Management

CDCEP®

Certified Data Center Energy Professional

BTEC Level 5 Professional Diploma

educon

90% 75% 55% 25% 15%

Certified Data Center Energy Professional (CDCEP®)

Certified Data Center Energy Professional (CDCEP®)

5 DAY PROGRAM

Program Overview

Become an expert in data center energy management.

Learn how to create an energy efficiency plan for your data center. Includes creation, implementation, analysis and formulating recommendations with the ultimate objective of reducing energy use and carbon emissions.

The Certified Data Center Energy Professional (CDCEP®) program considers the global focus on how energy prices and environmental protection is driving the need to reduce energy wastage through greater efficiency. It is of utmost importance and an issue that continues to be foremost in the minds of those operating data center facilities.

The five-day program teaches expertise in energy efficiency and provides the tools to make a significant contribution to the energy strategy and effectively deal with, and manage, energy related issues and deliver efficiencies.

Strategically plan, design and implement an energy plan for data center facilities, focusing on energy efficiency. Learners will be introduced to current energy profiler tools and models to analyze site data and formulate a comprehensive action plan to implement real energy savings potential and capacity reclamation.

The use and distribution of power will be explored considering server and IT equipment, and how usage can quickly spiral out of control when it is not being measured, monitored and maintained correctly. In addition, the use of redundant and back-up power infrastructure will be analyzed considering the power utilization for air-conditioning, fire suppression, security, alarms and other supporting systems.

A certified CDCEP® also considers the requirements for compliance, having a full understanding of national and international regulations, codes, standards including the U.S. Department of Energy (DoE) standard. During the program, learners will be provided a valuable opportunity to access the latest industry standards.

Following this program, you are encouraged to continue your professional development by advancing your knowledge and skills to gain further official certifications and qualifications by progressing through The Global Digital Infrastructure Education Framework which maps education programs to career advancement throughout the network infrastructure and data center sectors.

Program Duration
5 day class requiring pre-class study of approximately 20 hours.

Learner Profile
This program is targeted at individuals who are responsible for the management and use of energy within a data center.

Pre-requisites
Experience of working within a data center environment is essential; preferably with two years experience in a technical IT or facilities role. If you would like to discuss your experience or suitability for this program please contact us.

Program Requirements
Learners are required to undertake pre-class study, which is fully supported by an experienced and dedicated online Tutor. Learners are also required to have a webcam enabled laptop or suitable device with unrestricted wireless internet connectivity, the latest internet browser and suitable applications for reading/annotating PDFs and editing standard office documents.

Program Objectives
Gain an unrivaled knowledge and forward-thinking approach to energy provision. Become an expert in the analysis of energy usage, identify opportunities for efficiencies, structure and implement a detailed energy efficiency plan.

Qualification
▶ Internationally and industry recognized BTEC Level 5 Professional Diploma Certified Data Center Energy Professional
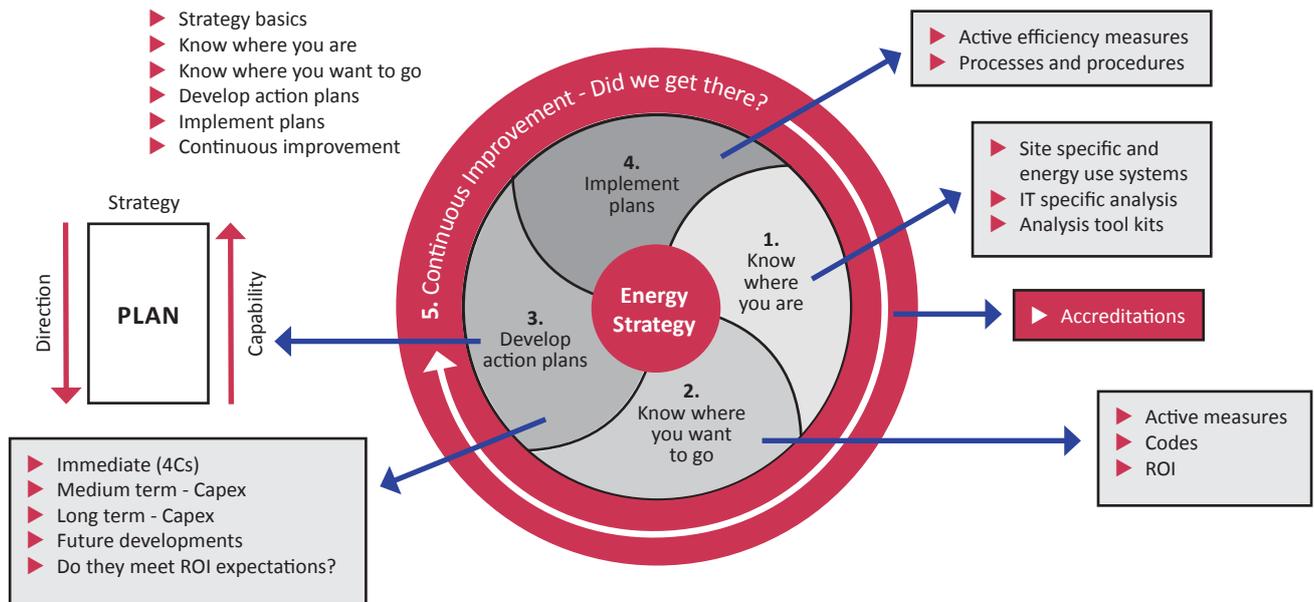
Certification
▶ Official Certified Data Center Energy Professional (CDCEP®) certification
▶ Use of CDCEP post nominal title
▶ Use of the CDCEP® logo
▶ Use of the official Certified Data Center Energy Professional (CDCEP®) Digital Badge

