2. BEST PRACTICES IN POWER DISTRIBUTION SECTOR
(Proposed Dates: 14/11/2022 to 09/12/2022 {4 Weeks})

Duration: 4 Weeks

AIM

Power distribution forms most crucial chain of the entire power business. If this segment is able to demonstrate commercial viability and maintain uninterrupted power supply to customer, there is every possibility that the entire power sector will yield positive results. Therefore, there is necessity to modernize and adopt best practices in power distribution sector. The best technology application and practices will improve quality and reliability of power supply to customer besides, help in reduction of losses. Refurbishment of HV & LV Distribution system will increase customer satisfaction on the one hand and increase the revenue of the utility on the other.

OBJECTIVES

- Impart knowledge on best practices in construction of distribution systems
- Orient the participants with advance technologies and systems including IT applications and automation.
- Educate the participants on Standards of Performance and customer relation management.

CONTENTS OF THE COURSE

Introduction
Power scenario of India and its Organizational Structure
Planning of distribution system, Load Forecasting & Analysis

Construction, Operation & Maintenance of Distribution System
Specifications of materials and Construction standards for Distribution systems
Distribution Transformers – Operation & Maintenance & Failure Analysis
Indoor and Outdoor Switchgear – Installation and Maintenance
Adoption of Innovative and Cost Effective Technologies & low cost 33/11 KV SS
Safety Measures and Prevention of Electrical Accidents
Switched Capacitors – HT & LT, Reactive Power Compensation
Earthing System and Protection against Lightning, Surges and Transient

O & M Practices for distribution lines and Sub-stations including recent practices such as condition monitoring and hotline maintenance, Maintenance Free Distribution Transformers
Power System Protection & Relays coordination

Performance improvement of distribution systems
Energy Audit & Accounting
Energy Efficiency and Distribution loss assessment and Loss Reduction methodologies
Optimal Integrated Strategy for Loss Reduction and Voltage Improvement

Pilferage & Theft of Energy
Load management & Demand Side Management Techniques
HV Distribution System
Distribution Automation & SCADA and Distribution Franchising

Revenue management of Power distribution utilities
Issues and challenges in Metering, Billing & Collection
Electricity metering, billing & collection
Metering Technologies & Advancements
Recent Developments in Metering – Remote, Pre-paid & Pilfer Proof
Smart Metering and Spot Billing technologies

Power Quality & Customer Service
Quality of service and Power Supply
Standards of performance for power supply
Customer Relation Management & Consumer Analysis Tools (CAT)
SCADA & Integrated Customer Care Center

Information Technology (IT)
IT for Distribution Management
Management Information Systems (MIS) & Consumer Information System (CIS)
Geographical Information Systems (GIS) and Global Positioning Systems (GPS)
Smart Meter & Smart Grid
Mobile/Electronic enabled Services

Exercises

Voltage Regulation Calculations for 33 KV, 11 KV and LT Lines
Calculation of Line Losses in Distribution
System Improvement Schemes – Methodology
Load Flow Study

Field Visits

33/11 KV Substation & HVD Systems
Transformer & Meter Manufacturing Units