

Course Overview:

This course will focus on the economic forces that drive utility decisions. We will explore the structure of the utility business and focus on profitable utility operations, for both ratepayers and shareholders. This course will describe how utility management makes cost & revenue decisions and optimizes power system economics based on those decisions.

Participants will attain a basic knowledge of generation economics to meet power system demand and will learn the impact of transmission and security constrained dispatch. This course will provide a general overview of operational costs including fuel and how these prices impact utility economics.

Course Objective:

- Understanding power market structure and interaction with production costs.
- Basic economic concepts, including application to electric utilities such as discounting, carrying
- Charges, cost-benefit analysis, rates & pricing, and integrated resource planning.
- Tools and techniques for economic studies including benefit/cost ratio determinations, comparing
- How generators are modeled (with assumptions) for commitment & dispatch purposes.
- How generator features & functions can impact system dispatch (including security constraints)

Course Outline:

- POWER PLANT CONCEPTS
- SIMPLE POWER PLANT
- BASIC ENERGY CONVERSION
- TRANSFERRING HEAT TO STEAM ENERGY
- CONVERTING STEAM ENERGY TO MECHANICAL ENERGY
- CONVERTING MECHANICAL ENERGY TO ELECTRICAL ENERGY
- HEAT AND ENERGY
- COMBUSTION BASICS
- PLANT OPERATIONS
- POWER PLANT ELECTRICAL PRIMER
- INVENTORY IMPACT AND COSTS
- SELECTING RELIABILITY & MAINTENANCE TACTICS
- DEVELOPING AND SELECTING PREDICTIVE MAINTENANCE SYSTEMS

Who Should Attend:

Engineers, managers, planners and analysts who work for power supply companies and who have to make investment decisions requiring a better understanding of how the power system impacts the economics of generation.

Training Language:

EN / AR

Training Methodology:

- Presentation & Slides
- Audio Visual Aids
- Interactive Discussion
- Participatory Exercise
- Action Learning
- Class Activities
- Case Studies
- Workshops
- Simulation