

BUREAU OF INDIAN STANDARDS
ELECTROTECHNICAL DIVISION COUNCIL (ETDC)

MINUTES OF 26TH MEETING OF ETDC

MEETING	NO. OF MEETING	DAY & DATE	TIME	VENUE
ELECTROTECHNICAL DIVISION COUNCIL (ETDC)	26th	Friday 12 July 2024	10:30 h	Lal C Verman Conference Hall, Manak Bhawan BIS Headquarters (9 Bahadur Shah Zafar Marg, New Delhi) (Hybrid meeting)

CHAIRMAN: Shri Ashok Kumar Rajput

SECRETARY: Shri A K Maharana

(List of Participations are given in **Annex 1**)

ITEM 0 GENERAL

0.1 Welcome Address by DDG (Standardization-I)

Shri Rajeev Sharma, DDG (Standardization-I) welcomed all the esteemed members present. In welcoming the Chairman of ETDC and congratulating him on assuming this role, he expressed confidence in the leadership of Shri Rajput in guiding and steering the standardization activity in the Electrotechnology sector.

He highlighted that the standards development process is going online at ISO and IEC level with the development of 'smart standards' and deployment of Online Standards Development (OSD) platform, which will not only change the way in which we engage in the standardization process but also require us to be aware of the processes. He emphasized that internationally, standards are no longer being viewed as standalone documents but increasingly, they are being considered from the viewpoint of 'standards as a service'. It requires our national standardization community also to reorient its viewpoint towards standards.

He informed that addressing sustainability aspects in our standards is the need of the hour and informed that BIS is also considering to establish a dedicated technical department related to Environment and Ecology to facilitate development of standards to address sustainability. To strengthen our foothold in the International Standardization activity, he encouraged the members to enhance their active participation in IEC, also by going through the draft standards and commenting on them.

While the 88th IEC General Meeting is taking place this year in Edinberg, UK, he informed that the 89th IEC General Meeting is scheduled to held in New Delhi during 2025. He requested all the members to actively participate in these events and encouraged them to share with and learn from the experts, the best in the respective technological domains.

He appreciated and placed on record the substantial contribution made by Shri V. S. Nandakumar, as earlier chairperson of ETDC, to the standardization activity in electro-technology sector.

0.2 Opening Remarks by Chairman, Electrotechnical Division Council (ETDC)

Shri Ashok Kumar Rajput extended a warm welcome to all members present. He thanked BIS in appointing him as Chairman of ETDC. While praising BIS for being a very responsible organization, he informed that even national regulations on electrical safety derive confidence from Standards. He said that standards address quality and safety aspects in a uniform and neutral manner and encouraged the members to strengthen their participation in IEC through BIS.

He echoed the sentiments of DDG (Standardization-1) on the importance of addressing sustainability in our standards and highlighted the efforts the Government is making through specific missions like 'LiFE' to promote sustainable practices. He shared the vision of Government of India on Energy Transition and enhancing the share of green energy which include renewable energy, hydro electricity as well as Green Hydrogen.

He encouraged all the members of various sectional committee of ETDC to enhance the speed of standards development. While noting that BIS is going to host the IEC General Meeting in 2025 in India, he suggested that BIS may associate all the relevant organizations and Ministries/Department in the event for the benefit of all stakeholders.

The meeting started with a brief introduction of all the participants.

ITEM 1 CONFIRMATION OF PROCEEDINGS OF THE LAST MEETING

1.1 There being no comments, the Council confirmed the proceedings of the last meeting.

1.2 Action Taken Report on the Decisions Taken in the Last Meeting

1.2.1 The Council considered the actions taken based on the decision taken at the last meeting as given in the Annex 1 of the Agenda and decided as follows:

Sl.No.	Item No. of 25 th ETDC Meeting	Decision	Action Taken	Decision taken in the meeting
1.	3.3	Appointment/Reappointment of Chairman of Sectional Committee	Please see Item 3.3	The council noted the information.
2.	5.2 (1)	Transfer of IS 302 (Part 2/Sec 24): 1994 'Safety of household and similar electrical appliances: Part 2 particular requirements: Sec 24 refrigerators, food - Freezers and ice - Makers' from ETD 32 to (MED 03) Mechanical Engineering Department of BIS.	This Indian Standard has been transferred to MED 03.	The council noted the information.
	5.2 (2)	Transfer of IS 10398: 1982 'Specification for Zener barrier for intrinsically safe process control instruments' from ETD 18 to ETD 22.	This Indian Standard has been transferred to ETD 22.	The council noted the information.
3.	5.4	The Council observed that energy efficiency aspects are being separately dealt by various technical committees and therefore requested BIS to send the proposal to BEE to obtain their views.	The views of BEE were sought on this proposal vide ETDC/G-1 dated 06 May 2024. Response of BEE is still awaited.	On the request of Ms. Prabhat Nalini Samal, Director BEE and member of the council, the council decided to send the communication again to her for an early response with a copy of letter to ETDC Chairman.

