**B**lack **S**tart **W**orking **G**roup

**Report to ROS**

**APRIL 11, 2013 Meeting**

**Primary Topic:** New NERC standard affects Black Start in ERCOT.

NERC EOP-005-2 becomes affective in the ERCOT region in July of 2013. BSWG is reviewing EOP-005, Requirement 6*,* and how it affects Transmission Operator’s and ERCOT.

EOP-005-2 R6 states:

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| R6. Each Transmission Operator shall verify through analysis of actual events, steady state and dynamic simulations, or testing that its restoration plan accomplishes its intended function. This shall be completed every five years at a minimum. Such analysis, simulations or testing shall verify: *[Time Horizon = Long-term Planning]*  R6.1. The capability of Blackstart Resources to meet the Real and Reactive Power requirements of the Cranking Paths and the dynamic capability to supply initial Loads.  R6.2. The location and magnitude of Loads required to control voltages and frequency within acceptable operating limits.  R6.3. The capability of generating resources required to control voltages and frequency within acceptable operating limits. |

**Topic 1 Resolution:**

BSWG adopted a definition of “intended function” as seen in NERC EOP-005-2, R6. This definition was developed to include all the intended functions of the TOP’s in the ERCOT region as related to Black Start.

The intent of this definition to clarify what the “intended function” is for the authors of Black Start Plans in the ERCOT region as well as preparing NERC audit evidence.

The “intended function” definition will appear in the Black Start template developed by ERCOT for Black Start Plan development.  This will be an addition to the ERCOT Operating Guide.

This definition will also be added to Op Guide Section 4.6 – Black Start Services.

The definition adopted by the BSWG is:

The intended function for each ERCOT Transmission Operator restoration plan is to, as applicable

* 1. Prepare transmission to allow Black Start Resource(s) to come online;
  2. Energize the Cranking Path(s), as available, to the next start Resource(s);
  3. Provide offsite power to additional generation and/or provide stabilizing load to control voltages and frequency within acceptable operating limits;
  4. Energize the Synchronization Corridor(s) to the synchronization points between Islands, as available;
  5. Coordinate with ERCOT on synchronizing Islands at the synchronization points; and
  6. Continue to follow ERCOT Reliability Coordinator directives as the restoration continues.

BSWG is requesting a vote of the definition of “intended function” from ROS.

BSWG continues to investigate the use of the ERCOT Black Start Simulator to provide evidence for NERC EOP-005-2, R6. Use of the ERCOT Black Start Simulator for gathering NERC evidence for individual TOP’s has challenges.

Challenges include:

* All entities (TOPs and QSEs) must participate to conduct a valid simulation.
* Determining how to capture evidence for individual TOPs from the ERCOT Black Start Simulator that can be used in a NERC audit.
* Maintaining high quality System Operator training while capturing practical NERC evidence.
* Costs to ERCOT and entities (TOPs and QSEs) of additional time on the ERCOT Black Start Simulator to gather evidence for this NERC requirement.

The responsibilities for EOP-005-2 were not resolved at the TOP CFR meeting. This item was been sent to TRE for an option on steady state versus dynamic simulation. BSWG will continue to investigate the use of the ERCOT Black Start Simulator to meet EOP-005-2, R6.

**Pending Topics:**

* Coordination with Gas Companies to provide station service to gas pumping facilities in the event of a Blackout. This is necessary to restore fuel to many power plants and other critical facilities.
* Outage coordination with ERCOT of Black Start critical assets. ERCOT is developing a method to better track outages of equipment that are critical to system restoration.

**Next BSWG Meeting: May 14, 2013**