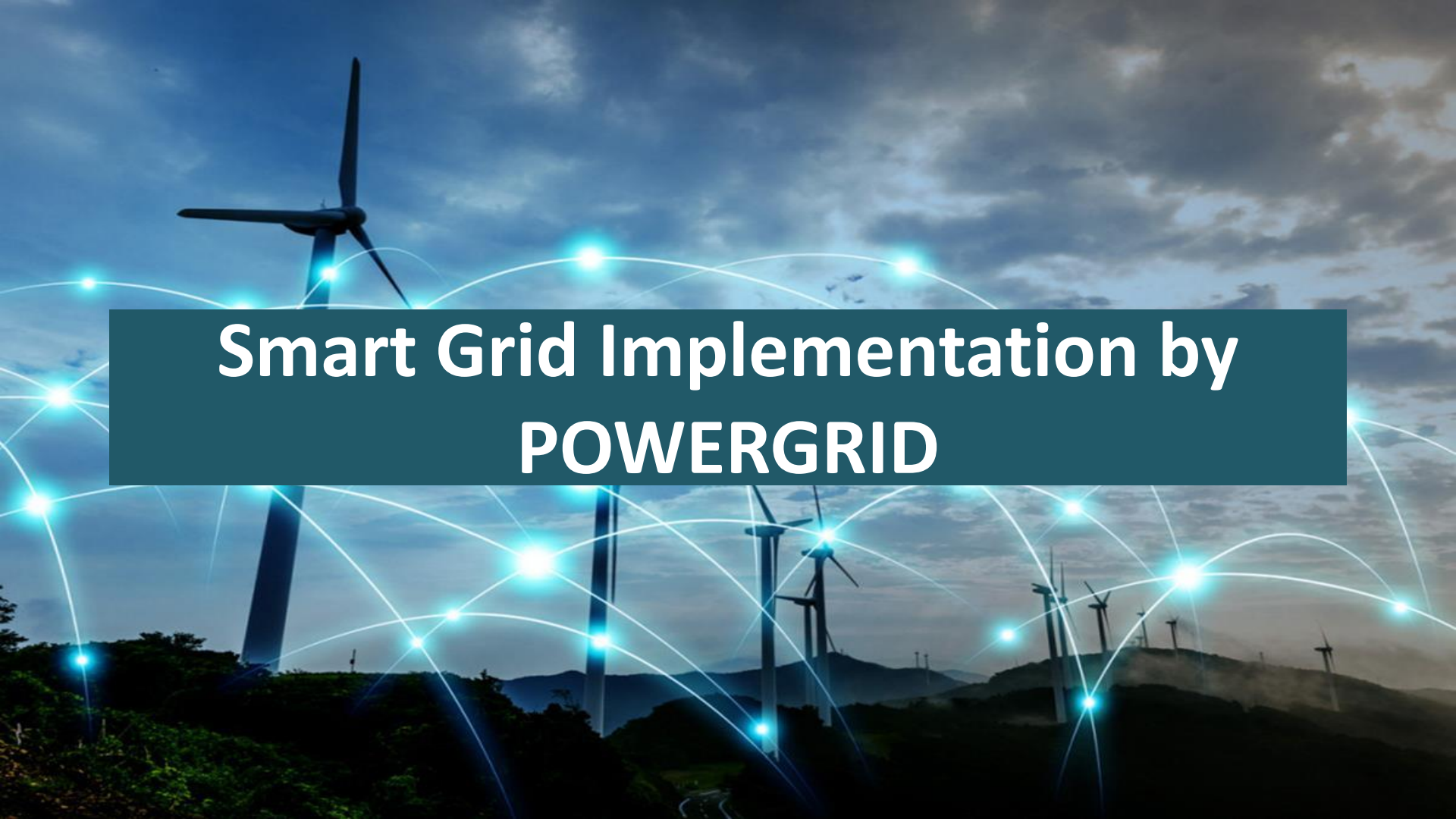

Smart Grid Implementation by
POWERGRID

# POWERGRID in Smart Grid Projects

- All attributes of Smart Grid implemented in Puducherry
- Developed Smart Grid Knowledge Center at Manesar
- Providing consultancy for following smart grid projects:
  - CESC, Mysore (AMI, OMS, SCADA)
  - TSECL, Agartala (AMI)
  - WBSEDCL, Siliguri (AMI)
  - UHBVN, Panipat (AMI, OMS SCADA)
  - HPSEB, Kala Amb (AMI, OMS, SCADA)
  - UGVCL, Naroda (AMI)
  - PED, Puducherry (AMI)
  - DHBVN, Gurgaon (AMI, OMS, SCADA)
- Implementing 11nos. REMCs for renewable integration.
- Experience in implementation of Distribution Automation projects.

# Smart Grid Knowledge Centre

## Demonstrable functionalities in Smart Grid Knowledge Centre

1. Advance Metering Infrastructure (AMI): Smart Meters along with different communication technologies (RF, PLC & GPRS)

2. Prepaid metering
   - Recharge through 16 digit pre-paid code
   - Recharge Online

3. Outage Management System  demonstration on a sample distribution network
   - Auto-Recloser
   - Sectionaliser
   - Fault Pass Indicator (FPI)
   - Distribution Transformer Monitoring Unit (DTMU)

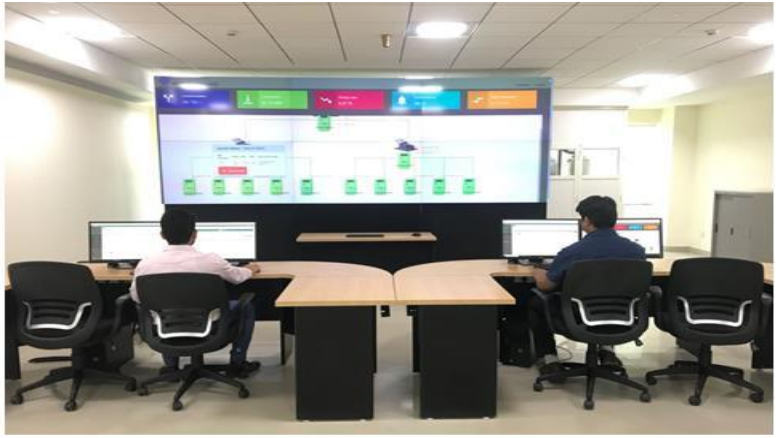
4. DC Microgrid

5. Renewable integration and AC Microgrid

5. Smart Home Automation System

6. Training lab to train Utility Engineers

# ….Smart Grid Knowledge Centre

# Scope of work in Smart Grid

- Advance Metering Infrastructure with state of the art communication system
- Data Analytics and Load Forecasting
- PLM to reduce peak demand
- Distribution Transformer Monitoring (DTMU)
- SCADA, DMS & OMS
- Substation Automation and RMUs
- Distributed Generation integration
- Power Quality Management
- GIS Mapping & Consumer Indexing
- Strengthening of Distribution infrastructure
- Reduction of distribution loss
- Energy Storage
- EV Charging Infrastructure

# Business Model for the Smart Grid Projects

- POWERGRID shall provide professional service and finance the Smart Grid Project
- No upfront investment by utility
- Procurement through e-tender with e-reverse Auction
  - POWERGRID shall carryout the project on turnkey basis.
  - Provides maintenance and service new consumers for 7-10 years.
  - POWERGRID can provide cloud or dedicated server based solution as per the choice of the utility.
  - POWERGRID shall carryout capacity building of the utility engineers and consumer engagement for active participation.
  - Utility to pay POWERGRID annuity or per meter per month based on the discovered cost.

# Thank You