ITEM 2 SCOPE AND COMPOSITION OF ELECTROTECHNICAL DIVISION COUNCIL (ETDC)

- 2.1** While noting the information given in the Agenda the council decided to communicate with the existing member organizations for updates, if any, in their principal and alternate members to ETDC. The council also decided to remove M/s Wazir Advisors, Gurgaon, which is into manufacturing of Electronic products, from the council as they may be more relevant in Electronics Sector which is outside the scope of ETDC
- 2.2** The council noted the information given in the agenda.
- 2.3** The council approved the request of International Copper Association of India as given in the agenda and accepted it as a member of ETDC.

ITEM 3 REVIEW OF COMPOSITION OF SECTIONAL COMMITTEES

3.1 Composition of Sectional Committees

The Council noted the information given in the Agenda.

3.2 Co-option in Sectional Committees

In reconstituting the sectional committees, the Council approved the co-options requests recommended by corresponding technical committee as given in the agenda. It also approved the withdrawal of members from various sectional committee as given in the addenda to the same Annex, placed before it during the meeting. This list of experts so withdrawn is placed at Annex-2.

3.3 Appointment/Reappointment of Chairpersons of Sectional Committees

The council, while noting the information about the chairpersons of various Sectional Committees, appointed/re-appointed the chairperson wherever their number of terms or term duration as chairperson is over, and also in consideration of their willingness. The chairpersons of the Sectional Committees and their date of appointment/reappointment, after approval of the council - wherever required, as on date are given below:

Sl. No	Sectional Committee	Chairperson/Organization	Period of Appointment
1.	Basic Electrotechnical Standards, ETD 01	Smt. Vandana Singhal, Chief Engineer, Central Electric Authority	Re-appointed till her retirement up to Sep 2024.
2.	Solid Electrical Insulating Materials and Insulation Systems, ETD 02	Shri S J Lahiri, Senior General Manager (Engineering-S/S), Powergrid Corporation of India	Re-appointed for a period of 3 years for another term up to August 2027.
3.	Fluids for Electrotechnical applications, ETD 03	Dr P Thomas, Additional Director, CPRI	Re-appointed for a period of 3 years upto June 2025.
4.	Electrical Insulators and Accessories, ETD 06	Shri SS Mishra, In personal Capacity	Re-appointed for a period of 3 years upto June 2026.
5.	Low Voltage Switchgear and Controlgear, ETD 07	Shri B.R.Vasudevamurty, Add. Director, CPRI	Appointed for a period of 3 years upto May 2027.
6.	High Voltage Switchgear and Controlgear, ETD 08	Shri M.S.Thakkar, Joint Director, CPRI	Appointed for a period of 3 years upto July 2027.
7.	Power Cables, ETD 09	Smt K.P. Meena, Joint Director (CPRI), CPRI, Bangalore	Appointed for a period of 3 years upto June 2025.
8.	Primary Cells and Batteries,	Mr. N S Sodha, In Personal	Re-appointed for a period of

