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BUREAU OF INDIAN STANDARDS

MINUTES

Name of the Committee	No. of Meeting	Day	Date	Time	Venue
Wind Turbines Sectional Committee, ETD 42	**15th**	**Tuesday**	**06th May 2025**	**11.00 AM**	**Hybrid Mode –** **National Institute of Wind Energy, Velachery - Tambaram Main Road Pallikaranai, Chennai - 600 100** **Online –** **https://bismanak.webex.com/bismanak/j.php?MTID=m85cda7f68df0250363147e21dfb577b2** **Meeting number: 2516 654 4810** **Password: ETD42**

List of members attended the meeting is at **Annexure –A.**

Chairperson : Dr. Rajesh Katyal, DG- NIWE **Member Secretary :** Shri Ritwik Anand

Item 0 WELCOME AND OPENING REMARKS BY CHAIRPERSON

Dr. Rajesh Katyal, Director General -NIWE and Chairman of ETD 42, extended a warm welcome to all members attending the meeting. He highlighted the ambitious renewable energy targets set by the Government of India, with a special focus on the wind energy sector, and underscored the critical importance of standardization in meeting these objectives. He further urged members to conduct a thorough review of the IEC document prior to its adoption as an Indian Standard, ensuring that it adequately reflects requirements relevant to Indian conditions.

Member Secretary thanked and welcomed all the participants present in the meeting. He requested the committee members to have thorough discussion on each and every agenda point and to arrive at useful conclusion.

The meeting started with a brief introduction of all members.

Item 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

1.1 There being no comments, the minutes of the last meeting of Wind Turbines Sectional Committee, ETD 42 held on 28th May 2024 were confirmed.

Item 2 COMPOSITION OF THE SECTIONAL COMMITTEE.

2.1 Committee noted the information provided in in **ANNEXURE - 1** of agenda. Committee requested BIS to write to the Indian Wind Turbine Manufacturers Association to seek a fresh nomination for the committee, as they are one of the key stakeholders and the currently nominated members have not attended several recent meetings. Further, it was decided by the Committee to replace Shri J.C. David Solomon/ alternate member of NIWE, with Dr. K.Boopathi, Director and Division Head of the Testing Division, NIWE.

2.2 Request for co-option is received from following organisations :

S.N.	Organization Name	Nomination	Minutes of Meeting
1	Individual Capacity	Shri Sivaraman P	Committee reviewed the co-option request received and decided not to approve the co-option, as the applicants had not demonstrated sufficient work related to wind turbines. Their work was found to be more aligned with grid integration, which falls under the scope of ETD 46, making it a more appropriate committee for their involvement.
2	PSNA College of Engineering & Technology, Kothandaraman Nagar	Dr. R. Karthigaivel	

The details of above nominations are placed at **ANNEXURE – 2.**

Item 3 Annual Program of Standardisation -APS- (2025-26) and Progress of APS (2024-25)

NEW WORK ITEM PROPOSALS (NWIPs)		
Sl No	**Subject/IS No**	**Remarks /Status**
1.	ETD-42 (20383) Wind Energy Generation Systems Part 21-1: Measurement and Assessment of Electrical Characteristics Wind Turbines	Published as IS/IEC 61400-21-1 : 2019 *The committee noted the information.*
2.	ETD-42 (20384) Wind Energy Generation	Published as IS/IEC 61400-26-1 : 2019

