



[www.erda.org](http://www.erda.org)

**FOUR DECADES  
OF SERVICE TO  
ELECTRICAL UTILITIES  
AND INDUSTRIES**





## AN OVERVIEW

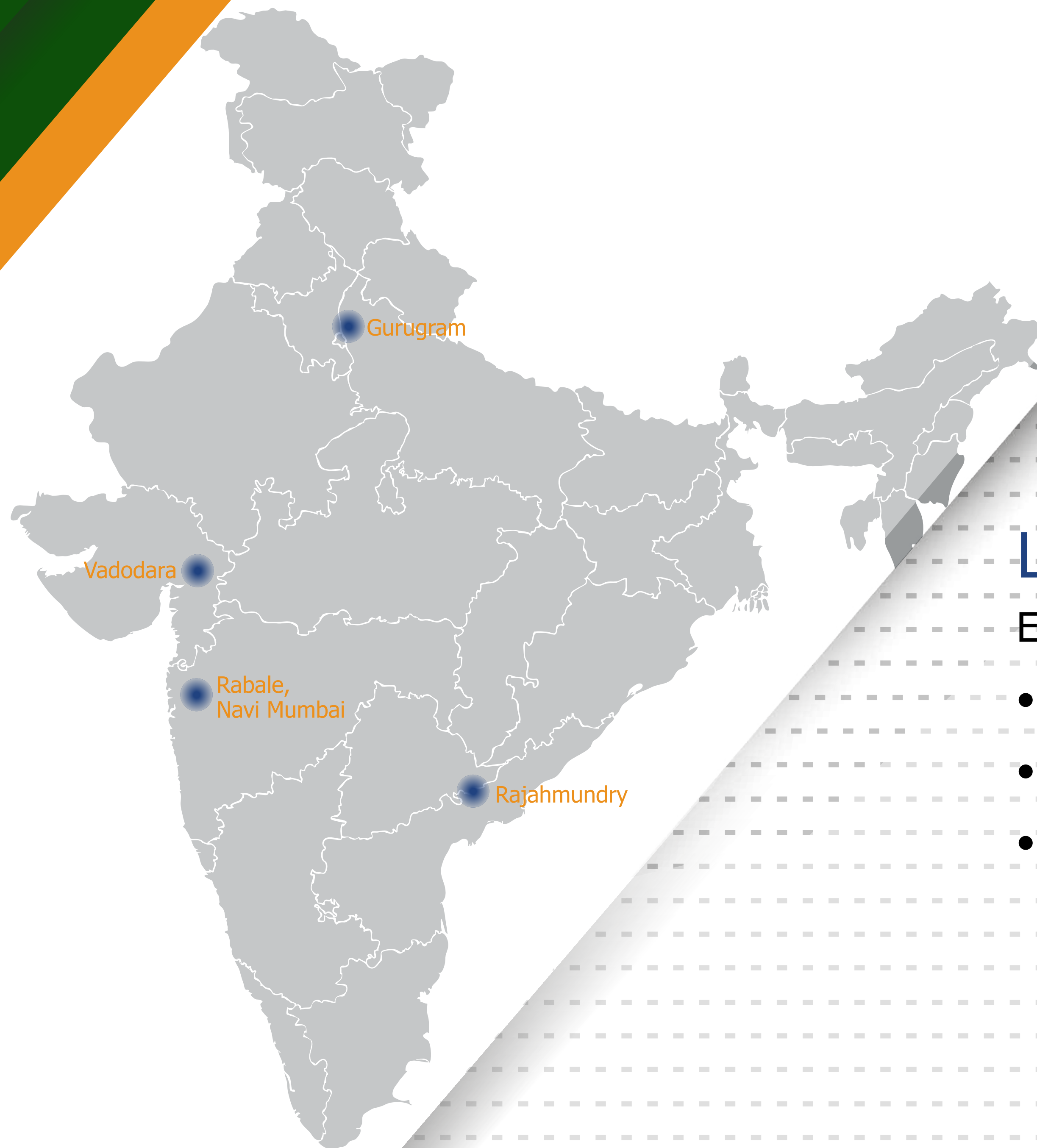
- Established in 1974
- Spread over 25 acres at Vadodara, Gujarat, India
- Total laboratory build up area of more than 14,000 sq.m.
- Customer base of more than 10,000





