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BUREAU OF INDIAN STANDARDS

MINUTES

Name of the Committee	No. of Meeting	Day	Date	Time	Venue
Equipment for Electrical Energy Measurement and Load Control Sectional Committee, ETD 13	41 st	Tuesday	10/01/2023	1030 h	Lal C Verma Hall Manak Bhawan BIS Headquarters, 9 Bahadur Shah Zafar Marg, New Delhi

CHAIRPERSON: Shri B.A.Sawle

MEMBER SECRETARY: Smt Meghna Mudgal

Sl. No.	Organization	Name
1.	<i>Chairperson (ETD 13)</i> Central Power Research Institute	Shri B.A. Sawale
2.	<i>Member Secretary (ETD 13)</i> Bureau of Indian Standards	Smt Meghna Mudgal
3.	Adani Transmission Limited	Shri Manoj Taunk
4.	BSES Rajdhani Power Limited	Shri Rishi Goyal
5.	BSES Yamuna Power Limited	Shri Ashish Kumar Joshi
6.	Calcutta Electric Supply Corporation Limited	Shri Udayan Ganguly
7.	Central Electricity Authority	Ms Bhaavya Pandey
8.	Central Power Research Institute	Smt Mridula Jain
9.	Central Power Research Institute	Shri V. Shivakumar
10.	Central Power Research Institute	Smt Viji Bharathi
11.	CyanConnode Private Limited	Shri Deepak Nimare
12.	CyanConnode Private Limited	Shri Manish
13.	Genus Power Infrastructures Limited	Shri Bajrang Agarwal
14.	Genus Power Infrastructures Limited	Shri Kuldeep Dhiman
15.	Genus Power Infrastructures Limited	Shri Aashish Gaur
16.	Genus Power Infrastructures Limited	Shri Ranvir Singh Rathore
17.	HPL Electric and Power Limited	Shri Sundeep Tandon
18.	HPL Electric and Power Limited	Shri Devendra Vyas
19.	HPL Electric and Power Limited	Shri Ramveer Gupta
20.	India Smart Grid Forum	Shri Reji Kumar Pillai
21.	Indian Electrical and Electronics Manufacturers Association (IEEMA)	Shri Uttam Kumar
22.	Indian Electrical and Electronics Manufacturers Association (IEEMA)	Shri Saad Faruqui
23.	Kalki Communication Technologies Private Limited	Shri Balagopalan Nathoor
24.	Narnix Technolabs Private Limited	Shri Kishor N. Narang
25.	National Smart Grid Mission, Ministry of Power	Shri Atul Kumar Bali

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		<i>(Virtual Presence)</i>
26.	Paschim Gujarat Vij Seva Sadan	Shri S N Gediya
27.	Schneider Electric India Private Limited	Shri Sujith Unnikrishnan
28.	Secure Meters Limited	Shri Rajnish Ameta
29.	Secure Meters Limited	Shri Mukesh Hingar
30.	Secure Meters Limited	Shri Hemant Kumar Sharma
31.	Secure Meters Limited	Shri S K Rattampal
32.	Tata Power Delhi Distribution Limited	Shri Saurav Chandel
33.	Tata Power Delhi Distribution Limited	Shri Subhadip Ray Chaudhuri
34.	Uttar Gujarat Vij Company Limited	Shri A.N.Diwan
35.	Yadav Measurements Private Limited	Shri Balmukund M Vyas
36.	Zera India Private Limited	Shri Shailendra Goyal
37.	Zera India Private Limited	Shri Kartikiya Sharma

Item 0 Welcome and Opening Remarks by the Chairperson

The Chairperson, Shri B.A Sawale welcomed the members present to the meeting. He appreciated the members actively contributing to the process of standardisation and hoped for a fruitful discussion on all Agenda points.

Member secretary welcomed the members to the meeting and briefed the members regarding various agenda points which required detailed discussions and solicited the co-operation of the members for completing the agenda in time.

Item 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

In view of no comments, the committee formally confirmed the minutes of the 40th meeting of Equipment for Electrical Energy Measurement and Load Control Sectional Committee, ETD 13 which was held on 01/07/2022.

Item 2 ACTIONS ARISING OUT OF PREVIOUS MEETING

Sl. No	Item no of Last minutes	Item	Background	Decision taken in the last meeting	Action Reported in the agenda	Decision Taken
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1.	2 (Sl No. 9)	<i>Informative annexures to IS 15959 (Parts 1, 2, 3) for guidance on interpretation and implementation of the IS 15959 series</i>	<p>The committee had decided that an informative annexure shall be added to IS 15959 (Part 1, 2 and 3) for guidance on interpretation and implementation of the provisions (eg. programming conditions) of these standards.</p> <p>A working group P1/WG 2 was constituted for discussion and formulation of the informative annexures.</p>	<p>Shri Balagopal informed the committee that a draft has been prepared by Shri Shiva Kumar. He informed that the draft can be finalized after further deliberation in the panel.</p> <p>It was decided to appoint Mr B M Vyas as the convener of WG 2/P1.</p> <p>The panel composition was also updated. The composition of the panel is as follows:</p> <ol style="list-style-type: none"> 1) Shri B M Vyas, M/s YMPL - Convener 2) Shri Balagopal, M/s Kalkitech 3) Shri Deepak Nimare 4) Shri Viji Bharati, CPRI 5) Shri Ashish Kumar Gaur 6) Shri R Karthik, M/s Schneider Electric Pvt. Ltd. 7) Shri Devendra Vyas, M/s HPL Electric & Power Ltd. 8) Shri Rajnish Ameta 9) Shri Shailendra Goyal, M/s Zera 10) Shri Bajrang Agarwal, M/s Genus 	Mr B M Vyas, M/s YMPL, Convener (WG 2/P1) to update the committee on the progress of work.	<p>Mr Shiva Kumar, CPRI Bengaluru agreed to work with Mr B M Vyas, M/s YMPL in order to prepare the informative annexures.</p> <p>The working group WG 2/P1 shall submit the drafts in 2 months' time for consideration of the committee.</p>
2.	2 (Sl No. 10)	Transition of the Security Mechanism	<p>The committee had decided that a method of implementation needs to be formulated for transition of the Security Mechanism (IS 15959 series).</p> <p>A Working Group P1/WG 3 under the convenorship was formed. The composition of the WG is given below:</p>	<p>Mr S Warriar and Mr Balagopal informed the committee that queries had been sent to HES vendors and that based on the inputs received from HES implementation agencies, no further change was made in the recommendation of the WG; <i>see</i> Annex 1 of the minutes of the last meeting.</p> <p>The committee agreed to keep the security mechanism id 2 and 5 as alternate permitted options to allow smooth transition in future</p>	Security mechanism id 2 and 5 have been incorporated in IS 15959 (Part 2) amend document as permiss	<p>The committee noted the information given alongside.</p> <p>Members were requested to examine the draft Amd 3 to IS 15959 (Part 2) (Doc ETD 13 (21718)) and provide comments on the same.</p>

