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Maureen E. Long
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Princeton Forrestal Village
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Ameren

RE: Request for Interpretation of NERC Standards TPL-002-0 and TPL-003-0

Dear Ms. Long:

In accordance with the NERC Reliability Standards Development Procedure, I am requesting a formal interpretation of two sub-requirements which are common to NERC standards TPL-002-0 and TPL-003-0. These sub-requirements are included in R1.3 of both standards and pertain to the simulation testing to assess system performance for Category B and Category C contingencies as defined in Table 1 of the standards. The specific sub-requirements for which clarification is requested are:

> R1.3.2. Cover critical system conditions and study years as deemed appropriate by the responsible entity.
>
> R1.3.12. Include the planned (including maintenance) outage of any bulk electric equipment (including protection systems or their components) at those demand levels for which planned (including maintenance) outages are performed.

R1.3.2
Questions requiring interpretation:

How should the phrase "critical system conditions" be interpreted? Does compliance with R1.3.2 require multiple contingent generation unit outages as part of possible generation dispatch scenarios describing critical system conditions for which the system shall be operated in accordance with the contingency definitions included in Table 1 of the TPL standards?

The following are two possible but conflicting interpretations.

1. The phrase "critical system conditions" defines a set of known or planned system conditions pertaining to load, generation dispatch, and firm transmission service reservations such as might describe summer peak, winter peak or some other assumed system conditions. Alternate generation dispatch scenarios may be evaluated. However, it is not the intent of the requirements that these alternate dispatch scenarios must include multiple contingent generation unit outages as might typically be considered to satisfy a resource adequacy planning criterion. Further, it is **not** the intent of the TPL standards that compliance requires the system to be planned to operate with multiple contingent generation unit outages as might be defined by a resource adequacy criterion **and** meet the conditions associated with contingent outages in Table 1.

2. The phrase "critical system condition" includes a variety of possible dispatch patterns including probabilistic based dispatch representative of generation deficiency scenarios with multiple contingent outages, as defined by the Transmission Planner or Planning Authority. Compliance with the TPL standard requires the application of the transmission contingency conditions in Table 1 **in addition** to these multiple contingent generation outages.

The material impacts of misinterpretation of this sub-requirement are:

- Interpretation of this sub-requirement is necessary to establish appropriate cost allocation of proposed system expansion in the Midwest ISO footprint, both within the Midwest ISO and between the Midwest ISO and PJM member companies.
- Interpretation 2 will lead to inconsistent application/interpretation of the contingency definitions included in Table 1, since the number of unit outages can vary based on the size and generation mix of each Transmission Planner's area of responsibility. As such it will be difficult to determine which contingent generation outages are part of the assumptions related to critical conditions and which are part of the contingency definitions in Table 1.
- Interpretation 2 will make compliance assessment more difficult as it relies on the judgment of the Transmission Planner or Transmission Coordinator to define which and how many contingent generator unit outages to include in the base case.
- Interpretation 2 can create a de facto transfer capability requirement.
- Interpretation 2 could dramatically increase the hurdles for the connection of new generation to system.

R.1.3.12
Questions requiring interpretation:

How should the inclusion of planned outages be interpreted with respect to the contingency definitions specified in Table 1 for Categories B and C? Does compliance with R1.3.12 require that the system be planned to operate during those conditions associated with planned outages consistent with the performance requirements described in Table 1 **plus** any unidentified planned outage?

The following are two possible but conflicting interpretations of this sub-requirement:

1. Any bulk electric equipment for which there is a known outage planned for a given point in time should be modeled as out of service in any base case model associated with the planned outage period. Such outages should not be restored prior to assessment of the applicable outage category specified by the standard. The ability to plan outages would be **accommodated** in the planning process by increasing the contingency definitions in Category B and/or Category C by one event in those studies of system conditions for which planned outages are typically performed. Standards compliance with Category B and Category C requirements would accommodate the potential planned outages through switching or redispatch so as to mitigate any limit or ratings violations.

2. In addition to known planned outages, the system shall be planned to include potential planned outages such that the system can be operated under those conditions for which planned outages are typically performed. As such, the contingency definitions associated with Category B and C events listed in Table 1 should be increased by one additional event in studies of system conditions for which planned outages are typically performed. Compliance with Category B and C events, including the addition of any potential planned outage, would be unchanged from the requirements in Table 1. Compliance with the requirement does not permit switching, redispatch or other mitigation measures to address any limit or ratings violations created by a potential planned outage for Category B events.

It should be noted that the pre Version 0 standard I.A.S2 stated that: "*...systems must be capable of meeting Category B requirements while **accommodating** the planned ... outage of any bulk electric equipment... at those demand levels for which planned... outages are performed." (emphasis added)* The I.A.S2 language regarding the ***accommodation*** of planned outages was not explicitly

captured in R.1.3.12. As such there is confusion as to how to address the issue of planned outages in the application of the TPL standards.

The material impacts of misinterpretation of this sub-requirement are:

- Interpretation of this sub-requirement is necessary to establish appropriate cost allocation of proposed system expansion in the Midwest ISO footprint, both within the Midwest ISO and between the Midwest ISO and PJM member companies.
- Interpretation 2 implies that the system should be planned such that any maintenance outage can be scheduled at demand levels for which planned outages are typically performed without the need to consider mitigation plans, alternate generation dispatch, or other outage coordination efforts which may facilitate maintenance outages.
- Interpretation 2 will result in confusion regarding appropriate contingency levels and mitigation options to be included under those conditions during which planned outages are typically planned.
- Interpretation 2 would increase the hurdles for the connection of new generation to the system by virtue of an increase in the contingency levels used in connection studies of off-peak conditions.

Thank your for your prompt consideration of these standards interpretation questions.

Sincerely,

Ed Pfeiffer
Manager, Electric Planning