Certifications are a commitment to life-long learning and offer the perfect portal to ensure knowledge, skills and certification remain current and up-to-date. Each certification gained requires re-certifying every three years via a simple online system.

Additional Awards
▶ Continual Professional Development (CPDs)
▶ 7 IEEE Continual Education Units (CEUs)

CDCEP® Program Objectives

- Strategy basics
- Know where you are
- Know where you want to go
- Develop action plans
- Implement plans
- Continuous improvement

Strategy

PLAN

Direction

Capability

- Immediate (4Cs)
- Medium term - Capex
- Long term - Capex
- Future developments
- Do they meet ROI expectations?

5. Continuous Improvement - Did we get there?

- 4. Implement plans
- 3. Develop action plans
- **Energy Strategy**
- 1. Know where you are
- 2. Know where you want to go

- Active efficiency measures
- Processes and procedures

- Site specific and energy use systems
- IT specific analysis
- Analysis tool kits

- Accreditations

- Active measures
- Codes
- ROI

Certified Data Center Energy Professional (CDCEP®) Topics

CDCEP®

Need for Energy Efficiency?
- CO_2 emissions issues
- Impact of increased energy demand
- Data center constraints

Corporate Social Responsibility
- Understanding Corporate Social Responsibility (CSR)
- Implementation of ISO 26000

Energy Audits
- Energy audit process
- Primary audit environments
- Actions to improve energy efficiency

Energy Evaluation
- Understanding energy consumption
- Identification of areas of concern
- Evaluation and modeling sources

Achievable Expectations & Energy Forecasting
- Achievable expectations
- Industry best practices
- Analysis and calculations
- Forecasting growth

Energy Metrics
- Need for metrics
- Current industry metrics
- New proxy metrics

Capacity Reclamation
- Understanding design parameters
- Importance of the four key constraints
- Decommissioning
- Capacity management

KPIs & Metrics
- Defining KPIs
- Selecting and preparing KPIs
- KPI measuring models

Business Continuity
- Business continuity considerations
- Site selection considerations
- Energy efficiency considerations

Energy Strategy
- Energy efficiency policy
- Energy efficiency strategy
- Energy action plan & management review

Energy Efficiency Plan
- Elements of the energy efficiency plan
- Continual monitoring

Delivery of the Energy Efficiency Plan
- Deployment of the energy efficiency plan
- Measuring, monitoring and reporting
- Energy efficiency procurement

Site Specific Energy Audits
- Audit direction
- Site specific audit plans
- Key energy audit areas

Energy Use Systems
- Major energy use systems
- Energy profile changes
- Optimization actions

System Specific Analysis
- IT analysis
- Power infrastructure analysis
- Environmental analysis
- Cooling analysis

Analysis Toolsets
- Data center toolsets

Active Energy-Efficiency Measures
- Establishing an energy baseline
- Measuring and monitoring
- Data analysis and energy plan preparation
- Real-time monitoring

Return on Investment
- Return on Investment (ROI)
- IT value
- Financial planning
- Total Cost of Ownership (TCO)

Codes & Best Practice
- U.S. Department of Energy (DoE) standard
- EU Code of Conduct

A Strategy for Energy Management
- Energy management roadmap
- Energy management team
- Energy awareness

Immediate Energy Actions (4C's)
- Importance of the four key constraints
- Identifying the immediate concerns
- Actioning the immediate concerns

Medium-Term CAPEX Actions
- IT measures
- Cooling measures
- Power measures
- CAPEX & ROI impacts

Long-Term CAPEX/OPEX Actions
- Long-term power efficiency
- Long-term cooling efficiency
- CAPEX & OPEX evaluation

Processes & Procedures
- Process & procedure requirements
- Process & procedure monitoring and control

Future Technical Developments
- New developing technologies

Energy Efficiency Accreditations
- Environmental accreditations
- Energy accreditations
- Data center energy accreditations

There are a number of group and individual case studies to formulate energy efficiency plans throughout this program.