		<p>Mr Vinoo S. Warriar, Kalkitech - Convener</p> <ol style="list-style-type: none">1) Ms Viji Bharathi, CPRI2) Mr Shiva Kumar, CPRI3) M/s Tata Power4) M/s L+G5) M/s HPL6) M/s Secure Meters7) M/s Genus8) M/s CESC9) Mr Deepak Nimare, M/s Cyanconnode <p>Additional members were to be coopted by the convener for completing the task as recommended by the panel.</p> <p>This work is to be carried out in coordination with WG 1/Panel 1 so that necessary incorporations may be made in IS 15959 series while drafting its amendments.</p> <p>Mr Bali from NSGM was requested to bring together stakeholders from HES and MDM suppliers so that all stakeholders/view-points are taken into consideration.</p>	<p>and the same is to be incorporated in IS 15959 series.</p> <p>Mr Aashish Gaur, M/s Genus confirmed that he had incorporated the same in IS 15959 (Part 2) amendment document.</p>	<p>ed alternate options to allow smooth transition.</p>	
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Item 3 COMPOSITION OF SECTIONAL COMMITTEE ETD 13

3.1 The present composition of ETD 13 along with list of panels was reviewed by the committee. The following was decided:

- i) New Conveners for the following panels were appointed:
 - a) **Panel 1** – Maintenance of IS 15959 series: **New Convener – Ms Viji Bharathi, CPRI**
 - b) **Panel 2** – Maintenance of IS 13779, IS 14697, IS 15884: **New Convener – Mr B M Vyas, YMPL Labs**
 - c) **Panel 4** – Maintenance of IS 16444 (Parts 1 and 2): **New Convener – Mr Subhadip Ray Choudhury, M/s Tata Power-DDL**
- ii) It was decided to remove ITRON from the committee due to continuous lack of participation in the committee work.

3.2 The following co-option requests were accepted by the committee:

- i) M/s Wirepas – To ensure representation from the RF Mesh provider end.
- ii) M/s Bosch Global Software Technologies – HES

Co-option requests of M/s. Linkwell Telesystems Pvt Ltd and M/s Electrify Energy Pvt Ltd were not accepted as industry and industry association is currently well represented in the committee. However, it was decided to add the two in the additional mailing list so that comments may be obtained from the two and they may accordingly re-apply after sometime where the committee may re-consider their contribution to the standardization work and also participation of other members in the committee.

Item 4 PRESENT POSITION OF WORK OF ETD 13

The committee noted the information given in the agenda.

Item 5 FINALIZED DRAFTS UNDER PRINT

Sl No.	IS no. and Title (with details of processing so far)	Decision Taken in the last meeting	Action Reported in the agenda	Decision Taken	
NEW					
1.	IEC TR 62059-11: 2002 Electricity metering equipment - Dependability -Part 11: General concepts	Wide circulated as Doc ETD 13 (19813) on 13 June 2022 Last date of comments: 12 Aug 2022 No comments received so far.	It was decided to send the document for printing, if no comments are received during the wide circulation period.	This document is under print since no comments were received during wide circulation period.	The committee noted the information given in the agenda.
2.	IEC TR 62059-21: 2002 Electricity metering equipment - Dependability -	Wide circulated as Doc ETD 13 (19814) on 13 June 2022	It was decided to send the document for printing, if	This document is under print since no comments were received during	The committee noted the information given in the agenda.

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	Part 21: Collection of meter dependability data from the field	Last date of comments: 12 Aug 2022 No comments received so far.	no comments are received during the wide circulation period.	wide circulation period.	
3.	IEC 62059-31-1: 2008 Electricity metering equipment – Dependability – Part 31-1: Accelerated reliability testing – Elevated temperature and humidity	Wide circulated as Doc ETD 13 (19816) on 13 June 2022 Last date of comments: 12 Aug 2022 No comments received so far.	It was decided to send the document for printing, if no comments are received during the wide circulation period.	Following comments have been submitted by M/s Schneider Electric Pvt. Ltd.: “Regarding Dependability standard IEC 62059-31-1, we got inputs from colleagues who are involved in standards committee of other countries that there were feedback to IEC committee from the industry on IEC 62059-31-1 that the standard has proven to be difficult to use as the test is time consuming and the results are not convincing. IEC committee is reviewing the inputs for the same. We suggest to check with the progress on this standard in IEC committee. If the standard is under review, we can wait till	The committee agreed that there is a need of an Indian Standard on the subject. Also, no decision from IEC has been communicated to INC so far regarding any withdrawal of the IEC standard being in process. Hence, the committee approved the document for printing and the testing laboratories present in the meeting were apprised specially regarding the testing requirements so as to take up enhancement of test facilities as and when need arises for implementation of the standard.

