

I. Background

A. Regulatory Background

2. In July 2006, the Commission issued an order certifying NERC as ERO pursuant to section 215 of the Federal Power Act (FPA).² Subsequently, in April 2007, the Commission approved delegation agreements between NERC and eight Regional Entities, including a delegation agreement between NERC and WECC.³ Pursuant to that delegation agreement, NERC delegated to WECC the authority to enforce mandatory Reliability Standards within the Western Interconnection.

3. In Order No. 693, the Commission approved 83 Reliability Standards, which became effective on June 18, 2007.⁴ Further, in Order No. 693, the Commission approved NERC's compliance registry process, including NERC's Statement of Compliance Registry Criteria (Registry Criteria), which describes how NERC and the Regional Entities will identify entities that should be registered for compliance with mandatory Reliability Standards.⁵ NERC's Rules of Procedure also provide that an entity registered by a Regional Entity may seek NERC review of the registration decision and, ultimately, may appeal the registration decision to the Commission.⁶

² *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062, *order on reh'g and compliance*, 117 FERC ¶ 61,126 (2006), *aff'd sub nom., Alcoa Inc. v. FERC*, 564 F.3d 1342 (D.C. Cir. 2009); 16 U.S.C. § 824o (2006).

³ *North American Electric Reliability Corp.*, 119 FERC ¶ 61,060, *order on reh'g*, 120 FERC ¶ 61,260 (2007).

⁴ *Mandatory Reliability Standards for the Bulk Power System*, Order No. 693, 72 Fed. Reg. 16,416 (April 4, 2007), FERC Stats. & Regs. ¶ 31,242 (2007), *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

⁵ Order No. 693 at P 92-95. The Commission has approved subsequent amendments to the Registry Criteria. *See, e.g., North American Electric Reliability Corp.*, 122 FERC ¶ 61,101 (2008).

⁶ Rules of Procedure of the North American Electric Reliability Corporation, Rule 501.1.3.4.

B. NERC Registry Criteria

4. NERC currently defines the bulk-electric system as:

As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.⁷

5. Section I of NERC's Registry Criteria provides that an entity that uses, owns or operates elements of the bulk electric system pursuant to NERC's definition above are candidates for registration. Section II of the Registry Criteria categorizes registration candidates under various functional entity types including transmission owner and transmission operator. Section II defines transmission owner as, "the entity that owns and maintains transmission facilities," and transmission operator, "the entity responsible for the reliability of its local transmission system and operates or directs the operations of the transmission facilities."

6. Section III of NERC's Registry Criteria identifies certain thresholds for registering entities that satisfy the criteria of sections I and II. Section III(d) provides that a transmission owner or transmission operator should be registered if it meets any of the following criteria:

1. An entity that owns/operates an integrated transmission element associated with the bulk power system 100 kV and above, or lower voltage as defined by the Regional Entity necessary to provide for the reliable operation of the interconnected transmission grid; or
2. An entity that owns/operates a transmission element below 100 kV associated with a facility that is included on a critical facilities list that is defined by the Regional Entity.⁸

⁷ NERC Registry Criteria, section I. In Order No. 743, the Commission directed NERC to develop revisions to the bulk electric system definition. *See Revision to Electric Reliability Organization Definition of Bulk Electric System*, Order No. 743, 75 Fed. Reg. 72,910 (Nov. 26, 2010), 133 FERC ¶ 61,150 (2010); *order on reh'g*, Order No. 743-A, 134 FERC ¶ 61,210 (2011).

⁸ NERC Registry Criteria, section III(d).

7. NERC's Registry Criteria also provide that the specified criteria "are general criteria only." A Regional Entity thus may register an entity that does not meet the specified criteria if the Regional Entity "believes and can reasonably demonstrate that the organization is a bulk power system owner, or operates, or uses bulk power system assets, and is material to the reliability of the bulk power system."⁹ Further, NERC's Registry Criteria provide that a class of entities, each of which would be individually excluded, may nevertheless be registered based on their aggregate impact on Bulk-Power System reliability.

II. Appeals of NERC Registry Decisions

A. Cedar Creek – Docket No. RC11-1-000

8. Cedar Creek states that it owns and operates a 300 MW wind power facility (Cedar Creek Facility) in Weld County, Colorado that commenced operations in 2007. Cedar Creek owns 72 miles of a 76-mile, 230 kV radial generation tie-line extending from the Cedar Creek Facility to an interconnection point with Public Service Company of Colorado (PSCo) approximately 4 miles from PSCo's Keenesburg Switching Station. PSCo owns and maintains the remaining 4 miles of the tie-line.

9. According to Cedar Creek, PSCo has full control of the entire 76-mile line, line breaker, line disconnects and ground disconnects through the Keenesburg Switching Station. Cedar Creek states that PSCo is a registered transmission operator and owns and controls the four miles of generator tie-line that extends from the interconnection point with Cedar Creek to the Bulk-Power System at the Keenesburg Switching Station. Cedar Creek states it has no operational control over any of those facilities. Cedar Creek also states that there are no controllable devices on the portion of the generator tie-line owned by Cedar Creek, thus it has no operational control over any portion of the tie-line. Cedar Creek has control of the ten 34.5 kV generator breakers and three 230 kV generator breakers located at the Cedar Creek Facility.

10. WECC registered Cedar Creek as a generator owner and operator, and transmission owner and operator. Cedar Creek only seeks Commission review of Cedar Creek's registration as a transmission owner and operator.

⁹ NERC Registry Criteria, Notes to Criteria, note 1 (footnote excluded).