	Systems Part 26-1: Availability for Wind Energy Generation Systems	*The committee noted the information.*
3.	IEC 61400-1:2019 Wind energy generation systems - Part 1: Design requirements	Shri N S Prasad, TERI, the convener of the working group, informed the committee that the working group, consisting of experts from 2 OEMs, 1 developer, and 1 certification agency, has already conducted several meetings to discuss this standard. He informed that the external conditions specified in the IEC standard differ from Indian conditions. Further, the Working Group noted that CEA has recently issued the procedure for assessment of design temperature for RE plants in compliance to CEA (Technical standards for Connectivity to the grid) regulation. Considering the above the Working Group requested an additional time period to complete the work. Chairman informed that the matter is still under discussion within the committee constituted by the Ministry of Power. Following deliberations, it was decided that, since the issue is currently being examined by the regulatory authorities, it will be taken up again in the next meeting of the committee.
4.	Review of IEC 61400-2:2013 Wind turbines - Part 2: Small wind turbines	The committee decided to review IS/ IEC 61400-2:2013 Wind turbines - Part 2: Small wind turbines standard to ascertain the changes required, if any as per Indian conditions. A working group has been constituted with the following experts to study the standard and present their recommendations in the next meeting of committee: a. Dr. Ranjan Kumar Behera, Associate Professor, IIT Patna, (Email - rkb@iitp.ac.in, Phone/Mob- 0612 - 3028050) **b.Shri Venkat Kumar Tangirala , Wind Stream Energy Technologies (Email - vk@windstream.tech, Mob-9866055550) - Convener** c. Shri Uday Kshirsagar , Spitzen Energy Solutions (India) Private Limited (Email - spitzenenergy@gmail.com, Mob-8888806391) d. Shri Vaisakh Suresh , World Resources Institute, India (Email - vaisakh.kumar@wri.org, Mob- 9790833871) e. Dr. Zakhir H. Rather , Indian Institute of Technology Bombay, Mumbai (Email - zakir.rather@iitb.ac.in , Mob- +91 22-2576-9341)

		Committee reviewed the progress of the revision of IS/IEC 61400-2:2013 and decided that Shri Venkat Kumar Tangirala ,Wind Stream Energy Technologies will serve as the Convener of the designated group. He will coordinate and schedule meetings of the working group to discuss the standard, and the group will submit its recommendations within 3 months.
5.	(Doc No – ETD 42/27347) Wind energy generation systems - Part 5: Wind turbine blades	*The committee approved the wide circulation of IEC 61400-5:2020 for a period of 2 months to elicit public comments.*
6.	(Doc No – ETD 42/27351) Wind energy generation systems - Part 6: Tower and foundation design requirements	Regarding the IEC 61400-6:2020 standard, Shri Vikas Aswale and Shri Jitendra Deshpande of M/s Suzlon Energy Limited provided a brief presentation on various issues related to design assumptions and requirements in the execution of ring flanges, load combinations specific to the foundation, and the factor of safety in frequency, as identified by them in the standard. (copy of the presentation is enclosed). The committee decided that **M/s Suzlon Energy Ltd** should discuss these comments with the following experts in structural and foundation design and submit their recommendations in the next meeting of committee: a. Shri Jitnedra, Econs Consultants, Chennai b. Dr. Pabbisetty Harikrishna, Chief Scientist & Head, Structural Engineering Research Centre (SERC) c. Shri Satya Kiran Raju Alluri, Scientist E, National Center for Coastal Research (NCCR) *The committee approved the wide circulation of IEC 61400-6 for a period of 2 months to elicit public comments.*
7.	(Doc No – ETD 42/27352/ IEC 61400-3-1:2019, Wind energy generation systems - Part 3-1: Design requirements for fixed offshore wind turbines	The committee decided that Convener **Dr. P K Dash, MNRE** may discuss these standards with the following experts and submit their recommendations in the next meeting of committee: a. Dr. Jaya Kumar Seelam, National Institute of Oceanography (NIO) b. Dr. Pabbisetty Harikrishna, Chief Scientist & Head, Structural Engineering Research Centre (SCRC) c. Shri Satya Kiran Raju Alluri, Scientist E, National Center for Coastal Research (NCCR) d. Professor Balaji Ramakrishnan, Indian Institute of
8.	(Doc No – ETD 42/27354) a/ IEC 61400-3-2:2019, Wind	

	energy generation systems - Part 3-2: Design requirements for floating offshore wind turbines	Technology (IIT), Bombay *The committee approved the wide circulation of IEC 61400-3-1 and IEC 61400-3-2 for a period of 2 months to elicit public comments.*
9.	ETD 42 (23624)/ IEC 61400-12:2022 Wind energy generation systems Part 12 Power performance measurements of electricity producing wind turbines Overview Documents was wide-circulated vide email dated 22 Sept 2023. Last date of Comments – 21.11.2023	The committee approved the documents for printing. *The committee noted the information.*
10.	(Doc No – ETD 42/23625) Wind energy generation systems - Part 12-1: Power performance measurements of electricity producing wind turbines	
11.	(Doc No – ETD 42/23627) Wind energy generation systems - Part 12-2: Power performance of electricity producing wind turbines based on nacelle anemometry	
12.	(Doc No – ETD 42/23628) Wind energy generation systems - Part 21-2: Measurement and assessment of electrical characteristics	