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				<p>conclusion before adoption of the standard as it is. Considering the testing infrastructure availability in India, it will be difficult to practice the standard.”</p> <p><i>The committee may discuss.</i></p>	
4.	<p>IEC 62059-32-1: 2011 Electricity metering equipment – Dependability – Part 32-1: Durability – Testing of the stability of metrological characteristics by applying elevated temperature</p>	<p>Wide circulated as Doc ETD 13 (19817) on 13 June 2022</p> <p>Last date of comments: 12 Aug 2022</p> <p>No comments received so far.</p>	<p>It was decided to send the document for printing, if no comments are received during the wide circulation period.</p>	<p>This document is under print since no comments were received during wide circulation period.</p>	<p>The committee noted the information given in the agenda.</p>
5.	<p>IEC 62059-41: 2006 Electricity metering equipment – Dependability – Part 41: Reliability prediction</p>	<p>Wide circulated as Doc ETD 13 (19818) on 13 June 2022</p> <p>Last date of comments: 12 Aug 2022</p> <p>No comments received so far.</p>	<p>It was decided to send the document for printing, if no comments are received during the wide circulation period.</p>	<p>This document is under print since no comments were received during wide circulation period.</p>	<p>The committee noted the information given in the agenda.</p>
REVISION					
6.	<p>IS 15884: 2010 Alternating current direct connected Static prepayment meters for active energy (Class 1 and 2) — Specification</p>	<p>Draft issued in wide circulation as Doc ETD 13 (17673) on 01 June 2022.</p> <p>Last date of comments: 30 June 2022.</p> <p>No comments received till date.</p>	<p>The committee approved the document for printing.</p>	<p>The document is under print. See Annex 4 of the agenda.</p>	<p>The committee approved and noted the document enclosed with the agenda.</p>

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Item 6 DRAFTS APPROVED FOR WIDE CIRCULATION

The committee noted the information given in the agenda.

Item 7 P-DRAFTS UNDER CIRCULATION

Sl No.	IS no. and Title (with details of processing so far)	Action Reported in the agenda	Decision Taken	
REVISION				
1.	<p>IS 15707: 2006 Testing, evaluation, installation and maintenance of a.c. electricity meters — Code of practice</p> <p>(REVISION)</p> <p>Doc ETD 13 (21557)</p>	<p>Shri BM Vyas, Convener of the WG 2/Panel 2 had informed the committee that 8 meetings of the WG 2/Panel 2 have been held.</p> <p>Mr Surendra Jhalora, M/s Erennovation submitted before the committee that no such standard exists in IEC and that this standard in its current form must also be considered for submission as a NP in IEC TC 13.</p> <p>The committee agreed to circulate the draft as P-draft among the committee members for 30 days.</p> <p><i>The committee further agreed to submit the same draft as New Work Item Proposal (NP) to IEC TC 13 committee as no standard on this subject exists in IEC and this is a very important standard for testing, evaluation, installation and maintenance of a.c. electricity meters.</i></p>	<p>The draft is under P-draft circulation as Doc ETD 13 (21557).</p>	<p>Members agreed to provide comments on the draft document.</p> <p>It was decided that comments shall be resolved by Panel 2. Utilities may be added in the panel for a considered discussion.</p> <p>The panel recommendations shall be considered in the sectional committee for incorporation of suitable changes in the draft.</p> <p>Once the committee approves the draft document for wide circulation, that draft shall then be submitted as a New Work Item proposal (NP) to IEC TC 13.</p>
2.	<p>IS 15959 (Part 1): 2011 Data exchange for electricity meter reading, tariff and load control — Companion specification</p>	<p>Mr Ashish Gaur, M/s Genus (Convenor of WG 1/Panel 1) informed the committee that the final merged document incorporating the panel recommendations has been prepared. It was decided to list the changes made in the document since its last amendment (i.e. Amd 5 to IS 15959 (Part 1): 2011 edition) and include the same in the Foreword of the document.</p> <p>Mr Aashish Gaur agreed to incorporate this list of changes in</p>	<p>The draft is under P-draft circulation as Doc ETD 13 (21555).</p>	<p>Members were requested to examine the document and provide comments within stipulated time.</p> <p>In case, comments are received during P-draft circulation, comments shall be resolved by WG 1/P1. Recommendations of WG 1/P1 shall be considered by Panel P1 before submission for consideration of</p>

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	<p>(REVISION)</p> <p>Doc ETD 13 (21555)</p>	<p>the Foreword and submit the document to BIS.</p> <p>In the last sectional committee meeting, Mr Gaur had agreed to provide the draft in 1 week after incorporation of the detailed list of changes made in the document since its last amendment in the foreword of the standard.</p> <p>The committee agreed to circulate the draft as P-draft among the committee members for 30 days.</p>		<p>ETD 13 committee.</p> <p>In case no comments are received during P-draft circulation, the committed decided to put the draft in wide circulation for 60 days.</p>
<p>3.</p>	<p>IS 15959 (Part 2): 2016 Data exchange for electricity meter reading, tariff and load control- Companion Specification</p> <p>(AMENDMENT 3)</p> <p>Doc ETD 13 (21718)</p>	<p>In the Joint meeting of Panel 1 and Panel 4 held on 29 Sept 2021, it was decided to add the following to the under preparation draft amendment :</p> <p><u>“Amendment to be made to Table 10:</u> Bit no. 85 Last Gasp (Occurrence of Power failure) Bit no. 86 First Breath (Occurrence of Power restoration)</p> <p><u>Amendment to be made to notes under Table 10:</u></p> <p>Note 1 – To be retained as it is. Note 2- Bits associated with events which are not applicable shall always be set to '0'. Bit status will be '1' for occurrence & '0' for restoration. For example, in case of load disconnection (301), bit (84) status will be '1' & '0' for load connection (302). Note 3- In case of event id, the odd number is for occurrence & the even number is for restoration. ”</p> <p>Committee approved the modification proposed in the joint meeting of Panel 1 and 4.</p> <p>It was also decided to include the change regarding HLS security mechanism as decided under WG 3/Panel 1. Mr Vinoo S. Warriar, Kalkitech – Convener (WG 3/Panel 1) and Mr Balagopal, Kalkitech agreed to co-ordinate with Mr Gaur to provide necessary change.</p> <p>Informative Annexure being prepared under WG 2/P1 under the convenorship of Mr Shiva Kumar, CPRI (Bengaluru) shall</p>	<p>The draft is under P-draft circulation as Doc ETD 13 (21718).</p>	<p>Members were requested to examine the document and provide comments within stipulated time.</p> <p>In case, comments are received during P-draft circulation, comments shall be resolved by WG 1/P1. Recommendations of WG 1/P1 shall be considered by Panel P1 before submission for consideration of ETD 13 committee.</p> <p>In case no comments are received during P-draft circulation, the committed decided to put the draft in wide circulation for 60 days.</p>

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	also be included in the draft document.		
	The committee agreed to circulate the draft as P-draft among the committee members for 30 days.		

