

# Energy and Cost Management

3 DAYS ⌚ 21



This course explores the effective use of energy by software, ICT systems and support infrastructure, within the data center. It covers best practices and strategies to control and manage energy efficiency.

## Learning Outcomes

Upon successful completion, students will be able to:

- Discuss electricity consumption and rates from a data center perspective, sustainability and monitoring industry organizations
- Discuss building and data center codes, carbon taxes and the climate change agreement
- Identify the corporate drivers for energy management, corporate and social responsibility, brand management, etc.

- Define and explain the basic metrics for data center efficiency, including DCIE and PUE
- Explain data center maturity
- Identify key roles and responsibilities in the energy efficiency initiative within a data center
- Define efficiency imperatives in the design of a data center
- Explain the role of IT equipment within the data center
- Discuss IT power management and

device environments according to ASHRAE

- Apply basic energy efficiency management techniques to the areas of IT, cooling and electrical systems
- Analyze the capabilities and limitations of metrics
- Report data center costs



## 5 reasons to choose our courses:

- 1** Courses aligned to international standards
- 2** Expert instructors with over 10 years experience
- 3** Interactive learning experience
- 4** Blended learning solutions (classroom and online)
- 5** Specialist career progression tracks for advanced learning

## Who should attend?

Any person involved in the management of mission critical IT and telecoms infrastructure, or those involved in design consultancy, including:

- Data Center Operator
- Data Center Design Consultant
- IT Architect
- IT Purchaser
- Environmental Champions within IT Department

Professional Development Hrs	21
Exam	1 hour, open book
Pre-requisites	Recommended 1-2 yrs verifiable experience in a data center/ computer room environment
Suggested progression	Critical Operations Professional

Price - \$2850 | €2150 | £1750

**"The course leader was passionate and kept students engaged throughout the three days."**

GREG BYRNE,  
Data Center Manager,  
Deutsche Bank

# Course Content

## Macro Global Energy Trends Overview

- Electricity consumption
- Electricity rates
- Data center perspective
- Sustainability
- Industry organizations

## Building and Data Center Codes

- Codes
- Carbon taxes
- Climate change agreement

## Data Center Energy – Business Drivers

- Revenue drivers
- Cost drivers
- Brand and reputational drivers
- CEO view
- Environmental drivers

## Measurement and Metrics

- Measurement and monitoring
- Data center facility metrics
- Sustainability metrics
- IT metrics
- Future metrics

## Data Center and IT Managing Metrics

## Data Center Maturity

- Data center maturity model
- Data center maturity model metrics

## Data Center Costs

### Holistic Management and Roles

- Roles
- Holistic management
- Data center units
- Resilience
- Service levels
- Load vs efficiency

### IT Equipment (Server, Storage, Network) Server

- Storage
- Network
- Software

### IT Power Management and Environmentals

- IT power management
- IT device environmentals
- ASHRAE 2008 update
- ASHRAE 2011 update
- Other factors

### Cooling and Electrical System Efficiencies and Future Trends

- Airflow management
- Best practices and ROI
- Heat rejection
- Economizers
- High temperature and high efficiency
- Humidity
- Electrical system efficiencies

