included.

Find out more about DOE's partnership efforts to improve the efficiency of data centers, and sign up to receive updates and information about this initiative on our Web site: www.eere.energy.gov/datacenters.