Item 8 P-DRAFTS UNDER PREPARATION

SI No.	IS no. and Title	Details	Decision Taken in the last meeting	Action Reported in the agenda	Decision Taken
New Subjects					
1.	DC Energy Meter	<p>The committee had decided to prepare a skeleton document using IS 13779 as the reference for general requirements and combining it with the requirements given in the draft IEC standard on DC Metering. Chairman of the committee had asked Mr B M Vyas to prepare the skeleton document with help of Mr Jhalora and provide the same to BIS for further circulation as P-draft for 1 month within the committee.</p> <p>In the last meeting, Mr Vyas made a brief presentation before the committee explaining the structure of the IEC standards and its difference from the structure of Indian standards on Electrical Energy metering. He explained how the Indian Standards structure is more of a 'Product Standard' based structure whereas, in IEC, <i>different standards exist</i> for:</p> <ul style="list-style-type: none"> - General requirements such as Constructional, climatic and EMC & type tests etc.), - Safety requirements and - Particular requirements. <p>Thus, one single draft document on DC Energy Meter is being prepared in line with other Indian Standards on Electrical Energy Metering.</p> <p>He explained that while drafting the skeleton document for Indian Standard on DC Energy Meter, Standard ratings, Safety</p>	<p>Mr Surendra Jhalora, M/s Erenovation Pvt. Ltd. was asked to take up the skeleton document prepared by Mr B M Vyas as a working draft and submit a P-draft.</p> <p>Mr Jhalora agreed to submit a White paper detailing the following:</p> <ul style="list-style-type: none"> - Terms of Reference - Details of testing of DC meters around the world 	<p>Mr Jhalora to update the committee on progress of work.</p>	<p>Mr B M Vyas, M.s YMPL labs and Mr Narang Kishore, M/S Narnix Technolabs were allocated the task to jointly work and prepare the draft document, taking the IEC document as base document and submit the working draft for consideration of the committee within 3 months.</p>

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		<p>requirements, General and Constructional requirements and metrological requirements will be consolidated from IS 13779 and IEC 62052-31, making changes as per India-specific conditions. He further emphasized that guidance w.r.t the following is required from relevant sectional committees such as ETD 50, ETD 51 and ETD 52:</p> <ol style="list-style-type: none"> i. Standard values for voltages and current ii. Immunity requirements <p>He was requested to give details of the information required from the above committees with Member Secretary and Mr Narang Kishore so that necessary inputs may be obtained for preparation of the document.</p>	<p>He agreed to submit the above white paper in 15 days.</p>		
<p>2.</p>	<p>Pluggable Communication module– Smart Meters <i>(informative annexure only)</i></p>	<p>Members had considered the document shared by NSGM. Mr Arun Mishra (NSGM) proposed that only Power and Data Interface may be standardized. Chairman clarified that in order to standardize the pluggable module provision, design changes would call for type testing.</p> <p>Shri Shailendra Goyal (M/s ZERA) had also offered to share similar documents (which are openly available and are not copyright protected) formulated by Germany as a concept document.</p> <p>Further, the committee noted that in one of the meetings with MoP, it was noticed that the work related to standardization of ‘Common Pluggable Communication Module’ needs to be taken up on priority.</p> <p>Given the urgency, Chairman proposed to form a working group WG 1 under Panel 4 under the convenorship of Mr Aashish Gaur, M/s Genus to draft an <i>‘informative annexure as a guideline for common pluggable module’</i>.</p> <p>The draft is under preparation under WG 1/Panel 1. Mr Aashish Gaur, Convenor (WG 1/Panel 1), in the last sectional committee had informed that the first meeting had been held in Dec</p>	<p>Mr Aashish Gaur, M/s Genus, Convenor (WG 1/Panel 1) informed the following:</p> <ul style="list-style-type: none"> - The WG 1/Panel 1 met once since the last sectional committee meeting. However, Group members were not able to conclude the content of common pluggable document - The next meeting (physical meeting) was scheduled at 	<p>WG 1/Panel 1 has a meeting scheduled on 09 Jan 2023.</p> <p>Mr Aashish Gaur, M/s Genus, Convenor (WG 1/Panel 1) to update the committee.</p>	<p>Mr Aashish Gaur, M/s Genus, Convenor (WG 1/Panel 1) apprised the committee regarding the progress of work in the Working group in the meeting held on 09 Jan.</p> <p>The working group was advised to work for defining a mechanical slot especially Pin out mechanical requirements.</p> <p>The following members were co-opted in the Working Group:</p> <ol style="list-style-type: none"> i) Cynaconnode ii) Wirepas iii) Zera <p>The committee authorized the WG</p>

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		<p>2021 and the work had been initiated. He informed that committee that the WG was working towards identifying the challenges and possible solutions by obtaining inputs both from the manufacturing and the HES end.</p> <p>Mr Narang Kishore updated the committee that no inputs were received from the panel members. He was requested to continue his work w.r.t clarification for DoT policy of IPv6 for communication.</p>	<p>CPRI Bhopal on 11th July to discuss the issues and conclude it.</p> <p>- Chairman had shared one reference document which was created with same objective. The document would be taken as input during the discussion on 11th July.</p> <p>Mr Narang Kishore agreed to share the draft letter/inputs for sending another letter in consultation with Chairperson of the committee.</p>		<p>convener to co-opt additional members from cellular communication providers too.</p>
3.	<p>Dual Source meters</p> <p><i>(informative annexure only)</i></p>	<p>Chairman suggested having informative annexure on Dual source meters would be helpful in this regard. It was decided to collect use case data for the same and draft an annexure accordingly which would be suitably incorporated in the existing Indian Standards. Mr Kishore Narang was allocated the task to prepare this informative annexure.</p> <p>In the last meeting, Mr Narang Kishore informed that the draft is under preparation and will share the same by year end for consideration of the committee. It was decided to circulate the draft within the committee for 15 days for obtaining comments from the committee members.</p>	<p>Mr Kishore informed that the draft is under preparation and will share the same shortly for review by the committee.</p>	<p>Mr Narang Kishore to update the committee.</p>	<p>Mr Narang Kishore informed that the work is yet to be initiated. He agreed to prepare and submit the informative annexure on Dual source meters within 1 month.</p>