	- Wind power plants	
13.	(Doc No – ETD 42/23629) Wind energy generation systems - Part 50-1: Wind measurement - Application of meteorological mast, nacelle and spinner mounted instruments	
14.	ETD 42 (23630)/ IEC TS 61400-29:2023 Wind energy generation systems Part 29 Marking and lighting of wind turbines Documents was wide-circulated vide email dated 22 Sept 2023. Last date of Comments – 21.11.2023	
15.	Regarding adoption of UL 4143, Wind Turbine Generator – Life Time Extension (LTE)" standard .	The committee earlier formulated the working group with the following members, Shri A Senthil Kumar, NIWE (Convener) Shri N. S. Prasad, TERI Shri Vikas Aswale, Suzlon Shri Nivedh BS, UL Shri Prabir Kumar Dash, MNRE to review the existing IS/IEC 61400-22 and suggest the proposed modifications. Subsequently, the committee decided to wide circulate, UL 4143, Wind Turbine Generator – Life Time Extension (LTE)" standard for a period of one month for adoption of the said standard. For adoption of UL standard, a separate agreement is required to be signed between UL and BIS. Department of Consumer Affairs has been requested by BIS to obtain clearance from the Ministry of External Affairs and approval of Central Government for signing the Collaboration & Licence Agreement between BIS and UL. Presently, the committee noted that the IEC has published **IEC TS 61400-28:2025**-Wind energy generation systems - Part 28: Through-life management and life extension of wind power assets . Copy of the standard is enclosed as **ANNEXURE – 6.**

		The committee approved the wide circulation of IEC TS 61400-28:2025-for a period of 2 months to elicit public comments.
16.	Wind energy generation systems - Part 8: Design of wind turbine structural components	APS (2025-26) *The committee approved the wide circulation of IEC TS 61400-28:2025-for a period of 2 months to elicit public comments.*
REVIEW /REVISISONS		
Sl No	**IS No/Title**	**Remarks /Status**
1.	ETD-42 (20382) Wind Turbines Part 11 Acoustic Noise Measurement Techniques Amendment - 1	Published *The committee noted the information.*
2.	ETD-42 (21807) Wind Turbines Part 13: Measurement of Mechanical Loads Amendment - 1	Published *The committee noted the information.*
3.	(IS/IEC 61400 : Part 22 : 2010) Wind Turbines Part 22 Conformity Testing and Certification	APS (2025-26) *Committee reviewed the standard due for revision this year and decided to reaffirm them, as there have been no changes in the corresponding base IEC standards.*
4.	IS/IEC 61400 : Part 25 : Sec 2 : 2015 Wind Turbines Part 25 Communications for Monitoring and Control of Wind Power Plants Section 2 Information model	APS (2025-26) *Committee reviewed the standard due for revision this year and decided to reaffirm them, as there have been no changes in the corresponding base IEC standards.*
5.	IS/IEC 61400 : Part 25 : Sec 3 : 2015 Wind Turbines Part 25 Communications for Monitoring and Control	APS (2025-26) *Committee reviewed the standard due for revision this year and decided to reaffirm them, as there have been no changes in the corresponding base IEC standards.*

	of Wind Power Plants Section 3 Information exchange models	
6.	IS/IEC 61400 : Part 25 : Sec 4 : 2016 Wind Turbines Part 25 Communications for Monitoring and Control of Wind Power Plants Section 4 Mapping to communication profile	APS (2025-26) *Committee reviewed the standard due for revision this year and decided to reaffirm them, as there have been no changes in the corresponding base IEC standards.*
7.	IS/IEC 61400 : Part 25 : Sec 6 : 2016 Wind Turbines Part 25 Communications for Monitoring and Control of Wind Power Plants Section 6 Logical node classes and data classes for condition monitoring	APS (2025-26) *Committee reviewed the standard due for revision this year and decided to reaffirm them, as there have been no changes in the corresponding base IEC standards.*

Item 4 PROGRAMME OF WORK

5.1 The committee noted the present position of work under Wind Turbines Sectional Committee, ETD 42 as given in **ANNEXURE - 3** of the agenda.

