

## AMERICAN GLOBAL INSTITUTE FOR PRIVATE TRAINING

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EXTERNAL TRAINING COURSE FROM 2020 TRAINING PLAN

## AMERICAN GLOBAL INSTITUTE FOR PRIVATE TRAINING



A Mechanical Engineering Training Course: <u>UTILITIES AND ENERGY SYSTEMS DESIGN AND PERFORMANCE IN</u> <u>REFINERIES AND PETROCHEMICAL PLANTS</u> From 08/03/2020 To 12/03/2020 UAE, Dubai, City Seasons Hotel 850 KD (For Participant Note Less Than 7 Participants) 950 KD (For Participant – (3-7) – Participants) 1100 KD (For Participant Less Than 3 Participants)

#### Description

This training course covers the process of Utilities and Energy Systems Design and Performance to assure adequacy, reliability, and economy. The course begins with an overview of the distribution system and its basic equipment. Next, the planning process is explored, step-by-step, emphasizing the importance of each step in achieving the desired outcome. An in-depth view of engineering economics is included to assure cost-effectiveness of the capital-intensive infrastructure. Since the planning process is necessitated due to changes in load, the process of performing and interpreting load forecasts is investigated. Finally, means of quantifying and measuring reliability will be presented so the reliability of the distribution can be properly assessed. Utility customers today are demanding higher reliability and lower costs, and this trend will undoubtedly continue for the next several decades. Effective planning techniques provide a means of meeting the customer demands of reliability and economy while better positioning the utility for adapting to future customer requirements. This training course presents proven planning methods which will benefit both the utility and its customers. This training course will feature:

- Distribution System and Equipment Overview The Planning Process
- Engineering Economics

- Load Forecasting

- Reliability Assessment

#### Objectives

By the end of this training course, participants will be able to:

- Specify optimum distribution system topologies and equipment
- Conduct comprehensive planning studies
- Perform the calculations necessary to economically justify system improvement projects
- Implement and interpret load forecasts for distribution system studies
- Quantify reliability and assess progress toward achieving reliability goals

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### The Course Content

Day One:	
System Objectives and Hierarchy	Substation Equipment
System Topologies and Service Areas	Feeder Equipment
True System Costs	The Need to Automate
Day Two:	
Evaluation Methods and Criteria	Planning Methods
Sensitivity Analysis	Four-Step Process
Planning Horizons	Lead Times
Day Three:	
Time Value of Money	Cost-Benefit Analysis
Cash Flow Constraints	Asset Management
Cost of Losses	Reliability Centered Maintenance
Day Four:	
Objectives of Small-Area Load Forecasting	Sophisticated Trending
Informal Methods	Simulation Methods
Simple Trending	Putting it All Together
Day Five:	
Definitions of Industry-Standard Reliability Terms	Effects of Design and Operation on Reliability
Reliability Indices	
Relationship between System Protection and	Intelligent System Components
Reliability	Reliability Improvement due to Automation

### For More Details About Our Training, Consulting & Conferences Please Feel Free To Contact Our Training & Consulting Department