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<p>4. Group Metering</p>	<p>-</p>	<p>It was further decided that a new document can be prepared for group metering. A working group was constituted for the same with Mr Subhadip Ray Choudhury, M/s Tata Power-DDL as the convenor for drafting the same. He was authorized to co-opt members from utility, manufacturers and other relevant stakeholders in the working group. The draft would be submitted in 3 months time.</p>	<p>MGVCL has submitted a proposal regarding Group metering which is given at Annex 12. Also, M.P.Madhya Kshetra Vidyut Vitran Co. Ltd. (MPMKVVC L) has also submitted a proposal regarding Group metering which is given at Annex 13.</p> <p>Mr Subhadip Ray Choudhury, M/s Tata Power-DDL to update the committee on the progress of work.</p>	<p>Mr Subhadip Ray Choudhury, M/s Tata Power-DDL informed that the work is yet to be initiated. He was advised to co-opt utilities like Adani, CESC, MGVCL and MPMKVVCL in the group. The utilities agreed to assist in R&D testing for simulation of use cases so that a draft document may be prepared.</p>
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Revision of/Amendments to existing IS				
5.	<p>IS 12346: 1999 Testing equipment for ac electrical energy meters (first revision)</p> <p>(REVISION)</p>	<p>Mr Goyal, Convener of WG 3/Panel 2 informed the committee that several meetings of the WG have been conducted and the draft revision document is being prepared based on IEC 62057.</p> <p>The working draft is expected to be ready in another 6 months.</p>	<p>Mr Goyal informed the committee that the WG 3/Panel 2 has had 20 meetings and that the draft is almost ready and will be submitted shortly for consideration of the committee.</p>	<p>Mr Goyal (Convener, WG 3/Panel 2) informed the committee that 23 meetings so far have been conducted and that the draft prepared shall be submitted latest by end of February.</p> <p>It was decided to circulate the draft as P-draft among committee members for 30 days.</p>
6.	<p>IS 15959 (Part 3): 2017 Data Exchange for Electricity Meter Reading, Tariff and Load Control — Companion Specification Part 3 Smart Meter (Transformer Operated kWh and kVARh, Class 0.2 S, 0.5 S and 1.0 S)</p> <p>(AMEN)</p>	<p>It was informed by the Convenor of WG 1/Panel 1, Mr Gaur that the finalized draft shall be submitted after further deliberations in WG 1/Panel 1.</p> <p>It was decided to align the changes for this draft amendment in line with the changes being made in Amd 3 to IS 15959 (Part 2).</p> <p>Mr Gaur confirmed that this amendment shall follow once Amd 3 to IS 15959 (Part 2) is prepared.</p>	<p>Mr Gaur informed that the amendment 1 to IS 15959 (Part 3) would follow once Amd 3 to IS 15959 (Part 2) goes into wide circulation.</p> <p>CDAC and ZERA comments shared as Annex 10 of the agenda of the 40th meeting to be considered while drafting the Amendment as decided in the last meeting.</p>	<p>---</p> <p>Convenor of WG 1/Panel 1, Mr Gaur informed that amendment 1 to IS 15959 (Part 3) shall now be drafted and submitted for consideration of the committee since Amd 3 to IS 15959 (Part 2) has been put in P-draft circulation.</p>

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	DMENT 1)				
7.	<p>IS 16444 (Part 1): 2015 a.c. Static Direct Connected Watthour Smart Meter Class 1 and 2 — Specification</p> <p>(AMENDMENT 3)</p>	<p>A Working Group WG 1/Panel 4 under the Convenorship of Mr Rajnesh Ameta, M/s Secure Meters, was formed to draft the standard.</p> <p>In the last meeting of sectional committee, after detailed discussions taking into consideration:</p> <ul style="list-style-type: none"> - changes being introduced in the draft revision document of IS 15884, - informative annexure as a guideline for common pluggable module, and - considered extension of implementation of IS 13779: 2020, <p>the committee decided to re-draft the Amendment to accommodate all relevant changes mentioned above. The revised draft amendment shall be prepared by WG 1/Panel 4 and submitted for consideration of the committee.</p>	<p>The committee agreed that the changes in IS 15884 were finalized now and also the IS 13779 implementation issue had been taken care of. The informative annexure on common pluggable module was also expected to be finalized soon.</p> <p>It was, decided, to re-draft the amendment in line with the changes mentioned above.</p> <p>WG 1/Panel 4 under the Convenorship of Mr Rajnesh Ameta, M/s Secure Meters agreed to formulate the modified draft amendment 3 to IS 16444 (Part 1) for the consideration of the committee.</p> <p>The committee agreed to circulate the draft (once</p>	<p>Mr Rajnesh Ameta, M/s Secure Meters to update the committee on progress of work.</p>	<p>Mr Rajnesh Ameta, M/s Secure Meters, Convener WG 1/Panel 4 agreed to rework on the draft in line with changes in IS 13779 and IS 15884.</p> <p>The draft shall then be circulated among committee members as P-draft for 30 days.</p>

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			received) as P-draft among the committee members for 30 days.		
8.	<p>IS 16444 (Part 2): 2017 a.c. Static Transformer Operated Watthour and Var-Hour Smart Meters, Class 0.2S, 0.5S and 1.0S Part 2 Specification Transformer Operated Smart Meters</p> <p>(AMENDMENT 2)</p>	<p>The committee considered the following:</p> <ul style="list-style-type: none"> - changes being introduced in the draft revision document of IS 15884, - informative annexure as a guideline for common pluggable module, and - implementation of IS 14697: 2021, <p>the committee decided to re-draft the Amendment to accommodate all relevant changes mentioned above. The revised draft amendment shall be prepared by WG 1/Panel 4 and submitted for consideration of the committee.</p>	<p>The committee agreed that the changes in IS 15884 were finalized now and also the IS 14697 implementation issue had been taken care of. The informative annexure on common pluggable module was also expected to be finalized soon. It was, decided, to re-draft the amendment in line with the changes mentioned above. WG 1/Panel 4 under the Convenorship of Mr Rajnesh Ameta, M/s Secure Meters agreed to formulate the modified draft amendment 2 to IS 16444 (Part 2) for the consideration of the committee. The committee</p>	<p>Mr Rajnesh Ameta, M/s Secure Meters to update the committee on progress of work.</p>	<p>Mr Rajnesh Ameta, M/s Secure Meters, Convener WG 1/Panel 4 agreed to rework on the draft in line with changes in IS 14697 and IS 15884.</p> <p>The draft shall then be circulated among committee members as P-draft for 30 days.</p>