	ETD 10	Capacity	three years upto April 2027.
9.	Secondary Cells and Batteries, ETD 11	Shri Pankaj Batra, In Personal Capacity	Appointed for a period of 3 years up to Nov 2026.
10.	Measuring Equipment for Basic Electrical Quantities, ETD 12	Dr Saood Ahmad, Sr Principal Scientist, NPL New Delhi	Appointed for a period of 3 years upto July 2026.
11.	Equipment for Electrical Energy Measurement and Load Control, ETD 13	Shri B A Sawale, Director General, CPRI	Re-appointed for a period of 3 years upto June 2025.
12.	Electrical Wiring Accessories, ETD 14	Shri Vimal Kumar, Chief Engineer & Executive Director CPWD	Appointed for a period of three year upto Nov. 2025
13.	Rotating Machinery, ETD 15	Shri Mukesh Maravi, AGM, BHEL	Appointed for a period of three year upto July 2026.
14.	Transformers, ETD 16	Shri S. Sudhakar Reddy, Additional Director CPRI	Re-appointed for a period of 3 years upto June 2025.
15.	Industrial Process Measurement and Control, ETD 18	Shri Rajeev Gupta, In Personal Capacity	Re-appointed for a period of three years upto June 2027.
16.	High Voltage Engineering, ETD 19	Dr. Pradeep M Nirgude, Additional Director CPRI	Re-appointed for a period of 3 years upto June 2025.
17.	Electrical Installations, ETD 20	Ms Sumita Anand, In Personal capacity	Re-appointed till a new chairperson is appointed.
18.	Electric Welding Equipment, ETD 21	Shri S Prabhakaran, GM, Welding Research Institute, BHEL	Re-appointed for a period of three years upto June 2027.
19.	Electrical Apparatus for Explosive Atmospheres, ETD 22	Shri Ajay Singh, DDG DGMS	Appointed for a period of three year upto July 2026.
20.	Lamps and Related Equipment , ETD 23	Dr. R.K Sinha, VC, Gautam Buddha University, Noida	Appointed for a period of 3 years up to July 2027.
21.	Lifts and Escalators, ETD 25	Shri S.A Patil, Chief Electrical Inspector, PWD Maharashtra	Appointed for a period of three years upto September 2026.
22.	Solar Photovoltaic Energy Systems, ETD 28	Dr. A.K.Tripathi, Sc G & Advisor, MNRE	Appointed for a period of 3 years up to July 2027.
23.	Power Capacitors, ETD 29	Dr T Bhavani Shankar, Joint Director, CPRI	Re-appointed for a period of three years upto December 2026.
24.	Surge Arresters, ETD 30	Dr Anil S Khopkar, HOD (PETE-II), Electrical Research And Development Association	Appointed for a period of three years upto October 2024.
25.	Power Electronics, ETD 31	Dr.Sachin Devassy, Sc G, CSIR-CEERI, Pilani	Appointed for a period of 3 years up to June 2027.
26.	Electrical Appliances, ETD 32	Shri Atul Gupta, Sc G, STQC, MEITY	Appointed for a period of 3 years up to May 2027.
27.	Winding Wires, ETD 33	Shri Ratnanav Acharya, In personal capacity	The Council requested Shri Ratnanav Acharya to continue as Chairperson till new Chairperson is appointed.
28.	Instrument Transformers, ETD 34	Shri Dinkar Devate, In Personal capacity	Re-appointed for a period of three years upto August 2024.
29.	Power System Relays, ETD 35	Shri Rajil Shrivastava, Senior General Manager, PGCIL	Re-appointed for a period of 3 years upto June 2025.
30.	Tools and Equipment for Live Working, ETD 36	Shri Dharambeer Kumar, Chief General Manager,	Appointed for a period of three year upto July 2026.

		PGCIL	
31.	Conductors and Accessories for Overhead Lines, ETD 37	Shri Anish Anand, ED, PGCIL	Re-appointed for a period of three years upto December 2026.
32.	Fuses, ETD 39	Shri M.S.Thakkar, Joint Director, CPRI	Appointed for a period of 3 years upto June 2027.
33.	HVDC Power Systems, ETD 40	Shri B B Mukherjee Chief General Manager (HVDC Engineering) PGCIL	Re-appointed for a period of three years upto June 2027.
34.	Wind Turbines, ETD 42	Dr Rajesh Katyal, DG, National Institute of Wind Energy	Appointed for a period of three years upto February 2026.
35.	Standardization of environmental aspects for electrical and electronic products, ETD 43	Dr. Sandip Chatterjee, Director, MeitY	Re-appointed for a period of three years upto June 2027.
36.	Safety of Machinery (Electrotechnical Aspect), ETD 44	Dr. K. Sankarnarayanswamy, Prof (HAG), NIT Trichy	Appointed for a period of three years upto July 2027.
37.	Grid Integration of Renewables, ETD 46	Dr. K. Balaraman, In Personal Capacity	Re-appointed for a period of three years upto June 2027.
38.	Technical Committee for developing Indian Standards in the field of Electrical Traction, ETD 47	Shri Jagsish Kumar, Executive Director, DMRC	Appointed for a period of three year upto July 2026.
39.	UHV AC Transmission Systems, ETD 48	Shri Vibhay Kumar, CGM, PGCIL	Appointed for a period of three year upto July 2026.
40.	Illumination engineering and luminaires, ETD 49	Dr Saswati Mazumdar, Jadavpur University, Kolkata	Appointed for a period till September 2024. Shri Bharat Kr Yadav, Director (MeitY) to be appointed thereafter for a period of 3 years upto Septmeber 2027.
41.	LVDC Power Distribution Systems, ETD 50	Shri Narendra Singh Sodha, In personal capacity	The Council requested Shri N.S Sodha to continue as Chairperson till new Chairperson is appointed.
42.	Electrotechnology in Mobility, ETD 51	Shri Prashant Vijay, ICAT	Appointed for a period of three year upto July 2026.
43.	Electrical Energy Storage Systems, ETD 52	Shri Pankaj Batra, In personal capacity	Reappointed for a period of three years upto February 2026
44.	Standardization of the management of assets in power systems , ETD 53	Shri Kuleshwar Sahu, Sr GM, PGCIL	Appointed for a period of three year upto July 2026.
45.	Marine Energy Conversion Systems, ETD 54	Dr. Purnima Jalihal, Sc G, National Institute of Ocean Technology	Appointed for a period of three year upto July 2026.

The Council noted the information and palced on record the substantial contribution made by all the outgoing Chairpersons for charing the technical committees and for sucessfully conducting the proceedings of the committee.

