Our Vision: AKANKSHA aims to be a leading and sustainable Power Quality Solution provider, using the latest technology, for customers across industries and DISCOM

Akanksha Power and Infrastructure Ltd (APIL)

Product Presentation

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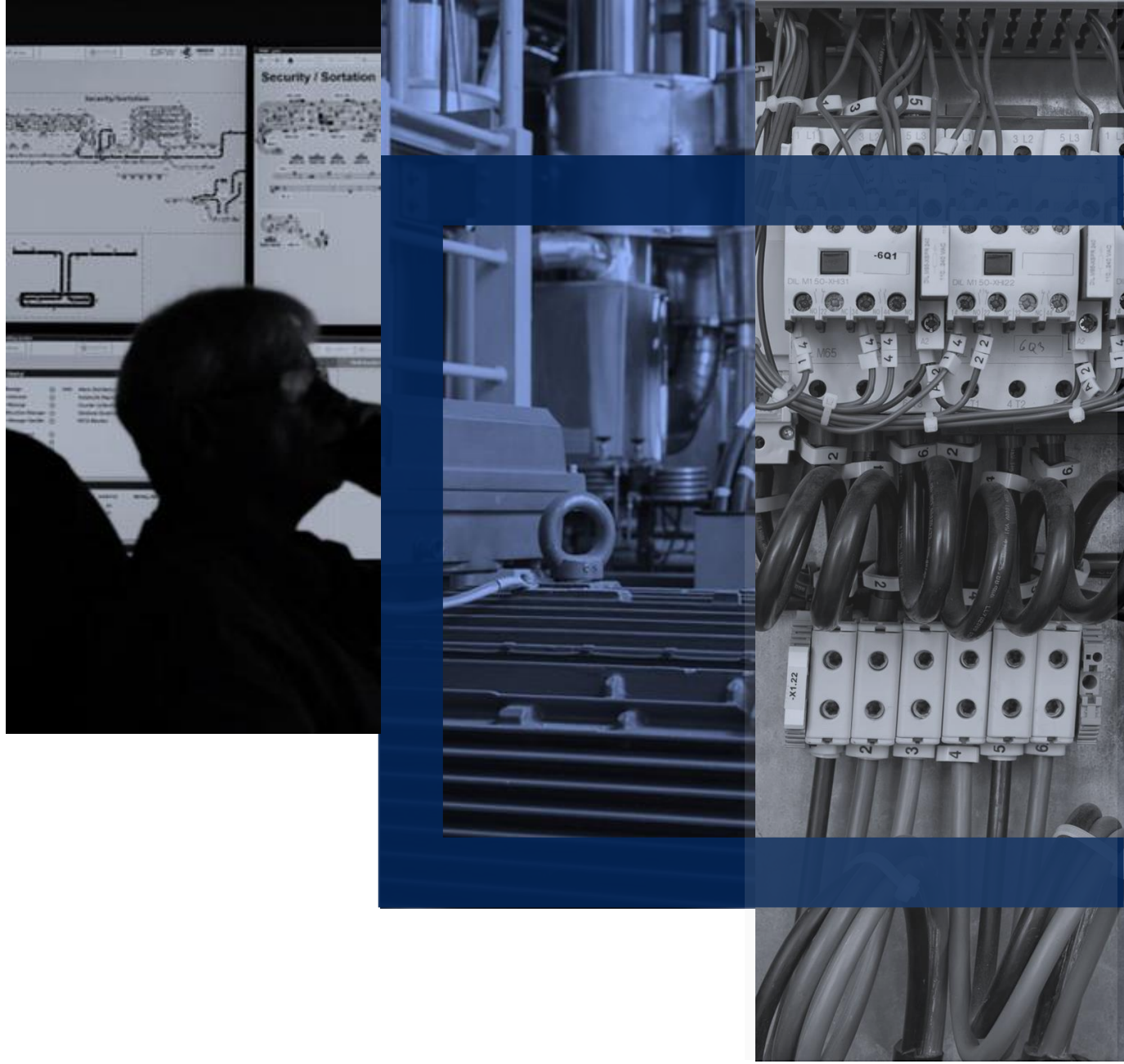
4 Growth Strategy 22



Background

Leading Player in Quality Power Systems & Solutions

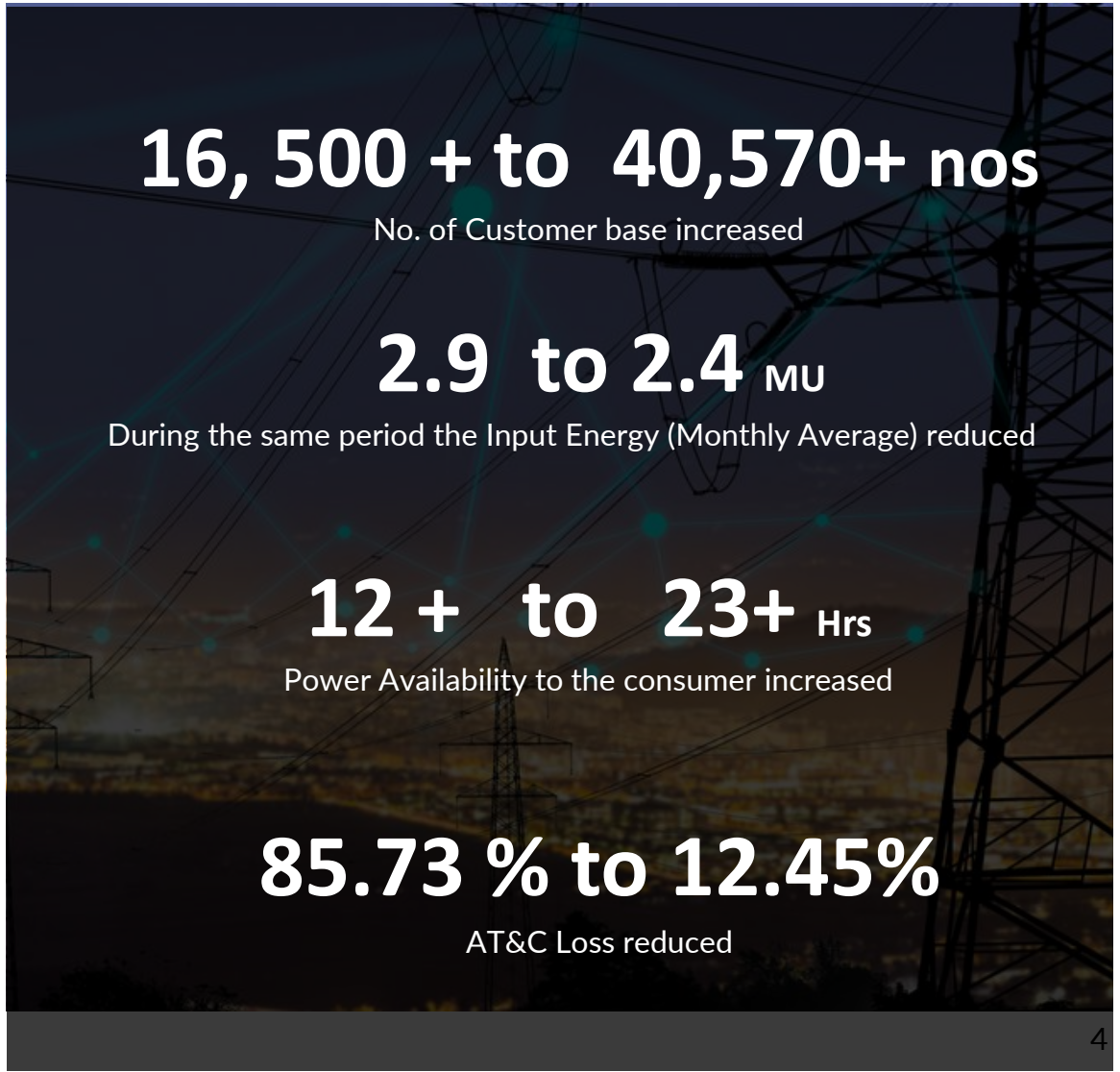
- Established in 2008, Akanksha Power and Infrastructure ltd ("APIL") focuses on delivering cost-effective power quality solutions through PQS systems like APFC Panels, Tuned and de-tuned Harmonic Filters. AMI infrastructure with smart meters, and power quality measurement products

