Presentation to AFSEC
Capacity building workshop – 5 to 9 Sept, Nairobi

IEC TC13 Overview

Roland Hill
Chairman:
SANC IEC TC13
From the 1920’s, TC13 has been responsible for:
- electrical energy measurement
- electricity tariffs and load control

TC13 standards are used to measure and control electrical energy (kWh) and demand (kW);
- in power stations
- along the transmission, distribution and supply networks
- at industrial, commercial and residential customers

TC13 metering systems provide data for:
- revenue billing, market and network operation
- energy management and customer education
IEC TC13 – Working Groups

- **WG 11:** Electricity metering **equipment**
  - Type testing of meters (IEC 62053 series)
  - Acceptance testing (IEC 62058 series)
  - Product safety (IEC 62052-32)

- **WG 13:** **Dependability** of metering equipment ('059)

- **WG 14:** **Data** exchange for meter reading, tariff and load control
  - Data models and communication protocols (IEC 62056)

- **WG 15:** Electricity metering, payment **systems**
  - Type test of meters & systems (IEC 62055 series)
# IEC TC13 – Representation in Africa

<table>
<thead>
<tr>
<th>IEC TC13 Voting Members</th>
<th>IEC TC13 Voting Members</th>
<th>IEC TC13 Observer Members</th>
<th>Interim AFSEC TC13 Committee Members</th>
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<tbody>
<tr>
<td>Australia</td>
<td>Korea, Republic of</td>
<td>Albania</td>
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# IEC TC13 - Africa’s contribution

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantity of Standards</th>
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<tbody>
<tr>
<td>1985</td>
<td>IEC 1036, IEC 61358</td>
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<tr>
<td>1990</td>
<td>IEC 61036, IEC 62052-21, IEC 62055-21/31/41/51/52</td>
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<tr>
<td>1995</td>
<td>IEC 61358, IEC 62058 parts 11/21/31, IEC 62059-31-1, IEC 62059-32-1</td>
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<td>2000</td>
<td>Metrology requirements, Prepayment functionality, DR/DSM/DER/EV</td>
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<td>2005</td>
<td>Acceptance test req’s, Dependability (ALT), Ageing of metrology</td>
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<td>2010</td>
<td>Safety requirements, Reactive energy, Multi-part prepayment</td>
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<td>2015</td>
<td>IEC 62052-31, IEC 62053-24, IEC 62055-32</td>
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<td>~64</td>
<td>Data exchange, Narrowband PLC, LV signalling on mains, Planning of PLC systems</td>
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<td>Virtual token interface, Conformance test suite, CIM reference architecture, Enterprise service bus, Naming &amp; design rules, Meter reading &amp; control</td>
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**Note:** Includes standards developed with IEC TC13 liaisons

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**IEC Metrology Standards:**
- IEC 1036
- IEC 61036
- IEC 62052-21
- IEC 62055-21/31/41/51/52
- IEC 62058 parts 11/21/31
- IEC 62059-31-1
- IEC 62059-32-1

**IEC Communication Standards:**
- IEC 1107
- IEC 61107
- IEC 61334-5-1/2
- IEC 62056-21
- DLMS/Cosem
- EN 50065-1
- IDIS package 1&2
- IEC 62056-8-3
- EMC compliance
- IEC 62488-1
- STS 101-1 and STS 201-15.1.0
- STS 501 Series (15 parts)
- IEC 61968-1
- Cosem Prepay
- Virtual token interface
- IECEE CB scheme
- Conformance test suite
- IEC 61968-1-1
- IEC 61968-1-2
- IEC 61968-9
- IEC 61968-9 Ed.2
- IEC 61968-11
- CIM for distribution
- Enterprise service bus
- Naming & design rules
- Meter reading & control
- CIM reference architecture
- Planning of PLC systems
- LV signalling on mains
- Narrowband PLC
- Data exchange
- Virtual token interface
- Conformance test suite
- CIM reference architecture
- Enterprise service bus
- Naming & design rules
- Meter reading & control
- CIM for distribution
- Planning of PLC systems
- LV signalling on mains
- Narrowband PLC
- Data exchange
AFSEC TC13 - Objective

US: EPRI, GridWise
NIST, ANSI c12, IEEE P19
C12: Openway, Zigbee

EU: MID, SM-CG, IDIS
IEC TC13&57, ISO, CEN, ITU
TC13: DLMS/Cosem

Asia: CN, IN...

AU: AFSEC, PIESA, SADC
IEC TC13&57, ISO, ITU
TC13 WG14: Cosem Prepayment
TC13 WG15: STS Association
Thank you for your attention

Roland Hill
Chairman:
SANC IEC TC13