



DCEP Generalist Training

- 7:45 Registration (15 minutes)**
- 8:00 1. Generalist Training Introduction (30 minutes)**
Objectives
Overview
Resources
- 8:30 2. Data Center Profiler (DC Pro) Overview (40 minutes)**
Introduction to Benchmarking and PUE
Overview of DC Pro
Introduction to PUE Estimator
- 9:10 3. IT Equipment (40 minutes)**
IT Equipment Energy Use
Provisioning and Minimizing Waste
Best Practices
- 9:50 Break (10 minutes)**
- 10:00 4. Air Management (60 minutes)**
Environmental Specifications and Metrics
Airflow and Temperature Management
Best Practices
- 11:00 5. Cooling Systems (60 minutes)**
DX and Chilled-Water Systems
Liquid-Cooled Systems
Best Practices
- 12:00 Lunch (60 minutes)**
- 1:00 6. Electrical Systems (50 minutes)**
Causes of Energy Inefficiencies
Electrical Power Chain
Best Practices
- 1:50 7. Assessment Process Manual (20 minutes)**
DCEP Assessment Process Manual
DCEP Assessment Process
- 2:10 Break (10 minutes)**
- 2:20 8. Data Center Profiler (DC Pro) Case Study (40 minutes)**
Input Steps
Results
Abbreviations and Acronyms
- 3:00 Exam (120 minutes)**
- 5:00 End of Generalist Training/Exam**

DCEP HVAC-Specialist Training (Day 1)

- 8:00** **Registration (15 minutes)**
- 8:15** **9. HVAC Specialist Training Introduction (30 minutes)**
Overview
Resources
Performance Metrics
- 8:45** **13. Air Handlers and Air Conditioners (80 minutes)**
HVAC Systems Overview
Airside Economizers
Indirect Evaporative Coolers
Energy Efficiency Opportunities
Best Practices
- 10:05** **Break (10 minutes)**
- 10:15** **14. Liquid Cooling (70 minutes)**
Why Liquid Cooling?
When to Consider Liquid Cooling
Cooling Configurations
Best Practices
- 11:25** **Lunch (60 minutes)**
- 12:25** **15. Chilled Water Plants (60 minutes)**
Metrics to Identify Energy Efficiency Opportunities
Optimizing Energy Usage
Design Considerations for Data Centers
Best Practices
- 1:25** **16. Cooling System Controls (45 minutes)**
Temperature, Humidity, and Airflow Control
Cooling Plant Control
Feedback and Diagnostics
IT Equipment Integration
Best Practices
- 2:10** **Break (10 minutes)**
- 2:20** **17. Assessment Process (60 minutes)**
Role and Purpose of DCEPs
Objectives of DCEP Assessment
DCEP Assessment Process
- 3:20** **18. Modeling Data Center HVAC Systems (75 minutes)**
Levels of Modeling Detail
Modeling Energy Usage
Annual Energy Usage vs. Annual Energy Cost
Abbreviations and Acronyms
- 4:35** **End of HVAC Specialist Training Day 1**

DCEP HVAC-Specialist Training (Day 2)

- 8:00 Registration (15 minutes)**
- 8:15 10. Environmental Requirements (45 minutes)**
Temperature and Humidity Specifications
Recommended and Allowable Ranges (ASHRAE/NEBS)
Compliance Metric RCI
Best Practices
- 9:00 11. Airflow and Temperature Management (80 minutes)**
Air Management Goals and Results
Energy vs. Thermal Performance
Air Management Measures
High-Level Air Management Metrics
Data Gathering and Management
Best Practices
- 10:20 Break (10 minutes)**
- 10:30 12. DOE Air Management Tool (80 minutes)**
DOE Tool Suite
DOE Air Management Tool
Application Example
Input Steps and Results
- 11:50 Lunch (60 minutes)**
- 12:50 Exam (180 minutes)**
- 3:50 End of HVAC Specialist Training/Exam**