- It is an ISO 9001:2015, 14001 : 2015, 45001 : 2008 certified organization specializing in the design, manufacturing, and supply of a diverse range of electrical products, including metering solutions, power quality improvement panels and smart energy meters.

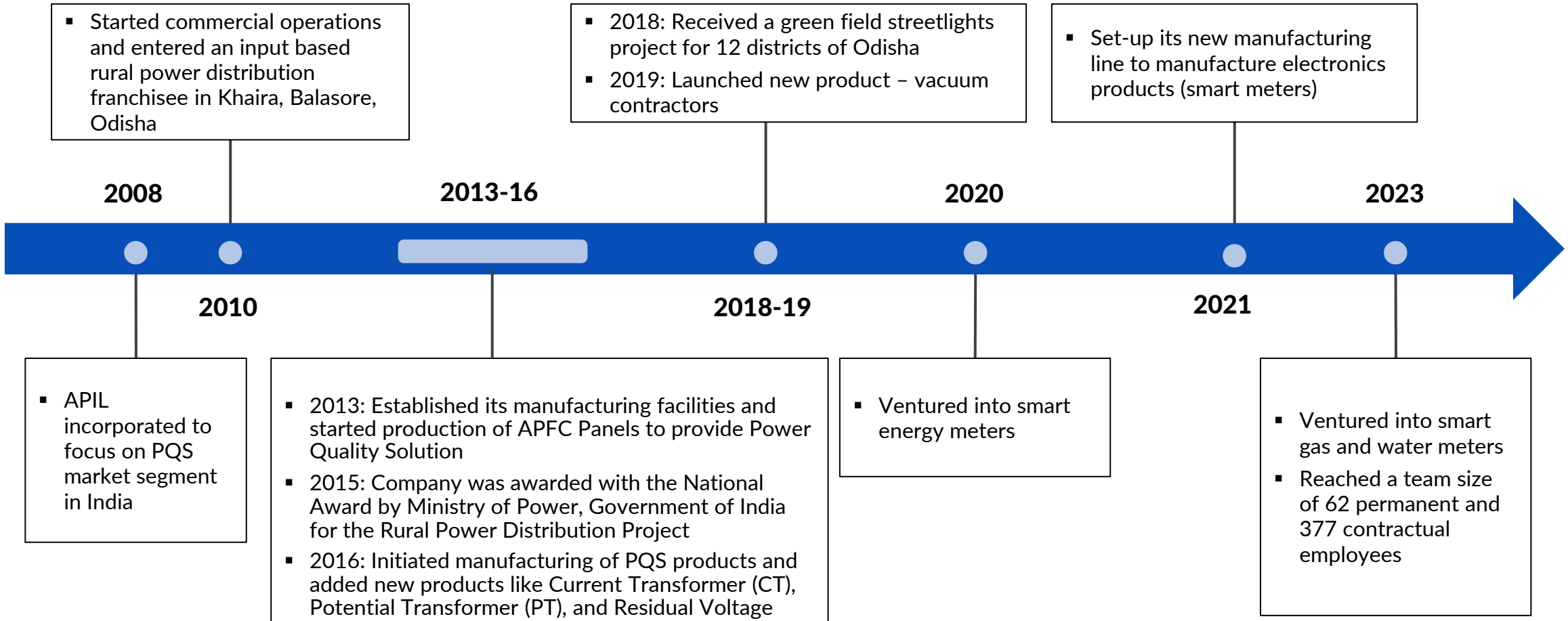
- The company has 2 well equipped state-of-the–art manufacturing plants in Nashik, Maharashtra.

- **APIL is a one of the reputed name in Energy Distribution Management. Bagged the prestigious national award from government of India, under Rural Distribution Franchisee Segment in year 2015. the highlights of the meritorious performance is:**

Highlights attributed to Reduction of AT&C Losses and save power



Impactful Journey in Creating a Focused Power Solutions Company



The Management Team with Deep Experience

Rabi Narayan Bastia
Independent Director

- Mr. Rabi (65 yrs) (Padmasree awardee) has 40+ years of work experience in Oil & Gas Industry
- He holds a DSc. in Petroleum Technology from ISM Dhanbad and a Ph.D. in Petroleum/ Structural Geology from IIT Kharagpur & Royal Geological Society, UK
- He supports the board in ensuring efficient and effective operations, bringing independence to the functioning of the company

Bipin B Dasmohapatra
Managing Director

- Mr. Bipin, (53 yrs) MD & promotor of the company, has 23+ years of experience in managing business operations & financial aspects of diversified sectors including the electrical equipment industry
- He holds a BA in Economics from AB College, Basudevpur, Odisha, and a Diploma in Business Management
- He is one of the guiding force behind the growth and business strategy of APIL

M M Babu Narayan
Independent Director

- Mr. Manayil Madathil Babu Narayanan (72 yrs) has 35+ years of work experience in system planning designing & operation of Extra-High Voltage/ High Voltage Transmission along with Distribution systems
- He holds a Masters in Engineering from the Indian Institute of Science
- He has been appointed as independent director on 10th May 2023. His presence on the board brings independence to the functioning of the company

Chaitali B Dasmohapatra
Director

- Ms. Chaitali (46 yrs) has 3 years of experience in handling banking operations in the banking sector along with auditing and accounting experience
- She holds a Post Graduation in Commerce from the University of Pune and has cleared the Intermediate Examination from Institute of Works Accountants of India

Suresh G
Non-Executive Director

- Mr. Suresh Kumar, aged 43 years, is the Non-Executive Director of the Company. He holds a degree of Bachelor of Engineering in Electrical and Electronics Bharathiar University, Konngu College of Engineering Tamil Nadu.
- Mr. Suresh is a man with wide experience of business development and marketing of PQS Solutions for MNC companies like FRANKO Germany, EPCOS Germany, Universal Cables etc.. He is one of the driving force behind the growth of sales of the company.

