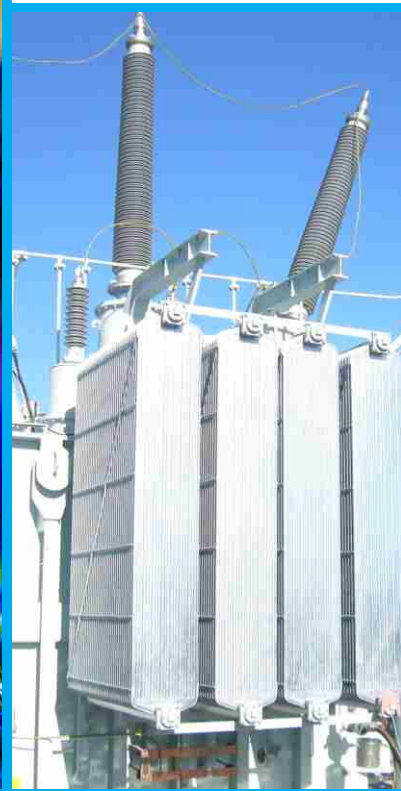


FUNDAMENTALS OF **Smart Metering**



What You **Will Learn...**

- Need for smart metering
- What smart metering means
- How to implement a smart metering system
- Technologies used in smart metering
- Components in a smart metering system
- What smart meter data management means

Course

STRUCTURE



“I would like to thank T&P Team of Smartbrains who helped me to get skill set on Electrical System Design. The learning experience was good and placement is excellent”

Zeeshan Ahmad

Ankit Electrotech Engineers Pvt Ltd, Noida

Day ONE

kWh and kVArh meters

- kWh meters
- After Diversity Maximum Demand (ADMD)
- Principle of operation of various kWh meters
- kVArh meters
- Various connections of kWh and kVArh meters
- Calculation of multiplier factor
- Apparent, active and reactive power calculation
- kWh and kVArh meters: testing and calibration

Introduction to smart metering

- Energy measurement
- Gas/water/heat metering
- Conventional meters
- Metering approaches
- Need of smart metering
- Features of smart metering

Basics of smart meters

- Definition of a smart meter
- Functions and features of smart meters
- Block diagram and design of smart meters
- Introduction of prepayment meters
- Tampering and security of meters
- Introduction to M-bus(EN13757) and wireless M-bus

Metering Technologies

- Metering technologies for smart metering
- Technologies used for communication
- Technologies for data storage
- Meter Data Management (MDM)
- Methods used for billing (tariff structure)
- Load control technology
- System architecture and implementation

Day TWO

Advanced Metering Infrastructure (AMI)

- Definition of AMI
- Advanced Meter Reading (AMR) solutions
- Implementing AMI
- Benefits of AMI
- AMI communication strategy
- Security aspects for AMI
- AMR vs AMI capability

Introduction of Smart Grid

- Need for smart grid
- Characteristics of smart grid
- Future of smart grid
- Features and implementation of smart grid
- Technologies for smart grids
- Smart grid milestones

Applications of smart metering

- Implementation of smart metering for water utilities
- Implementation of smart metering for gas utilities
- Study reports of smart metering for energy savings
- Designing of smart homes using smart metering
- Designing of smart premises using smart metering
- AMR used in submetering

Implementation of Smart Metering in Different Countries

- Smart metered countries
- Smart metering initiatives around the world
- Cost benefit analysis for AMI
- Case study and roll out of AMI trials for Australia

SmartBrains Oil and Energy Institute provides premium training courses for energy industry executives and fresh engineering graduates. Our success and distinguished reputation is thanks to our commitment to provide first-class programmes to our clients. Combining leading professionals from across the industry as lecturers and an interactive, practical format, the lessons learnt in a SmartBrains for Energy course are directly transferable back to the work place.

Our Strategic Objectives

To be recognized by industry and employers as a highly reputable training organization. Provide dynamic leadership, sound management and excellence in training. Continue to improve our services through quality management processes. Invest in and value our people through professional development activities. Grow our business through innovation and to continue to be financially secure. Be influential in the economic development of the industries we serve nation wise

Admission Requirements

- ▶ Duly Filled Application Form
- ▶ 2 Photographs
- ▶ Photo State of Qualifying Examination
- ▶ Address Proof
- ▶ I.D. Proof
- ▶ Latest Resume



Our Mission

“To provide quality training and assessment services and to prepare our students for a fulfilling professional career in their chosen industry. We are committed to upholding our values of providing excellence in training”

Declaration

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- ▶ SmartBrains has right to expel any student at any time for misbehavior, poor attendance without refunding the fees.
- ▶ Certification will be issued only after completion of course, submission of all assignments and passing all the examinations.
- ▶ SmartBrains has its own rules and regulations about conducting examinations and assessment of examinations

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