Value addee



Smart Grid Standardization

CONFERENCE ON ROLLING PLAN ON ICT STANDARDISATION Session 3: Sustainable Growth: Smart grids and smart meters, ICT environment

Presenter: Johannes Stein, on behalf of the Smart Grid Coordination Group (SG-CG)

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Micro storag



There are a lot of Smart Grid standardization activities worldwide





SG-CG – Who are we?





Smart Grid Coordination Group (SG-CG) of CEN, CENELEC and ETSI

- Phase 1
 - From 6/2011 until 12/2012
- Reference Architecture -> SGAM, conceptual model
- Sustainable processes ->Use Cases
- Smart Grid Information security (SGIS) – SGIS Toolbox
- First of standards
 - Prioritisation, work programme
 - First set of standards
- Framework for new standardization process for complex systems



- Phase 2
 - currently under development until end of 2014
- Methodology (Use Cases, reference architecture, SGAM, conceptual model, market and flexibility, new applications)
- SGIS
- Set of Standards (Update)
- Interoperability (recommendations, Excel tool)

All reports of phase 1 are available under

http://www.cencenelec.eu/standards/Sectors/SustainableEnergy/Management/SmartGrids/Pages/default.aspx



Other Coordination Groups and Mandates relevant for Smart Grid

- M/441 Smart Metering
 - Smart Meter Coordination Group (SMCG) of CEN, CENELEC, ETSI
- M/468 Electromobility
 - eMobility Co-ordination Group (eM-CG) CEN, CENELEC
 - Common WG with SG-CG for Smart Charging

Smart Cities (new)

 Coordination Group "Smart and Sustainable Cities and Communities" (SSCC-CG) CEN, CENELEC

\Rightarrow There are liaisons between the SG-CG and the other CG's.



Mandate M/490 – SG-CG New process for standardization





Conceptual Model



source: SG-CG based on NIST

CEN-CENELEC-ETSI Smart Grid Co-ordination Group

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New Conceptual Model – integrating Market Model and Flexibility Concept









SGAM Layers





Information / Communication Layer





Report "First Set of Standards"





SG-CG key messages for discussion

- System Approach for standardization developed
- Set of standards as selection guide provided
 - Not only a list of standards -> **guidance** by means of SGAM and system breakdown
 - Not only CEN, CENELEC or ETSI standards considered
 - Ranking of standards: EN, IEC/ISO/ITU, consortia specifications e.g. IEEE, IETF, W3C
 - Set of standards contains approx 70% 80% ICT standards
 - SG-CG represents not only Technical Committees but all relevant European associations (stakeholders of various sectors) in this field: ENTSO-E, Eurelectric, Digitaleurope, T&D Europe, ... and others
- Consensus and cooperation between ETSI and CEN/CENELEC

in the SG-CG can be seen as best-practice example.

Worldwide influence of the SG-CG

With the M/490 mandate and the work of SG-CG, Europe caught up the already existing discussions on international and national level, and took partly the leadership in the worldwide development of Smart Grid standardization (SGAM, set of standards approach, use cases, ... -> e.g. mapping tool of IEC).

 \Rightarrow **Rolling plan acknowledges** the work done and under preparation by the SG-CG.

Rolling Plan for ICT Standardisation, 05/12/2013, page 62 (6.2) Proposed other activities around standardisation No other activities required.

- \Rightarrow We already have today a lot of smart grids standardization activities
 - -> Crystallization points
 - SG-CG on European level is the crystallization point on European level and
 - IEC on international level (in agreement with ISO and ITU)

⇒ Structured system approach of SG-CG might be interesting also for other rolling plan activities.



Thank you for your attention