Robust Infrastructure Across 2 Manufacturing Plants

Plant Location	Plot No. 87/4, MIDC, Satpur, Nashik- 422007, Maharashtra
Land area	1,800 sq mt.
Constructed Area	30,000 sq ft.

Plant Location	F- 97, MIDC, Satpur, Nashik- 422007, Maharashtra, India
Land area	1,000 sq mt.
Constructed Area	10,000 sq ft.

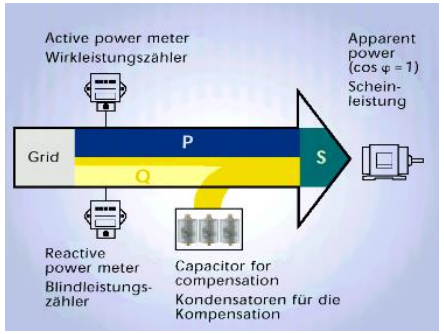
an end to end solution

AKANKSHA

END TO END SOLUTION FOR AT&C REDUCTION

TECHNICAL LOSSES

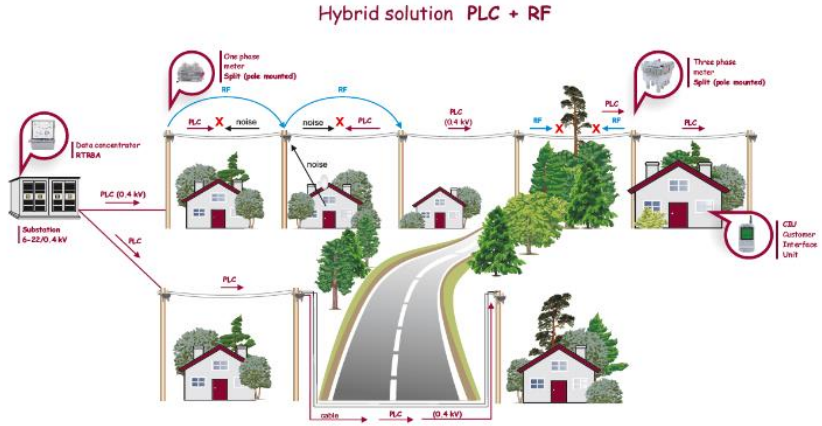
- LINE LOSSES
- TRANSFORMER LOSSES
- OVERLOADING
  - *Higher Feeder Resistance*
  - Low PF
  - *Low transformer voltage*



PQS – power quality solution

COMMERCIAL LOSSES

- Faulty Meters
- Faulty Billing
- Wrong Tariff
- THEFT



AMI – automatic metering infrastructure


PQS
Segment

PQS System to improve power quality & reduce technical losses

- **APFC panels reduce operational losses**
- **They can sense and control the load continuously on real time basis**
- **They are easy to use as every operation is done automatically**
- **The panels can automatically identify the required capacitance and control the Power Factor & mitigate to reduce harmonics**

MV APFC Panel

✓ **Specifications:**

- Nominal Voltage: 3.3kV, 6.6kV, 12 kV, 33kV
- 50 Hz / 60 Hz
- Step Configuration: As per customer's requirement
- Protection: HRC Fuses
- Reactor: As per customer's requirement (No reactor / 0.2 % / 6%)
- Switching: Vacuum Contactor
- Single / Double star with RVT or NCT protection
- Indoor / Out-Door version

LV Hybrid APFC Panel

LV APFC Panel

✓ **Specifications:**

- Normal Voltage 440 Volts, 3 Phase, 50 Hz / 60 Hz Protection class: IP 4X / 5X
- Cooling: Self-convection (take care of sufficient convection)/Forced Cooling
- Reactor: As per customer's requirement (No reactor / 0.2 % / 7% or 14 %)
- Switching: Contactor switched OR Thyristor switch (TSM)
- Using our TSM modules, we can give APFC panel with 1 kVAr Resolution for Dynamic Fast Fluctuating Load
- Combination of Static Var Generator (SVG) + Active Harmonic Filter (AHF) for most effective harmonic filtering and power factor improvement

PCC / MCC / VFD Panel

✓ **Specifications:**

- Customized Power Control / Motor control/ Variable Frequency Drive Panels are manufactured as per the customer's requirement
- Normal Voltage 440 Volts, to 33 kV
- 3 Phase 4 wire / 3 phase 3 wire
- 50 Hz / 60 Hz
- Protection class: IP 4X / 5X
- Cooling: Self-convection (take care of sufficient convection)/Forced Cooling

Vacuum Contactor/Capacitor Switch Products Under PQS Segment

Vacuum Contactor is an electrically controlled switch that is used to make or break an electrical circuit with the help of vacuum interrupter, relay and fuse

11 kV Vacuum Contactor Switch For Outdoor Application

Specifications:

- ✓ Outdoor / indoor application
- ✓ Rated voltage: 3.3kV / 6.6 /11 kV at 50 Hz
- ✓ Rated current: 400 A
- ✓ Rated Capacitor switching current: 100/200A
- ✓ Rated short-time current: 10 kA rms for 1 sec
- ✓ Electrical / Mechanical endurance: 1,00,000 operations

- **Cycloaliphatic POLYMER bushings most preferable for outdoor application**
- **Both with Mechanical Latch / permanent Magnetic Latch type Mechanism**

11 kV Vacuum Contactor Switch For Indoor Application

Specifications:

- ✓ Indoor / Indoor application
- ✓ Rated voltage: 3.3kV / 6.6 /11 kV at 50 Hz
- ✓ Rated current: 400 A
- ✓ Rated Capacitor switching current: 100/200 A
- ✓ Rated short-time current: 10 kA rms for 1sec
- ✓ Electrical / Mechanical endurance:100000 operations

- **Both with Mechanical Latch / permanent Magnetic Latch type Mechanism**

11 kV Vacuum Circuit Breaker For Indoor Application

Specifications:

- ✓ In door / In door application
- ✓ Rated voltage: 11 kV at 50 Hz
- ✓ Rated current: 1250 A
- ✓ Rated short circuit peak withstand current: 37.5 kA rms for 1 sec
- ✓ Rated power frequency with voltage – 75 kV peak
- ✓ Electrical / Mechanical endurance: 50,000 . 10,000 operations