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			agreed to circulate the draft (once received) as P-draft among the committee members for 30 days.		
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Item 9 COMMENTS ON PRINTED STANDARDS

9.1 Comments carried forward from last meeting

Sl No.	Organization and comments received	Decision Taken in the last meeting	Action Reported in the agenda	Decision Taken
1.	<p>Comments from CEA</p> <p>A letter from CEA has been received regarding Provision of net metering in IS 15884. See Annex 5 of the agenda.</p>	<p>In the last sectional committee meeting, the same was discussed. The committee felt that prepaid functionality (Remote) will be handled at MDM end and IS 15959 (Part 2) has provisions to shift to pre-paid functionality. However, it was decided to re-discuss this in presence of CEA again in the next meeting as committee requested for clarification regarding the exact nature of change being asked by CEA. Ms Pooja (CEA) agreed to communicate regarding the same to the relevant division of CEA.</p>	<p>To be discussed in the meeting.</p>	<p>The agenda point came up for discussion when representative of CEA had to excuse herself for another meeting.</p> <p>To be discussed in the next meeting in presence of CEA representative.</p>
2 (i)	<p>Comments from ISGF</p> <p>ISGF has submitted comments proposing changes in IS</p>	<p><i>Proposed change by ISGF - Remove Clause 9.3 of IS 16444</i></p> <p><i>Decision Taken by ETD 13:</i> Regarding RPL routing protocol, ISGF stated that this is required as there were several technology advancements in the 7 years since publishing of standard and suggested this requirement be kept open. He</p>	<p>Working Group WG 2/Panel 4 has submitted its recommendations which are given at Annex 7 for consideration of the committee.</p>	<p>The committee deliberated and discussed on the proposal in detail. The committee agreed that the current requirement is in no way restricting entry of new technologies and the same is technology agnostic.</p> <p>However, based on the feedback of ISGF and</p>

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	<p>16444. See Annex 6 of the agenda.</p>	<p>noted that CEA and some utilities have agreed with this suggestion. Shri Sundeep Tandon, M/s HPL opined that this point has to be deliberated in depth before making a decision. Shri Ashish Gaur, M/s Genus seconded the opinion and suggested forming a working group for the same. Shri Narang Kishore, M/s Narnix Technolabs agreed to provide information regarding the work done by LITD in this regard. The committee agreed that this issue needs to be discussed by the committee further before arriving at a decision. It was decided to form a new Working Group WG 2/Panel 4 and the task of reviewing the existing Communication Requirements in IS 16444 (Part 1 and 2) was allocated to the Working Group. Composition of the Working Group is as follows:</p> <ol style="list-style-type: none"> a. Shri Saurav Chandel, Tata Power-DDL (Convener) b. Shri Devendra Vyas, HPL c. Shri Kishore Narang, Narnix Technolabs d. Ms Viji Bharti, CPRI e. Shri Deepak Nimare, CyanConnote Private Limited, f. Shri Balagopal, Kalkitech g. Shri R Karthik, Schneider Electric India Power Ltd. h. Shri Shailendra Goyal, Zera i. Shri Aashish Gaur, Genus j. Shri Rajnish Ameta, Secure Meters k. Shri Shubhadip Ray Chaoudhury, Tata Power-DDL l. Shri Reji Pillai & Shri Amarjeet, ISGF 		<p>Narnix Technolabs, the committee felt that it appears that certain issues have been faced by providers of certain communication technologies even though none have been reported to ETD 13 so far.</p> <p>In order to make the requirements completely technology agnostic in nature to allow latest routing protocols and communication technologies, following modification in the clause 9.3.1 may be considered: Network: IPv6 (RPL or other routing protocols complying to standards from ITU/IEC/IEEE/CEN/CENELEC/ETSI/IETF).</p> <p>The above modified text shall be shared as a proposed amendment to REC and NSGM along with state utilities inviting their comments and seeking their concurrence/dis-agreement on the proposed change.</p> <p>Further, inputs shall be sought from them for proposing changes required in Adaptation layer and clause 9.3.2 in accordance with draft changes mentioned above in Network layer.</p> <p>If the above changes are agreed by the utilities, REC and NSGM, i.e the implementation bodies, the amendment shall be put in wide circulation for 60 days.</p>
2		<p><i>ISGF Comment 2 - Test Schema for testing</i></p>	<p>Same as above.</p>	<p>The committee agreed that members of ETD 13</p>

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(ii)		<p><i>meters and communication solutions</i></p> <p><i>Decision Taken by ETD 13:</i> Shri Reji Pillai, ISGF suggested that the test scheme for testing meters and communication solutions should be developed by ETD 13.</p> <p>Chairman (ETD 13), Shri B.A. Sawale clarified and informed that it has already been decided by the committee to add an informative annexure to the IS 15959 series of standards in this regard to clarify any confusion due to interpretation of clauses. It was informed that a working group WG 2/P1 under Shri Bal Mukund Vyas, M/s YMPL is working on the same.</p> <p>Further, it was decided that this shall also be discussed by the working group WG 2/Panel 4.</p>		<p>must be represented in LITD 28 so as to help understand the latest developments and further then draft the informative annexures of IS 15959 series under WG 2/P1.</p>
2 (iii)		<p><i>ISGF Comment 3 – Other changes suggested:</i></p> <p><i>i. Communication requirements:</i> <i>Decision Taken:</i> To be discussed by the working group WG 2/Panel 4.</p> <p><i>ii. Common Pluggable Modules:</i> To be discussed by the working group WG 1/Panel 1.</p>	<p>Same as above <i>and</i> WG 1/Panel 1 convener Mr Gaur to confirm.</p>	<p>Same as 2 (i) above.</p>