ITEM 4 REVIEW OF TECHNICAL ACTIVITIES

The Council noted the information given in the agenda for the Items 4.1.

4.2 Review of the Published Standards & Pre-2000 standards

The Council noted the information given in the agenda. IEEMA while highlighting the issue of sharp change in ambient temperature conditions under which electrical products function in the country as experienced this year, where temperature exceeded 54 deg C also in some places in the country, requested that the ambient conditions must be re-visited while specifying them in the Standards. The Council observed that changing ambient conditions in the standard will require studies to be conducted on a wide scale and directed that individual sectional committees should look into sector specific changes in ambient conditions required in the standards. The Council also requested IEEMA to share inputs on this matter with the respective sectional committees.

The Council noted the information given in the agenda for the Items 4.2 and 4.3.

ITEM 5 DEVELOPMENT OF WORK IN NEW ACTIVITIES/NEW COMMITTEE PROPOSAL/CHANGE OF TITLE/SCOPE

5.1 Proposal for change in Scope of ETD 54 'Marine Energy Conversion System Sectional Committee' :

The Council approved the proposed new scope of the Sectional Committee ETD 54.

5.2 Standards National Action Plan (SNAP)

The Council noted the information given in the agenda.

ITEM 6 PROMOTIONAL ACTIVITIES

6.1 Programme of Work

The Council noted the information given in the agenda.

6.2 Seminars/Conferences/Workshops organized by Electrotechnical Department

The Council noted the information given in the agenda.

6.3 Seminars/Conferences/Workshops/Meetings organized by outside organizations

The Council noted the information given in the agenda.

Item 7 INITIATIVES TAKEN BY BIS MANAGEMENT IN STANDARDS DEVELOPMENT ACTIVITY

The Council noted the information given in the agenda from 7.1 to 7.7.

7.8 Creation of Standardization Cells

The Council noted the information and also advised that communication be sent to the standardization cells related to Electro-technology sector seeking updated information on their composition and contact details.

ITEM 8 INTERNATIONAL ACTIVITIES

The Council noted the information given in the agenda from 8.1 to 8.7.

ITEM 9 NATIONAL INSTITUTE FOR TRAINING IN STANDARDISATION (NITS)

The Council noted the information given in the agenda.

ITEM 10 CONSULTATIVE GROUP ON SUSTAINABILITY

The Council appreciated the efforts of BIS and recommended that efforts may be made to bring in

more relevant organizations to support this initiative.

ITEM 10 DATES AND PLACE FOR THE NEXT MEETING

The Council decided to meet twice in a year and also decided to meet again in January 2025. The exact date and place shall be decided in consultation with the Chairperson of the Division Council.

ITEM 11 ANY OTHER BUSINESS

With the permission of the Chair, HETD informed that BIS is planning to strengthen its footprint at IEC with deeper engagement in the standardization process. He requested all the members of the Council and chairpersons of Sectional Committees of ETDC to identify 2-3 experts in their respective domains who can be nominated to IEC WG/PT/MT so that country specific needs are addressed proactively. He also requested all the chairpersons of Sectional Committees to inform areas where R&D projects are needed to be instituted by BIS to facilitate standardization activity.

There being no other business, the meeting ended with a vote of thanks to the Chair.