1. NERC's Cedar Creek Decision

11. In its October 6, 2010, decision (Cedar Creek Decision), NERC upheld WECC's registration of Cedar Creek as a transmission owner and operator. NERC explained that Cedar Creek meets the requirements of section III.d.1 of the Registry Criteria. It noted that Cedar Creek did not dispute that it meets the 100 kV and above threshold requirement because Cedar Creek owns 230 kV transmission facilities. Next, NERC concluded that Cedar Creek's tie-line is an "integrated transmission element" as described in the Registry Criteria because the line is the link between its generation facility and PSCo's Keenesburg Switching Station, "both of which are material to and part of the [Bulk-Power System]."¹⁰

12. NERC also supported its conclusion that Cedar Creek's registration was proper by stating that Cedar Creek's facilities have a material impact on the Bulk-Power System in part due to Cedar Creek's admission that if its generator tie-line were lost it could not execute sales of power or move that power onto PSCo's transmission system. NERC also noted WECC's argument that "improper maintenance and operation of the Cedar Creek 230 kV transmission line and associated transmission equipment could have an impact on reliability far beyond the loss of the generating facility."¹¹

13. NERC found unpersuasive Cedar Creek's reliance on Commission precedent to support Cedar Creek's assertion that its line is not "integrated" with the Bulk-Power System. Specifically, NERC dismisses Cedar Creek's reliance on the factors set forth by the Commission in the *Mansfield*¹² decision to determine whether a transmission line is integrated with the Bulk-Power System as support that its line is not considered to be an "integrated" component of the transmission grid. According to NERC, *Mansfield* predated NERC's mandatory Reliability Standards and is based on section 205 of the FPA not section 215. As further support for its determination, NERC stated that Cedar Creek does not meet the Registry Criteria exclusion for radial transmission lines serving only load with one transmission source. NERC asserts that, from a physical perspective, a single transmission line between a single substation and generator will result in the generator being "radially" connected. However, according to NERC, from a reliability perspective, the transmission line is integrated with other elements of

¹⁰ Cedar Creek Decision at 10.

¹¹ *Id.* at 10-11.

¹² *Mansfield Mun. Elec. Dep't and North Attleborough Elec. Dep't v. New England Power Co.*, 97 FERC ¶ 61,134 (2001) (Mansfield).

the Bulk-Power System because it is used to transmit power to the grid and to receive station power, requiring coordination of operation with those other elements.

14. NERC dismisses Cedar Creek's attempt to distinguish its facilities from the considerations discussed by the Commission in *New Harquahala*.¹³ NERC rejected Cedar Creek's argument that factors such as wind, generator size, the amount of generation and the connecting substation, distinguish it from New Harquahala's facilities and found that there are similarities between the facilities, including ownership of high voltage transmission lines and high voltage switching equipment. NERC also rejected Cedar Creek's reliance on the recommendations contained in the NERC Final Report from the Ad Hoc Group for Generator Requirements at the Transmission Interface¹⁴ as grounds for not registering Cedar Creek because neither NERC nor the Commission have issued any guidance or revised any rules or regulations to implement any of the recommendations.

15. NERC found that a gap in reliability would occur if Cedar Creek is not registered as a transmission owner and operator, and identified FAC-003-1 (Transmission Vegetation Management Program) as an example of a Reliability Standard that would not apply to Cedar Creek if it is not registered.¹⁵ NERC added that to "ensure that Cedar Creek is held accountable for the specific requirements and Reliability Standards applicable to [transmission owners and transmission operators], it is necessary that Cedar Creek be registered for the [transmission owner] and [transmission operator] functions."¹⁶ In response to

¹³ *New Harquahala Generating Company, LLC*, 123 FERC ¶ 61,173, order on clarification, 123 FERC ¶ 61,311 (2008) (New Harquahala) (finding that NERC adequately supported the registration of New Harquahala, which owns and operates a 1,092 MW generator and 26-mile tie line, as a transmission owner and operator based on NERC's authority to register entities that own or operate assets that are material to the reliability of the Bulk-Power System).

¹⁴ NERC Final Report from the Ad Hoc Group for Generator Requirements at the Transmission Interface, November 16, 2009 (GO/TO Report). The GO/TO Report, the Ad Hoc Group recommended modifications to NERC's Rules of Procedure, Registry Criteria, and other documents to reflect that a generation operator should not be registered as a transmission operator on the basis of the generator interconnection facility. The GO/TO Report also recommended that certain Reliability Standards should apply to generator tie-lines.

¹⁵ Cedar Creek Decision at 12.

¹⁶ *Id.*

Cedar Creek's claims that a number of transmission owner and transmission operator requirements are inapplicable, NERC found that there is nothing to prevent Cedar Creek from demonstrating to WECC and NERC that it should not be subject to certain of the transmission owner and operator requirements and Reliability Standards based on technical or physical limitations of the facilities.

2. Cedar Creek's Appeal to the Commission

16. On October 27, 2010, Cedar Creek filed its request for appeal of NERC's Cedar Creek Decision. Cedar Creek argues that NERC's finding that Cedar Creek is properly registered as a transmission owner and operator is inconsistent with the Registry Criteria. Cedar Creek believes it should be exempt from registration under the plain language of the Registry Criteria and that no showing can be made that such exemption should be over-ridden due to concerns about Bulk-Power System reliability. In support that its line is not integrated, Cedar Creek cites to the Commission's *Mansfield* order and to FPA section 205 precedent holding that generator lead lines consist of limited and discrete facilities that do not form an integrated transmission grid but merely connect two points without any electrical breaks between the two points.¹⁷ Cedar Creek argues that NERC's claim that its reliance on *Mansfield* is misplaced and inapplicable because it is based on FPA section 205 is unfounded. Cedar Creek also argues that it is nonsensical to claim that *Mansfield* is only applicable to part of the FPA and notes that NERC has not cited any precedent to support its claim that the precedent is not applicable to a section 215 determination of whether facilities are integrated.

17. While noting that the GO/TO Report has not been adopted by NERC or the Commission, Cedar Creek claims that the recommendations in the GO/TO Report support the opposite result of NERC's decision. According to Cedar Creek, the GO/TO Report supports the development of a plan to de-register generator owners and operators previously registered as transmission owners and operators because of a generation interconnection facility.