## AN OVERVIEW

- Total manpower strength of 410 including
  - 356 technical persons
  - 30 post graduates and research associates
- Testing of more than 50,000 samples every year
- Evaluation of more than 135 electrical products



## LOCATIONS

ERDA Operates from:

- Head Office – Vadodara, Gujarat
- Registered Office – Rabale, Maharashtra
- Regional Laboratories:
  - Gurugram, Haryana
  - Rajahmundry, Andhra Pradesh



The background of the slide is a photograph of an anechoic chamber. A man in a light pink shirt and dark trousers is standing on the left, holding a smartphone to take a picture of a piece of scientific equipment. The equipment is a complex structure of vertical rods and horizontal bars, mounted on a tripod. The walls of the chamber are covered in white, square-shaped electromagnetic absorbers. The floor is grey with yellow and black safety markings. The right side of the slide features a white diagonal band with a dotted pattern, containing the text and logo.

## LEGAL IDENTITY

- Not-for-Profit professional Research Organisation
- Registered under the Societies Registration Act, XXI of 1860
- Established with the support of Government of Gujarat and the Government of India (CSIR)





## ACCREDITATIONS - NATIONAL

- Accredited by NABL (Govt. of India)
- Approved by BIS, BEE and PESO (Govt. of India)
- Recognized as SIRO by Ministry of Science & Technology (Govt. of India)





Intertek

DEWA

ADWEA

DCRP

TNB

## ACCREDITATIONS - INTERNATIONAL

Approved by

- Intertek (ASTA)
- DEWA (Dubai)
- ADWEA (Abu Dhabi)
- DCRP (Oman)
- TNB (Malaysia)







## ORGANISATION - MC

- Policies, strategies & compliance overseen by Managing Committee comprising of elected / nominated personnel from
  - Central & State Govts.
  - PSUs
  - Utilities
  - Industries





## ORGANISATION - INTERNAL

- Headed & managed by highly qualified technical personnel & experienced professionals with core objectives of
  - Achieving Excellence
  - Thrust on Research & Development & Innovation
  - Customer Service







## ORGANISATION - INTERNAL

- Always establish and follow well laid procedures & systems
- Emphasis on transparency & high ethical standards





A photograph of high-voltage testing equipment in a laboratory. It features two tall blue metal stands with multiple silver-colored spherical electrodes. A long, flexible, silver-colored metal hose connects the two stands. In the foreground, there is a blue cylindrical base with a spherical electrode on top. A yellow box with the text 'HIGH VOLT' is visible on the right stand. The background is a plain, light-colored wall.

## ORGANISATION - INTERNAL

- ERDA's surplus income is ploughed back for improvement of its infrastructure and conducting R&D in the field of electrical power
- The surplus income is not distributed as dividend or by any other means to its members



## ORGANISATION - INTERNAL

- Individual members of the Managing Committee have no interest in the investments of the association
- No individual member of the Managing Committee is a debtor or creditor of the association





## GOVERNMENT SUPPORT

- Established at Vadodara on land provided by Gujarat government free of cost
- Receives regular grant from Government of Gujarat for its capital projects
- Accounts get audited by CAG (Govt. of India)



## IT / CUSTOM DUTY EXEMPTION

- Exempted from Income Tax and Customs duty
- Provision of maximum three government nominees (GOG & CSIR) in the ERDA Managing Committee





## 3 VERTICALS

- Testing & Evaluation
- Field Services
- R&D and Expert Services





## TESTING AND EVALUATION

- 24 state-of-the-art laboratories
- Testing of more than 135 electrical products





## SHORT CIRCUIT LABORATORY

Largest On-Line Low Voltage Short Circuit  
Laboratory in India - 120 kA, 570 V



## TRANSFORMERS

- Transformer testing facility as per IS 1180 under the mandatory BIS scheme
- ERDA tests 75% of total distribution transformers evaluated in India as per IS 1180-2014





## EMI/EMC

State-of-the-art EMI/EMC laboratory with  
10 meter semi-anechoic chamber & 3 ton  
turn-table