9.2 New Comments

Sl No.	Organization and comments received	Decision Taken
1.	<p>Comments from M/s Secure Meters (<i>see</i> Annex 8 of the agenda)</p> <p>M/s Secure Meters has submitted comments on Clause 4.3 of IS 15959</p>	<p>The committee discussed the need for providing option for simultaneous operation. The committee felt that the need may be application specific and only in special cases.</p>

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	(Part 1) – “Requirements for simultaneous operation” .	It was, therefore, agreed to include the requirement as an optional requirement only, by means of adding a note after clause 4.3 in IS 15959 (Part 1) stating the following: NOTE — Wherever there is a requirement for simultaneous operation from utility, the same may be agreed between buyer and supplier.
2.	Comments from Mr Narang Kishore (<i>see</i> Annex 9 and Annex 10 of the agenda) Mr Narang Kishore, M/s Narnix Technolabs has submitted a proposal to higher accuracy class (0.1s) inclusion in Indian standard for AC Static Transformer Watthour Meters (IS 14697).	The proposal for inclusion of accuracy class (0.1s) in Indian standard for a.c. Static Transformer Watthour Meters, IS 14697 was agreed and approved by the committee. Since the entire document needs to be modified to accommodate requirements in majority of clauses for the accuracy class 0.1S, it was decided to draft a revision document in place of an amendment. Panel 2 was asked to prepare the draft revision document of IS 14697 incorporating the above.
3.	Comments from M/s Bosch Global Software technologies The load control is an important functionality of Smart meter. It is important to standardize the representation of these events. In the current version of the standard, there is lack of clarity in representation of load control event. This is leading to different interpretations and implementation resulting in reporting issues. This ambiguity can be corrected by any one of the two approaches presented in Annex 14 .	WG 1/P1 convener confirmed that requirement is covered in the draft IS 15959 revision document under circulation. However, WG 1/P1 was advised to revisit M/s Bosch’s comments and discuss with them if needed to incorporate any suitable changes to allow clarity in interpretation of the document. If any change is proposed based on the above discussion, WG 1/P1 convener to immediately apprise the committee of any changes so that the same may be discussed before finalizing the draft document in the committee.

Item 10 REVIEW/REAFFIRMATION OF PUBLISHED INDIAN STANDARDS

10.1 The committee noted the information given in the agenda.

10.2 Review of Pre-2000 Indian Standards

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The following Indian Standards under the purview of ETD 13 were published prior to the year 2000 and are due for review. The following decisions were taken:

Sl No.	IS No.	Title	Committee member to whom ARP review of IS is allocated	Decision Taken
1.	IS 1766:1998	Time switches for metering and load control (<i>Second Revision</i>)	Working Group of following members: i) Shri B.A.Sawale, Chairperson (ETD 13) ii) Shri B M Vyas, YMPL iii) Shri Shailendra Goyal, ZERA	The working group agreed to review the standard and submit the ARP report within 2 months' time.
2.	IS 9792 (Part 1): 1987	Guide for testing calibration and maintenance of AC electricity meters: Part 1 Single phase whole current watt-hour meters Class 2.0 (<i>First Revision</i>)	Working Group of following members: i) Shri B.A.Sawale, Chairperson (ETD 13) ii) Shri B M Vyas, YMPL iii) Shri Shailendra Goyal, ZERA	The working group agreed to review the standard and submit the ARP report within 2 months' time.
3.	IS 12346:1999	Testing equipment for a.c. electrical energy meters (<i>First Revision</i>)	Already under revision under WG 3/Panel 2	See Item 8 Sl no. 5 of these Minutes.
4.	IS 14372:1996	Volt - Ampere hour meters for full power factor range - Specification	Shri Sujith Unnikrishnan, Schneider Electric India Pvt. Ltd.	Shri Sujith Unnikrishnan, M/s Schneider Electric India Pvt. Ltd. presented the review report for consideration of the committee (<i>see Annex 1</i> of these minutes). The report recommended to withdraw the standard as it is defined for electromechanical type meters. The committee agreed with the recommendation and approved the withdrawal of the standard.
5.	IS 14415:1997	Volt - Ampere hour meters for restricted power factor range - Specification	Shri Sujith Unnikrishnan, Schneider Electric India Pvt. Ltd.	The report highlighted the following: 1. There is no single standard dedicated for Volt-ampere hour meters

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				<p>2. Standards which currently available that defines requirements for volt-ampere hour meters</p> <p>i) IEC 61557-12</p> <p>ii) IEEE 1459:2010</p> <p>3. Rewrite the standard considering electronic meter based VAh energy measurement and release as an independent standard. This independent standard can be referred in IS 13779/IS 14697.</p> <p>The committee agreed with the recommendation and approved the rewriting of the standard and making necessary changes.</p> <p>Panel 2 was asked to draft the revision document in line with the above review report recommendation.</p>
6.	IS 14451 (Part 1):1998	Telemetry for consumption and demands : Part 1 Impulse transmitting and receiving devices	<p>Working Group of following members:</p> <p>i) Shri B.A.Sawale, Chairperson (ETD 13)</p> <p>ii) Shri B M Vyas, YMPL</p> <p>iii) Shri Shailendra Goyal, ZERA</p>	<p>It was proposed to re-write the standard and reprint it with required reference and cosmetic changes as the committee felt that it may still have select users and withdrawing the standard without identifying them and seeking their input would rid them of a relevant reference document.</p> <p>The working group agreed to review the standard considering the above and confirm if re-printing of the document as mentioned above can be carried out.</p>
7.	IS 14451	Telemetry for consumption	Working Group of following members:	It was proposed to re-write the standard

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	(Part 2):1999	and demands : Part 2 Direct digital transfer of meter values	i) Shri B.A.Sawale, Chairperson (ETD 13) ii) Shri B M Vyas, YMPL iii) Shri Shailendra Goyal, ZERA	and reprint it with required reference and cosmetic changes as the committee felt that it may still have select users and withdrawing the standard without identifying them and seeking their input would rid them of a relevant reference document. The working group agreed to review the standard considering the above and confirm if re-printing of the document as mentioned above can be carried out.
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It was re-iterated that Action Research projects (ARPs) are to be undertaken for review of the above standards. Action Research is the process of systematic actions carried out using the techniques of research, studying current practices, in order to suggest improvements in existing standards through innovative critical analysis.