18. Cedar Creek contends that its registration as a transmission owner and operator is not necessary for the reliable operation of PSCo's transmission system. Cedar Creek argues that NERC's claim that Cedar Creek's line is integral to Bulk-Power System reliability is wrong. Cedar Creek states that PSCo purchases all of the energy from the Cedar Creek wind facility, and PSCo's operating procedures state that power flow and stability studies indicate that there are no reliability or stability issues associated with the loss of the Cedar Creek Facility or the 230 kV

¹⁷ E.g., *NorthWestern Corp.*, 127 FERC ¶ 61,266 (2009).

tie-line.¹⁸ Cedar Creek contends that PSCo's studies refute any claim that its line or associated equipment could have a far reaching impact on the Bulk-Power System. According to Cedar Creek, if its line were to fault, the only consequence would be that it could not execute power sales or move the power onto the transmission system. Cedar Creek contends that such a situation is no different than is experienced on any given day when the wind is not blowing and its generating facility is providing no energy. Cedar Creek states that these characteristics demonstrate that Cedar Creek's generation is not needed to ensure reliability, which distinguishes it from the Commission's decision in *New Harquahala*.

19. Cedar Creek argues that, even if the Commission were to conclude that Cedar Creek should be registered as a transmission owner, the Commission should reverse NERC's finding that Cedar Creek should be registered as a transmission operator. Cedar Creek supports this contention by noting that PSCo is a registered transmission operator and operates the four miles of line that extend from the interconnection point with Cedar Creek to the Keenesburg Switching Station. Cedar Creek also states that, because there are no controllable devices on the portion of the line it owns, Cedar Creek has no operational control over any portion of the line.

3. Interventions and Comments

20. Notice of Cedar Creek's filing was published in the *Federal Register*, 75 Fed. Reg. 68,780 (2010), with interventions and protests due on or before November 26, 2010. On November 16, 2010, American Wind Energy Association (AWEA), Edison Electric Institute (EEI), and Electric Power Supply Association (EPSA) filed a joint request for extension of time to file comments. On November 18, 2010, the Commission granted the extension of time up to and including December 7, 2010.

21. Timely interventions and comments were filed by: NERC, AWEA along with Wind on the Wires, Energy Alliance, The Wind Coalition, California Wind Energy Association, Mid-Atlantic Renewable Energy Coalition, Renewable Northwest Project (collectively, AWEA), BP Wind Energy North America Inc. (BP Wind), Calpine Corporation (Calpine), Dominion Resources Services, Inc. (Dominion), EEI, EPSA, E.ON Climate & Renewables North America LLC (E.ON), Horizon Wind Energy, LLC (Horizon), Independent Power Producers of

¹⁸ Cedar Creek Appeal at 14 and Attachment D, "Interconnection System Impact Study Report," May 2005.

New York, Inc. (IPPNY), Invenergy¹⁹ and Acciona Wind Energy USA LLC (collectively, Invenergy), Kelson Energy, Inc. (Kelson), KGen Power Management Inc. (KGen), Milford, NRG Energy (NRG), Sempra Generation (Sempra), Tenaska Energy, Inc. (Tenaska), Wisconsin Electric Power Company (Wisconsin Electric), Wisconsin Public Service Corporation and Upper Peninsula Power Company (WPSC/UPPCO).

22. Timely interventions were filed by: WECC, American Municipal Power, Inc. (American Municipal Power), Consumers Energy Company (Consumers), Old Dominion Electric Cooperative (ODEC), Holland Board of Public Works (Holland), National Rural Electric Cooperative Association (NRECA), PPL Companies,²⁰ PSEG Companies,²¹ TransCanada Power Marketing Ltd. and TransCanada Maine Wind Development Inc. (TransCanada), and SERC Reliability Corporation (SERC). American Public Power Association (APPA) and NextEra Energy Resources, LLC (NextEra) each filed a motion for leave to intervene out of time.

23. On December 7, 2010, Milford filed a letter requesting that WECC publicly release a Compliance Protocol document developed by NERC, WECC and New Harquahala. NERC responded to Milford's letter in a pleading submitted December 28, 2010. On January 14, 2011, Cedar Creek filed an answer to NERC's comments filed on December 7, 2010. On January 19, 2011, Milford filed a motion in reply to NERC's December 28, 2010 pleading.

24. In general, NERC filed comments in support of the Registry Decision. All other commenters, consisting primarily of generation owners and operators, oppose Cedar Creek's registration as a transmission owner and operator.

¹⁹ Invenergy consists of Invenergy Wind Development LLC, Invenergy Thermal Development LLC, and Clipper Windpower Development Company, Inc.

²⁰ The PPL Companies are PPL Electric Utilities Corporation, PPL EnergyPlus LLC, PPL Montana, LLC, PPL Brunner Island, LLC, PPL Holtwood, LLC, Lower Mount Bethel Energy, LLC, PPL Martins Creek, LLC, PPL Montour, LLC, PPL Susquehanna, LLC, and PPL Wallingford Energy LLC.

²¹ The PSEG Companies consist of PSEG Power LLC, PSEG Power LLC, PSEG Energy Resources & Trade LLC, PSEG Energy Resources & Trade LLC each of which is a wholly owned, direct and/or indirect subsidiary of Public Service Enterprise Group Inc.

a. NERC Comments

25. NERC comments that its decision provides adequate support and a rational basis for concluding that Cedar Creek meets the Registry Criteria for a transmission owner and operator. NERC emphasizes that its decision was based on a straightforward application of the NERC Registry Criteria. NERC argues that it applied the Registry Criteria and found, based in part on Cedar Creek's own characterization of its interconnection facilities, that Cedar Creek owns and operates transmission facilities. NERC also notes that there is no dispute that Cedar Creek meets the 100 kV and above requirement in the Registry Criteria because Cedar Creek's transmission facilities are operated at 230 kV.

