



Ministry of Heavy Industries
Ministry of Power
Government of India

SUPPORTED BY



COUNTRY PARTNER



INTERNATIONAL PARTNER



FOUNDING PARTNERS



15th Edition
ELEC RAMA
Powering the Future of Energy



4th Edition
**World
Utility
Summit**
20-21 February 2023
Delhi NCR, India

SUSTAINABLE TRANSFORMATION OF UTILITIES

POSTER BOOKLET

World Utility Summit 2023



THE THEME

The theme of the World Utility Summit, (WUS) is “Sustainable Transformation of Utilities”.

This summit would bring in thought leaders across the globe to deliberate the preparedness of utilities to deal with the transformational changes. Regulators, technology providers, consultants, government bodies and utility leaders are expected to share their views on the various challenging and exciting scenarios and help shape the roadmap of the future utilities.

SUMMIT TRACKS:



■ Accelerating Digital Journey of Energy Ecosystem

Utilities get their revenues primarily via billing the customers for their demand and energy usage. New energy ecosystem, with multiple options for consumers to meet their electricity demand, will pose stiff competition to the utilities. Earlier for paying electricity bills a long queue has to be made but in today's era the process has been digitized. With the use of smart meters, every process is digitized and simple. The questions arise in what manner digitization of energy ecosystem will affect the consumers?



■ Best Practices in Asset Management

Proper asset management allows company to effectively provide their service to the nation. Any breakdown in this process brings the potential for catastrophic failure in the nation infrastructure. Proper asset management allows you to:

- Enhance the life of assets through proper maintenance
- Allows you to respond efficient during emergency situation
- Reduce operating cost in long term.

The four main pillar of the asset management are:

- Evaluate your system's asset
- Assess your current service level
- Identify your most critical component
- Map out your life cycle cost
- Develop maintenance plan



■ Enhancing the Utility System Resiliency

In this environment, the utilities, Government and others stakeholders needs to take longer and deeper look at building resilience to limit and mitigate the risk to customers. Protecting them from risk that threaten life, property and economic activities that can be costly. We would like to suggest important pillars in the effort to improve our Nations grid resilience.

- Smartening the Grid
- Hardening the Grid
- Distributed Generation
- Building resilience on demand



■ **Distribution Utilities of Future: Advanced Technologies for Business Transformation**

The Indian power sector is evolving at a fast pace and has undergone some major transformations in recent past aimed at improving grid efficiency, security, stability, and consumer experience. However, the distribution utilities remain the weakest link in power sector value chain. The deployment of advanced technologies such as smart-grids can reduce pilferage, enhance consumer participation, and realize more revenues through losses reduction, lower energy costs, and eliminate manual intervention. Further, the combination of advanced technologies, innovative market models and consumer engagement strategies can support solutions like grid interactive buildings and enable consumers to support the distribution utilities in managing the demand supply balance. Together, such technologies and solutions have the potential to transform the distribution utilities and accelerate the use of clean energy resources in power grids.



■ **Sustainable Practices towards Net Zero Utilities**

In current scenario, Energy and Utilities executives are working towards sustainable practices. Almost half of the energy and utilities respondents have committed to a net zero goal. The major driving factors for sustainable utilities are upcoming government policies favorable to consumers and industry, increasing consumer and shareholder demand, and Decreasing cost of renewable energy. The important question arises how the Utilities are building a sustainable future.



■ **New Energies (Common track with eTECH^{nxt})**

The Indian renewable energy sector is the fourth most attractive renewable energy market in the world. As of May 2022, India's installed renewable energy capacity stood at 159.94 GW which is 39.70 % of the overall installed power capacity. People everywhere are looking for new energy ideas to help them make energy smart decisions for the future. We believe in renewable Energy and changing the attitude and practices about the way people generate and use energy. Central to this is the discovery and development of alternative energy sources. This track will cover the latest developments in technologies, novel business ideas, grid dynamics, learnings from pilot demonstrations and working considerations associated with these technologies. The topic will emphasis on Green Hydrogen, Electrification of Transportation, Nuclear & Biomass.



**BSES Rajdhani
Power Limited**



BRPL drives the EV revolution in the National Capital



Facilitates installation of over 1600 EV charging points @ over 650 locations in South and West Delhi

S.No.	Charging Category	No. of Charging points	Number of locations
1	Public	486	165
2	Private	913	369
3	Captive	221	132
	Total	1602	666

BENEFITS:

Lowest prices

Subsidy under Delhi EV policy

Single window platform

Easy to apply

*Till January 31, 2023

Driving towards converting BRPL's vehicle fleet to EVs by 2030

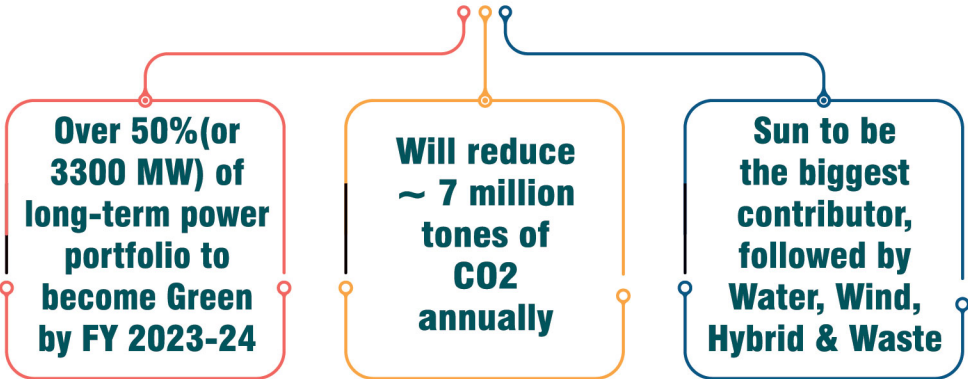


Venue: India Exposition Mart, Knowledge Park II, Greater Noida, Delhi NCR, India
Date: 20 -21 February 2023

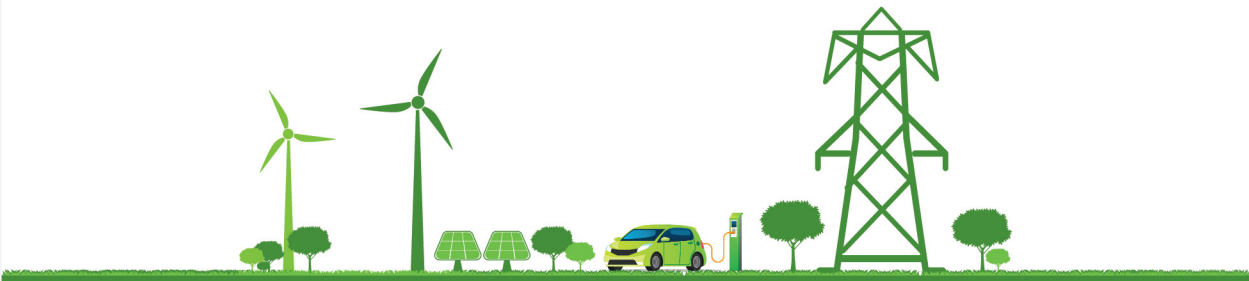




BSES to become one of the greenest discoms in the country



FY 2023-24	Source	Solar	Hydro	Wind	Hybrid	WTE	Total
	MW	1391	1015	650	210	40	3306
	% of Total Portfolio	22%	16%	10%	3%	1%	52%



Venue: India Exposition Mart, Knowledge Park II, Greater Noida, Delhi NCR, India
Date: 20 -21 February 2023





Shaping the future of sustainable Delhi through rooftop solar

Over 4000 (Over 105 MWp) rooftop Solar Net metering connections energized



Easy to apply at	Call	Email	MNRE national solar portal at
https://solar.bsesdelhi.com	19123 (Ext: 8)	netmetering.brpl@relianceada.com netmetering.brpl@gmail.com	www.solarrooftop.gov.in

Venue: India Exposition Mart, Knowledge Park II, Greater Noida, Delhi NCR, India
Date: 20 -21 February 2023



Adding flexibility in the distribution grid



Figure : From left, Battery enclosure, PCS / Inverter and ACDB / EMS enclosure



Figure : From left, Battery enclosure, PCS / Inverter and ACDB / EMS enclosure

**Installed at 6,
11KV/415
distribution
transformer
substation**

**Type of installation:
Customized separate
enclosures for battery
bank, PCS (inverter) and
ACDB incl. EMS (energy
management
system)**

**Lithium iron
phosphate
battery (LFP)**

**Main application:
Peak shaving,
energy time-shifting
arbitrage**

**Secondary application :
Reactive power support
and power factor
improvement**

**Project duration:
4000 cycles or 10
years, whichever
is earlier**

Venue: India Exposition Mart, Knowledge Park II, Greater Noida, Delhi NCR, India
Date: 20 -21 February 2023



BRPL commissions first-of-its-kind urban microgrid system in Delhi

100 KWp Solar PV + 466 kWh Battery Energy Storage System (BESS)

Microgrid is a part of the Indo-German Solar Partnership Project (IGSEP)

Estimated to reduce ~ 115 tonnes of CO₂ annually

Capable of operating in parallel with Grid supply & charging / discharging of BSES on demand through Solar or Grid supply

Production of about 1.5 lakh units of clean energy per annum



Venue: India Exposition Mart, Knowledge Park II, Greater Noida, Delhi NCR, India
Date: 20 -21 February 2023



Greening Delhi : Planted over 1,00,000 trees in south and west Delhi

**BRPL is doing its bit for the environment and the
rising pollution – one tree at a time!**



Venue: India Exposition Mart, Knowledge Park II, Greater Noida, Delhi NCR, India
Date: 20 -21 February 2023





Powering Opportunities for a Sustainable Future

ROBUST & RESILIENT NETWORK FOR DELIVERING 24X7 POWER SUPPLY

*Leveraging captive Optical Fiber backbone for enabling **Faster Restoration***

DIGITAL TRANSFORMATION

Faster restoration with futuristic technologies

Industry 4.0, Sensor based IoT devices, Augmented/Mixed reality, Drone, Digital Twins

Amplifying impact through Advanced Analytics

Predictive maintenance, Predicting HT Cable Faults, Social sentiment analysis, Revenue Protection.

