INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

IEC International Standards for the Smart Grid

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FERC / NARUC

Technical Conference on Smart Grid Interoperability Standards

November 14, 2010

Atlanta, Georgia

The whole world of electrotechnology

One of three ISDOs (IEC, ISO, ITU)

Globally relevant voluntary, consensus-based international standards

162 participating countries – both developed and developing

Network of **10 000 experts**

Focus: all **electric** and **electronic** devices

Head office: Geneva,
US regional office: Boston
US NC within ANSI

The whole world of electrotechnology

Core work: standards and conformity assessment.

Define **rules**, **specifications**, **measuring** and **testing criteria, EMC** to enable global trade, interoperability, safety, efficiency, reliability, respect of environment.

Working Liaison with NIST

Close **cooperation** with:
IEEE, ASTM, SAE, IPC, EIA, JEDEC, AAMI and more

Consensus-based, voluntary standard

Voluntary participation and acceptance

Balanced global representation

Approval of **majority** or all IEC member countries

The value of IEC Standards results directly from the strength of its bylaws, the effective and balanced representation of the industry, and the traceability on how consensus is built. The IEC directives provide straightforward rules to follow. The IEC Central Office headquartered in Geneva supervises compliance.

IEC “foundational “ Smart Grid Standards

5 **core** IEC Smart Grid families of Standards

28 voting + 16 observing countries
(Developed by TC 57)

Essential for homogeneous communication and seamless interoperability

Universally recognized and **widely used**
(roadmaps: IEC, US, China, Japan, Korea, EU, Germany, etc...)

Role of the IEC in Smart Grids

Most **internationally trusted** source of standards for energy sector

Broadest portfolio of published technical Smart Grid Standards

Stringent protocols: predictability, long-term robustness

Involved in **all major Smart Grid activities** globally –
15 countries to date

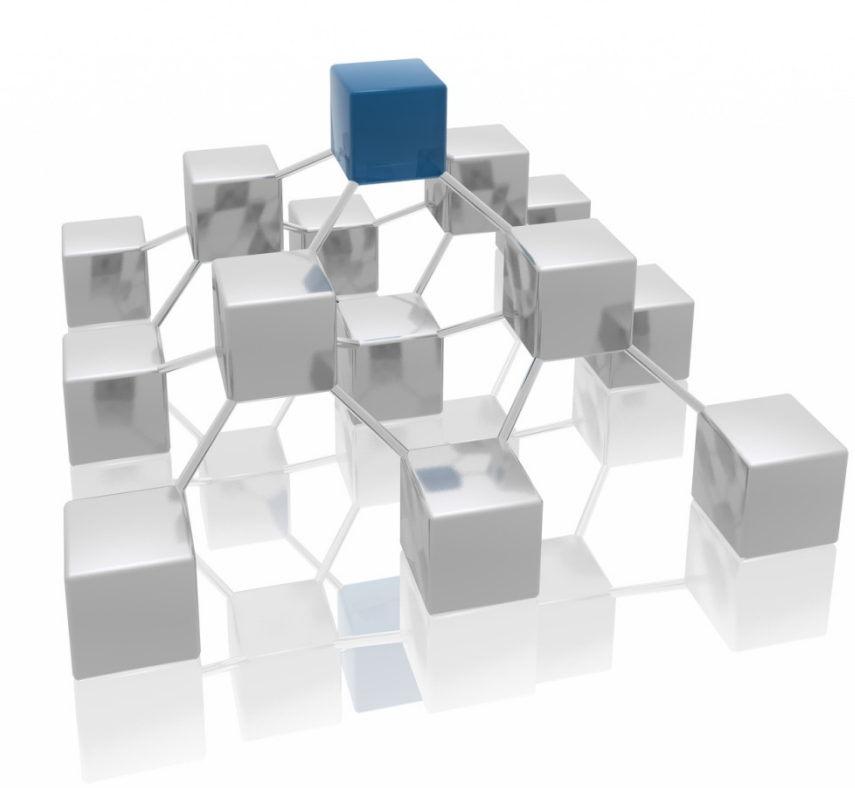
Continuously updated

Smart Grid in never ending evolution

Strong standards: adapt, grow, sustain

5 “foundational” IEC Standards:

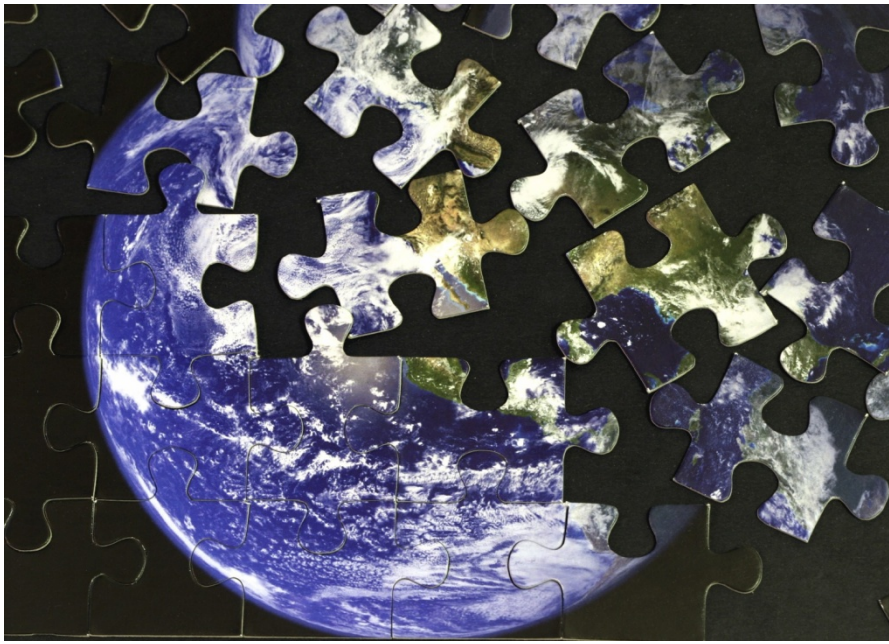
- Technology independent
- Amongst the more mature
- Able to evolve (based on a standardized architecture and roadmap)
- Enable Integrating new technologies and innovation



Future work

Make standards work for users

- **facilitate** navigation
- **identify** gaps or overlaps
- **manage** and update portfolio



Conformity Assessment:
One test in one country worth worldwide

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Thank you for your attention

www.iec.ch