- **With Permanent Magnetic Latch Mechanism**

Instrument Transformer Products Under PQS Segment

Instrument transformers are electrical devices used to measure electrical quantities such as voltage and current in high and low voltage power systems

Outdoor Oil Cooled Current Transformer

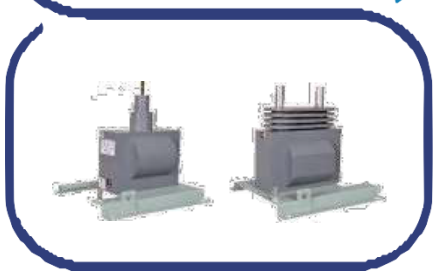
- ✓ CT for the system voltage up to 33 kV Construction available in Live Tank & Dead Tank types. Ip up to 3600A for dead tank design Is = 5 or 1A, Up to 3 cores, Ith up to 40 kA Burden & Accuracy class as per IS-2705, IEC-60044 Conformance to other standards on request 1.2 / 50 micro sec. Lightning impulse voltage up to 170 kVp Ingress protection of secondary terminal Box : IP 55

Outdoor Oil Cooled Voltage Transformer

- ✓ VT for system voltage up to 33 kV Single or Double pole VT (Only up to 33 kV) Burden up to 200 VA Voltage factor 1.2 Un continuous,1.5 Un 30s, 1.9 Un 30s, 1.9 Un 8h Accuracy & protection class as per IS-3156, IEC-60044 Conformance to other standards on request 1.2 / 50 micro sec. Lightning impulse voltage up to 170 kVp Ingress protection of secondary terminal Box : IP 55

Residual Voltage Transformer (RVT)

- ✓ Resin cast dry type RVT up to 11 kV Oil cooled type RVT up to 11 kV Burden and accuracy class as per IS-2705/3156/IEC-60044 Conformance to other standards on request



Outdoor Cycloaliphatic Resin Cast PT

- ✓ CT – PT for system voltage up to 33 kV Ip up to 1250 A Burden & Accuracy class as per IS-2705, IEC- 60044 Conformance to other standards on request
- ✓ Outdoor Cycloaliphatic Resin cast CT-PT for system voltage up to 33 kV Ip up to 1250 A Burden & Accuracy class as per IS-2705, IEC- 60044 Conformance to other standards on request

Power Quality Solution

“Technology partnership with TDK - Japan”

Our team is capable to do the system study PQS measurements. Collect the power quality parameters as per IEEE-519, Based on the data and analysis design the system, manufacture the system, install at the site, as well online monitoring the performance, using our analytics portal. a Complete end to end solution. We recognise every project as unique solution for industry or utility company based on its load profile and purpose of use.

LOW VOLTAGE AND MEDIUM VOLTAGE CAPACITOR BANKS

BASIC BENEFITS

With our power quality solutions, we improve the power factor, we relieve the electrical distribution system, like TRANSFORMER, CABLE, SWITCHGEARS in the network. Prolong life-time for all the equipments in the network.

TECHICAL DATA

- Nominal Voltage: up 36 kV, 50/60 Hz
- Nominal Power: up to 15 mVAr
- Assembly: Indoor / Out-door
- Installation: open rack, kiosks
- Step Configuration: Fixed single step, Variable switching steps.
- reactor: air, iron core, inrush current damping or de-tuned filters
- IEC 60871-1,2,4, IEC 60099-6 , IEC 60076-6, IEC 61869-2 IEC 60831, IEC 61921, IEC 60439

SINGLE OR MULTI STEP AUTOMATIC MV CAPACITOR BANK – STRUCTURE TYPE

- ✓ NOMINAL VOLTAGE: up to 36 kV, 50 Hz
- ✓ BANK : up to 10 mVAr
- ✓ Protection : Expulsion Fuses
- ✓ Inrush or filter reactors
- ✓ Switching: Capacitor Switch
- ✓ Single / double star with protection
- ✓ Out-Door version

MULTI STEPS AUTOMATIC MV CAPACITOR BANKS - INDOOR ASSEMBLY

- ✓ NOMINAL VOLTAGE: up to 12 kV, 50 Hz
- ✓ Step Configuration : up to 5 mVAr, in multiple steps.
- ✓ Protection : HRC Fuses
- ✓ Inrush or filter reactors
- ✓ Switching: Vacuum Contactor.
- ✓ Single / double star with protection
- ✓ Indoor / Out-Door version


AMI
Solutions

a family of Smart electricity meters

“aku” family of smart electricity meters with AMI infrastructure, to take care of compete ownership to reduce Commercial losses in the Electricity Distribution network.

“aku” Split 1/3 phase electricity meter with CIU

- ✓ **DRDHC**, Dual Redundant Dynamic Hybrid Communicative energy meters, IP 68, for outdoor application, operating – 40 deg to + 75 deg temperature. Ensure meter bypass and tempering with hybrid communication (PLC + RF) to ensure data reliability.

“aku” Classic 1/3 phase electricity meter

- ✓ **DRDHC**, Dual Redundant Dynamic Hybrid Communicative energy meters, Classic meters for indoor application, operating – 40 deg to + 75 deg temperature. With hybrid communication (PLC + RF) and Cellular as an optional, as required, to ensure data reliability.

“aku” MID 1/3 phase electricity meter for sub metering

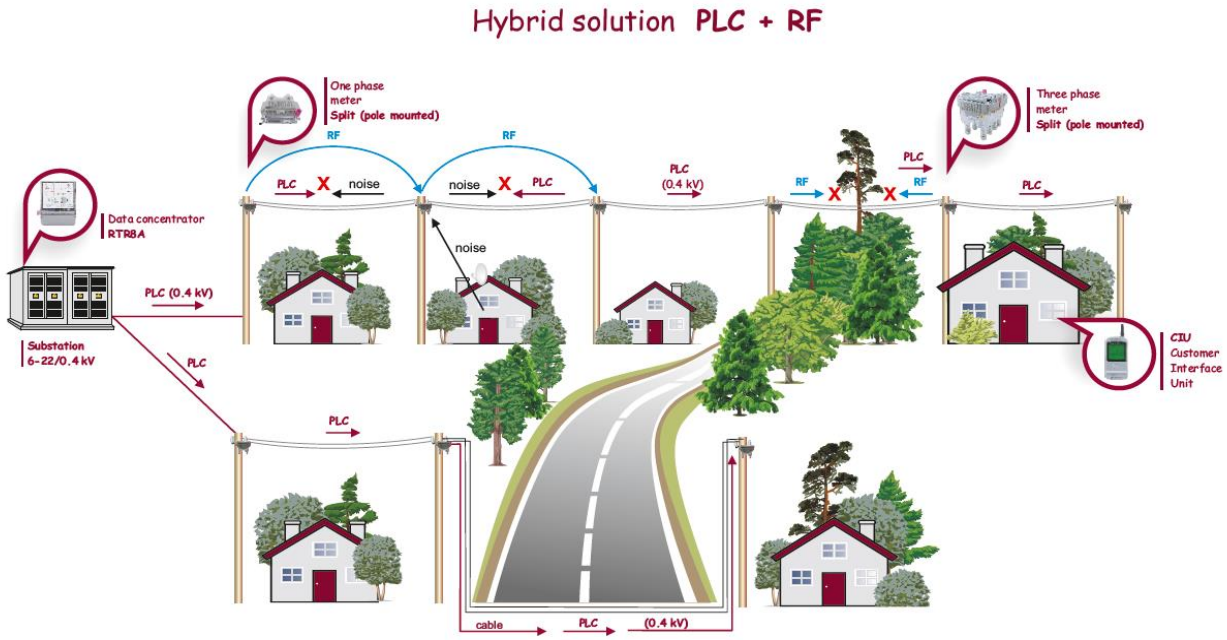
- ✓ **MID**, Compact DIN meters, for internal energy accounting with Bluetooth communication, compatible to the android mobile with prepaid billing engine.

