

## Smart Grid Task Force Scope

### Purpose and Deliverables

The purpose of the Task Force is to provide a high-level review of the reliability impacts of integrating Smart Grid<sup>1</sup> technology on the bulk power system. It will consider system planning, design, and operations with respect to the bulk power system. The Task Force will prepare a report that reviews Smart Grid characteristics, identifies reliability concerns including cyber-security vulnerability, and provides recommendations to NERC and the industry. The report will:

1. Identify and explain any issues and/or concerns of the Smart Grid with respect to bulk power system reliability, including a definition of Smart Grid in the context of bulk power system reliability.
2. Assess Smart Grid reliability characteristics, including those expected to be significant in the near-term and their potential impacts on bulk power system reliability. In particular, identify aspects that could become material to the reliability of the bulk power system,
3. Determine the cyber-security and critical infrastructure protection implications of Smart Grid technologies and the potential impacts on bulk power system reliability,
4. Identify how the integration of Smart Grid technologies affects bulk power system planning, design and operational processes and the tools that may be needed to maintain bulk power system reliability,
5. Determine which existing NERC Reliability Standards<sup>2</sup> may apply to bulk power system Smart Grid elements, and provide recommendations for areas where technical foundations for standards development work may be needed, and,
6. Present conclusions, recommendations, and a work plan for completing any recommended actions.

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<sup>1</sup> “Smart Grid” is a term that broadly refers to electric systems and devices that integrate advanced sensing and communications with real-time monitoring to enable the two-way flow of energy and new forms of supply, delivery, and consumption. The Energy Independence and Security Act of 2007 outlined several “Smart Grid Functions” in Section 1306(d) and for the terms of this scope, Section 1306(d) will serve as a baseline definition.

<sup>2</sup> NERC’s Facility Connection Requirements (FAC), Critical Infrastructure Protection (CIP), and Communications (COM) Reliability Standards may be applicable.

### **Approach and Milestones**

The Task Force will function under the Planning Committee and establish liaisons with the Operating Committee and the Critical Infrastructure Protection Committee. The following schedule is envisioned:

- Provide updates to the Planning, Operating and Critical Infrastructure Protection Committees at their September 2009 meetings,
- Provide a preliminary draft report seeking guidance from the PC/OC/CIPC at the December 2009 meetings,
- Submit a draft report for consideration at the PC/OC/CIPC March 2010 meetings
- Receive final Planning Committee approval of the report at the June 2010 PC meeting,
- Begin to execute any proposed work plan per timeline established in the report.

### **Background**

The integration of Smart Grid and associated technologies into many levels of the electric system may have bulk power system reliability considerations. While wise Smart Grid integration may present significant opportunities to improve monitoring, security, and power flow, a failure to adequately address the reliability considerations in the planning, design, and operation of the bulk power system could present reliability risks and challenges. While many of the technologies currently associated with Smart Grid have been available for several years, others are yet unproven; and a rapid integration of all these devices with their associated control and data systems will present significant change in the electric industry that may potentially impact bulk power system reliability. Further, as interoperability has been proposed as the foundation for Smart Grid functions, cyber-security reliability considerations should be integrated to ensure bulk power system reliability is maintained.

Therefore, this NERC task force will review the implications of Smart Grid integration on power system planning, design, security, and operations as well as review NERC's Reliability Standards to identify any enhancements and gaps.

### **Membership**

NERC will seek task force membership from industry, security, and vendor subject matter experts, with final selection subject to the approval of the chair of the Planning Committee. Members must be willing to commit their time to participate in the task force discussions and contribute to writing the final report.

Each member may designate one alternate to ensure availability. Leadership positions (Chair and, if required, Vice Chair) will be approved by the chair of the Planning Committee.

Initially, the Task Force will be organized as outlined below:

- Leadership Team
  - Chair
  - Vice Chair (if required)
  - Team leaders
    - Characteristics
    - Planning
    - Operations
- Liaison from Demand Response Data Task Force (DRDTF)
- Members
- Observers
- NERC Staff

### **Governance**

The task force reports to the Planning Committee and its final work products will be subject to PC review and approval.

### **Meeting**

Meeting and conference calls will be scheduled as needed.