26. NERC states that it gave due consideration to and rejected other arguments advanced by Cedar Creek that its interconnection facilities are not "integrated transmission elements" as the term "integrated" is defined in Commission's *Mansfield* decision.²² NERC argues that Cedar Creek's reliance on *Mansfield* for its position that its transmission facilities are not "integrated" is misplaced because the decision predates NERC's mandatory and enforceable Reliability Standards and is based on section 205 of the FPA, not section 215. NERC also states that in Order No. 743, which directs NERC to develop a revised definition of the term "bulk electric system," the Commission revisited the concepts of "integrated transmission element" and "material impact." According to NERC's characterization of Order No. 743, the Commission held that defining such terms is not dispositive with respect to reliability matters. NERC comments that the Commission has recognized under section 215 of the FPA that radial interconnection facilities are part of the Bulk-Power System if they operate at 100 kV or higher.²³ Given the directive from Congress that all users, owners, and operators of the Bulk-Power System be subject to section 215 and thus subject to the mandatory and enforceable Reliability Standards, NERC argues that it is disingenuous for Cedar Creek to claim that its portion of the 76-mile transmission line is not an integrated transmission element.

27. NERC states that, while it does not have to address the material impact issue, in the Cedar Creek Decision it held that Cedar Creek's transmission facilities have a material impact on the Bulk-Power System because the loss of the Cedar Creek interconnection line would affect Cedar Creek's ability to put its power onto the transmission grid. NERC also contends that Cedar Creek confuses reliable operation of interconnected Bulk-Power System elements with resource

²² NERC Comments at 10-11, citing *Mansfield*.

²³ NERC Comments at 14, citing *Lee County, Florida, et al.*, 121 FERC ¶ 61,143, at P 28 (2007), *reh'g denied*, 122 FERC ¶ 61,141 (2008).

adequacy. According to NERC, the failure of the Cedar Creek tie-line would affect the reliable operation of the Bulk-Power System and the result would not merely be that Cedar Creek could not execute sales of power. NERC argues that, to the contrary, time and again the Bulk-Power System demonstrates the far reaching consequences which can take place from otherwise isolated actions.

28. NERC also explains that it found that a gap in reliability will occur if Cedar Creek is not registered as a transmission owner and operator. Citing its Cedar Creek Registry Decision, NERC notes there are Reliability Standards that are applicable only to a transmission owner or operator that apply to Cedar Creek because no other entity, such as PSCo, has agreed to assume Cedar Creek's obligations as a transmission owner and operator. Thus, NERC contends that a reliability gap will occur without registering Cedar Creek as a transmission owner and operator. In particular, NERC identifies system operation, protection and communication related Reliability Standards with "High" Violation Risk Factors that should apply to Cedar Creek as a transmission owner and operator. Finally, NERC dismisses Cedar Creek's argument that its removal from the list of registered entities is supported by the GO/TO Report because NERC has not implemented recommendations contained in the GO/TO Report.

b. Comments Opposing Registration

29. Many commenters²⁴ argue that NERC misapplied the Registry Criteria and failed to demonstrate that Cedar Creek owns and operates an "integrated transmission element." They claim that the manner in which NERC applied the Registry Criteria would generically classify every generator registered as a generator owner and connected to the bulk electric system at or above 100 kV as a transmission owner and operator. Some commenters²⁵ claim that NERC redefines the word "integrated," does not recognize the well-established operational distinction between integrated and non-integrated facilities and is not based on any engineering or operational analysis. Other commenters²⁶ state that NERC's decisions are inconsistent with the common understanding of the term "integrated" and Commission precedent interpreting the term, noting that the Commission has held that radial interconnection lines are not to be considered integrated and that there is a distinction between interconnection facilities and network upgrades.²⁷

²⁴ *E.g.*, AWEA, BP Wind, EPSA, Horizon, Kelson, KGen, and NRG.

²⁵ AWEA, Invenergy, Kelson, and KGen.

²⁶ AWEA, Horizon, Invenergy, Kelson, KGen, and WPSC/UPPCO.

²⁷ *E.g.*, AWEA Comments at 10; Kelson Comments at 7; Horizon Comments at 8.

EPSA adds that NERC is defining the terms “integrated transmission element” and “material” without stakeholder input, which according to EPSA undermines the FPA section 215 requirement that stakeholders receive due process with the ERO.

30. AWEA and EPSA argue that there is no Commission precedent to make a distinction, as NERC does, between Commission authority pursuant to FPA section 205 and the section for Reliability Standards under section 215. In the same vein, Horizon and IPPNY disagree with NERC that the *Mansfield* order is inapplicable to the definition of a transmission owner or operator. Likewise, WPSC/UPPCO contend that the Commission’s section 205 decisions regarding cost allocation for radial lines and transmission lines are relevant because they are based on the function of the lines.

31. Commenters argue that NERC provides no evidence that the Cedar Creek facilities are material to the Bulk-Power System other than the fact that the facilities connect two material parts of the Bulk-Power System.²⁸ Horizon, BP Wind and NRG believe that NERC’s claims of the importance and integral nature of the tie-lines are incorrect because they are connected to small generators and not connected to a substation that is a major generating hub or critical to service to main population centers, as was the case in *New Harquahala*. AWEA contends that NERC’s findings that the Cedar Creek and Milford facilities are material to the Bulk-Power System are not supported with respect to wind generation because wind plants are variable resources, and there would not normally be reliability issues with the loss of a wind generator or its associated generator tie-line.

32. Dominion argues that NERC ignores the fundamental engineering and reliability analysis embedded in the generator interconnection study process. Dominion and E.ON state that the system impact studies, among other things, evaluate the impact of the interconnection request on system reliability using the same reliability analyses that are embedded in the Reliability Standards and provide ample protections to protect the reliable operation of the Bulk-Power System. Dominion notes that the Cedar Creek and Milford system impact studies established that the interconnection of the facilities was not material to reliability and that loss of the facilities will not have a reliability impact beyond loss of the localized generation resource.