40 TON IP TEST FACILITY

# INGRESS PROTECTION

Asia's largest IP testing facility -  
40 ton payload

ERDA  
TEST FACILITY  
DESIGNED BY  
S. GUPTA  
MT, ERDA  
DEC, 2000





## FIELD SERVICES

- Electrical Diagnostics for Generators, Motors, Transformer & Cables
- Mechanical Diagnostics
- Energy Audits
- Power System Studies
- Third Party Inspection





# CONDITION MONITORING

Condition monitoring of lightning arrestor  
at live substation







## RLA

Remnant life assessment of thermal power plant







## ONSITE TESTING

NABL accredited onsite power  
transformer testing upto 100 MVA





## MOBILE VAN

NABL accredited Mobile Testing  
Laboratory for Energy Meter / CT&PT  
and Oil Testing







## RESEARCH & DEVELOPMENT

- Undertakes Research Projects and Expert Services in five technology missions
  - Advanced Materials
  - Renewables
  - Diagnostics
  - Power Systems
  - Smart Grids & New Product Technologies



## EXPERT SERVICES

- Undertakes Expert Services in the field of
  - Power System studies
  - Power Quality measurement and analysis
  - Simulation and modelling based on finite element methods
  - Material characterisation





## TECHNOLOGIES DEVELOPED

- Developed innovative patented technology on
  - Anti dust coating on solar panels
  - IE4 Induction motor
  - Charge controller for electric vehicles
  - Nano silver contact
  - Corrosion resistant paint
  - Fault current limiter
  - Online fault sensor

ERDA  
coated

Uncoated



# TECHNOLOGIES DEVELOPED - FCL



क्रमांक : 022101580  
SL No :

भारत सरकार  
GOVERNMENT OF  
पेटेंट कार्यालय  
THE PATENT OFFICE  
पेटेंट प्रमाणपत्र  
PATENT CERTIFICATE  
(Rule 74 Of The Patents Rules)

पेटेंट सं. / Patent No. : 289733  
आवेदन सं. / Application No. : 1200/MUM/2007  
फाइल करने की तारीख / Date of Filing : 21/06/2007  
पेटेंटी / Patentee : ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION

प्रमाणित किया जाता है कि पेटेंटी को उपरोक्त आवेदन में यथाप्रकटित FAULT CURRENT LIMITER FOR LT SWITCHGEAR AND APPLIANCES नामक आविष्कार के लिए, पेटेंट अधिनियम, १९७० के उपबंधों के अनुसार आज तारीख 21st day of June 2007 से बीस वर्ष की अवधि के लिए पेटेंट अनुदान किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled FAULT CURRENT LIMITER FOR LT SWITCHGEAR AND APPLIANCES as disclosed in the above mentioned application for the term of 20 years from the 21st day of June 2007 in accordance with the provisions of the Patents Act, 1970.

INTELLECTUAL  
PROPERTY INDIA  
PATENTS | DESIGNS | TRADE MARKS  
GEOGRAPHICAL INDICATION

अनुदान की तारीख : 20/11/2017  
Date of Grant :

पेटेंट नियंत्रक  
Controller of Patent

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, 21st day of June 2009 को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।  
Note. - The fees for renewal of this patent, if it is to be maintained will fall / has fallen due on 21st day of June 2009 and on the same day in every year thereafter.



