



NERC and FERC Attempt to Eliminate Reliability Gap in Tie Lines

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The primary purpose of the North American Electric Reliability Corporation (NERC) is—with oversight by the Federal Energy Regulatory Commission (FERC)—to promulgate and enforce standards intended to ensure the reliability of the bulk electric system (BES).

As such, NERC requires owners and operators of BES facilities to register in various categories, such as Generator Owner (GO), Generator Operator (GOP), Transmission Owner (TO), and Transmission Operator (TOP), as applicable. Once registered, the entity must comply with each of the reliability standards applicable to each category in which the entity is registered. For example, a generator would be registered as a GO and GOP because of its ownership and/or operation of generation facilities and would be required to comply with each standard applicable to a GO and GOP. However, virtually all generators also own and/or operate radial transmission facilities—called “generator interconnection facilities” or “tie-lines”—which have the sole function of

transmitting the electricity from their generating facilities to the transmission grid.

Generators traditionally had viewed their tie-lines as part of their generation facilities. However, in 2007 NERC began to register some generators with tie-lines over 20 miles in length as TO/TOPs solely because of their ownership and operation of those tie-lines. According to NERC and FERC, such registrations were necessary because there would be a reliability gap if the generator did not apply certain TO/TOP reliability standards to its tie-line.¹

Only a limited number of TO/TOP standards were necessary to fill the gap, but NERC registered such generators as TO/TOPs, subjecting them to the full complement of the TO/TOP standards. Subsequently, in each case, NERC, the regional entity, and the registered generator engaged in nonpublic and often protracted negotiation about which TO/TOP reliability standards should be applicable. This practice resulted in inconsistent registration of generators as TO/TOPs and inconsistent application of the TO/TOP standards to the registered generators. Moreover, the practice created uncertainty for all generators because the reasons NERC and FERC gave for needing to register certain generators as TO/TOPs were so broadly defined as to potentially subject all generators that owned or operated tie-lines to TO/TOP registration.

FERC has now issued Order 785²—the “GO/TO Order”—which is intended to fill the perceived reliability gap and obviate the need for similar TO/TOP registrations, at least for most generators. However, because NERC retains the discretion to

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decide that a particular generator should be registered as a TO/TOP solely due to its tie-line, and the circumstances in which this could occur are vaguely stated,³ a generator, particularly one with a long tie-line, will continue to face uncertainty as to whether it will be registered as a TO/TOP, and, if so, which TO/TOP standards will be applicable. There is much to like about the GO/TO Order—and it took six years and tremendous effort by industry and NERC to get to this point—but the remaining uncertainty is bothersome.

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Notably, the GO/TO Order does not have the effect of deregistering any generator that is currently registered as a TO/TOP due solely to its generator tie-line. However, the order does not alter an entity's right to seek a change in its registration status under NERC's Rules of Procedure, thus leaving open the ability of a generator currently registered as a TO/TOP to request that NERC terminate that registration.

NEW GENERATOR OWNER REQUIREMENTS

Although the GO/TO Order adds to a GO's obligations for reliability standards compliance, the impact should affect only a small number of GOs. There are two new standards that are narrowly applied to a small subset of GOs, and two standards that currently apply to generator equipment are extended to include generator interconnection facilities, but it is likely that GOs already apply those standards to their tie-lines.

Specifically, the GO/TO Order approved the following.

- *FAC-001-1*: Although likely to be an uncommon event, as soon as a GO enters into an agreement to evaluate the reliability impact of an interconnection to its tie-line, regardless of whether the GO does so voluntarily or is required to do so by regulatory mandate,⁴ the GO must document, maintain, and publish facility connection requirements that comply with NERC, regional, and individual criteria for generation facilities, transmission facilities, and end-user facilities.

- *FAC-003-3*: A GO with an overhead transmission line that (1) extends greater than one mile beyond or does not have a clear line of sight from the switchyard to the point of interconnection and (2) is operated at 200 kilovolts or higher, or less than 200 kilovolts if identified as an element of an Interconnection Reliability Operating Limit (IROL)⁵ under FAC-014 must implement a formal vegetation management program to minimize vegetation encroachments on or adjacent to the rights-of-way for its tie-line, thereby preventing vegetation-related outages.
- *PRC-004-2.1a* and *PRC-005-1.1b*: The existing PRC-004 and PRC-005 standards govern protection system misoperations, maintenance, and testing and are applicable to GOs. The revisions clarify that they are applicable to generator interconnection facilities as well as generation facilities.⁶