33. E.ON contends that NERC has not demonstrated any reliability gap in regard to the Cedar Creek facilities. E.ON argues that upholding the NERC decisions would foist vast and complex transmission owner and transmission operator Reliability Standards on a generator solely by virtue of its radial interconnection facility without any demonstrated reliability need to do so. E.ON

²⁸ *E.g.*, AWEA, BP Wind, EPSA, Horizon, IPPNY, Kelson and Milford.

also states that there is no demonstration of the practical ability of a generator to comply with Reliability Standards applicable to a transmission owner or operator. Likewise, Milford contends that a generator cannot reasonably comply with all transmission owner and operator requirements and notes that Cedar Creek has attempted without success to get WECC to agree to a list of Reliability Standards and requirements that would apply under the transmission owner and operator registration. E.ON provides examples of the significant increase in compliance costs for generators, in the form of hiring personnel and purchasing computer software if these Reliability Standards are applied to a generator. E.ON and Horizon claim that these additional costs will negatively affect the financial viability of pursuing new wind generation development.

34. NRG asks that the Commission reject the registrations without prejudice until NERC and WECC resolve the issue as part of the standards development process. EPSA and others express concern that NERC's interpretation that all generator owners and generator operators with interconnection facilities rated at 100 kV or above should be registered as transmission owners and transmission operators reflects the development of supplemental criteria developed without affording due process to those entities that would be subject to them or providing a process by which the Commission can approve such criteria.

35. Several commenters²⁹ point to the Commission's regulations³⁰ as support to identify the distinction between integrated and non-integrated transmission facilities, and the filing requirements for FERC Form 715 as support for a finding that interconnection facilities do not qualify as integrated transmission facilities.

36. WPSC/UPPCO asks the Commission to reject NERC's implication that all generators interconnected at 100 kV or above must be registered as transmission owner/operator. WPSC/UPPCO, citing to Order No. 2003,³¹ contends that the

²⁹ *E.g.*, EPSA, Kelson, KGen and Invenergy.

³⁰ 18 C.F.R. § 141.300(a)(2011), which states that “[a]ny transmitting utility, as defined in § 3(23) of the Federal Power Act, that operates integrated (that is, non-radial) transmission facilities at or above 100 kilovolts must complete FERC Form No. 715.”

³¹ *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, FERC Stats. & Regs. ¶ 31,146 (2003), *order on reh'g*, Order No. 2003-A, FERC Stats. & Regs. ¶ 31,160 (2004), *order on reh'g*, Order No. 2003-B, FERC Stats. & Regs. ¶ 31,171 (2004), *order on reh'g*, Order No. 2003-C, FERC Stats. & Regs. ¶ 31,190 (2005), *aff'd sub nom. Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007), *cert. denied*, 552 U.S. 1230 (2008).

transmission system begins at the “Point of Interconnection” and encompasses facilities at or beyond that point. WPSC/UPPCO asks that the Commission rule that a generation owner cannot be classified as a transmission owner/operator merely by virtue of ownership of generation interconnection facilities, grant the appeals and remand the appeal to NERC to determine whether factors other than mere radial line ownership would justify classifying both or either as transmission owners/operators.

37. Many commenters cite to the GO/TO Report as support for not registering the vast majority of generator owners/operators’ tie-lines as transmission owners/operators. Some ask that the Commission either consider the recommendations in the GO/TO Report or order NERC to accelerate the work now underway to implement the GO/TO Report’s recommendations.³²

B. Milford – Docket No. RC11-2-000

38. Milford owns a 203.5 MW wind facility (Milford Facility) with individual wind turbines connected in clusters to a number of 34.5 kV collection lines which comprise an on-site underground collection system. Specifically, the Milford Facility consists of 97 wind turbine generators, a collector substation; an interconnection facility at the connection between the Milford Facility transmission line and the Intermountain Power Project (Intermountain) substation; and a SCADA system. The underground collection system links each turbine to the next and is connected to the Facility substation that consists of two 168 MVA, 34.5 to 345 kV on-site step up transformers. The high voltage side of the transformers is connected to an 88-mile overhead 345 kV line, connecting the Milford Facility to the Bulk Power System.

39. The Milford Facility interconnects to the Bulk-Power System by way of the 345 kV Intermountain AC Switchyard owned by Intermountain Power Agency. The Intermountain Switchyard is on the property of the Intermountain plant, a coal-fired steam-electric generating station near Delta, Utah, which consists of two 900 MW units. The Intermountain AC Switchyard consists of a 345 kV breaker-and-a-half bus configuration that, in addition to connecting to the Milford 345 kV line, connects each of the Intermountain coal plants, two 345 kV lines owned by Intermountain Power Agency to the Mona Switching Station in Utah, one 230 kV line owned by Intermountain to the Gonder Substation in Nevada, and three connections to a 500 kV DC line and its related facilities owned by Intermountain Power Agency and connecting to the Los Angeles Department of Water and Power’s (LADWP) Adelanto Converter Station in California. In total, 2,003.5

³² AWEA, Dominion and EEI.

MW of generation is connected to the Intermountain AC Switchyard (Intermountain Unit 1 at 900 MW, Intermountain Unit 2 at 900 MW and Milford Project at 203.5 MW) and four transmission lines are connected to the Intermountain AC Switchyard (2 Mona lines at 345 kV, 1 Gonder line at 230 kV and 1 DC).