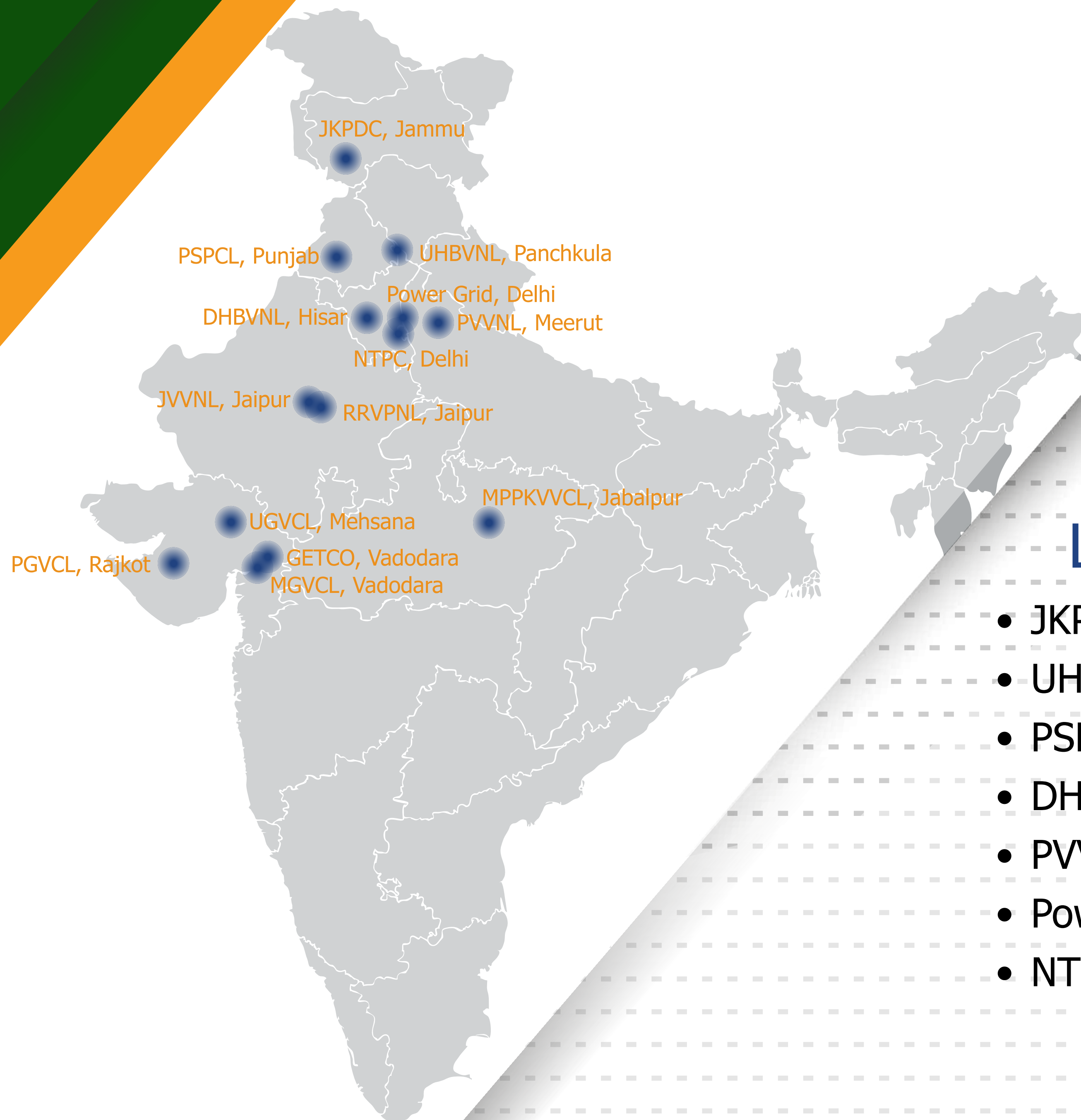




## CRM

- ERDA prepares around 20,000 work orders per annum
- ERDA is catering to Indian Utilities and PSUs since the last 44 years