Annex 1: Meeting Attendance

S. N.	Organization	Representative Name	Email	Mode
1.	Central Electricity Authority, New Delhi	Shri Ashok Kumar Rajput (Chairperson)	rajput.ashok@gmail.com	Physical
2.	Bureau of Indian Standards	Shri A. K. Maharana (Head ETD)	heetd@bis.gov.in	Physical
3.	Bharat Heavy Electrical Limited, New Delhi	Shri Akash Dani	adani@bhel.in	Virtual
		Shri S. Prabakaran (Chairperson ETD 21)	sethupraba@gmail.com	Virtual
4.	Bureau of Energy Efficiency, New Delhi	Ms Pravata Nalini Samal	psamal@beeindia.gov.in	Virtual
5.	Calcutta Electric Supply Corporation Limited, Kolkata	Shri Sujit Kumar Pathak	sujit.pathak@rpsg.in	Virtual
		Shri Santanu Sen	santanu.sen@rpsg.in	Virtual
6.	Central Electricity Authority, New Delhi	Smt. Vandana Singhal (Chairperson ETD 01)	vandana@nic.in	Virtual
7.	Central Power Research Institute, Bengaluru	Shri B. A. Sawle (Chairperson ETD 13)	sawle@cpri.in	Virtual
		Shri S. S. Reddy (Chairperson ETD 16)	ssreddy@cpri.in	Virtual
		Smt. Meena K.P (Chairperson ETD 09)	meena@cpri.in	Virtual
		Shri Vasudevamurthy (Chairperson ETD 07)	brvmurthy@cpri.in	Virtual
		Shri M K Wadhvani (Chairperson ETD 08 and ETD 39)	wadhvani1962@gmail.com	Virtual
8.	CSIR - Central Electronics Engineering Research Institute, Pilani	Dr. Sachin Devassy (Chairperson ETD 31)	sachindevassy@ceeri.res.in	Virtual
9.	Delhi Metro Rail Corporation Limited, Delhi	Shri Anand Kumar	anand7495@gmail.com, anand.kumar@dmrc.org	Virtual
		Shri Jagdish Kumar (Chairperson ETD 47)	jagdish.2390@dmrc.org	Virtual
10.	Directorate General of Mines Safety, Dhanbad	Shri Raj kumar	rajkumar@dgms.gov.in	Virtual
11.	Electric Lamp and Component Manufacturers Association of India, New Delhi	Shri Amal Sengupta	amalsengupta@elcomaindia.com	Virtual
12.	Electrical Contractors Association of Maharashtra, Mumbai	Shri Ulhas Vajre	ulhasvajre@gmail.com	Virtual
13.	Engineers India Limited, New Delhi	Ms. Shalini Verma	s.verma@eil.co.in	Virtual
14.	GETCO, Vadodara	Dr. A. J. Chavda	ceengg.getco@gebmil.com, acerc.getco@gebmil.com	Virtual
15.	Indian Electrical and Electronics Manufacturers Association, New Delhi	Shri Vivek Arora	vivek.arora@ieema.org	Physical
		Shri Uttam Kumar	uttam.kumar@ieema.org	Physical
16.	Jadhavpur University, Kolkata	Dr. Saswati Mazumdar (Chairperson ETD 49)	saswati.mazumdar@gmail.com	Virtual
17.	National Institute of Ocean Technology, Chennai	Dr. Purnima Jalihal (Chairperson ETD 54)	purnima@niot.res.in	Virtual
18.	National Institute of Wind	Dr. Rajesh Katyal	dg@niwe.res.in	Virtual

	Energy, Chennai	(Chairperson ETD 42)		
19.	Nuclear Power Corporation of India Limited, Mumbai	Shri K. Murdia	kmurdia@npcil.co.in	Virtual
20.	Power Grid Corporation of India, Gurugram	Shri Vibhay kumar (Chairperson ETD 48)	vibhay@powergrid.in	Virtual
		Shri Anis Anand (Chairperson ETD 37)	anish@powergrid.in	Virtual
		Shri Kuleshwar Sahu (Chairperson ETD 53)	kuleshwar@powergrid.in	Physical
		Shri S. J. Lahiri (Chairperson ETD 02)	sjlahiri@powergrid.in	Physical
		Shri N S Sodha (Chairperson ETD 10 and ETD 50)	nss5419@gmail.com	Virtual
21.	Siemens Limited, Mumbai	Shri Manoj Belgaonkar	manoj.belgaonkar@siemens.com	Virtual
22.	Standardization Testing and Quality Certification (STQC)	Smt. Raveena Rajiv Gupta	raveena.gupta@stqc.gov.in	Virtual
		Shri Abhijit Dasgupta	abhijitd@stqc.gov.in	Virtual
23.	The International Centre for Automotive Technology (ICAT)	Shri Prashant Vijay (Chairperson ETD 51)	prashant.vijay@icat.in	Virtual
24.	Voluntary Organisation in Interest of Consumer Education (VOICE), New Delhi	Shri Rajiv Jha	rajiv08@gmail.com	Virtual
25.	In Personal Capacity	Shri Bhaskaran T (Chairperson ETD 44)	bossbaskarant@gmail.com	Virtual
		Shri Dinkar Devate (Chairperson ETD 34)	dinkar.devate@gmail.com	Virtual
		Dr. Pradeep M Nirgude (Chairperson ETD 19)	pmnirgude.cpri@gmail.com	Virtual
		Dr. K Balaraman (Chairperson ETD 46)	kbram67@gmail.com	Virtual
		Dr. T. Bhavani Shanker (Chairperson ETD 29)	tbs@cpri.in	Virtual
		Dr. P. Thomas (Chairperson ETD 03)	pthomas64@gmail.com	Virtual
		Shri Rajiv Gupta (Chairperson ETD 18)	rajivra1212@gmail.com	Physical
		Ms. Sumita Anand (Chairperson ETD 20)	sumita.anand18@gamil.com	Physical
		Shri Pankaj Batra (Chairperson ETD 11 and ETD 52)	pan_batra@hotmail.com	Virtual
26.	Bureau of Indian Standards	Shri Rajeev Sharma (DDG - Std 1)	scgt@bis.gov.in	Physical
		Shri Ritwik Anand (Sc D)	eetd@bis.gov.in	Physical
		Shri Tushar Sharma (Sc D)	eetd@bis.gov.in	Physical
		Md. Israfil (Sc D)	eetd@bis.gov.in	Physical
		Ms Neha Agarwal (Sc C)	eetd@bis.gov.in	Physical
		Ms Ankita Tripathi (Sc C)	eetd@bis.gov.in	Physical
		Shri Abinash Bordoloi	eetd@bis.gov.in	Physical

