

Management



Certified Data Centre  
Energy Professional

BTEC Level 5  
Professional Diploma



Customer Focused ▶▶▶  
Quality Driven ▶▶▶▶▶

The **Global Leader** in **Technical Education**  
for the **Digital Infrastructure Industry**

## Certified Data Centre Energy Professional (CDCEP®)

### 5 DAY PROGRAM

#### Learner Profile

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

#### Pre-requisites

Experience of working within a data centre 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 a suitable application for editing standard office documents such as Microsoft Word, PowerPoint, and Excel.

#### Program Objectives

Gain an unrivalled 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.

#### Program Duration

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

#### Qualification

- ▶ Internationally and industry recognised BTEC Level 5 Professional Diploma Certified Data Centre Energy Professional

#### Certification

- ▶ Official Certified Data Centre Energy Professional (CDCEP®) certification
- ▶ Use of CDCEP post nominal title
- ▶ Use of the CDCEP® logo
- ▶ Use of the official Certified Data Centre 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 an online learning management system.

#### Additional Awards

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



## Certified Data Centre Energy Professional (CDCEP®)

### Program Overview

Become an expert in data centre energy management.

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

The Certified Data Centre 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 centre 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 centre facilities, focusing on energy efficiency. Learners will be introduced to current energy profiler tools and models to analyse 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 analysed considering the power utilisation for air-conditioning, fire suppression, security, alarms and other supporting systems.

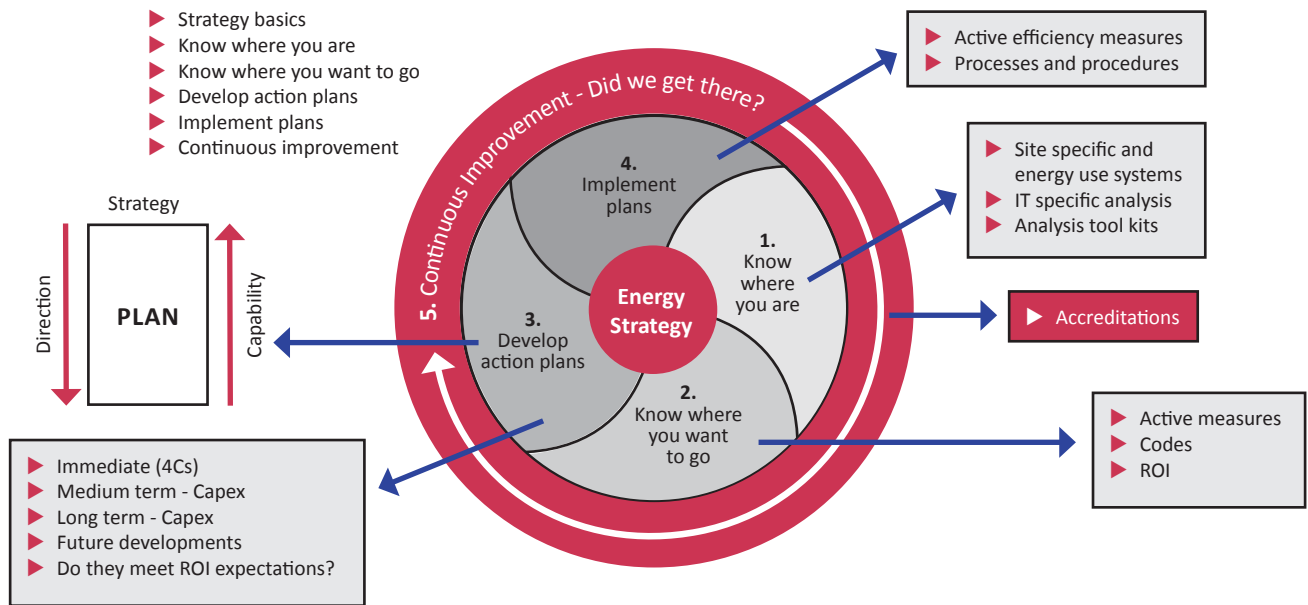
A certified CDCEP® also considers the requirements for compliance, having a full understanding of national and international regulations, codes, standards including the U.S. Department of Energy (DoE) standard. During the program, learners will be provided a valuable opportunity to access the latest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



Certificate no: 0959T3

# CDCEP® Program Objectives



## Certified Data Centre Energy Professional (CDCEP®) Topics

### CDCEP®

#### Need for Energy Efficiency?

- ▶ CO<sub>2</sub> emissions issues
- ▶ Impact of increased energy demand
- ▶ Data centre 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 modelling 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
- ▶ Optimisation actions

#### System Specific Analysis

- ▶ IT analysis
- ▶ Power infrastructure analysis
- ▶ Environmental analysis
- ▶ Cooling analysis

#### Analysis Toolsets

- ▶ Data centre 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) standards
- ▶ 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 centre energy accreditations

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