1. NERC's Milford Decision

40. In its October 6, 2010, decision (Milford Decision), NERC upheld WECC's registration of Milford as a transmission owner and operator. NERC concluded that Milford meets the Registry Criteria requirements for owning and operating an integrated transmission element associated with the Bulk-Power System 100 kV or above. NERC stated that, because Milford's line is the link between its generating facility and the Intermountain substation, both of which are material to and part of the Bulk-Power System, loss of the Milford line would result in the loss of a generating facility which is material to the Bulk-Power System. NERC reasoned that, under the Registry Criteria, if an integrated transmission element associated with the Bulk Power System exceeds 100 kV, it is by definition a transmission facility. Given that Milford admits its interconnection facilities interconnect the generating facility to the Bulk-Power System by way of the 345 kV Intermountain Power Project, NERC concluded that Milford meets the requirement as an entity that owns and operates an integrated transmission element associated with the Bulk Power System.

41. NERC rejected Milford's claim that its line was a sole-use radial transmission line. NERC stated the radial line exclusion in the Registry Criteria only applies to radial facilities that serve only load. Although NERC agrees the tie-line is "radial," NERC argued it is still integrated transmission by virtue of connecting a Bulk-Power System generator to the grid. NERC relied on three additional points to conclude that Milford's line is "integrated" and thus should be registered: (1) Milford labeled the generator tie-line as a transmission line on its website; (2) the Commission referred to the generator tie-line as a transmission line in an open-access related order;³³ and (3) the generator tie-line can transmit power to the grid and receive station power.

42. NERC rejected Milford's reliance on the recommendations contained in the GO/TO Report as grounds for not registering Milford because the recommendations are not binding and have not been adopted by NERC. In addition, NERC dismissed Milford's reliance on a system impact study and expert affidavits to support its claims. NERC states that the system impact study was not

³³ *Milford Wind Corridor, LLC*, 129 FERC ¶ 61,149 (2009).

intended to demonstrate how the Milford facilities could impact the grid if the facilities are not properly registered and covered under the Reliability Standards. Nevertheless, NERC claims that the system impact study confirms that “proper equipment, maintenance and operation are required to ensure reliability of the facilities and the transmission system.”³⁴ NERC also states that the Milford affidavits support that faults and switching errors could occur with respect to the Milford tie-line.

43. NERC concluded that Milford’s tie-line has a material impact on the Bulk-Power System. NERC cited a statement from *New Harquahala*, where the Commission reasoned that if New Harquahala was only registered as a generator owner and operator, “it will not be required to have its staff trained to operate the facilities in an emergency or to coordinate protection for its transmission line and switchyard with other [transmission operators] and the Regional Entity,” and NERC concluded that this situation is true for Milford as well.³⁵

44. In response to Milford’s claim it is unable to comply with a number of Reliability Standards applicable to a transmission owner or operator, NERC notes that there is nothing in the NERC Rules of Procedure, or the registration criteria to prevent Milford from demonstrating to WECC and NERC that it should not be subject to certain of the transmission owner or operator requirements. NERC dismisses Milford’s view that *New Harquahala* was a directive to negotiate a list of requirements applicable to transmission owners and operators because *New Harquahala* was limited to the entities, facts and circumstances of that case and did not result in a global proclamation for all future registrations involving generator interconnection facilities.

2. Milford’s Appeal to the Commission

45. On October 27, 2010, Milford filed its request for appeal of the NERC’s Milford Decision. Milford argues that it should not be registered as a transmission owner or operator because it does not meet the definitions in the Registry Criteria. Milford argues that NERC disregards facts in the record and discounts the recommendations of the GO/TO Report. Milford believes that, if NERC’s decision is upheld, it would appear to classify every generator connected to the bulk electric system at or above 100 kV as a transmission owner and operator. Milford argues that NERC’s reliance on Milford’s characterization of the tie-line on its website, a Commission order referring to the tie-line as a transmission line

³⁴ Milford Decision at 14.

³⁵ Milford Decision at 15.

and the fact that Milford can transmit power to the grid and receive station power, raise facts not in the record, misapplies Commission precedent, and provides no basis to support NERC's conclusions.

46. Milford notes that the definition of "bulk electric system" does not generally include "radial transmission facilities servicing only load with one transmission source" and argues that the Milford tie-line is such a radial line. Milford argues that the tie-line is not integrated into the bulk electric system and thus does not meet the thresholds in the NERC Registry Criteria. Milford also argues that its system impact study shows that there are no adverse system impacts with its connection to the Intermountain AC Switchyard.³⁶ Milford adds that applying the *New Harquahala* precedent to the Milford situation leads to the conclusion that Milford should not be registered as a transmission owner and operator.³⁷

47. Milford also provided an affidavit from a registered professional engineer to support its demonstration that Milford should not be registered as a transmission owner and operator.³⁸ Milford cites to the affidavit to support the conclusion that the tie-line is a radial interconnection facility and that "the only meaningful impact of the loss of the interconnection facilities would be the loss of the Milford generation output with reactive power flows only marginally affected."³⁹ Milford also cites to the affidavit to contend that "there is little prospect of switching errors as: switching will be limited due to the normally closed position of the breakers; specific coordination requirements; all switching will be controlled by LADWP and there is no risk of energizing a large generator out of phase as exists with conventional thermal generation plants."⁴⁰

3. Interventions and Comments

48. Notice of Milford's filing was published in the *Federal Register*, 75 Fed. Reg. 68,780 (2010) with interventions and protests due on or before November 26, 2010. On November 16, 2010, AWEA, EEI, and EPSA filed a joint request for

³⁶ Milford Appeal, Ex. C-3.

³⁷ Milford Appeal at 14-18.

³⁸ Milford Appeal, Ex. A.

³⁹ Milford Appeal at 19.

⁴⁰ *Id.* at 21.

extension of time to file comments. On November 18, 2010, the Commission granted the extension of time up to and including December 7, 2010.

49. Timely interventions and comments were filed by: NERC, AWEA, BP Wind, Calpine, Cedar Creek, Dominion, EEI, EPSA, E.ON, Horizon, IPPNY, Invenergy, Kelson, KGen, NRG, Sempra, Tenaska, Wisconsin Electric, and WPSC/UPPCO.