High-touch Customer Experience for a No-touch World

Voice bot, Chatbot, WhatsApp bot, Social media, Website, Mobile app, Digital Services including Payments

Agile way of working & edge-based decision making

Workforce Automation through Workforce Management App, Business Process Automation through RPA

DECARBONIZATION

Transforming our Sub-stations/buildings to Green buildings

Battery Energy Storage System (BESS)

Co-creating EV ready network & supporting transformation to Electric cooking

DISASTER MANAGEMENT

Reinforcing robustness & Resilience of Network coupled with dynamic workforce


DECENTRALIZATION

Microgrid with Floating Solar & Battery Storage system

Block chain technologies for Demand Side Management solutions & Peer to Peer (P2P) energy management

WWW.CESC.CO.IN [/CESCLIMITED](https://www.linkedin.com/company/cesc-limited) [/CESCLTD](https://www.facebook.com/CESCLTD) [/CESCLIMITED](https://twitter.com/CESCLIMITED) [/CESC_LIMITED](https://www.instagram.com/CESC_LIMITED)



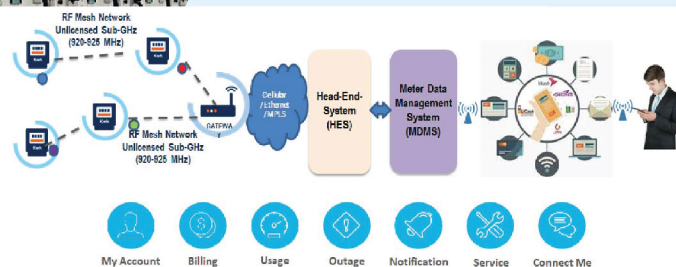


**Dhaka Power
Distribution
Company Ltd.
(DPDC)**

World Utility Summit 2023



Dhaka Power Distribution Company Ltd. (DPDC)



Stepped Ahead Towards Smart Power Distribution Utility

- AMI
- Smart Grid
- GIS Mapping
- ERP
- Call Center
- 4IR Technology



Dhaka Power Distribution Company Ltd. (DPDC)

(Dependable Power - Delighted Customer)

Venue: India Exposition Mart, Knowledge Park II
Greater Noida, Delhi NCR, India
Date: 20-21 February 2023





**Energy Efficiency
Services Limited
(EESL)**

EESL ENERGY EFFICIENCY SERVICES LIMITED
A JV of PSUs under the Ministry of Power

Unnat Jyoti by Affordable LEDs for ALL (UJALA)

36.86 crore LED bulbs distributed across India
72.18 lakh LED Tube lights
23.59 lakh Energy efficient fans

Smart Meter National Programme (SMNP)

Installed over **32.55 lakh** Smart Meters in Uttar Pradesh, Delhi, Haryana, Bihar, Rajasthan and Andaman
M/S Intellisart has installed **1.26 Lac** Smart Meters in the State of Assam

Smart Meters are connected through a **web-based monitoring system** to reduce commercial losses of utilities, enhancing revenues

Street Lighting National Programme (SLNP)

Installed over **1.28 crore** LED Street Lights
Saved 8.60 billion kWh per year
5.92 million t CO₂ reduction per year
Total annual monetary saving is **6,022 crore** in electricity bills of municipalities

Super-Efficient Air-Conditioning Programme

Provides **1.5-TR** cooling capacity
3,146 Super-Efficient Air Conditioners are Deployed
Reduces the cost of cooling upto **50%**

Atal Jyoti Yojna (AJAY)

Installed over **2.72 lakh** Solar LED street lights in the rural areas
Solar LED Lights are being installed in rural, semi-urban and urban areas

Decentralized Solar Power Plant Programme

As on date approx. **175 MW** Solar Power Plants are commissioned
Signed agreements for approx. **800 MW** of generation

Building Energy Efficiency Programme (BEEP)

11,715 buildings Energy Efficiency Projects Completed
747 buildings including Railway stations and Airports are under construction under BEEP
30-50% Energy saving potential to the tune of up to in these buildings

National E-Mobility Programme

1,857 nos. of **4W EVs** CESTL deployed/ Under deployment (Till date)
More than **180 clients** got benefited
Reduce upfront costs by **40%**

EV Charging Infrastructure

443 Public Charging Stations (PCS) have been installed (Till date)
278 are operational and rest are in the process
It aims to increase adoption of electric vehicles

Trigeneration

EPSL Trigeneration Pvt Ltd has been established by Edina UK Ltd
800 kWe project of Mahindra and Mahindra Trigeneration has already commissioned
2.0 MW Trigeneration with **450 TR VAM** Signed SLA with Data Center in Navi Mumbai for setting up of

Agriculture Demand Side Management (AgDSM) Programme

Under this Programme **BEE 5-star** energy efficient agricultural pumps are distributed
30% reduction in energy consumption
81,180 pumps have been installed in the state of Andhra Pradesh and Uttar Pradesh (Till date)

SUSTAINABLE PRACTICES towards NET ZERO UTILITIES





**Electrical Research
and Development
Association (ERDA)**

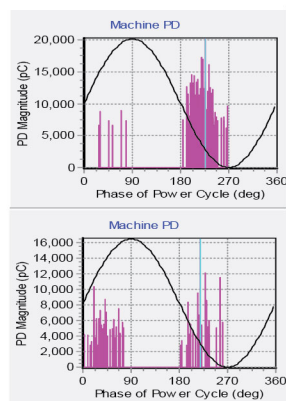
World Utility Summit 2023

Utility Poster Session



Diagnostic Testing & Asset Management

- Asset management through condition based maintenance using diagnostic testing of power equipment
- Rotating machine partial discharge monitoring case study at one of the leading thermal power plant



Energy Conservation and Environment Protection

ERDA is approved consultant by Commissioner of Electricity, Gujarat State (Regd. No.-GUJ-005), Petroleum Conservation Research Association (PCRA), Gujarat Energy Development Agency (GEDA) & Maharashtra Energy Development Agency (MEDA), CREDA, Chhattisgarh and EMC, Kerala for conducting energy audit study.

- More than 350 Energy Audits (including 150 Generating Units up to 660 MW)
- 68 MW Potential Savings
- 3.81 Lacs MT CO₂ Emission Reduction
- INR 1460 Million Annual Recurring Savings



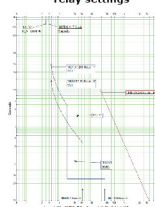
Testing at utility premises

ERDA has built and is operating laboratories at utility premises for evaluation of equipment and T&D hardware received at utility stores from manufacturers. These laboratories include UGVCL - Narol, Gujarat; MPKVCL - Jabalpur, Madhya Pradesh; PVVNL - Muradnagar, Uttar Pradesh. With facility at utility premises, quality of materials has been improved due to increase in lot size for testing.

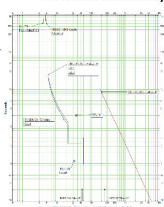


Power System Studies

Graph shows existing relay settings



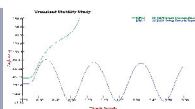
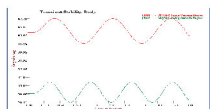
Graph shows relay setting after proper co-ordination [Part of Protection Audit study]



For TRANSCO, Regulators, Industries, CPP, Wind Power Plant, Solar Power Plant :

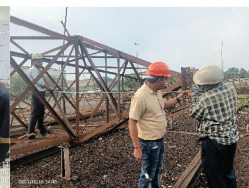
Power System studies like

- Load Flow
- Short Circuit
- Relay Co-ordination
- Renewable Energy integration study
- FACT Solutions
- Insulation Co-ordination
- Very Fast transient Overvoltage
- Reactive Power Compensation study
- Protection audit study



Third Party Inspection

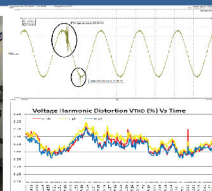
- ERDA is accredited by National Accreditation Board for Certification Bodies (NABCB)
- Inspection of Electrical material i.e. Transformers, HT & LT Cables, Conductors, Energy Meters, CT/PT, Panels, Insulators, Tower Hardware and Structures, VCB's Lighting Arrestors, Capacitors, Battery and Battery Chargers, Pump Sets, Solar PV Module, Fiber Optic Cable etc.
- In order to provide economical and prompt services, we have created decentralized inspection service centers



Power Quality Measurement

Power Quality Measurement Activities include:

- For Wind and Solar Plants: Harmonic, Flicker, DC current injection as per CEA guideline
- For TPPs, CPPs, Utilities, Industries, Metros:
 - Active & Reactive power
 - Power factor & Frequency
 - Voltage unbalance
 - Harmonics, Flicker
 - Switching surge



Venue: India Exposition Mart, Knowledge Park II,
Greater Noida, Delhi NCR, India
Date: 20 - 21 February 2023





**Gujarat Energy
Transmission
Corporation
Limited (GETCO)**

World Utility Summit 2023

Utility Poster Session



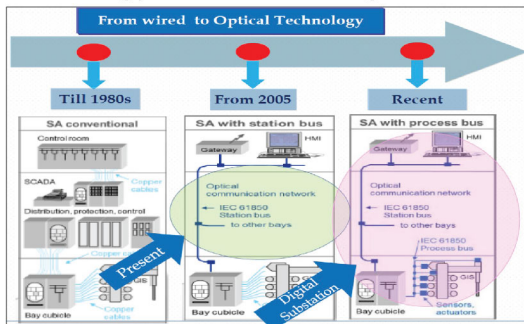
Gujarat Energy Transmission Corporation Ltd.



