Objective: Interconnection procedures and standards should be enhanced to address voltage and frequency ride-through, reactive and real power control, frequency and inertial response and must be applied in a consistent manner to all generation technologies.

Abstract: Interconnection procedures and standards should recognize the unique characteristics of various generation technologies but focus on the overall bulk power system performance rather than the performance of an individual generator. A uniform set of interconnection procedures and standards, phased in over a reasonable timeframe will provide clarity to equipment vendors and generation developers for product design requirements and ensure efficient and economic manufacturing and installation/interconnection of new generation resources. The NERC Planning Committee should compile all existing interconnection requirements that Transmission Owners have under FAC-001 and evaluate them for uniformity. If they are inadequate, action should be initiated to remedy the situation (e.g. a Standard Authorization Request).

Deliverables: Review of NERC’s Facilities Design, Connections and Maintenance, (FAC) Standard FAC-001-0 to ensure that the following are addressed:

- Establish appropriate interconnection procedures and standards
- Ensure adequate communications considering COM-002-2 and registry Criteria

Milestones (per IVGTF Work Plan):

- Industry survey of current interconnection standards by PC’s  December 2009
- Draft recommendations to the PC by PC’s  June 2010
- Develop SAR with Standards Committee if required.

Task 1.3 Team:

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**Detailed Work Plan**

1. Conduct team conference calls to review work scope and refine work plans

2. Develop a list of existing standards relating to interconnection of generating plants (including wind and solar facilities) - preliminary list below from July 27 meeting minutes:
   a. NERC FAC-001-0
   b. NERC COM-002-2
   c. NERC PRC-024 Draft
   d. NERC PRC-006/SPP
   e. NERC MOD-026 Draft
   f. NERC MOD-027 Draft
   g. NERC Compliance Registry Criteria Section 500 and Appendix 5
   h. NERC Compliance Registry Criteria Statement
   i. IEC 61400-25
   j. IEC 61400-01
   k. IEC 34-3
   l. ANSI/IEEE C50.13
   m. FERC Order 661-A
   n. FERC Order 2003
   o. IEEE 1547
   p. Others TBD (Matt Pawlowski and Bob Nelson offered to assist.)
   Also include international grid codes?

3. Create a shared repository of all standards documents that is accessible to all members of the task team - perhaps a web page set up by NERC

4. Review all existing standards to find items that would affect interconnection requirements of variable generators (primarily wind and solar)

5. Review state-of-the-art industry practices, experience and trends in wind/solar power plant integration

6. Compile “industry survey” table or report summarizing existing standards, practices, and evolving industry trends *(Completed by December 2009)*

7. Narrow the list to only those items that directly or indirectly affect power system reliability and are relevant to this task

8. Develop team consensus recommendation for NERC standards and practices for integration of wind and solar power plants
   a. Include recommendations from Task 1.7, Reconciliation of IEEE Std. 1547
   b. Include recommendations from Task 2.2, Balancing Area Communications

9. Prepare draft task report with specific recommendations

10. Review and revise as required to produce a final task report *(Completed by June 2010)*

11. Develop SAR with Standards Committee if required.