MOST GO/GOPs WILL NOT BE REGISTERED AS TO/TOPs

FERC found that these changes would fill the reliability gap presented by tie-lines, thus obviating the need to register most generators as TO/TOPs.⁷ And with these changes implemented, NERC has stated that it will not pursue registration of most generators as TO/TOPs due solely to their ownership or operation of tie-lines.⁸ However, both FERC and NERC have acknowledged that the registration of a generator as a TO/TOP might be necessary if additional reliability gaps are identified in individual assessments.⁹

WHEN A GO/GOP WILL BE REGISTERED AS A TO/TOP

According to NERC, the following events could trigger an individual assessment: (1) NERC gaining new information, for example, from its analysis of an event or occurrence on the transmission system; (2) NERC gaining additional information specific to an individual generator tie-line, which might lead to additional registration; and (3) NERC assessing whether a facility fits within the BES definition.¹⁰ Because a generator "should only be obligated to comply with those Reliability Standards and requirements necessary to close the identified reliability gap,"¹¹ FERC directed NERC to evaluate which TO/TOP standards

should apply to the particular entity based on its specific circumstances.¹²

CONTINUING CONCERN

Because NERC continues to have the discretion to register generators as TO/TOPs in relatively vague circumstances, uncertainty remains. Wind generators, for example, are particularly susceptible to TO/TOP registration because they are often sited at substantial distances from load, similar to the generators registered as TO/TOP in *Harquahala* and *Cedar Creek and Milford*. Although there may not be an appetite for further change at this point, NERC should be mindful of the problems generators face resulting from this continued uncertainty.

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The *Harquahala* and *Cedar Creek and Milford* cases provide some examples of the types of generator interconnection facilities that might still be subject to TO/TOP registration. However, other than tie-line length, not much else distinguishes the tie-lines at issue in those cases from the tie-lines of most generators. Even though FERC was unwilling in the GO/TO Order to make any blanket determinations about the types of generator interconnection facilities that would or would not trigger the individual assessment and potential registration,¹³ NERC could nevertheless provide some additional guidance on the specific types of tie-line that might prompt the individual assessment and potentially TO/TOP registration.

Finally, if past practice is any indication, reaching resolution on which TO/TOP standards should apply to a generator tie-line is likely to require extensive resources (not only of the registered entity, but also NERC, FERC, and the regional entity). The process could also result in inconsistent application of the TO/TOP standards among similarly situated generators. Mitigating some of the lingering uncertainty would require that generators that potentially may be registered as TO/TOP have some idea of which TO/TOP standards might be applicable to them.

Understandably, NERC does not want to give up the ability to make any particular TO/TOP stan-

dard applicable to a generator where it is needed to fill an identifiable reliability gap. However, NERC could mitigate this uncertainty by, for example, publishing a list of the TO/TOP standards it views as the starting point for any negotiation with a generator, along with the rationale regarding why application of such standards would be needed for reliability and to fill the identified gap. If a specific situation warrants it, NERC would not lose the ability to add additional standards to close a reliability gap.

Reaching resolution on which TO/TOP standards should apply to a generator tie-line is likely to require extensive resources.

Similarly, the generator would be permitted to argue that application of a specific TO/TOP is not needed to fill any identified reliability gap. Such guidance would allow the industry to get a better sense of which TO/TOP standards could be applicable in such situations, thus reducing uncertainty, and could also encourage consistency in the application of TO/TOP standards. 

NOTES

1. *New Harquahala Generating Co., LLC*, 123 FERC ¶ 61,173 (2008) (*Harquahala*); *Cedar Creek Wind Energy, LLC and Milford Wind Corridor Phase I, LLC*, 135 FERC ¶ 61,241, *reh'g*, 137 FERC ¶ 61,141 (2011), order on compliance filing, 139 FERC ¶ 61,214 (2012) (*Cedar Creek and Milford*).
2. *Generator Requirements at the Transmission Interface*, 78 Fed. Reg. 58449 (Sep. 24, 2013) (final rule).
3. See GO/TO Order at 42, 50.
4. See GO/TO Order at 23.
5. An IROL is a system operating limit that, if violated, could lead to instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the BES. See NERC. (2013, October 30). *Glossary of terms used in NERC Reliability Standards*. Retrieved from http://www.nerc.com/files/glossary_of_terms.pdf.
6. Although undefined by NERC, FERC found that the term “generator interconnection facilities” refers to “generator interconnection tie-lines and their associated facilities extending from the secondary (high) side of a generator owner’s step-up transformer(s) to the point of interconnection with the host transmission owner.” *Ibid.*, at 37.
7. *Ibid.*, at 19, 49, 50.
8. *Ibid.*
9. *Ibid.*, at 49, 52–53.
10. *Ibid.*, at 42, 50.
11. *Ibid.*, at 53.
12. *Ibid.*
13. *Ibid.*, at 51.