4th Edition
World Utility Summit
20-21 February 2023

Accelerating Digital Journey of Energy Ecosystem

Technology Transition for Digitalization



Driving Factors for Accelerating Digitalization

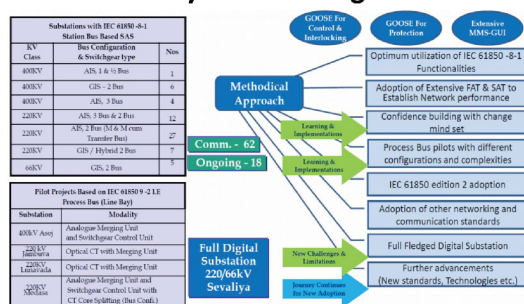
- To reduce life cycle (O&M as well as R&M) cost
- To improve O&M efficiency
- To increase asset life
- To reduce asset footprints
- To built intelligent and flexible substation
- To minimize concerns of retiring of skilled resources

Motivation for Digitalization

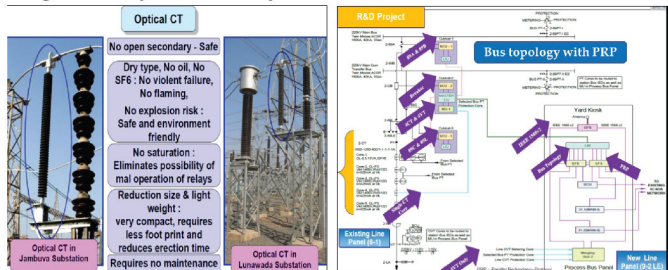
- Large foot prints of Control room building and cable trenches
- High level of physical complexity and components
- Tons of cabling and thousands of terminations
- Clumsy wiring, Huge resource requirement
- Safety concerns due to direct interface with control cubicles
- Conversion of old aged asset is the biggest challenge



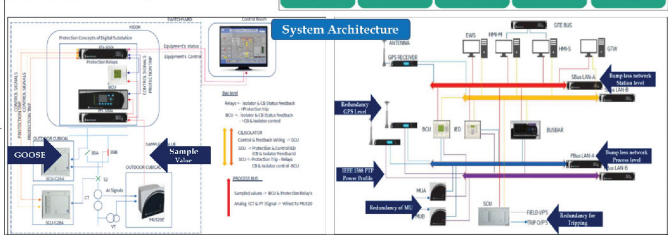
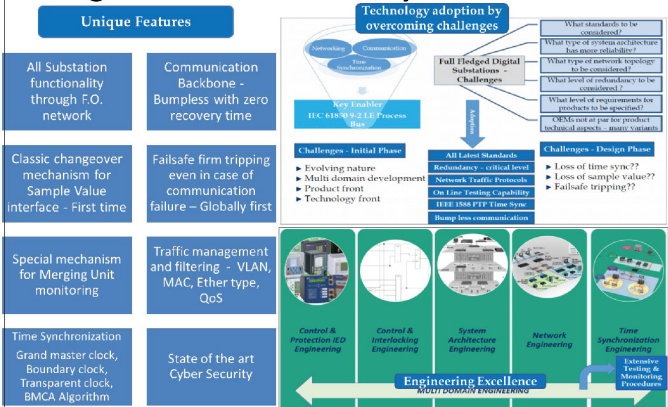
GETCO Journey Towards Digitalization



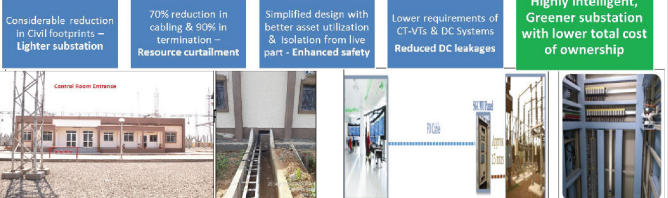
Digital Bay Pilot Projects



Full Digital Substation - Sevaliya



Benefits

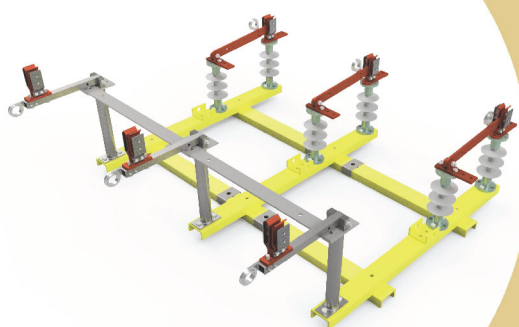




**The Gujarat
Power Research &
Development Cell
(GPRD)**

World Utility Summit 2023

Utility Poster Session



**GUJARAT POWER
RESEARCH & DEVELOPMENT CELL**
GUJARAT URJA VIKAS NIGAM LTD

AIR BREAK SWITCH WITH EARTH BLADE (WITH FRP MOUNTING CHANNEL)

AIR BREAK SWITCH WITH EARTH BLADE (WITH FRP MOUNTING CHANNEL) is a combination of the 11 KV AB Switch, Flexible Earthing Blade, FRP Base Channel

The DISCOMs are adopting and implementing all safety measures and safety tools or equipments. Even though, the line staff's safety issues are increasing.

DISCOMs need a permanent technical solution by designing a system to face the problem during maintenance activities.

Gujarat Power Research & Development Cell has developed "AIR BREAK SWITCH WITH EARTH BLADE (WITH FRP MOUNTING CHANNEL)", a unique concept with the enhanced design for the inevitable safety issues faced by the DISCOMs.

Benefits to the Power Distribution Companies

- Easy mounting
- Line staff's Electrical accidents shall get reduced
- Increase in ease and safety of the operation
- Increase the confidence of the DISCOM's technical staff during maintenance activities

**PATENT
AWAITED**

Features of ABEB

- Safety to line staff
- Cost-Effective Solution
- Mechanically rugged design
- Reduce Power Interruption
- Address the back power issues of the distributed feeder line
- Minimization of the fault restoration time
- Improved aesthetics

The AIR BREAK SWITCH WITH EARTH BLADE (WITH FRP MOUNTING CHANNEL) is a unique concept, having the capability to reduce the electrical accident. It is performing best and satisfactorily in the field.



www.gprd.in



guvnlrnd@gprd.in



[@gprd_guvnl](https://twitter.com/gprd_guvnl)

Venue: India Exposition Mart, Knowledge Park II, Greater Noida, Delhi NCR, India
Date: 20 -21 February 2023



World Utility Summit 2023 Utility Poster Session



**GUJARAT POWER
RESEARCH & DEVELOPMENT CELL**
GUJARAT URJA VIKAS NIGAM LTD



GeoUrja®

GeoUrja® is a user-friendly software platform developed for GPS survey of the Electrical Network and Consumers' locations by using a Smart Mobile device. The software-based application enables to capture of essential network elements such as the geographical position of electrical assets namely Transformers, HT & LT Poles & Lines, Cable route & Switching devices etc. The application also allows

dynamic updation, addition, modification in the electrical network.

The Enterprise solution 'GeoUrja®' platform is aimed to cover complete asset information, data modeling, integration and analysis for providing a supportive system for better management decisions and improvised consumer services.

