

Scope & Guiding Principles

April 14, 2016

- Charter
 - “...establish minimum design standards to assure a minimum level of robustness is provided such that the newly competitively-solicited facility ... would not introduce a weak point in the system in terms of performance.”
- Scope
 - Overhead Transmission
 - 69kV – 765kV
 - Initial primary focus
 - Underground Transmission
 - 69kV – 500kV
 - Start time TBD once substantial progress has been made on the overhead transmission minimum design standards. Additional U/G transmission SMEs may have to be recruited to supplement the current roster.
 - Direct Current Transmission
 - Voltage range TBD
 - Start time TBD once substantial progress has been made on the underground transmission minimum design standards. Additional DC transmission SMEs may have to be recruited to supplement the current roster.
 - Gas Insulated Substations (GIS)
 - This work will be handled by the Substation sub-task force
 - Line rating methodology standards are out of scope.

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- Guiding Principles
 - Our standards will have basis in sound engineering judgment, and represent the latest industry best practices.
 - We will strive to arrive at consensus standards.
 - We will make decisions in support of the spirit of FERC Order 1000.
 - Our decisions will be made to not restrict innovation.
 - We will focus on establishing traditional design standards. These include but are not limited to loading, clearance, environmental, and insulation criteria; and access and right-of-way requirements.
 - Our design standards will in general be performance based, prescriptive as needed, but will not result in a detailed design processes.
 - For example:
 - “The magnitude of all weather-related loads, except for NESC or other legislated loads shall be determined using a 100 year mean return period and the basic wind speed and ice with concurrent wind maps defined in the ASCE Manual of Practice (MOP) 74. With the exception of the NESC or other legislated loads that specify otherwise, overload factors shall be a minimum of 1.0.” – From the *SPP Minimum Transmission Design Standards for Competitive Upgrades*.
 - The first sentence identifies the performance. The second adds some prescriptiveness, but it is appropriate. It does not state the procedure to calculate the actual loads, which would be too detailed.
 - We will defer to established industry accepted codes, specifications, standards, and guidelines (e.g., NESC, ASCE 48, ASCE 10, ASCE 48, etc.) for specifications and the design of materials and components.

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- We recognize that material, construction, and operating standards can “introduce a weak point in the system in terms of performance,” however to the extent practicable, we will limit inclusion of these so as not to exclude industry accepted materials, construction means and methods, and operating practices; and good utility practice in general.

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