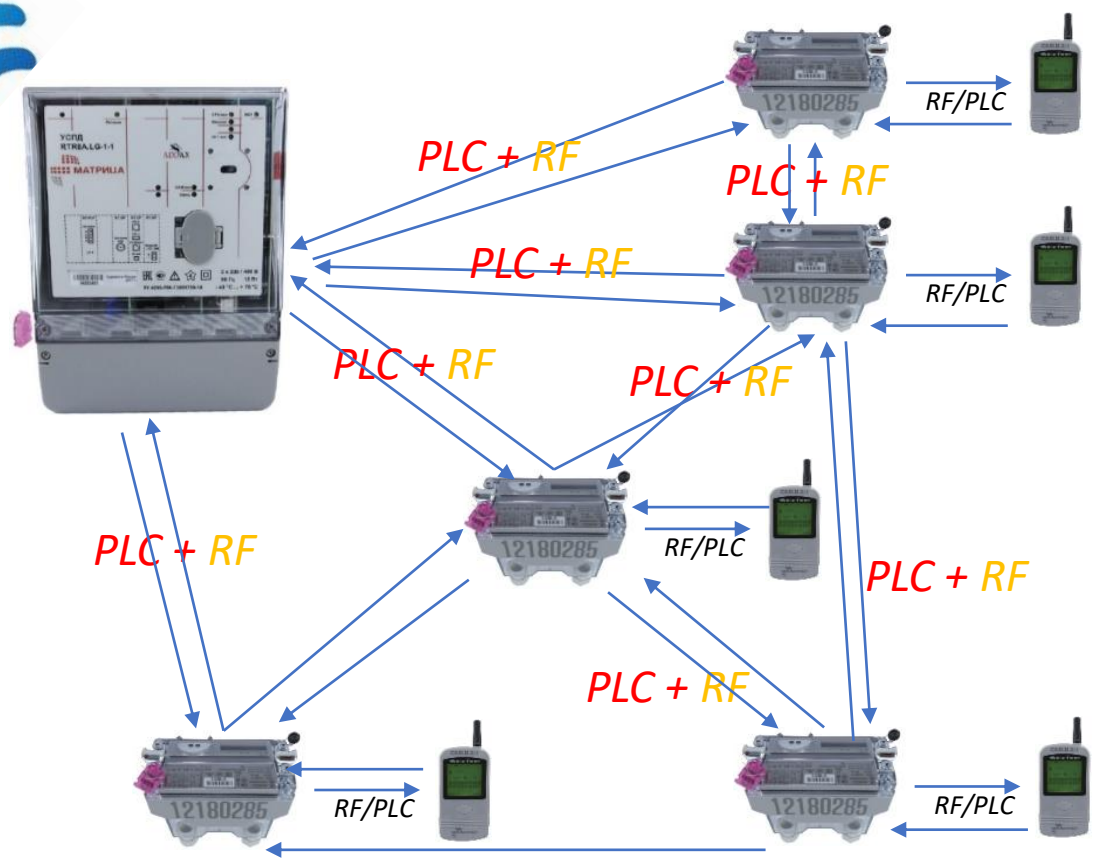
DATA Concentrator unit with Transformer meters

- ✓ DATA concentrator, to gathered the data from the consumers and push the data to the DISOCM designated server.
- ✓ HT meter, CT connected meter, Feeder meter all also included in our family.

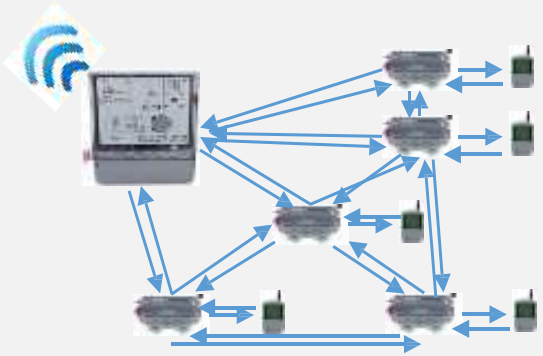
a simple architect?

Each device supports to establish the connection with other nodes via PLC or RF or PLC+RF "from device to device" (hop-by-hop mechanism).



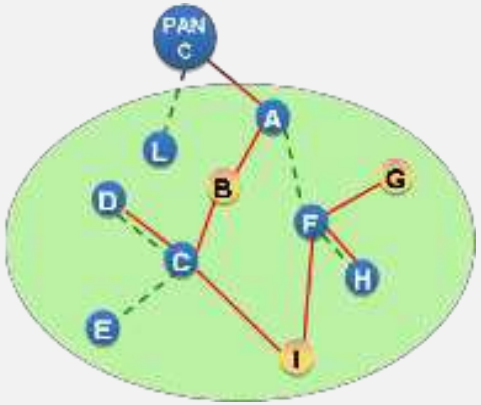


APIL has Developed AMI Solutions to Mitigate Commercial Losses



Infrastructure for Consumer Indexing

Tamper & Bypass Resistance



Two Way Communication

Efficient Operation to Cut Cost

- **DRDHC, Dual Redundant Dynamic Hybrid Communicative solution based on power line carrier and Radio.**
- **The capability to make each distribution transformer work as an independent profit center**

The meters are split into two parts can't tamper or Bypass.

1. Measuring device – This portion is located at a remote place
2. Display Unit – Setup in the room to see the consumption parameters & messages

DRDHC communication, to ensure reliable and seamless communication

- Inbuild relay for remote switching capacity to take care of remote disconnection and limit the load.
- To limit the consumption of the consumers if required.