FEATURES

EASY SURVEY MOBILE APPLICATION

- Network information with HT and LT network over the satellite image
- Consumer basic detail
- Quick search and navigation option for consumer and electrical assets
- Current location base overhead/underground network information
- Asset QR tagging and information
- Live location-based network view

DASHBOARD

- Developed on an open-source platform and uses GIS cloud technology
- Electrical network statistical information with consumers details
- Network asset attribute view and edit functionality with geographical and vector-based map
- Electrical network analysis with power flow study like voltage regulation, loss calculation, low voltage, reactive energy etc.
- Network planning with multiple network views over geographical view
- Integration with ERP and billing system through API services

SAMPARK

- Designed for the Customer Care Center
- Integrated platform for places and locations search with consumer details
- Quick information of electrical network and power connectivity

GUJARAT POWER PORTAL

- Integrated single platform for existing systems elements such as Information of Feeder Circuit Breakers, RMUs, Meter Modern, Switches, etc. are carried out and plotted on GIS Power Network
- The real-time power supply status of the Consumers and ongoing network outage information entails to access power reliability
- DISCOMs' Boundaries: DISCOM wise, Circle Wise, Division Wise, Subdivision wise, Geographical view
- Revenue Boundaries: District wise, Taluka wise, Village wise
- Digital layers of Roads, Rivers & Rail Network

GEOURJA LIVE

- Unique & innovative dashboard
- Live power supply status of feeders & consumers
- Real-time power supply status of consumers
- Ongoing network outage information
- Easy to manage the power flow of the network
- Feeder circuit breakers, RMUs, meter modems, switches, etc. plotted at single platform



Venue: India Exposition Mart, Knowledge Park II, Greater Noida, Delhi NCR, India
Date: 20 -21 February 2023



World Utility Summit 2023

Utility Poster Session



**GUJARAT POWER
RESEARCH & DEVELOPMENT CELL**
GUJARAT URJA VIKAS NIGAM LTD

SPECIALLY DESIGNED MEDIUM VOLTAGE COVERED CONDUCTOR

SD_MVCC

There are issues like frequent line tripping, snapping of conductor, fast deterioration of the bare conductor, safety hazards, maintaining power reliability, etc. for the bare conductor overhead distribution network passing through dense plantations in a coastal area. There are other issues like environmental clearance in the forest areas and Right Of Way (RoW).

Gujarat Power Research & Development (GPRD) Cell has designed, developed & installed a Specially Designed Medium Voltage Covered Conductor to address the specific issues of power reliability and safety of PGVCL in the coastal belt having dense plantation of coconut trees. a unique concept to address the issues like reducing faults and interruptions caused by tree contacts and enhancing the reliability, Reducing animal faults, protecting the aluminum conductor from corrosion, reducing maintenance cost of tree trimming, greater compactness of distribution network.

The SD_Medium Voltage Covered Conductor comprises of triple extrusion design on the base conductor as per the international standard EN 50397-1. The three layers of MVCC are a semi-conducting sheath to equalize the electric field stress, an unfilled insulating XLPE insulation without carbon black compound and finally, a hard abrasion-resistant outer protective layer of HDPE with UV stabilized, weather & track resistant. The SD_MVCC is preferably used with its standard accessories as per international standard EN 50397-2 and installation as per standard EN 50397-3. The various accessories used are Insulation Piercing connectors (IPC), Tension Clamp, Helical Conductor Fitting, Arc Protection Devices (APD) and Earth parking devices.

Features of SD_MVCC & applications

- Protects the conductor from corrosion
- Enhanced electrical safety
- Longer life cycle compared to the bare conductor
- No requirement to change the network configuration
- Cheaper alternative to underground cables and ABC cables
- Addresses the power reliability issues
- No interruption while touching tree branches
- Ideal and safer solution for installations over river / lake/ forest / road slums / congested residential areas and in polluted areas
- Addresses RoW issues with reduced in between phase clearance.
- Useful to use in the forest area also
- Protects Animal and Bird safety from the live wires

www.gprd.in

guvnlrnd@gprd.in

[@gprd_guvnl](https://twitter.com/gprd_guvnl)

Venue: India Exposition Mart, Knowledge Park II, Greater Noida, Delhi NCR, India

Date: 20 -21 February 2023

ieema
your link to electricity

15th Edition
ELEC RAMA
Powering the Future of Energy
18-22 February, 2023

IEEE
Advancing Technology
for Humanity

IEEE PES
Power & Energy Society®

World Utility Summit 2023 Utility Poster Session



**GUJARAT POWER
RESEARCH & DEVELOPMENT CELL**
GUJARAT URJA VIKAS NIGAM LTD

ONLINE TESTING SET



The ONLINE TESTING SET comprises standard HT TVM, CTs, PTs and switching device. The OLTS is competent to test the entire Metering Set comprising of CTPT unit, TVM and Control cable in on-load condition without interrupting the Power supply.

Features of OLTS

- Onsite testing of a Metering Set of HT Consumer installation
- Testing the CTPT unit, TVM and Control Cable during actual loading
- No need to interrupt the power supply of HT Consumer
- A Testing Set up on the Wheel
- The actual technical loss of a feeder section can be measured
- Promising large scale testing in minimum time

Benefits to the Power Distribution Companies

- Huge revenue leakage, due to hidden error of CTs and PTs can be eliminated
- Economically & technologically viable option
- A cost-effective solution
- DISCOMs can do it, without the help of a third party or outsource

**PATENT
GRANTED**

The OLTS is a novel concept and it performing best and satisfactorily in the field

www.gprd.in

guvnlrnd@gprd.in

[@gprd_guvnl](https://twitter.com/gprd_guvnl)

Venue: India Exposition Mart, Knowledge Park II, Greater Noida, Delhi NCR, India
Date: 20 -21 February 2023

ieema
your link to electricity

**15th Edition
ELEC RAMA**
Powering the Future of Energy
18-22 February, 2023

IEEE
Advancing Technology
for Humanity

IEEE PES
Power & Energy Society®

World Utility Summit 2023

Utility Poster Session



**GUJARAT POWER
RESEARCH & DEVELOPMENT CELL**
GUJARAT URJA VIKAS NIGAM LTD

WATCHDOG TRANSFORMER

ONE SOLUTION FOR MANY ISSUES



The WatchDog Transformer (WDT) is a combination of the present Distribution Transformer (DT) and WatchDog Device (WDD)

Benefits to the Power Distribution Companies

- Measuring and monitoring of real-time electrical & health parameters of the Transformer
- Improved the transformer's protection, reduces its failure & increases the service life
- Connect and disconnect feature increases the revenue realization
- Improves the operation efficiency using bi-directional communication, control & automation
- Eliminating direct access to vulnerable low voltage bushings for illegal usage of electricity
- Leakage protection feature improves the safety of lives
- Identifies revenue leakages by auto Energy Audit
- Eliminates human intervention at all levels

- Cost-effective, reliable & quality Power supply for the valued Customer
- By using WDT, DISCOMs may avoid feeder segregation in case of mixed load feeders of Agricultural Pump Sets & Domestic connections

Features of WDT

- 3 Phase and 1 Phase Power Supply Scheduling in Agriculture Sector
- Overload, Short Circuit & Leakage Protection
- Over, Under & Unbalance System Voltages monitoring
- Load Connect & Disconnect: locally & remotely
- Remote Monitoring of Electrical & Health Parameters

The WatchDog Transformer is a novel concept, it is having the capability to revolutionize the Power Sector



www.gprd.in

guvnlrnd@gprd.in

[@gprd_guvnl](https://twitter.com/gprd_guvnl)

Venue: India Exposition Mart, Knowledge Park II, Greater Noida, Delhi NCR, India

Date: 20 -21 February 2023

ieema
your link to electricity

15th Edition
ELECRAMA
Powering the Future of Energy
18-22 February, 2023

IEEE
Advancing Technology
for Humanity

IEEE PES
Power & Energy Society®

The logo features a central white circle containing the company name. Surrounding this circle are six overlapping, petal-like shapes in various colors: blue, green, red, orange, teal, and pink. Each colored shape is set against a larger, semi-transparent grey background shape of the same form, creating a layered, flower-like effect.

**IntelliSmart
Infrastructure
Private Limited**



IntelliSmart Infrastructure Pvt. Ltd. is India's leading smart metering and digital solutions provider, established with the core purpose of becoming the most preferred partner of the utilities.

Our organizational culture is built on the intrinsic values of integrity, respect, innovation and sustainability, which influence our everyday endeavours and collective practices.

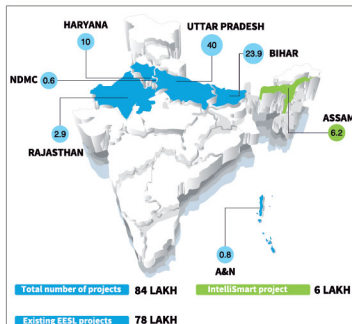


We aim to create a difference in power distribution with digital interventions while shouldering the responsibility of the mass-scale rollout of smart meters under RDSS.

With smart meter infrastructure, consumer data management and AI/ML-based analysis, we seek to create value for the discoms by enabling them to develop additional revenue sources.

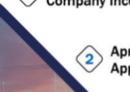
IntelliSmart is one of the first AMISPs to have achieved CMMI-SVC v2.0 ML3 certification.





Mission
Pioneering digitalisation in the power sector; create a sustainable and efficient energy ecosystem propelled by digital technology and create value for all by reducing inefficiencies and energy losses in the power value chain

To be recognised as the most preferred digital partner of the utilities and create a digitalised & resilient power sector through innovative technological solutions



- 1 November 2019
Company Incorporation
- 2 April 2020
Appointment of CEO
- 3 September 2020
Inauguration of Delhi Office
- 4 July 2021
Achieved 98% bill reads in more than 1 million smart meters
- 5 September 2021
Commissioned India's first SMOC (Smart Meter Operation Centre) in Haranya
- 6 October 2021
Operationalization of Bihar's first SMOC
- 7 November 2021
Won Assam Tender for installation of 6 lakh smart meters in TOTEX mode
- 8 July 2022
Term Loan of about INR 200 cr for Assam project sanctioned by BoB
- 9 September 2022
3 million smart meters installed under RDSS program
- 10 November 2019
Company Incorporation

The diagram illustrates the architecture of Discom's Legacy Systems, divided into three main sections: SMART METER, CLOUD INFRASTRUCTURE, and SCM APP & WEB PORTAL.

