

**Smart Grid Standards  
Adoption  
Utility Industry Perspective**

AMI/HAN Group

Open Discussion – Part 1

March 3<sup>rd</sup> 2009

Moderator: Erfan Ibrahim - EPRI

# The basic challenges with accelerating Smart Grid standards adoption are:

- a) The number of stakeholders, range of considerations and applicable standards are very large and complex which **requires a formal governance structure at a national level involving both government and industry, with associated formal processes to prioritize and oversee the highest value tasks.**
- b) The smart grid implementation has already started, and will be implemented as an “evolution” of successive projects over a decade or more. **Standards adoption must consider the current state of deployment, development in progress and vendor product development lifecycles.**
- c) Interoperability is generally being discussed too broadly and should be considered in two basic ways, with a **focus placed on prioritization and acceleration of the adoption of “inter-system” standards.**

# Proposal to accelerate Smart Grid standards adoption

- NIST should immediately establish a more formal governance structure and related processes to prioritize Smart Grid standards selection and ensure an open unbiased process including key stakeholders.
- In 2009, Smart Grid standards should be selected for the following areas that can leverage existing standards to create significant value:
  - Common Information Model standards
  - Security standard applicable across inter-system interfaces
  - Inter-system boundary interface standards
  - Interoperable communications standards based on Internet or other open protocols and standards as applicable

# Proposal to accelerate Smart Grid standards adoption (Contd.)

- The Smart Grid standards selection process should follow four principles, Openness, Separation of Duties, Generational Compliance, and Loose Coupling for the purpose of creating a sustainable standards policy.
- Smart Grid certification guidelines for interoperability should be established. The guidelines should include mechanisms for interoperability enforcement and where appropriate leverage commercial certification activities.

## Position Statement

There is no technical reason to attempt to standardize all aspects of the Smart Grid today, if engineered and designed correctly. Nor is it likely possible given the lack of clear definition of all the elements and uses of the smart grid and complexity given the number of systems involved.

# Assumptions

Smart Grid systems architected appropriately should be able to accept updated and new standards as they progress assuming the following standards evolution principles are recognized:

- Interoperability must be adopted as a design goal, regardless of the current state of standards
- Interoperability through standards must be viewed as a continuum
- Successive product generations must incorporate standards to realize interoperability value
- Smart Grid technology roadmaps must consider each product's role in the overall system and select standards compliant commercial products accordingly
- Standards compliance testing to ensure common interpretation of standards is required