Most important part of the AMI is low operation cost. Since it works through Power line and free band Radio frequency, the communication cost up to the DCU level is Zero.

As the infrastructure AMI primarily work on PLC, is a hardware communication, the reliability is better. So, the total cost of ownership (TCO) is better.

a family of Smart Water Meters

AKANKSHA

“akanksha – hanbit ” family of smart water meters

Domestic Ultrasonic Water Meter (UWM) series with Built-in Valve

- ✓ The UWM with integrated valve is based on the proven ultrasonic technology, advanced water supply management with leakage control. The device maintains its high accuracy (up to R800) throughout its entire lifetime of up to 16 years including its battery life and allows integration in AMI systems within the complete solution. Models also available w/o integrated valve.

Inductive Pulse Based AMR ready Multijet Water Meter with Smart Comm. features

- ✓ The Multijet Water Meter MIB series as per ISO-4064 & IS779 standard for Domestic water metering applications has multiple options of AMR retrofitting to make them smart enough to receive Data directly to remote/cloud server for analysis & billing purposes. The available communications options are: MBUS (walkby/driveby), LoraWan, GPRS(2G/4G), NB-IoT. The Meter has multi-level tamper protections with reverse flow control.

Wolt-man type Smart Water Meter for Bulk/Commercial con sumption applications

- ✓ The Wolt-man type Smart Water Meter starting from DN50 to DN200 sizes has Analog or Digital(optional both) display for consumption reading with built-in NFC for configuration purposes. The Meter is complied with ISO4064 standard with Class 2/Class B accuracy levels. The meter has GPRS 2G/4G built-in radio module for remote communication.

Smart Ultrasonic Water Meter for Bulk or Commercial Consumers

- ✓ The UWM Bulk Water Meter Series offers sizes from DN50 till DN400 ranging from 2 to 4 ultrasonic sensors. The Series of meters have Built-in LoRaWAN or optional GPRS 2G/4G communication for remote monitoring and billing purposes. The meters comply with ISO 4064 standard with R250 and optional R400 accuracy levels.

a family of Smart GAS Meters

“akanksha – hanbit ” family of smart GAS meters

Smart AMR – MBUS

- ✓ The Smart AMR MBUS is compatible for G1.6/G2.5/G4 Diaphragm GAS meters to make them enable to read the meters using an handheld + a mobile phone on Walk By or Drive By mode from a distance of 500meters LOS. This is most popular postpaid smart metering system, successfully deployed more than 200,000 nos. In India and abroad. Akanksha-Hanbit also has the wired MBUS model for closed network residences or commercial users, which is more reliable and with near real time data capture feature.

Smart AMR – LoRa/ MBUS

- ✓ The Smart AMR-LoRa/MBUS is a duel communication model for 100% meter data collection periodically. The LoRaWAN ensures daily data to SERVER directly, and MBUS gives an advantage of collecting data whenever there is a data loss by fixed network. The is also popular because of its data reliability.

PAYGT-RFID

- ✓ The "PAYG" Pay As You Go a Prepaid Smart Gas meter series with Token i.e. RFID/NFC Card to TOP-UP or Recharge the meter with Card when the balance is zero or low to continue the GAS supply. Most popular, well proven with more than 100,000 meters successful deployment in India and abroad. The product has all necessary approvals to be safely used in different GAS environment zones.

PAYGTL-LoRa BLE

- ✓ The fully loaded "PAYG" Series with Token Less operation and with 100% remote communication to control to monitor, the GAS consumption, to recharge and to connect/disconnect the GAS supply. This Device is compatible with all major mechanical GAS meters with built-in valve models to implement the AMI operation. The meter qualifies with all necessary approvals to operate it safely. The device is also available with only Bluetooth communication without much compromise in its functionality, where the price is a constraint.


Energy
Transparency

Objective - APIL -02

Innovate offerings of smart equipment's to make APIL as the

“Customer Choice”

for AMISP* & Digital Services globally.