- SMART METER:** This section includes three smart meters (each with a 'Smart Meter' label), a radio tower, and a central circle labeled 'CELLULAR RF/PLC'. An arrow points from the radio tower to the 'CELLULAR RF/PLC' circle.
- CLOUD INFRASTRUCTURE:** This section contains two server racks labeled 'HES' and 'MDMS'. An arrow labeled 'Daily LLP & BP from meter' points from the 'HES' server to the 'MDMS' server. Another arrow labeled 'Meter Event' points from the 'MDMS' server to the 'SCM APP & WEB PORTAL' section.
- SCM APP & WEB PORTAL:** This section includes a 'Balance Update' process (represented by a computer monitor and a document icon), a 'New Credit' process (represented by a computer monitor and a document icon), a 'Payment Gateway' (represented by a computer monitor), and a 'Customer Payment' process (represented by a computer monitor). Arrows indicate the flow of data from the 'MDMS' server to these processes. Below these processes are two server racks labeled 'Billing System' and 'Other System'. The entire section is labeled 'Discom's Legacy Systems'.



DBFOOT model relieves discom from upfront financial commitments, ensures performance through well-defined SLAs and supports large-scale operations by bringing time & cost efficiencies

- Strong management team
- Existing presence in states with upcoming bids

Proven on-ground experience

- Managing over 3 mn operating meters
- All of ~ 5,000/day

Leadership

- Strategic tie-up with OEMs/service providers
- Leveraging economies of scale

Future play smart meter asset management

- Parentage
- robust IT infra via tie-ups with
- Infosys and various digital Initiatives

Enterprise IT Infrastructure	Stack for RF and Cellular Communication
<ul style="list-style-type: none"> - Supports multiple technologies and products - Cluster-based scalable architecture - Composite solutions on secured & well-managed architecture 	<ul style="list-style-type: none"> - RF Mesh/NB/IoT/Cellular integration for electricity & gas - Common NIC & stack cellular + RF with single antenna
<h3>P2P Block Chain for Rooftop Solar</h3> <ul style="list-style-type: none"> - Trading based on P2P models using blockchain - Market place for prosumers and consumers for trading 	<h3>Smart Meter as a tool for Disaster Management</h3> <ul style="list-style-type: none"> - Capacitors or batteries store sufficient energy to send out a "dying gas" message in the event of power loss
<h3>EV Charging Platform</h3> <ul style="list-style-type: none"> - Aggregation of in-home/residential electric car charging stations - Last mile electric network asset management based on IoT/AMI & AI/ML techniques 	<h3>Smart Meter Hub</h3> <ul style="list-style-type: none"> - Single Point Entry into the consumer home - Electricity, gas, water, broadband all to be done through single hub



**Jaipur Vidyut
Vitran Nigam
Limited (JVVNL)**

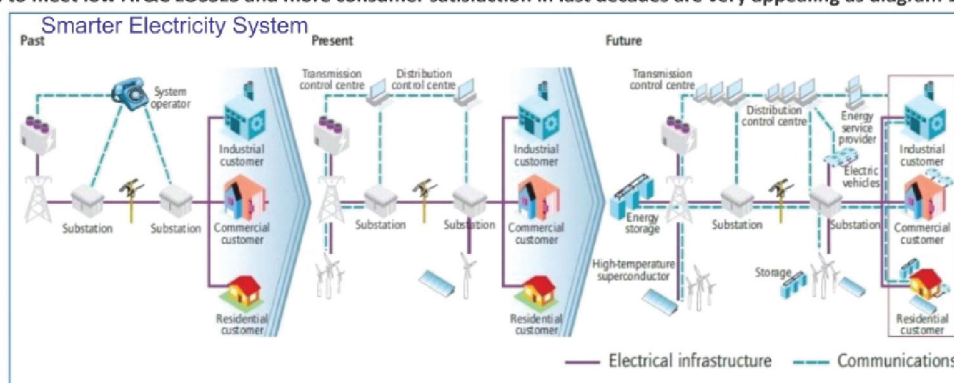
World Utility Summit 2023 Utility Poster Session

Best Practises in JDVVNL

Veena Pareek Executive Engineer, JDVVNL

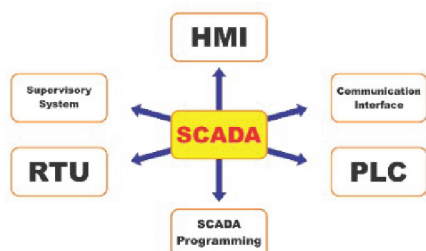


Power distribution is most crucial and weak link in power sector yet smarter practices make it better. Best practices adopted by Jd vvnL to meet low AT&C LOSSES and more consumer satisfaction in last decades are very appealing as diagram 1 shows:-

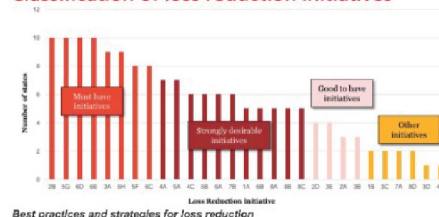


The practical implementation of Audit and efficient power supply maintenance with consumer satisfaction is clear target of Discom in form of IPDS, Din dayal gram in vidhutikara, RDSS, DSM etc projects.

S.no	Particulars	Progress done with adoption of good practices
1.	Implementation of IT application in Metering,	1. Total 1346427 under Ph-I up to Dec-23 and 2733655 under Ph-II up to March-25 smart meters are proposed to be installed. 2. Standard Bidding Documents (SBD) with MDM Version -4 revised from Nodal agency (REC) on 20.08.2022 3 .RDSS Smart metering Project 4. Total 56027 Smart Meters installed up to FY 2021-22 under IPDS in JdVVNL.
2.	Billing and Collection (MBC) activities (AMR/HHD/email, sums based intimation).	All 11690 feeders of 11 KV are metered and on 8412 modem are installed, also IT driven work order creation having TAT's for each complaint category. ♦ Has a start of the art 24x7 call centre ♦ Multi lingual bill ♦ Various payment options and alerts by sms.
3.	MIS based periodic reporting of unit wise business parameters	Input energy, drawl ,system augmentation plan and their execution, no of tripping on transformers and substation month wise ,feeder wise AT&T losses etc are calculated and monitor with meetings and MRF formats
4.	Implementation of IT application in network management activities (SCADA, DSM, OMS etc.).	DSM cell is created separately for implementation of KUSUM –C project of solar panel and solar pump set, load and demand side measures are taken for load shading by power controller cell successfully. SCADA is also very effectively working
5.	Best practices and strategies for distribution loss reduction - Final report Forum of Regulators	Energy Audit for FY 2020-21 and Q1 and Q2 quarters of this year done as per BEE regulations. Director's report is also an indicative of progress .
6.	Consumer satisfaction and staff safety and training	Online and off line grievance portal and time bond rectification are integral part of JDVVNL. Time to time training given to staff for use of safety equipments purchased with assurance of hazard less O&M activities.



Classification of loss reduction initiatives



Date: 20 -21 February 2023 Venue : India Exposition Mart, Knowledge Park II, Greater Noida, Delhi NCR, INDIA

The logo features a central white circle containing the company name. This circle is surrounded by six overlapping, petal-like shapes in various colors: blue, green, red, orange, teal, and pink. Each colored shape is set against a larger, light gray background shape of the same form, creating a layered, flower-like effect.

**Muscat Electricity
Distribution Company
(MEDC)**

GIS Technology for the Asset Management

Yousuf Mohammed Al Mahrooqi

Muscat Electricity Distribution Company (MEDC)

Sultanate of Oman



The urbanization in the Muscat governorate is growing rapidly, making a huge impact in different sectors. Electricity distribution is one of the most critical sectors which is being impacted by this growth of urbanization because it deals directly with more than 450,000 customers by delivering and supplying the power safely and smartly. The asset maintenance circulation in Muscat Electricity Distribution Company (MEDC) faced a critical challenge of building a strong strategy based on accurate data of maintenance activities on the field. It is important to have a smart workflow of the processes to collect, analyze and make a solid decision. This poster aims to present the complete smart solution where the location intelligence rises to drive the maintenance activities to quit the paper-based environment and apply the new GIS technologies for the operations field.



Figure 1 "DSS GMT Inspect Dashboard is part of a solution of digitalizing the annual process of monitoring and maintaining the Distribution substations in MEDC"

All maintenance and operation inspections are relying on GIS technologies by utilizing amazing functions of mobile applications and web-based apps for reporting and analyzing. This transformation enhances the quality of inspection work to ensure the safety of the MEDC network which ultimately ensures the reliability and sustainability of the power and customer satisfaction.