Item 5 INTERNATIONAL ACTIVITIES

6.1 The committee noted the details of Harmonization status of Indian Standards w.r.t latest IEC Standards is placed at **ANNEXURE – 4.**

6.2 The committee reviewed the various ongoing projects in IEC TC 88 and it was decided to nominate following experts :

a. Mr Mayank Tiwari , IIT Patna- JWG 1/ IEC TC 88 - IEC TR 61400-4-2 ED1 -Wind energy generation systems - Part 4-2: Lubrication of drivetrain components in wind turbines.
b. Mr. A.D. Thirumoorthy , Indian Wind Power Association, Chennai - WG 21/IEC TC 88 - Measurement and assessment of power quality characteristics of grid connected wind turbines

Item 6 MANDATORY DAY-LONG WORKSHOPS FOR CHAIRPERSONS AND PRINCIPAL MEMBERS OF SECTIONAL COMMITTEES.

The committee noted the information.

Item 7 DATE AND PLACE OF NEXT MEETING

It was decided to hold the next meeting of ETD 42 in the month of November. The final dates will be communicated to the members in consultation with the Chairperson.

Item 8 ANY OTHER BUSINESS

There being no further business, the meeting ended with a vote of the thanks to the chair.

Download List of ANNEXURES ☞ **Click Here**

ANNEXURE A

(*Members Presents in 15th Meeting of Wind Turbines Sectional Committee, ETD 42*)

SI. No.	Organization	Member Name	Member Email
1.	National Institute of Wind Energy, Chennai	Dr. Rajesh Katyal (*Chairperson*)	dg@niwe.res.in
2.	Bureau of Indian Standards, New Delhi	Shri Ritwik Anand (*Member Secretary*)	eetd@bis.gov.in
3.	CSIR - National Aerospace Laboratories, Bengaluru	Dr. Manabendra Manindrakumar De (*Alternate Member*)	manav@nal.res.in
4.	Central Electricity Authority, New Delhi	Shri Deepak Choudhary (*Principal Member*)	choudharydeep@nic.in
5.	DNV GL AS	Shri Alok Kumar (*Principal Member*)	alok.kumar@dnvgl.com
6.	Electrical Research and Development Association, Vadodara	Shri Ravi Singh (*Principal Member*)	ravi.singh@erda.org
7.	Indian Institute of Technology Bombay, Mumbai	Dr. Zakhir H. Rather (*Principal Member*)	zakir.rather@iitb.ac.in
8.	Indian Institute of Technology Delhi, New Delhi	Shri Rahul Goyal (*Principal Member*)	rahulgoyal@ces.iitd.ac.in
9.	Indian Institute of Technology Patna, Patna	Shri Mayank Tiwari (*Alternate Member*)	mayankt@iitp.ac.in
		Shri Ranjan Kumar Behera (*Principal Member*)	rkb@iitp.ac.in

10.	Indian Wind Power Association, Chennai	Shri A.D. Thirumoorthy (*Principal Member*)	adtmoorthy@gmail.com
11.	National Institute of Wind Energy, Chennai	Shri JC David Solomon (*Alternate Member*)	david.niwe@nic.in
		Shri Sajan Anthony Mathew (*Alternate Member*)	mathew@niwe.nic.in
		Shri A. Senthil Kumar (*Principal Member*)	asenthilkumar.niwe@nic.in
		Dr. K. Boopathi	boopathi@niwe.res.in
		Shri M Saravanan	saravanan@niwe.res.in
12.	ReNew Power Private Limited, Gurugram	Shri Suresh Pillai (*Principal Member*)	suresh.pillai@renew.com
13.	TERI School of Advanced Studies, New Delhi	Shri N. S. Prasad (*Principal Member*)	ns.prasad@teri.res.in
14.	WindStream Energy Technologies, Telangana	Shri Venkat Kumar Tangirala (*Principal Member*)	vk@windstream.tech