	(Sc C)		
	Shri Emanuel Abhishek Murmu (Sc C)	eetd@bis.gov.in	Physical
	Shri Neeraj Kushawaha (Sc C)	eetd@bis.gov.in	Physical
	Shri Nitish Kumar Jain (Sc C)	eetd@bis.gov.in	Physical
	Shri Jatin Tiwari (Sc B)	eetd@bis.gov.in	Physical
	Shri Ashok Kumar (Sc B)	eetd@bis.gov.in	Physical

**Annex 2: Members Withdrawn from Sectional Committees
(Item 3.2 of Minutes)**

Committee Wise Members (Membership Discontinued)	Count of Organization
ETD 10-Primary Cells And Batteries	8
Central Electricity Authority, New Delhi	1
Consumer Education and Research Centre, Ahmedabad	1
CSIR - Central Institute for Mining and Fuel Research, Dhanbad	1
Department for Promotion of Industry and Internal Trade, New Delhi	1
Electronics Regional and Test Laboratory (North), New Delhi	1
Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade, New Delhi	1
National Test House, Kolkata	1
NITI Aayog, New Delhi	1
ETD 11-Secondary Cells And Batteries	13
Bharat Battery Manufacturers Company Private Limited, Kolkata	1
Central Public Works Department, New Delhi	1
Directorate General of Quality Assurance, New Delhi	1
Directorate of Tech Development and Production (AIR), Ministry of Defence, New Delhi	1
Indian Cellular Association, New Delhi	1
Intertek India Private Limited, Gurugram	1
Ministry of Electronics and Information Technology, New Delhi	1
Ministry of Environment Forest and Climate Change, New Delhi	1
Ministry of New and Renewable Energy, New Delhi	1
Panasonic India Private Limited, Gurugram	1
Power Grid Corporation of India, Gurugram	1
Research Designs and Standards Organization (RDSO), Lucknow	1
Tata Power Limited, Mumbai	1
ETD 12-Measuring Equipment For Basic Electrical Quantities	10
Automatic Electric Limited, New Delhi	1
BSES Rajdhani Power Limited, New Delhi	1
Council of Scientific and Industrial Research, New Delhi	1
CSIR - Central Scientific Instruments Organisation, Chandigarh	1
Defence	1
Institute for Design of Electrical Measuring Instruments, Mumbai	1
Larsen and Toubro Limited, Mumbai	1
National Test House, Kolkata	1
Power Grid Corporation of India, Gurugram	1
Shanti Electric Instruments Private Limited, Mumbai	1
ETD 13-Equipment For Electrical Energy Measurement And Load Control	12
Central Board of Irrigation and Power, New Delhi	1
Department of Telecommunications, Ministry of Communications and Information Technology, New Delhi	1
India Smart Grid Forum, New Delhi	1

Indian Institute of Technology Hyderabad, Hyderabad	1
Landis+Gyr Limited, Noida	1
Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited, Indore	1
Maharashtra State Electricity Distribution Company Limited, Mumbai	1
National Smart Grid Mission, Ministry of Power, Gurugram	1
Power Grid Corporation of India, Gurugram	1
Rural Electrification Corporation Limited, New Delhi	1
Tata Power Limited, Mumbai	1
Uttar Pradesh Power Corporation Limited (UPPCL), Lucknow	1
ETD 14-Electrical Wiring Accessories	8
Chief Electrical Inspector Industries, Energy and Labour Department Government Of Maharashtra	1
Consumer Education and Research Centre, Ahmedabad	1
Consumer Guidance Society of India, Mumbai	1
Delhi Electrical Accessories BIS Licensees Association, Delhi	1
Directorate General of Quality Assurance, New Delhi	1
National Test House, Kolkata	1
Public Works Department, Government of Maharashtra, Mumbai	1
Rex Polyextrusion Limited, Sangli	1
ETD 15-Rotating Machinery	7
CG Power and Industrial Solutions, Mumbai	1
Development Commissioner Micro-Small and Medium Enterprises	1
Indian Institute of Technology Delhi, New Delhi	1
KSB Pumps Limited, Pune	1
Marathon Electric Motors (India) Limited, Kolkata	1
Steel Authority of India Limited (SAIL), New Delhi	1
Testing Electrical Standards Laboratory and R&D Institute Private Limited, Gandhinagar	1
ETD 16-Transformers	12
Bharat Heavy Electrical Limited, New Delhi	1
Central Board of Irrigation and Power, New Delhi	1
Central Electricity Authority, New Delhi	1
CG Power and Industrial Solutions, Mumbai	1
Easun-MR Tap Changers Private Limited, Chennai	1
Haryana Vidyut Prasaran Nigam Limited, Panchkula	1
M&I Materials India Private Limited, New Delhi	1
Maharashtra State Electricity Distribution Company Limited, Mumbai	1
Rural Electrification Corporation Limited, New Delhi	1
Tata Power Delhi Distribution Limited, New Delhi	1
The Brihanmumbai Electricity Supply and Transport, Mumbai	1
Transformers and Rectifiers (India) Limited, Ahmedabad	1
ETD 18-Industrial Process Measurement And Control	4
EMERSON	1
Institute for Design of Electrical Measuring Instruments, Mumbai	1
National Productivity Council, New Delhi	1
NTPC Limited, New Delhi	1
ETD 20-Electrical Installation	7