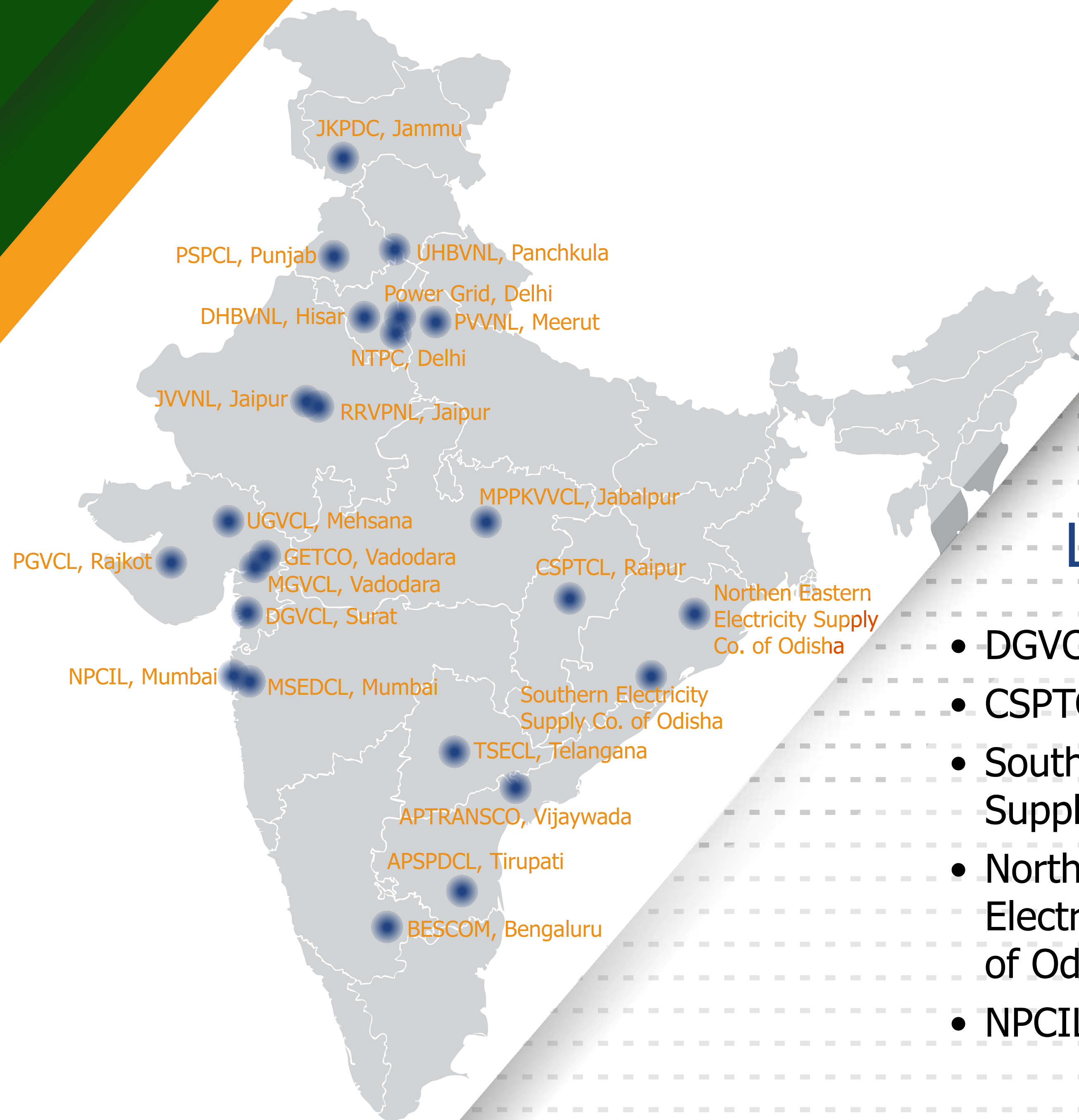




## LIST OF INDIAN UTILITIES

- JKPDC, Jammu
- UHBVNL, Panchkula
- PSPCL, Punjab
- DHBVNL, Hisar
- PVVNL, Meerut
- Power Grid, Delhi
- NTPC, Delhi
- JVVNL, Jaipur
- RRVPNL, Jaipur
- MPPKVVCL, Jabalpur
- UGVCL, Mehsana
- PGVCL, Rajkot
- GETCO, Vadodara
- MGCVCL, Vadodara





## LIST OF INDIAN UTILITIES

- DGVCL, Surat
- CSPTCL, Raipur
- Southern Electricity Supply Co. of Odisha
- North Eastern Electricity Supply Co. of Odisha
- NPCIL, Mumbai
- MSEDCL, Mumbai
- TSECL, Telangana
- APTRANSCO, Vijaywada
- BESCO, Bengaluru
- APSPDCL, Tirupati





## INTERNATIONAL CUSTOMERS

- 50+ international customer base including all the top transformer and switchgear manufacturing companies in Middle East Region
- More than 200 panels and 100 bus ducts tested as part of ASTA Certification and tests are witnessed by ASTA observers





## INTERNATIONAL CUSTOMERS

- A K Steel, USA
- Alfano Electric Systems, Riyadh
- Alstom, Grenoble, France
- China Steel Corporation, Taiwan
- Electric House, Saudi Arabia
- Kiklanka, Sri Lanka
- Nippon Steel, Japan
- Powerbar Gulf, UAE



