



Electrical Demand Side Management (DSM)



International Association
for Health and Occupational Safety
and the Environment



Course Introduction:

Electricity is critical for continued economic growth in the Middle East. The demand for electricity and installed capacity has increased rapidly since eightieth of the last century. To provide for the countries growing electricity needs, Middle East electricity sector generation investment program calls for capacity additions and capital expenditures. By developing the least-cost mix of power sector resources to meet this growing demand, the Middle East can ensure the most productive use of its investment capital.

This program provides an introduction to demand-side management (DSM), which has been increasingly adopted by electric utilities in industrialized nations as a power sector resource and an option to traditional supply side investments. DSM is the planning, implementation, and evaluation of utility activities that are designed to encourage customers to modify their electricity consumption patterns with respect to both the timing and level of demand (kW) and energy (kWh). DSM thus mobilizes power sector resources on the customer's side of the meter. These resources can be planned, measured, and used to satisfy customer demand for electric services.

Course Objectives:

Upon successful completion of the course participants will be able to:

- Have a very good understanding of Demand Side Management (DSM) including the organization of this program
- Identify the steps in the DSM planning process
- Apply the DSM action and be able to select, implement & evaluate pilot DSM programs
- Learn how to conduct market assessments through market & load research, compilation of data and market segmentation analysis
- Assess DSM potential using DSM technologies and measures
- Understand the detailed program design and be able to know the differences between pilot and full-scale programs
- Know the process of assessing and selecting DSM resources and be able to understand program implementation and the various management issues related to DSM
- Perform program evaluations for DSM including its planning, implementation and presentation

Who Should Attend?

- Electrical Manager Engineers who are concerned with planning and R&D.
- Senior and junior engineers who are concerned with the power system design and operation planning including those who are working within the distribution centers.

- High qualified technician who are involved with the operation advanced technology.
- Electrical engineers and highly qualified technicians whom working in electrical distribution, transmission, operation and protection of the electrical power systems.

Course Outline:

DAY ONE:

- **Introduction - Overview of the Course**
- **Introduction to Demand Side Management**
 - Overview of DSM
 - The US Experience with DSM
 - The Potential for DSM in Developing Countries
- **Organization of this Program**
- **The DSM Planning Process**
- **The DSM Action**
 - Situation Analysis and Load Shape Objectives
 - Institutional Framework Development
 - Market and Load Research and Analysis

DAY TWO:

The DSM Action (cont'd)

- DSM Measure Availability
- Program Design Activities
- Selection, Implementation, and Evaluation of Pilot DSM Programs
- Full-Scale Program Implementation
- Case Study: A DSM Action Plan for Indonesia
- **Market Assessments**
 - Market Research
 - Load Research
 - Compilation of Data
 - Market Segmentation Analysis
- **Assessing DSM Potential**
 - DSM Technologies and Measures
 - Identifying; and Screening DSM Measures
 - *Technical Potential*
 - *Economic Analysis*
 - *Market Potential*
 - Measure Screening

- Case Study: Measure Screening in Poland

DAY THREE:

- **Program Design**
 - Differences between Pilot and Full-Scale Programs
 - Formulating Program Concepts
- **Detailed Program Design**
 - Determining Measure Eligibility
 - Details of Program Delivery
 - Detailed Design of Financial Incentives
 - Detailed Design of Program Marketing
 - Program Management and Data Tracking Systems
- **Jamaica Case Study**
- **Assessing and Selecting DSM Resources**
 - Economic Benefit/Cost Analysis
 - Financial Benefit/Cost Analyses
 - *The Participant Perspective*
 - *The Utility Perspective*
 - *The Ratepayer Perspective*
 - Environmental Considerations
 - Social Considerations
 - Customer Class Equity
 - Selecting the Resource Portfolio

DAY FOUR:

- **Program Implementation and Management Issues**
 - Getting Started
 - *Organization and Coordination*
 - *Staffing the DSM Organization*
 - *Alliance with Other Government Agencies*
 - *Operations Support Resources*
 - *Communications Plans*
 - *Strategy to Build Market Infrastructure for DSM Implementation*
 - *Lining Up a Long-Term Source of Financing for DSM Resource*
- **Managing Ongoing DSM Activities**
 - Managing Relations with Trade Allies
 - Expanding the Market Infrastructure for Program Delivery

- Using the Monitoring and Tracking System
- General Implementation Management Issues
- Potential Contributions of Advisory Bodies
- Application of Evaluation Results to Program
- Redesign and Operation

DAY FIVE:

- **Program Evaluations**
 - Evaluation Planning
- Evaluation Implementation
 - Impact Evaluation
 - Process Evaluation
 - Presentation of Evaluation Results

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work
- Discussion
- Presentation

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Fees:

To be advised as per course locations. This rate includes participant's manual, Hand-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Timings:

Daily Course Timings:

08:30 - 08:50	Morning Coffee/Tea
08:50 - 10:20	First Session
10:20 - 10:40	Recess (Coffee/Tea/Snacks)
10:40 - 12:20	Second Session
12:20 - 12:40	Recess (Coffee/Tea/Snacks)
12:40 - 14:30	Last Session