The results are impacting the building of the maintenance strategy where the data of the inspections documented digitally and transformed to information where the power of the data visualization comes in the core of the process. The interactive Dashboard is the main tool to visualize the data intuitively and interactively where the managers figure out effortlessly the critical issues and end up with solid decisions for preventive maintenance which keep Muscat Electricity Distribution Company (MEDC) supplying power to the customer sustainably.

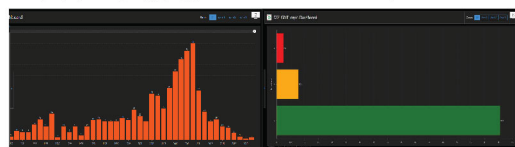


Figure 2 "TX per manufacturer year and critical issues per action level."

The use of GIS has achieved many successes, whether it is a direct impact on managing operations, time spent, or reducing money spent on auditing during and after the visit. Which had an impression on the request to apply the same to other aspects such as security, safety and periodic examination of stations connected to SCADA.

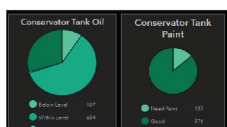


Figure 4 "Conservator Tank Oil and Paint"



Figure 3 "Chart present the silica Gel Condition and Tx Leakage in PMT"

It is worth mentioning that one of the best asset management practices in MEDC is the peak load measurement. Where MEDC empowering the peak load process by using the GIS technology. This process is recording the highest amount of energy that a consumer draws from the substations in the summer. The ability to perform peak load management in distribution systems has several benefits for utilities, including reduced demand charges and improved reliability, efficiency, and utilization of the network infrastructure. The peak load before GIS was measured using a traditional way like papers and a couple of formulas for calculations. But GIS made it more accessible by offering smart form used by the engineers at the site. The form capture the LV feeders and the TX load. The result summarize in a dashboard and present a live indication about the progress at field and the overall load curve. Moreover, as a strategic plan, MEDC aspire to expand the use this data as a realistic laboratory to support the company vision of implementing an advanced distribution management system (ADMS).

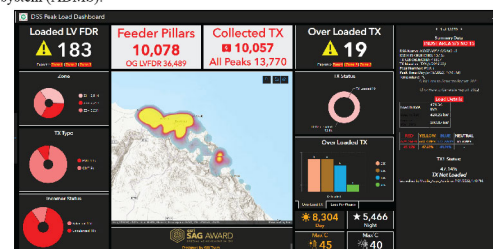


Figure 5 "DSS Peak Load Dashboard is part of a solution to monitor the Distribution substation load in the peak load period"

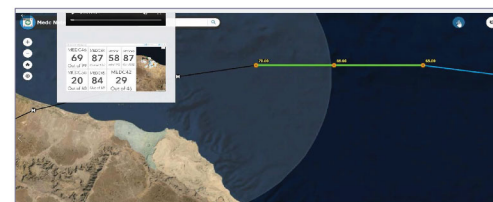


Figure 6 "Outage management solution during the cyclone Shabeen"

The GIS played a prominent role in solving the problem of meters that were not read for a long time by finding solutions based on the spatial power of the GIS and the power of analysis and display of data in a lively manner.



Figure 7 "Accounts reading dashboard solution-based GIS."

Venue: India Exposition Mart, Knowledge Park II,
Greater Noida, Delhi NCR, India
Date: 20 - 21 February 2023

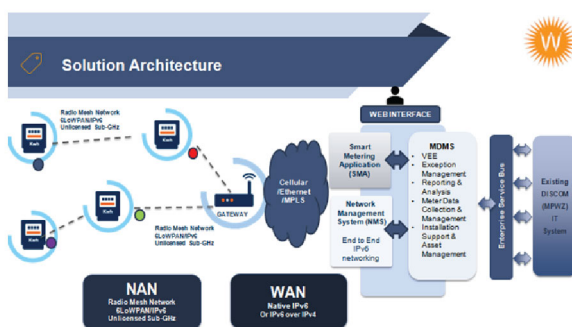


**Madhya Pradesh
Paschim Kshetra
Vidyut Vitran
Company Ltd.
(MPPKVCL)**



MADHYA PRADESH PASCHIM KSHETRA VIDYUT VITRAN COMPANY LTD, INDORE

Deployment of Smart Metering in West Discom Indore to improve Operational Efficiency and Consumer Satisfaction



Advanced Metering Infrastructure (AMI) -The main objective of AMI is to establish two-way communications between smart energy meter and Head End System (HES), and enable remote reading, monitoring & control of energy meters and electrical network meters to serve as repository of record for all raw, validated and edited data. The Advanced Metering Infrastructure helps utility to manage their resource and business process efficiently.

Component of Advanced Metering Infrastructure –

- Smart Meter
- Communication Infrastructure
- Head End System
- Meter Data Management
- Mobile App
- Cloud Infrastructure
- MPPKVCL has realized the importance of Smart Meters in their territory and already implemented one of the largest Smart Metering Project for 1.2 Lakh consumers of Indore City over RF Canopy on Unlicensed frequency band 865-867MHZ. Further on the basis of success of Indore Pilot Project, Discom has awarded contract to around 7.49 Lakh Consumers to 3 different AMISPs and out of which around 2.2 Lakh Smart Meters has already been installed and installation of balance consumers are in process.

Project Benefits DISCOM Perspective

- Average Improvement Per Bill after installation of Smart Meter is around Rs 310 Per Month with expected payback period is around 28 Months.
- For Smart Metering Area, Billing Efficiency has been increased by 17.5 %, Collection Efficiency increased by 13.9%, AT&C losses reduced by 27.6% and CRPU has been increased by 37%.
- Remote Disconnection/ Reconnection of 4.24 Lakh Consumers and recovery of 220 Cr from AMICC up to Jan-2022 due to which saving of Manpower of Rs 16.96 Cr
- Total 16616 cases identified against aberrations reported, leading to additional billing of Rs 15.04 Crore. 2278 Cases booked against theft.
- 50 MW increase in (26945 Connection) sanctioned load on the basis of recorded MD which is around 15 % of total load of Smart Metering Consumer, monthly fixed charges of around Rs 54.12 Lacs started
- PF Penalty (PF<0.80) imposed on around 91 K bills of SSI Amounting Rs. 192.85 Lacs
- 752 No. Consumers are converted from Domestic to NDLP, monthly fixed charges of approx Rs 7.52 Lacs started
- Accurate & timely availability of billing data (>98 %), provided billing data of 67.87 Lakh bills through AMI & provided reading even in Lockdown and Curfew of Covid-19 Pandemic
- Arrears of Consumers has been reduced by 36% after installation of Smart Meter
- 80% of old electronic meters removed due to Smart meters has been reutilized in rural areas after

Project Benefits Consumers

- Error free Bills due to no manual intervention.
- MPWZ has provided incentive to 2 Lakh Small Scale units for maintaining P.F > 0.85.
- Development of Mobile App for consumers wherein Smart Metering Consumer can check the consumption during the day ,week , month or year and monitor the same
- Option to choose –Prepayment.
- Enablement for renewable Integration.
- Billing related complaints reduced by 83%.

Project Benefits Government

- Reduction in working capital loan to the DISCOM.
- Improvement in Financial Health of DISCOM.
- Increased Consumer Satisfaction.
- Due to availability of Meter Data - Subsidy can be addressed to the genuine consumers. Rs 10 per consumer Less subsidy passed to Smart Metering consumer as compared to Non smart Metering Consumers





**National Power
Training Institute
(NPTI)**

World Utility Summit 2023
Utility Poster Session



NATIONAL POWER TRAINING INSTITUTE

(Ministry of Power, Government of India)

WELCOMES YOU ALL

AT

WORLD UTILITY SUMMIT 2023

ABOUT NPTI

National Power Training Institute (NPTI), an ISO 9001:2015 & ISO 14001:2015 organization under Ministry of Power, Govt. of India is a National Apex body for Training and Human Resources Development in Power Sector and the world's leading integrated Power Training Institute, with its Corporate Office at Faridabad. NPTI operates on a Pan-India basis through its eleven (11) institutes. Apart from highly skilled and competent trainers and state-of-art laboratories, NPTI has Hi-Tech real time simulators of various power plant capacities, which includes thermal (Supercritical, Subcritical), multifunctional, CCGT, Hydro, SCADA & Smart Grid Operations and Dispatcher Training Simulator at its various institutes.

Having trained more than 3,76,350 Power Professionals in training programs over the last 5 decades, NPTI is the only Institute of its kind in the world with such a wide geographical spread and covering a wide gamut of training programs in Renewable Energy & Power Sector.