Directorate General Factory Advice Service and Labour Institutes, Mumbai	1
GETCO, Vadodara	1
Haryana Vidyut Prasaran Nigam Limited, Panchkula	1
In Personal Capacity, Bengaluru	1
Maharashtra State Electricity Distribution Company Limited, Mumbai	1
Nuclear Power Corporation of India Limited, Mumbai	1
Rural Electrification Corporation Limited, New Delhi	1
ETD 2-Solid Electrical Insulating Materials And Insulation Systems	16
3 M ELECTRO & COMMUNICATION INDIA PRIVATE LIMITED	1
Adani Electricity Limited, Mumbai	1
Bhabha Atomic Research Centre, Mumbai	1
ELANTAS Beck India Limited, New Delhi	1
Haryana Vidyut Prasaran Nigam Limited, Panchkula	1
Indian Electrical and Electronics Manufacturers Association, New Delhi	1
Indian Institute of Technology Madras, Chennai	1
Indian Institute of Technology Ropar, Punjab	1
National Institute of Technology, Hamirpur	1
NTPC Limited, New Delhi	1
Permali Wallace Private Limited, Bhopal	1
Senapathy Whiteley Private Limited, Bengaluru	1
Shriram Institute for Industrial Research, Delhi	1
Siemens Limited, Mumbai	1
Toshiba Transmission and Distribution Systems (India) Private Limited, New Delhi	1
UL India Private Limited, Bengaluru	1
ETD 31-Power Electronics	6
ABB India Limited, Bengaluru	1
Association of Uninterruptible Power Supply and Power Conditioning Systems, New Delhi	1
Bhabha Atomic Research Centre, Mumbai	1
Directorate General of Quality Assurance, New Delhi	1
Directorate General of Supplies and Goods, New Delhi	1
Indian Institute of Technology Madras, Chennai	1
ETD 32-Electrical Appliances	9
Bureau of Energy Efficiency, New Delhi	1
Central Public Works Department, New Delhi	1
Consumer Education and Research Centre, Ahmedabad	1
Defence Research and Development Organization, Research Centre Imarat, Hyderabad	1
Electronics Regional and Test Laboratory (North), New Delhi	1
Government of Gujarat (IW), Energy and Petrochemical Department, Gandhinagar	1
Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade, New Delhi	1
National Test House, Kolkata	1
Petroleum Conservation Research Association, New Delhi	1
ETD 37-Conductors And Accessories For Overhead Lines	6
J S K Industries Private Limited, Silvassa	1

Kalpa Taru Power Transmission Limited, Biomass Power Plant, Padampur	1
KEC International Limited, Mumbai	1
NTPC Limited, New Delhi	1
Tata Power Limited, Mumbai	1
Telecommunication Engineering Center, New Delhi	1
ETD 3-Fluids For Electrotechnical Applications	12
Calcutta Electric Supply Corporation Limited, Kolkata	1
Defence Research and Development Organization, Research Centre Imarat, Hyderabad	1
Elico Limited, Hyderabad	1
Indian Transformers Manufacturers Association, Vaishali	1
INDIVIDUAL CAPACITY	1
M&I Materials India Private Limited, New Delhi	1
Nuclear Power Corporation of India Limited, Mumbai	1
Prime Meiden Limited, Gurugram	1
Siemens Limited, Mumbai	1
Tamil Nadu Electricity Board, Chennai	1
Tata Power Limited, Mumbai	1
Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited, Lucknow	1
ETD 40-Hvdc Power Systems	9
Adani Transmission Limited, Ahmedabad	1
AP TRANSMISSION COMPANY	1
GE Power India Limited (Alstom Project India Limited), Noida	1
Indian Institute of Technology Delhi, New Delhi	1
Indian Institute of Technology Kanpur, Kanpur	1
KEC International Limited, Mumbai	1
Maharashtra State Electricity Transmission Company Limited, Mumbai	1
Uttar Pradesh Power Corporation Limited, Lucknow	1
Uttar Pradesh Power Transmission Corporation Limited, Lucknow	1
ETD 44-Safety Of Machinery- Electrotechnical Aspects	12
ABB India Limited, Bengaluru	1
Bharat Heavy Electrical Limited, New Delhi	1
Central Board of Irrigation and Power, New Delhi	1
Delhi Metro Rail Corporation Limited, Delhi	1
GreyOrange (India) Private Limited, Gurugram	1
Indian Electrical and Electronics Manufacturers Association, New Delhi	1
Indian Institute of Technology Delhi, Department of Electrical Engineering, New Delhi	1
Intertek India Private Limited, Gurugram	1
Larsen and Toubro Limited, Mumbai	1
Ministry of Heavy Industries and Public Enterprises, Department of Heavy Industry, New Delhi	1
Omron Automation Private Limited, Mumbai	1
TUV Rhineland (India) Private Limited, Mumbai	1
ETD 46-Grid Integration of Renewables	8
Bharat Heavy Electrical Limited, New Delhi	1
GE Power India Limited (Alstom Project India Limited), Noida	1