50. Timely interventions were filed by: WECC, American Municipal Power, Consumers, ODEC, Holland, NRECA, PPL Companies, PSEG Companies, TransCanada, and SERC. APPA and NextEra each filed a motion for leave to intervene out of time.

51. On December 7, 2010, Milford filed a letter requesting that WECC publicly release a Compliance Protocol document developed by NERC, WECC and New Harquahala. NERC responded to Milford's letter in a pleading submitted December 28, 2010. On January 19, 2011, Milford filed a motion in reply to NERC's December 28, 2010 pleading.

a. NERC Comments

52. NERC comments that in its underlying decision, it reviewed and considered the evidence and arguments presented by Milford and WECC and determined that Milford is properly registered as a transmission owner and operator and explained the bases for its findings and conclusions. NERC states that Milford's line is the link between its generation facility and Intermountain's Switchyard, both of which are material to and a part of the Bulk-Power System. NERC states that loss of Milford's line would result in the loss of a generating facility which is material to the Bulk-Power System. NERC states that Milford's assertion that its line is not an integrated transmission element of the Bulk-Power System is inconsistent with the Energy Policy Act of 2005, FPA section 215, Commission precedent under section 215 and the NERC Registry Criteria.

53. NERC states Milford misinterprets the Registry Criteria applicable to transmission owners and operators. NERC argues that in its underlying decision it applied the Registry Criteria and found that, based on Milford's characterization of its interconnection facilities, Milford owns and operates transmission facilities. In addressing the issue of owning or operating an "integrated transmission element", NERC states that it gave due consideration to and rejected Milford's arguments that its interconnection facilities are not integrated and that Milford does not meet the exclusion from transmission owner and operator requirements for radial transmission lines serving only load with one transmission source. NERC argues that, contrary to Milford's assertion, its interconnection facilities are by their

nature an independent transmission element because the facilities are part of the Bulk-Power System.⁴¹

54. NERC states that, while it does not have to address the material impact issue, in the Milford Decision it held that Milford's transmission facilities have a material impact on the Bulk-Power System because the loss of the Milford interconnection line would affect Milford's ability to put its power onto the transmission grid. NERC argues that Milford claims, that the Milford facility has not been designated as critical to support the grid, confuses reliable operation of the interconnected Bulk-Power System elements with resource adequacy and that the loss of the Milford line could have an effect on the operation of the Bulk-Power System. NERC notes that the Milford Decision explained its determination that a reliability gap would occur if Milford is not registered as a transmission owner and operator. NERC identifies certain Reliability Standards that do not apply to a generator operator but would result in a reliability gap if Milford is not registered as a transmission owner and operator. Finally, NERC dismisses Milford's argument that its removal from the list of registered entities is supported by the GO/TO Report because NERC has not implemented the recommendations contained in the GO/TO Report.

b. Comments Opposing Registration

55. With the exception of Milford, which only filed comments in the Cedar Creek proceeding, and NERC, which filed separate comments in each proceeding, intervenors that filed comments in the Cedar Creek proceeding also filed the same comments in the Milford proceeding and are not repeated here.

III. Discussion

A. Procedural Matters

56. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure,⁴² the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure,⁴³ the Commission will grant APPA's and NextEra's late-filed motion to intervene given their interest in the

⁴¹ NERC Comments at 19-20.

⁴² 18 C.F.R. § 385.214 (2011).

⁴³ 18 C.F.R. § 385.214(d).

proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay.

57. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2011), prohibits an answer to a protest unless otherwise ordered by the decisional authority. We are not persuaded to accept Cedar Creek's and Milford's answers and will, therefore, reject them. To the extent NERC's December 28 letter responds to Milford's initial comments, we will treat that response as answer. We are not persuaded to accept it and will, therefore, reject it.

B. Commission Determination

58. The Commission denies Cedar Creek's and Milford's appeals and affirms that Cedar Creek and Milford are properly registered as transmission owners and operators. In *New Harquahala*, the Commission held that NERC adequately supported the registration of the New Harquahala line based on NERC's plenary authority to register entities that own or operate assets that are "material to the reliability of the Bulk Power System."⁴⁴ In *New Harquahala*, the Commission considered the importance and impact of the facilities, as well as the reliability gap that could result if the facilities were not properly registered.⁴⁵ The Commission affirmed the NERC registration, based on the specific facts of the case, that the reliable operation and maintenance of the interconnection facilities connected to the New Harquahala generating facility were material to the reliability of the Bulk-Power System.⁴⁶ We apply the same fact-specific analysis to the Cedar Creek and Milford appeals and find that NERC adequately supported the decisions to register Cedar Creek and Milford as transmission owners and operators. As discussed below, NERC's underlying Registry Decisions and comments to the appeals provide sufficient, fact-specific evidence to adequately support a conclusion that the facilities will have a material impact on the Bulk-Power System. The Commission, therefore, affirms NERC and WECC's findings based on the specific facts of these cases that the reliable operation and maintenance of the interconnection facilities that connect Cedar Creek and Milford to the Bulk-Power System are necessary to the reliability of the Bulk-Power System. In making this finding, we need not address the issues raised regarding the interpretation of

⁴⁴ *New Harquahala*, 123 FERC ¶ 61,173 at P 44, quoting NERC Registry Criteria, Notes to Criteria, note 1.

⁴⁵ *Id.* P 45-55.

⁴⁶ *Id.*

section III(d)(1) of NERC's Registry Criteria and the definition of an "integrated transmission element."

1. Cedar Creek

a. Importance of the Cedar Creek Transmission Line

59. We find that Cedar Creek's tie-line is material to Bulk-Power System reliability. The Commission finds that improper protection coordination and operation of the Cedar Creek 230 kV transmission line and associated transmission equipment could have an impact on reliability beyond the loss of the Cedar Creek generating facility. We agree with NERC's statement that Cedar Creek must "coordinate its operations and activities with respect to the interconnection facilities in synch with the bulk power system."⁴⁷ Therefore, as discussed below, we find that Cedar Creek's coordination with connected facilities regarding protection systems, potential system operating limits and other matters are an important aspect of system reliability.

