



AFSEC

ATC13 Electrical Energy Measurement and Control

U.S- Africa Rural Electrification and Smart Metering Standards Workshop

18/01/2022

Don Taylor

(ATC13 Chair)

Organization



AFSEC

- Chair (Don Taylor)
- Secretariat (Nigeria)
- Country members
- Project Team 1
 - Country members + invited experts
- Project Team 2
 - Country members + invited experts

Country members



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<u>ATC13</u>	<u>IEC TC13</u>
Cote d'Ivoire	associate
DR Congo	affiliate
Egypt	full
Ghana	associate
Kenya	full
Namibia	affiliate
Nigeria	full
Rwanda	affiliate
Senegal	affiliate
South Africa	full
Uganda	associate
Zambia	affiliate
Zimbabwe	affiliate
13	

Meetings



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- ATC13 meets every 3 months
- Project Team 1 currently in dormant /maintenance mode
- Project Team 2 meets every 3 months

Scope of work



- We mirror the work of IEC TC13
- Standards for electrical energy measurements, tariff and load control
- Harmonisation of standards in Africa for the prevention of barriers to trade

Program of work



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- Endorsement of IEC standards for metering equipment (AC and DC)
- Guide_1 : the use of standards for smart metering systems
- Guide_2 : the use of standards for smart metering communication protocols (complementary to Guide_1)

Endorsed standards



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- IEC 62052 suite: general + safety requirements
- IEC 62053 suite: particular requirements
- IEC 62054 suite: time switches (future)
- IEC 62055 suite: payment metering systems
- IEC 62056 suite: smart meter protocols
- IEC 62057 suite: meter test units (future)
- IEC 62058 suite: acceptance inspection

Clean energy support



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- IEC 62056 suite: semantic interoperability
 - Import/export energy billing measurements
 - TOU and BLOCK tariffs
 - Prepayment accounting in the meter
 - Token credit
 - Emergency credit
 - Import/export energy charges
 - Auxiliary charges
 - Local and remote load management
 - Remote meter communications

Collaboration



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- Outreach to APUA
 - Association of Power Utilities of Africa
- Outreach to ARSO
 - African Organisation for Standardisation
- Objectives
 - Prevention of overlapping standardization
 - Coordination at project level
 - Promotion of AFSEC standards to other stakeholders

Challenges



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- Adoption of AFSEC endorsed standards at country NEC level
- Adoption of non-IEC standards at country level
- Commenting and voting on IEC circulating documents happens via IEC member countries
 - limited influence
 - possible conflict of interest



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THANK YOU FOR YOUR ATTENTION

.... I now hand over to Dr Omar Gatera
ATC57 Chair