

Data Center Certified Energy Practitioner (DC-CEP) Program

Developed by DOE in Collaboration with the Industry

The DOE Save Energy Now program is partnering with industry to develop a certification process leading to practitioners qualified to evaluate the energy status and efficiency opportunities in data centers. The key objective of the Data Center Certified Energy Practitioner (DC-CEP) Program is to accelerate energy savings in the dynamic and energy-intensive marketplace of data centers.

Overview

Energy Assessment Tools for data centers are currently being developed by the U.S. Department of Energy (DOE) under the Save Energy Now program for evaluating major data center systems. This suite of software tools called DC Pro is partially available now and will soon be fully available for use by anyone for identifying energy savings. Some data center operators may prefer to have assistance in the use of the Tools or contract for assessments by Data Center Certified Energy Practitioners.

The DC-CEP Program is driven by the fact that significant knowledge, training, and skills are required to perform accurate energy assessments in data centers. Benefits of using the Practitioners include consistency of qualifications and approach as well as a high level of repeatability and credibility of recommendations. Target groups for participating in the Program include employees of property management companies, engineering consulting firms, service companies, data center end users, state energy agencies, colleges, and utilities.

The DC-CEP Program is being defined, designed, and implemented by working closely with industry stakeholders. The first phase of the Program is scheduled to be developed during 2009 with a goal of performing the initial pilot training and certification in the last quarter. This phase will include the DC Pro Tools that are scheduled to be available this year. By 2011, DOE has set a goal to have certified at least 200 Practitioners.

Data Center Certified Energy Practitioners

The Practitioner is an individual who is trained on energy assessments in data centers. Key skills include design, operation, and diagnostics experience as well as measurement equipment techniques and data collection knowledge. The candidate needs to pass minimum qualifications and either one (Tier 1) or two (Tier 1 + Tier 2) certification exams, including demonstration of proficiency in the use of select tools in the DC Pro tool suite (Profiling Tool + System Assessment Tools).

The Tier 1 Practitioners will be expected to have a good understanding of all data center disciplines (electrical, air management, cooling, IT-equipment) for providing broad recommendations based on the high-level Profiling Tool. The Tier 2 Practitioners address energy opportunities using one or several of the in-depth System Assessment Tools covering the same four data center disciplines. The first phase of the Program will include the Tier 1 as well as the Tier 2 for cooling and air management (HVAC).

DOE and the industry collaborators plan to develop a candidate training curriculum, candidate exams, and a complete set of supporting Program documents, including an Assessment Manual for use by the Practitioners and a Tool Manual, an Engineering Manual, and a Data Collection Guide.

Candidate Training

Individuals who meet specific knowledge requirements and academic/work experience requirements will be eligible to participate in the Program, either at the Tier 1 or Tier 2 level. The Tier 2 level will require a PE, CEM, or equivalent as a prequalification. Since technical knowledge and experience is required for using the in-depth System Assessment Tools, the Practitioner candidates need to attend an obligatory training course before taking the Tier 2 exam. Training will include material from select technical discipline(s), including impact on reliability, and corresponding DC Pro Tool(s). A basic knowledge of remaining disciplines will also be required to effectively identify and quantify energy saving opportunities.

Becoming a Practitioner requires a passing score on the exam(s). Exam areas are the same as training areas plus case studies to test the use of the DC Pro Tools. Recertification every 2-3 years will be required to cover changing technologies, which is especially critical in data centers. Exam recertification will be required in some cases, e.g. major revisions of the DC Pro Tools whereas professional credit re-certification will be allowed in some cases, including number of performed assessments.

Organizational Structure

The organizational structure consists of several collaborative bodies. DOE/LBNL is taking the lead on development of training and exam content in close collaboration with the industry led by a Steering Committee. A third-party Certifying Organization will be the Program implementer and administrator of training and exam. This organization will also be responsible for maintaining a database of the Practitioners. The Certifying Organization is yet to be selected. Desirable characteristics of the organization include proven impartial status, technical core expertise, experience in certification programs, and established infrastructure for collaboration.

ANSI Accreditation

The credibility of the certification can be increased through ANSI accreditation of the Certifying Organization, which assures that principles of openness, due process, and balance have been followed. Recognizing that the administrative complexity and cost increases with accreditation, the Program will be structured as if the Organization is applying for accreditation but defer decision until economically viable. A viable business model is needed for the Certifying Organization.

For more information, please sign up to be contacted.