GLIMPSES OF NPTI



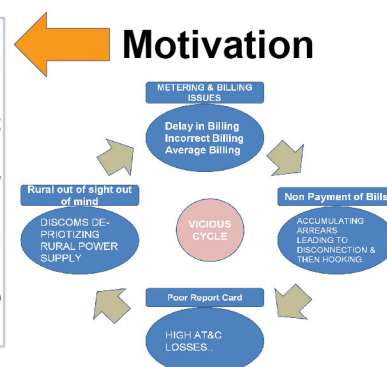


World Utility Summit 2023 Utility Poster Session

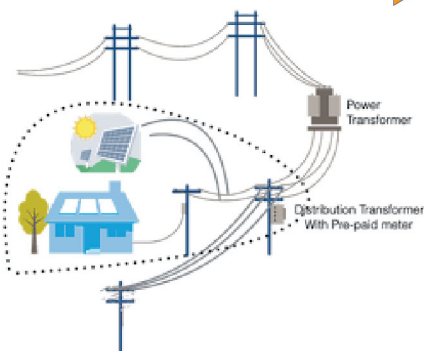


Alternative Model for Rural Power Distribution: Focus on Sustenance

- 100% rural electrification needed push and support from Central Government in the form of RGGVY, DDUGJY & SAUBHAGYA, due to the lesser demanding and lesser remunerative nature of rural consumers
- Electrification has not ensured regular power supply, as the social vs market incentives still remain mis-aligned for the DISCOMs
- Across States, DISCOMs are witnessing interest from private enterprises for parallel licensing in their urban areas, due to their better commercial suitability
- With right incentive structure of the stakeholders so involved, the efficiency and service delivery can be improved in rural areas
- An "atmanirbhar" or a self-dependent approach of a **self-reliant co-operative** model may be better from rural service delivery stand-point



Proposal

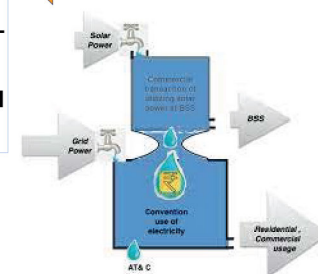


- Urban grid can be managed on commercial principles, however rural grid may be better managed by a community i.e., rural electricity cooperative societies (RECS), particularly for billing and collection.
- RECS can source the power from grid as well as **Solar plants** installed under PM-KUSUM scheme or other subsidized Govt. schemes.
- RECS can have **single point metering** at DTR level, with Smart-Prepaid meter having net meter functionality.
- RECS can maintain **EV charging stations** to utilize the available solar power in captive or can be traded with neighboring RECS or to DISCOM, for optimal power scheduling
- RECS can be engaged in **financing** of electric autos and other commercial electric equipment to promote small industry and improve the overall economic status of the area.

- Can reduce recurring Tariff subsidy burden by better targeting of capital investment subsidy and also be politically prudent for State Governments.
- Can support clean energy transition by putting thrust on Solar and E-Vehicles, while also promoting rural employment and economy.
- Can create an ecosystem of competitive Urban market, with Rural consumers responsible for quality of their own service delivery.

Venue: India Exposition Mart, Knowledge Park II,
Greater Noida, Delhi NCR, India
Date: 20 - 21 February 2023

Benefits



The logo features a central white circle containing the company name. Surrounding this circle are six stylized, overlapping petals in various colors: blue, green, red, orange, teal, and pink. Each petal is set against a light gray shadow, creating a sense of depth and movement.

**Sterlite Power
Transmission
Limited**

World Utility Summit 2023 Utility Poster Session



Sterlite Power

An Integrated Approach on Transmission Planning
Studies for Bulk RE Evacuation in Indian context

Evaneet Kaur, Sandip Maity, Rajesh Suri
Email: Sandip.maity@sterlite.com

STERLITE POWER TRANSMISSION LIMITED

INTRODUCTION

India has set an ambitious target for renewable energy (RE) capacity addition of 175 GW by 2022 and 500 GW by 2030. Resource rich locations RE energy are concentrated in a few pockets around the country. Hence, transmission network planning becomes critical to enable RE transfer to major load centres. This paper discusses strategy for development of network models for transmission planning and extent to which network is to be modelled.

CASE STUDY

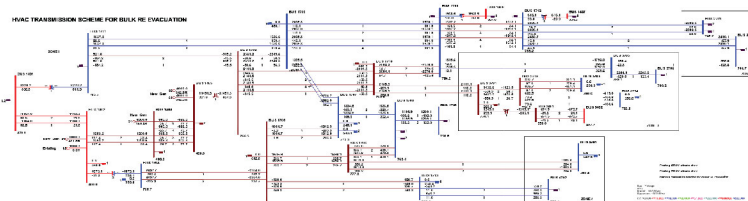


Figure 1 SLD showing HVAC transmission scheme for bulk RE evacuation

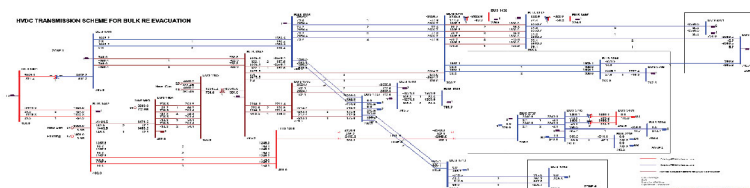


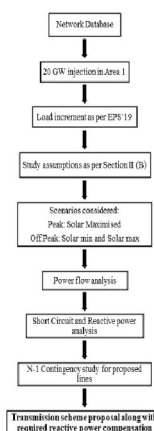
Figure 2 SLD showing Hybrid (HVAC+HVDC) transmission scheme for bulk RE evacuation

CONCLUSION

From the analysis carried out the planned and existing transmission network on 765kV and 400kV is adequate to meet the demand for future growth. Under N-1 contingency of 765kV lines, the network is adequate, however a few lines which over-loaded based on SIL are well within their thermal limits. Capex estimates favour HVAC scheme as it would not exceed 70% the cost of Hybrid transmission scheme. However, Hybrid transmission scheme is far more advantageous that it outweighs the cost incurred.

Venue: India Exposition Mart, Knowledge Park II,
Greater Noida, Delhi NCR, India
Date: 20 - 21 February 2023

TRANSMISSION PLANNING METHODOLOGY



RESULTS

a) *Power export to beneficiary zones:* The power export from zone 1 to other zones for both the cases is shown in Table 2.

From	To	Case I - HVAC	Case II - Hybrid (HVAC + HVDC)
Zone 1	Zone 2	9751	10392
	Zone 3	12404	12550
	Zone 4	3363	4523
	Total	25518	27465

b) *N-1 contingency study:* The proposed lines were analysed for N-1 contingency and overloading of 765 and 400 kV lines were checked during such contingencies.

c) *Reactive power compensation study:* A reactive power study was done for the proposed scheme using the peak and off-peak scenario.

d) *Short circuit level study:* Short Circuit studies were performed for identifying injections as well as post RE power injection.

The logo features a central white circle containing the company name. Surrounding this circle are six stylized, overlapping petals in various colors: blue, green, red, orange, teal, and pink. Each petal is set against a light gray shadow, giving the logo a three-dimensional appearance.

**Tata Power
Delhi Distribution
Limited**

World Utility Summit 2023 Utility Poster Session



TATA POWER-DDL

TATA POWER DELHI DISTRIBUTION LTD

Steering the Power Sector on Technology, Process & Platform

Distributing
electricity in
North & North West
Delhi

Serving a
populace
of 70 Lakh

Peak Load of
2228 MW

Network
Length
13,774 km

AT&C Loss
FY 2022
6.8%

Accelerating Digital Journey of Energy Ecosystem

First ever large scale IOT-based Distribution Automation in India

Digital Substation Implementation for a Secure and Reliable Data Transmission

Collaboration for South Asia's Largest Grid-Scale Energy Storage System in India

IElectrix-Shakti – Clean Energy transition through Integrated Local Energy Systems (Energy Islands)

Advanced Technologies for Business Transformation

- Advanced Distribution Management System (ADMS)
- Geographic Information System (GIS)
- Advanced Metering Infrastructure (AMI)
- SCADA controlled Grid Stations
- Automated Meter Reading (AMR)
- GSM based Street Light system
- In-House R&D Unit - Smart Grid Lab
- New-age Digitally Integrated Solutions
- Automated Demand Response (ADR)
- Green Energy Solutions
- 1st Indian Discom to get CERT-In Empanelment
- 24x7 Integrated Helpline

Venue: India Exposition Mart, Knowledge Park II, Greater Noida, India
Date: 20 - 21 February 2023