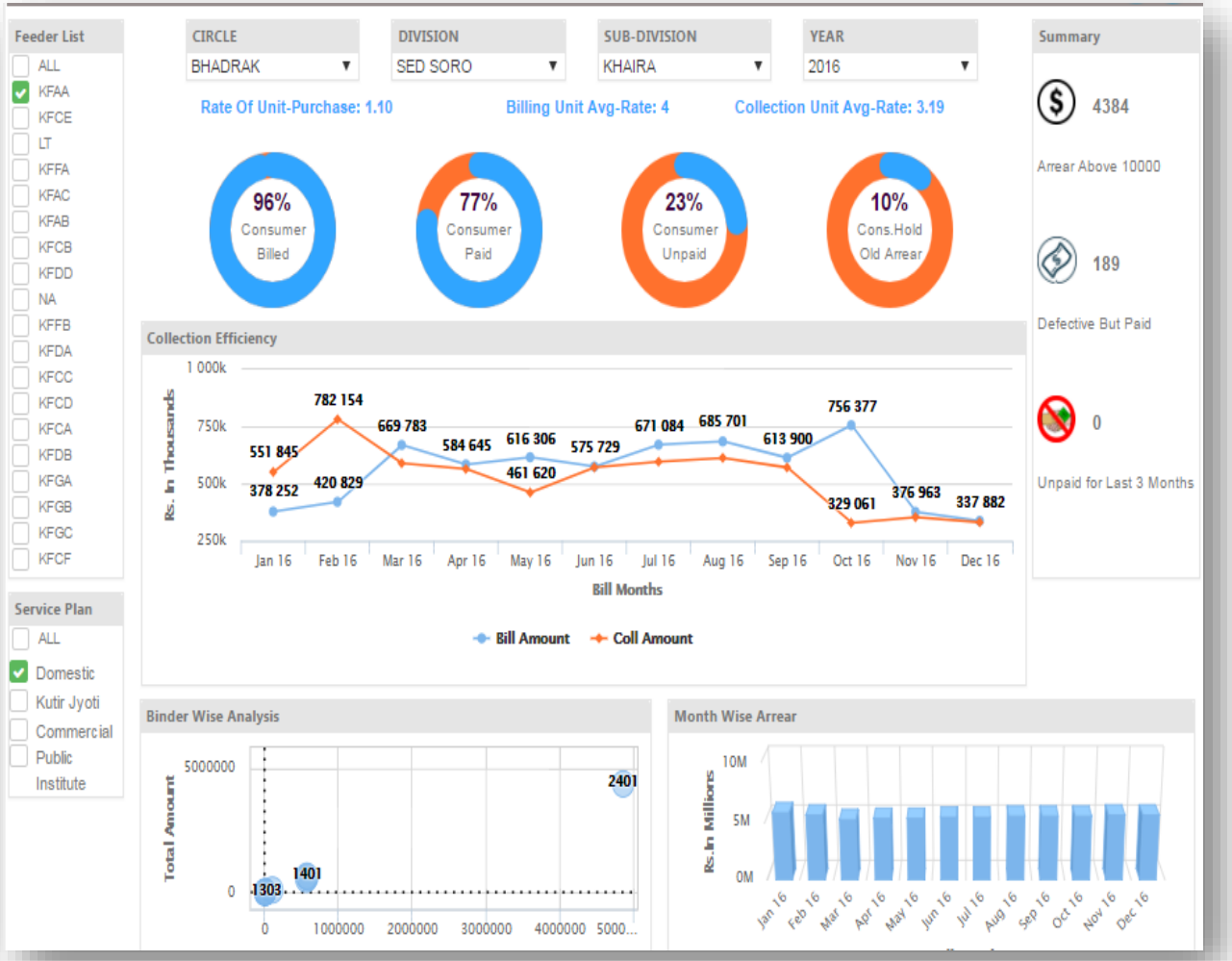
* Conservator of Natural resources

Analytics & dashboard management.

AKANKSHA

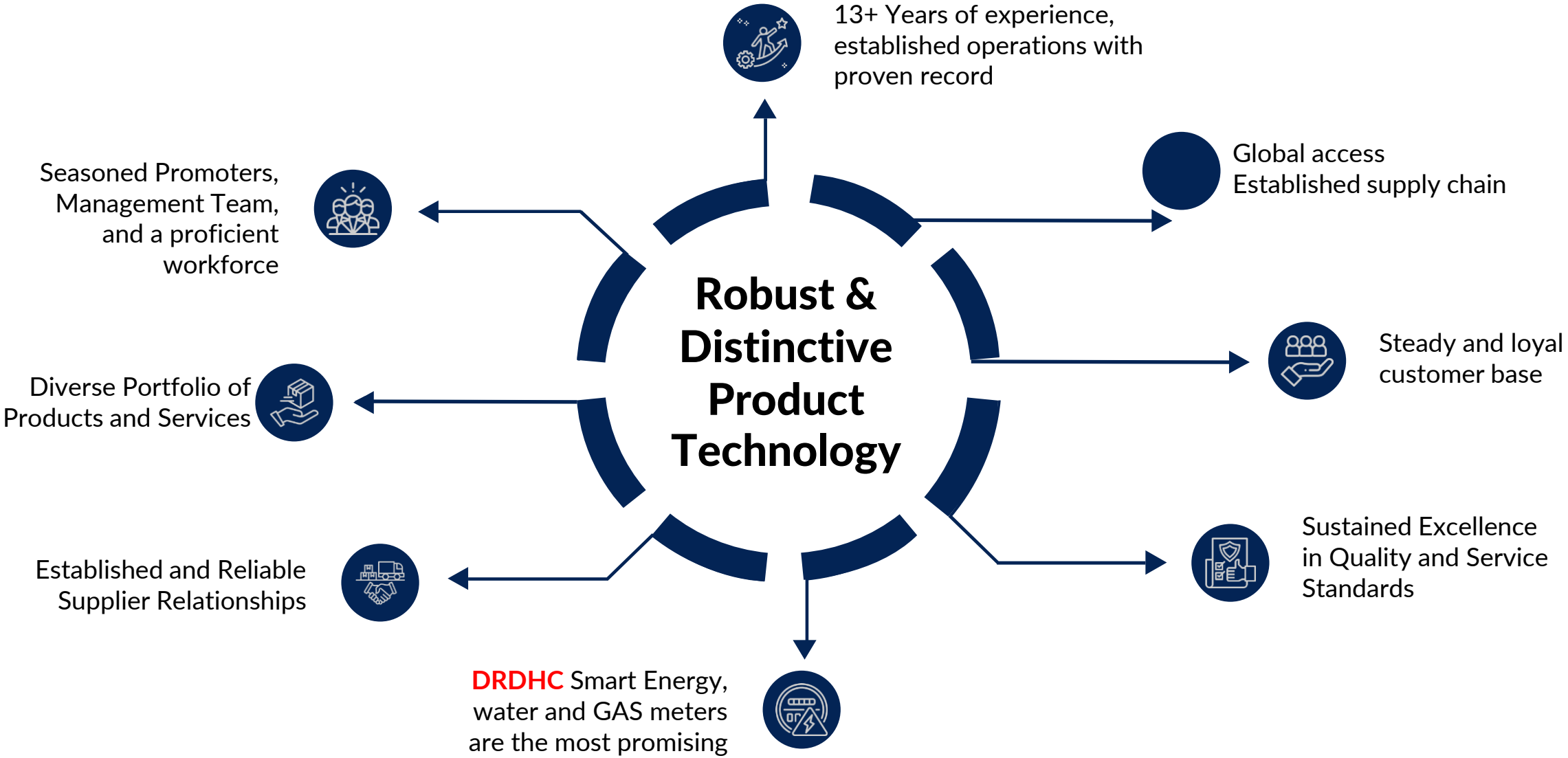
Data Analytics

Dashboard Management



Our Value Proposition

Key Value Propositions



Strong Mix of National & International Marquee Clients

RMS Measurement & Control — South Africa

GASCO GAS EQUIPMENT AND SERVICES CO. LTD. — QATAR

sensus a xylem brand — UK

esyasoft — DUBAI

QATARGAS — QATAR

EL MASRIA CO. ELECTROMECHANICAL CONTRACTING — EGYPT

rms remotemeteringsolutions — SOUTH AFRICA

bme — Sri LANKA

EMIDAS — THAILAND

SIEP — SIBIRSKOE, RUSSIA

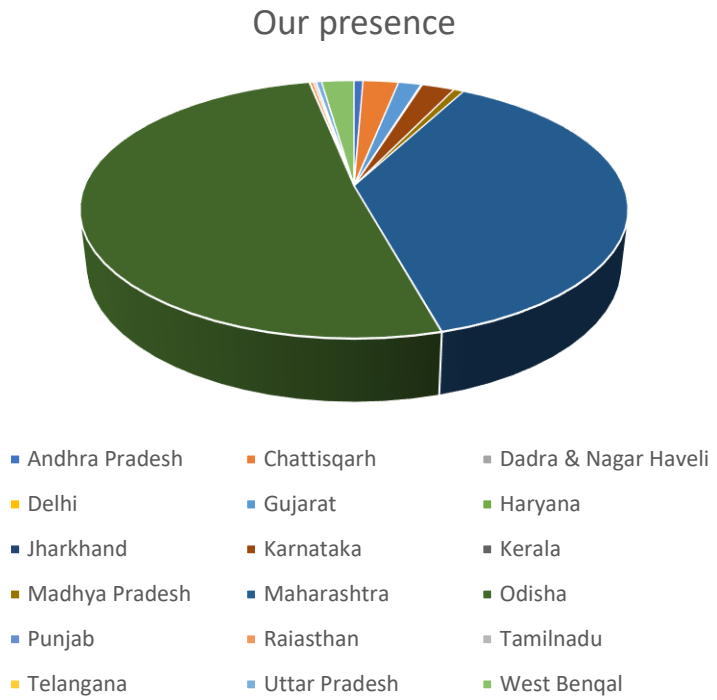
МАТРИЦА — MATRITCA, RUSSIA

RAIPLY — MALAWAI

Mix of Clients from different segments across the globe

- Mining
- Oil & GAS
- Large Industry
- Generation
- Commercial establishments
- Energy transmission & distribution
- Residential establishments
- AUTOMOTIVE Industries
- SOLAR ENERGY