The outcome of the ARP could be recommendations for either:

- 1) Revision (Draft to be submitted) or
- 2) Reprint with only editorial corrections or
- 3) Withdrawal (with justification)

Item 11 INTERNATIONAL ACTIVITIES

11.1 Membership in IEC/TC 13 and New Subjects for Harmonization

The committee noted the information given in the agenda.

11.2 In the last meeting of sectional committee ETD 13, Shri Kishore Narang had briefed members on recent activities of TC 13/WG 14. He informed the committee that he has been appointed as liaison with TC 13 on behalf of TC 69 for EV. He informed the members that an ad-hoc group has been created for cooperation between TC 13 and TC 69. The next meeting of the Joint adHoc group was scheduled on 19 Jan 2023.

It was decided that ZERA must be represented on the adHoc group and Mr Kishore was advised to do the needful.

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He also informed the committee regarding the proposal regarding meter as a module for incorporating into a system and suggested India could develop a proposal for same and lead the standardization process for the same. Shri B.A. Sawale emphasized that the various use cases and applications of DC metering need to be listed for further standardization. Shri Shubhadip Ray Choudhury, M/s Tata Power-DDL added that additional conditions like environmental conditions, configuration, termination and mechanical requirements, metrology and influenced parameters etc. It was decided that Shri Narang Kishore shall prepare a concept note based on the applications and what metering configuration is required for each case and decide whether only metrology part needs to be defined or not. shall prepare the concept note for consideration of the committee and the proposal shall be discussed and decided on in the next meeting.

Item 12 NEW WORK ITEM PROPOSALS FOR INDIAN STANDARDIZATION

12.1 Group Metering

See Item 8, Sl no. 4 above.

In addition, following new work items were discussed and the committee agreed that there is a market requirement of these subjects and hence new Indian Standards or suitable annexures in existing standards addressing the following requirements must be formulated:

12.2 ABT Meter

Panel 2 was asked to prepare a working draft and circulate among the committee members.

12.3 Grid regulation to be incorporated in the new IS

Panel 2 was asked to prepare a working draft and circulate among the committee members.

12.4 Composite Metering

Panel 4 was asked to prepare a working draft and circulate among the committee members.

Item 13 DATES AND PLACE OF THE NEXT MEETING

It was decided to hold the next meeting in the next quarter of the year. The final date and place of the meeting shall be decided in consultation with the Chair of the committee.

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Item 14 ANY OTHER BUSINESS

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

Annex 1 of Minutes

Standards Review

IS 14372 - Volt-ampere hour meters for full power factor range - Specification

IS 14415 - Volt-ampere hour meters for restricted power factor range - Specification



Life Is On

Schneider
Electric

Comparison between IS 14372 & IS 14415

	IS 14372	IS 14415
Power Factor	Power factor range is full range	Power factor range is restricted range
Method of computation	Does not explicitly defines whether it applies for electromechanical or electronic meters Defines two method of computation – Vector sum VAh & Arithmetic sum VAh	Applies to electromechanical type with concept of using Wh meters as VAh meters for a limited range
Class of accuracy	No separate class defined	Class is a combination of kVAh and kWh Ex: Class 1-1, 2.5-2

Comparison between IS 14372 & IS 14415

	IS 14372	IS 14415
List of tests covered	Accuracy, electrical and insulation tests – IS 722 (Part 1) is referred which is withdrawn	General construction, Accuracy, electrical and insulation tests. Requirements are defined in this standard itself without any reference.

Standards referred - Status

- IS 722 (Part 1) : 1986 - AC electricity meters: Part 1 General requirements and tests

Status : **Withdrawn**

- IEC 60211 : 1966 – Maximum demand indicators, Class 1.0 (First edition)

Status : **Withdrawn**

- IS 2705 (Part 1) : 1992 – Current transformers : Part 1 General requirements (2nd revision)

Status : **Reaffirmed in 2017**

- IS 8530 : 1977 – Maximum demand indicators (Class 1)

Status : **Withdrawn**

- IS 13010 : 1990 – AC watt-hour meters, Class 0.5, 1 and 2

Status : **Reaffirmed in 2012**

- IS 14390 : 1996 – Var-hour meters, Class 3.0

Status : **Reaffirmed in 2001**

- IS 722 (Part 6) : 1980 - AC electricity meters: Part 6 Var-hour meters, class 2.5

Status : **Withdrawn**

Technical comments

IS 14415

- It is recommended to withdraw the standard as it is defined for electromechanical type meters.

IS 14372

- It is recommended to withdraw the standard and adopt the any one of the following:
 1. Rewrite the standard considering electronic meter based VAh energy measurement and release as an independent standard. This independent standard can be referred in IS 13779/IS 14697
 2. Include the VAh requirements in IS 13779 / IS 14697 depending on the application requirements.

Available international standards

- There is no standard dedicated for Volt-ampere hour meters
- Standards which currently available that defines requirements for volt-ampere hour meters
 - IEC 61557-12 - Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC - Equipment for testing, measuring or monitoring of protective measures - Part 12: Power metering and monitoring devices (PMD)
 - Defines the definition, accuracy class, tests and acceptance criteria.
 - IEEE 1459:2010 - IEEE Standard Definitions for the Measurement of Electric Power Quantities Under Sinusoidal, Non sinusoidal, Balanced, or Unbalanced Conditions
 - This standard provides definition for apparent power

Challenges

- kVA calculation needs to be standardised to have uniformity in measurement across devices of multiple makes. This should consider lead treated as UPF requirement of utilities.
- The standard method adopted should be available in accuracy test systems which will be used for testing kVAh
- Inclusion of reactive energy for Class 1.0 meters
- If kVAh is optional, how to have separate inclusion under BIS license.

The above points to be considered while formulating the standard.