Indian Electrical and Electronics Manufacturers Association, New Delhi	1
National Institute of Wind Energy, Chennai	2
NTPC Limited, New Delhi	1
Tata Power Delhi Distribution Limited, New Delhi	1
Tata Power Limited, Mumbai	1
ETD 49-Illumination Engineering and Luminaries	9
Airports Authority of India, New Delhi	1
Bureau of Energy Efficiency, New Delhi	1
Central Public Works Department, New Delhi	1
Delhi Metro Rail Corporation Limited, Delhi	1
international Centre for Automotive Technology, Manesar	1
International Centre of Automotive Technology, Manesar	1
Ministry of Electronics and Information Technology, New Delhi	1
NTPC Limited, New Delhi	1
Nuclear Power Corporation of India Limited, Mumbai	1
ETD 50-LVDC Power Distribution Systems	10
Amara Raja Batteries, Tirupati	1
BASIL Energetics Private Limited, Chennai	1
Clean Energy Access Network, New Delhi	1
Cygni Energy Private Limited, Hyderabad	1
IEEE India, Bengaluru	1
Indian Institute of Technology Hyderabad, Hyderabad	1
Indian Institute of Technology Kharagpur, Kharagpur	1
Indian Institute of Technology Madras, Chennai	1
Scope T & M Private Limited, Mumbai	1
Tata Power Delhi Distribution Limited, New Delhi	1
ETD 52-Electrical Energy Storage Systems	15
Bharat Heavy Electrical Limited, New Delhi	1
Central Electricity Authority, New Delhi	1
Central Power Research Institute, Bengaluru	1
CSIR - Central Electrochemical Research Institute, Karaikudi	1
Exide Industries Limited, Kolkata	1
Indian Institute of Technology Madras, Chennai	1
Indian Renewable Energy Development Agency Limited, New Delhi	1
Institute of Electrical and Electronics Engineers Standards Association	1
Ministry of New and Renewable Energy, New Delhi	1
Narnix Technolabs Private Limited, New Delhi	1
National Institute of Solar Energy, Gurugram	1
Shreenath Smart Technologies Private Limited, Ahmedabad	1
Siemens Limited, Mumbai	1
Tata Group, Mumbai	1
Tata Power Limited, Mumbai	1
ETD 6-Electrical Insulators And Accessories	3
Aditya Birla Insulators Company, Halol	1
Haryana Vidyut Prasaran Nigam Limited, Panchkula	1
Punjab State Transmission Corporation Limited, Amritsar	1
ETD 7-Low Voltage Switchgear And Controlgear	13

Adani Power Limited, Ahmedabad	1
Brihan Mumbai Electric Supply and Transport Undertaking, Mumbai	1
Central Public Works Department, New Delhi	1
Defence Research and Development Organization, Research Centre Imarat, Hyderabad	1
GE Energy Management System, New Delhi	1
Indian Institute of Technology Bombay, Mumbai	1
International Copper Association India, Mumbai	1
KEC International Limited, Mumbai	1
Novateur Electrical and Digital Systems Private Limited, Chennai	1
Power Grid Corporation of India, Gurugram	1
Rural Electrification Corporation Limited, New Delhi	1
Steel Authority of India Limited (SAIL), New Delhi	1
Sur Iron and Steel Company Private Limited, Kolkata	1
ETD 9-Power Cables	12
Central Board of Irrigation and Power, New Delhi	1
Central Public Works Department, New Delhi	1
Coal India Limited, Kolkata	1
Ensto India Private Limited, Gurugram	1
Haryana Vidyut Prasaran Nigam Limited, Panchkula	1
Havells India Limited, Noida	1
NTPC Limited, New Delhi	1
Power Grid Corporation of India, Gurugram	1
Shriram Institute for Industrial Research, Delhi	1
Steel Authority of India Limited (SAIL), New Delhi	1
Tamil Nadu Electricity Board, Chennai	1
Tata Power Limited, Mumbai	1
Grand Total	221