Strong Mix of National & International Marquee Clients



Product Innovation Done by the promotors

- ✓ **Manufactured the first 11 kV Automatic Power Factor Control (APFC) Panel:**
  The promoter of the company developed, and field tested the panel with Maharashtra DISCOM & eventually commercialised in India, now is a big market.

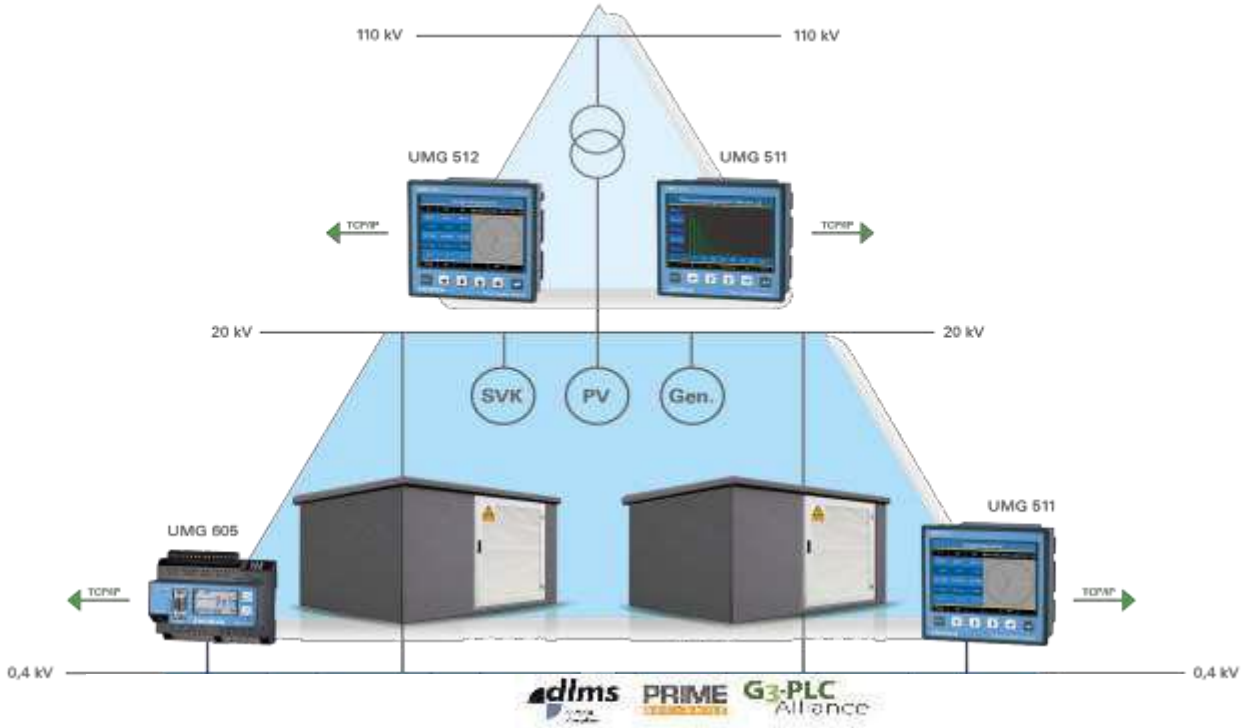
- ✓ **Manufactured & Developed the 1st APFC Panel with Individual Step Protection:**
  11kV APFC with Individual Step Protection was installed at L&T Sea-woods in 2016

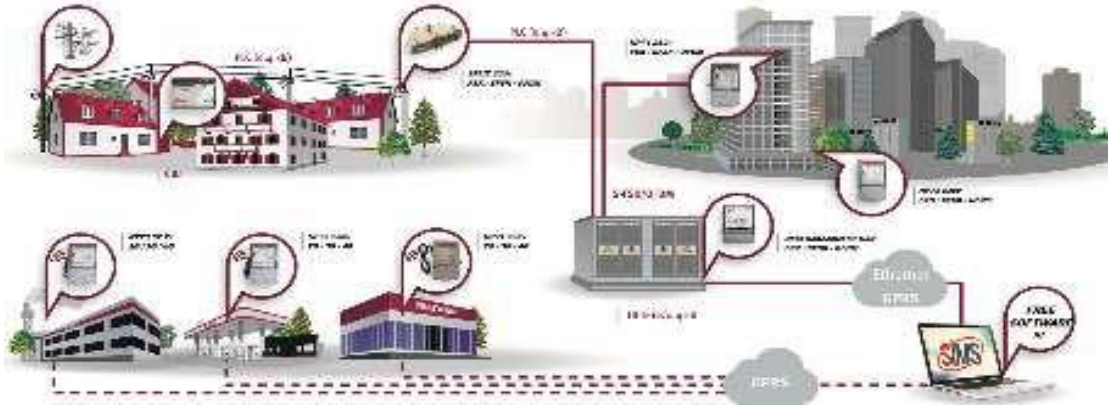
- ✓ **Inhouse Manufactured APFC Panel with Vacuum Circuit Breaker (VCB) as Incomer:**
  The 11kV APFC Panel with VCB incomer along with MV APFC was manufactured & installed at HAL Koraput, Odisha in 2017 with 11 kV Dry type capacitors.

- ✓ **Inhouse Developed & Manufactured APFC Panel with Draw-out Construction:**
  The 11kV APFC Panel designed with Individual step protection was installed at HAL Bengaluru in 2019

- ✓ **We are the company manufacturing major of the components required for the solution:** Manufacture all type of component, which make us competitive and reliable.

- ✓ **Only company in India is having DRDHC Smart energy meters. Single source for provide Smart solution for Electricity, Water and GAS solutions.**


110 kV
110 kV
UMG 512
UMG 511
TCP/IP
TCP/IP
20 kV
20 kV
SVK
PV
Gen.
UMG 605
UMG 511
TCP/IP
TCP/IP
0,4 kV
0,4 kV
dlms
PRIME
G3-PLC
Alliance



Thank you