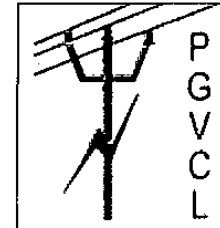


## INTERNATIONAL CUSTOMERS

- Prysmian Cables, UK
- Pubudu, Sri Lanka
- Right Choice, UK
- Siemens, China
- Summit Power, Bangladesh
- Tamco, Malaysia
- Tetrattech ES, USA



# VOICE OF CUSTOMERS



:: Save Energy For Benefit of Self & Nation ::

## PASCHIM GUJARAT VIJ COMPANY LIMITED

REGD. & CORPORATE OFFICE, "PASCHIM GUJARAT VIJ SEVA SADAN"

OFF NANA MAVA MAIN ROAD, LAXMINAGAR, RAJKOT - 360 004

CIN U40102GJ2003SGC042908

Telephone No. 0281 - 2380425 / 427 / 2360182

Fax No. 0281 - 2368175

Website: [www.pgvcl.com](http://www.pgvcl.com)

E-mail: [proc.pg@gebmil.com](mailto:proc.pg@gebmil.com)

No. PGVCL/Proc/ No - 2 6 7 4

Date: 1 0 NOV 2017

To  
The Director,  
ERDA,  
GIDC, Makarpura,  
Vadodara - 390010

Sub: Appreciation for timely completion of type test on DTRs.

Dear Sirs,

We are associated with ERDA, Makarpura for more than a decade for testing of our products as per National & International Standards. We would like to thank you very much for your support for completion of type tests on PGVCL Suppliers' Distribution Transformers at your various department in last few months. We want to compliment your testing team as well as all the HOD, CRM and especially Business Development team for their extended support, quality of services and quick response on the same. Because of them, we were able to get the supply of ordered DTRs on time.

We look forward for the same support from you in future.

Thanking you,

Yours sincerely,

Chief Engineer (Material)  
PGVCL: Rajkot

Copy to:  
The C.E. (Tech) PGVCL, Corporate Office, Rajkot.



# VOICE OF CUSTOMERS



**M.P. POORV KSHETRA VIDYUT VITARAN Co. Ltd.**  
**REGD. OFFICE – BLOCK No. 8, 3<sup>RD</sup> FLOOR, SHAKTI BHAWAN,**  
**RAMPUR, JABALPUR - 482 008 (M.P.)**

**CIN: U40109MP2002SG015120**

**(Telephone no. 0761-2667808, 2666040 EXTN. 270-2473, 270-2425 & 270-2461)**

**Fax no.0761-2660048, email: [cepurez@yahoo.in](mailto:cepurez@yahoo.in)**

We are hereby grateful to M/s ERDA for their excellent service provided to us and appreciate their hard work towards testing of our transformers at this Lab. We are also grateful to them to always arrange our testing schedule as per our requirements and complete the jobs within our urgency by working even on weekly offs & public holidays.

We praise M/s ERDA for their commitment towards their work and congratulate them to achieve the testing standard set at this Lab through which quality of transformers supplied to our stores is improved.



# VOICE OF CUSTOMERS



Oman Fiber Optic Co.S.A.O.C



الشركة العمانية للألياف البصرية ش.م.ع.م

Date: 03/07/2018

## LETTER OF APPRECIATION

Sub: Appreciation for Good Work

We, Oman Fiber Optic Co. thank you for the quality of service provided by your company. We sincerely appreciate your efficient, gracious customer service, the level of detail and accountability you have demonstrated on our each project and the way you conduct business as a whole.

We have and will continue to recommend your service to other divisions and our vendors.

We are satisfied with your work and we look forward to continuing this relationship.





## AWARDS 2006-07

Dr. Vikram Sarabhai Award to Dr. G.S. Grewal





## AWARDS 2007-08

WIPO Award to Dr. V. Shrinet & Dr. M.K. Shah





## AWARDS 2008-09

Dr. Vikram Sarabhai Award to Dr. M.K. Shah





## ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION

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Infrastructure Corp., Rajahmundry - 533 106, Andhra Pradesh.

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