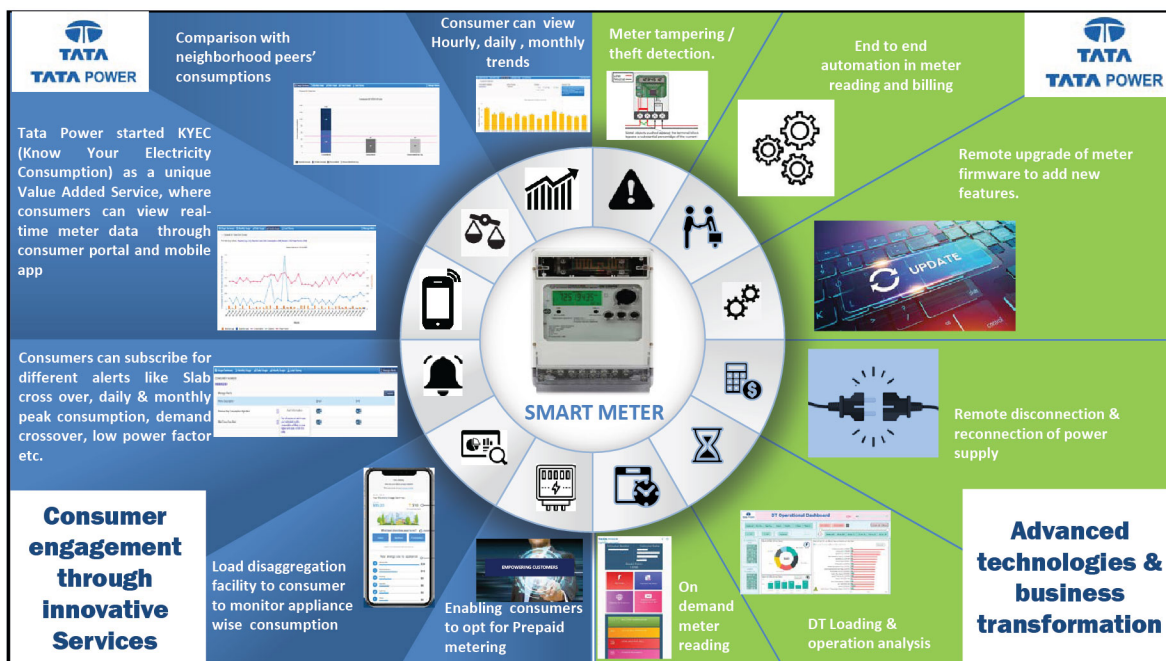
The logo features a central white circle with the text "Tata Power Mumbai" in blue. Surrounding this circle are six colorful, petal-like shapes in blue, green, pink, red, orange, and teal, each with a light gray shadow behind it, creating a flower-like or sun-like appearance.

**Tata Power
Mumbai**




World Utility Summit 2023

Utility Poster Session



**Venue: India Exposition Mart, Knowledge Part II,
Greater Noida, Delhi NCR, India
Date: 20-21 February 2023**



The logo features a central white circle containing the text "TP Central Odisha Distribution Limited (TPCODL)" in blue. This circle is surrounded by six overlapping, petal-like shapes in blue, green, red, orange, teal, and pink. Each colored shape is set against a larger, semi-transparent grey background shape of the same form, creating a layered, flower-like effect.

**TP Central Odisha
Distribution Limited
(TPCODL)**



TPC[⚡]DL

Tata Power and Odisha Government Joint Venture



Distribution Utilities of Future: Advanced Technologies for Business Transformation



Composite Insulated Cross Arm (CICA)

Low cost solution for **11kV & 33kV** line poles to eliminate premature faults on distribution lines. New design provides higher phase to earth clearances- No more bird faults & Creepage distance - No Insulator flashover.



Rebar Lacing Poles (RLP)

Light weight and low cost cyclone resilient poles that can withstand wind speed of upto **300km/hr.** **First Time in India**



Line Voltage Regulator Transformer (LVRT)

Low Cost Solution for 11 kV distribution lines extended over long distances in large Rural Areas-LVRT boost the voltage up to 35%. **First Time in India**



Marconite based highly productive earth excavation tool

"A cost effective & highly productive excavation tool used for difficult to reach places". 'Marconite' is used as earth enhancement compound in this device which enhances earthing life span upto 25 years'

Centralised Power System Control Centre

115 remotely (through SCADA) operated PSS, **77** unmanned PSS.



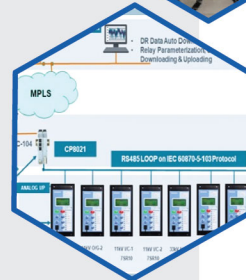
Smart Meters for error-free billing

2% instant rebate on pre-paid recharges. **22,000 meters** already installed.



Reliable Low-Cost Automation Solution for 33/11kV Primary Sub-Station-

4 PSS successfully Piloted in Rural Areas where full fledged automation is not feasible.



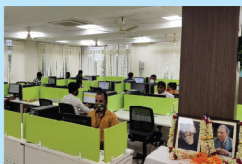
TPCODL

Tata Power and Odisha Government Joint Venture



'Consumer Engagement & Innovative Services'

A one stop solution for all customer needs
'16 Physical + 1 Mobile Customer Care Centres across' TPCODL with Self help kiosks, Queue management and Feedback tab
'A state of the art' 50 seater call centre operating 24X7



Bill delivery over whatsapp.
Over 2.9 lakh+ registration done till date

Camps in rural regions for processing New Connection applications



TPCODL Mitra App.
One stop application for bill payment, bill delivery, new connection, complaint management

A customer loyalty initiative to encourage digital payments- Pay & Win Scheme



Digital avenues
Leading to payment through digital mode by 3.1 Lakhs customers

Building Utilities of *future*

Complaint management App for line man at section engineers at 500 Bidyut Seva Kendras



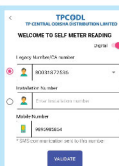
Over 1000 Fuse Call Centres (Bidyut Seva Kendras) in rural areas to enhance rural connect

Adarsh Gram Panchayat-A model GP in each sub-division with benchmark standards in AT&C, BE & CE 54 Model GPs have been adopted till date



580+ Gaon Chala Camps for door step services in rural regions.
RWA camps to address consumer concerns in Residential Welfare Societies

OCR based meter reading & spot billing implemented across all divisions with success rate of over 95%



App for consumer convenience for self meter reading & bill generation. Nearly 500 scans being done per month



Tata Power and Odisha Government Joint Venture

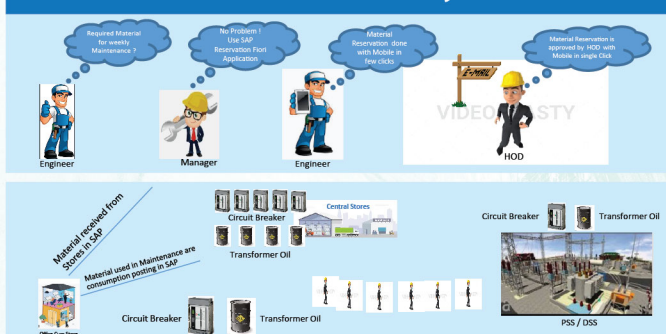


4th Edition
**World
Utility
Summit**
20-21 February 2023

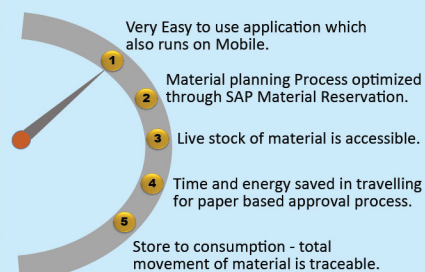
BEST PRACTICES IN ASSET MANAGEMENT



Material Movement Cycle



Material Movement Usage





ABOUT WUS 2023

World Utility Summit was conceptualised to provide a wider forum for utilities to deliberate together on changes that will come, probable ideas and solutions to deal with continuous changes. World Utility Summit is scheduled in 2023 with theme Sustainable Transformation of Utilities. The electricity ecosystem is undergoing an unprecedented transformation with the proliferation of renewables, distributed generation of resources and electric vehicles on one side and consumer activism and regulatory pressures on other. These developments can help utilities to embrace the complexities of the network and to prepare to drive decisions based on probabilities and real-time data.

- Accelerating Digital Journey of Energy Ecosystem
- Best Practices in Asset Management
- Enhancing The Utility System Resiliency
- Distribution Utilities of Future: Advanced Technologies For Business Transformation
- Sustainable Practices Towards Net Zero Utilities
- New Energies (Common Track With **eTECH^{nxt}**)

SUPPORTED BY



Ministry of Heavy Industries
Ministry of Power
Government of India



COUNTRY PARTNER



INTERNATIONAL PARTNER



FOUNDING PARTNERS



IEEMA is the first ISO certified industry association in India, with 950+ member organizations encompassing the complete value chain in power generation, transmission and distribution equipment. Its membership base ranges from public sector enterprises, multinational companies to small, medium and large companies. IEEMA members have contributed to more than 90% of the power equipment installed in India. Know more @ www.ieema.org



ELECRAMA is the flagship showcase of the Indian Electrical Industry ecosystem and the largest congregation of power sector ecosystem in the geography. ELECRAMA brings together the complete spectrum of solutions that powers the planet from source to socket and everything in between. Featuring not just equipment & technology, but peerless thought leadership platforms for everything electric - from technical conclaves to industry summits. Know more @ www.elecrama.com



IEEE, an association dedicated to advancing innovation and technological excellence for the benefit of humanity, is the world's largest technical professional society. It is designed to serve professionals involved in all aspects of the electrical, electronic, and computing fields and related areas of science and technology that underlie modern civilization. Know more @ <http://www.ieee.org/>



The Power & Energy Society (PES) provides the world's largest forum for sharing the latest in technological developments in the electric power industry, for developing standards that guide the development and construction of equipment and systems, and for educating members of the industry and the general public. Members of the Power & Energy Society are leaders in this field, and they — and their employers — derive substantial benefits from involvement with this unique and outstanding association. Know more @ www.ieee-pes.org



Conference Secretariat

Rishyamook Building,
First Floor 85 A,
Panchkuian Road, New Delhi
Delhi 110001

E-mail: secretariat@worldutilitysummit.org

Website: www.worldutilitysummit.org

Uttam Kumar

M: +91 9717518502

E: uttam.kumar@ieema.org

Dr. Saad Faruqui

M: +91 9897031934

E: saad.faruqui@ieema.org