60. The Commission does not find persuasive Cedar Creek's contention that it has "no operational control" over its tie-line facilities. Instead, the record indicates that Cedar Creek owns and controls equipment at one end of the tie-line. Cedar Creek states that it owns and operates the Cedar Creek Facility and defines the scope of equipment associated with the Facility.⁴⁸ This equipment, specifically 230kV circuit breakers and associated tie-line protective relays, provides Cedar Creek control over the switching of one end of the tie-line.⁴⁹

61. While Cedar Creek cites to WECC's Regional Assessment to demonstrate that PSCo operates the equipment located at the Keenesburg Switching Station, it does not state which entity operates the equipment owned by Cedar Creek and identified above. This equipment at the Cedar Creek end is important because its operation must be coordinated with the equipment at the remote end of the line that is under the control of PSCo. If coordination does not occur, or is performed improperly, there is the potential that operation of this equipment could have impacts beyond the generating facility and tie-line to the Bulk-Power System. For

⁴⁷ NERC Comments at 14.

⁴⁸ Cedar Creek Petition at 16-18.

⁴⁹ *Id.* at 17, n.39. Specifically, Cedar Creek controls the following equipment: three 230 kV Generation Breakers; one 230 kV Generator Tie-Line Primary Relay; one 230 kV Generator Tie-Line Secondary Relay; and one 230 kV Generator Tie-Line Bus Relay.

example, if the tie-line relays at the Cedar Creek end of the line are not coordinated with other relays on adjoining Bulk-Power System facilities connected at the Keenesburg Switching Station, a fault on the tie-line could lead to unnecessary loss of the adjoining facilities and potentially turning an otherwise localized system fault into a region-wide disturbance. For example, the Rocky Mountain Energy Center (RMEC), a 600 MW combined cycle generation plant, is connected to the same substation to which Cedar Creek is connected.⁵⁰ If the tie-line relays are not coordinated, a fault on the tie-line could result in the loss of RMEC and other Bulk-Power System facilities at Keenesburg. Similar unintended events could occur if manual switching of the 230 kV breakers at the Cedar Creek Facility (initiated by Cedar Creek operators) are not coordinated with switching on other Bulk-Power System facilities.

62. The Commission also is not persuaded by the reliance on the PSCo system impact study to conclude that there are no reliability impacts. The study did not evaluate the impact of improper protection coordination or improper operation of the facilities on Bulk-Power System reliability. In addition, the Commission notes that the system impact study was performed in 2005. The Commission does not find the results of a six year old study persuasive. System conditions could have changed in the past six years that could alter the results of the study. Therefore, the study does not address whether improper operation of the Cedar Creek facilities would not have wider area impacts. For these reasons, we find that Cedar Creek is properly registered as a transmission owner and operator based on the reliability impact of the 230 kV transmission line. Accordingly, we deny Cedar Creek's appeal.

b. Reliability Gap

63. In addition to the discussion above regarding the importance of the facilities at issue, we are persuaded that the Cedar Creek tie-line facilities have a material impact on Bulk-Power System reliability because a gap in reliability would occur if the owner and operator of the facilities are not registered. Based on the records in this proceeding, the Commission finds that, if adequate reliability requirements, including coordination of protection systems, operations and maintenance and properly trained and certified staff are not provided for on the Cedar Creek facilities, there is a reliability risk that would affect the Bulk-Power System in WECC. Specifically, if Cedar Creek is not required to comply with certain Reliability Standards applicable to a transmission owner and operator, there will be reliability gaps in (1) coordination of protection systems, (2) operations and operating credentials, and (3) restoration and development and

⁵⁰ Cedar Creek Appeal, Ex. D at 4.

communications of system operating limits. Below, we discuss each of these matters.

i. Protection system coordination

64. With regard to protection system coordination and misoperations, there is a risk of an adverse impact on reliability if the protection relays or protection systems on the Cedar Creek line are not coordinated with those on the transmission network facilities in its area.⁵¹ Such coordination is required by several Reliability Standards. In particular, Reliability Standard PRC-001-1, Requirements R2 and R2.2 require a transmission operator to communicate and coordinate with the reliability coordinator and affected transmission operators and balancing authorities regarding relay or equipment failures that reduce system reliability.⁵² These provisions also require the transmission operator to take corrective action as soon as possible when a relay failure occurs. Reliability Standard PRC-001-1, Requirement R4 requires a transmission operator to “coordinate protection systems on major transmission lines and interconnections with neighboring Transmission Operators, Generator Operators and Balancing Authorities.” Reliability Standard PRC-004-1, Requirement R1 requires a transmission owner that owns a protection system to develop a Corrective Action Plan to avoid misoperations.

65. The Cedar Creek facility includes protection systems that could cause the tie-line to trip automatically in response to a fault. Cedar Creek must coordinate this protection or else other transmission operators will not have adequate information to prevent the spread of a fault on the Cedar Creek line, causing other interconnected Bulk-Power System facilities to unexpectedly come off line. However, unless Cedar Creek is registered as a transmission owner and operator, it does not appear that any entity would have responsibility for system protection coordination or misoperation for the Cedar Creek line. Thus, compliance with the Reliability Standards identified above is necessary to prevent a reliability gap.

⁵¹ NERC’s Glossary of Terms Used in Reliability Standards defines “protection system” as “protective relays, associated communication systems, voltage and current sensing devices, station batteries and DC control circuitry.”

⁵² Reliability Standard PRC-001-1, Requirement R2.1 requires a generator operator to communicate with “its transmission operator and host balancing authority” regarding relay or equipment failures. However, this provision does not require communication with the reliability coordinator or all other affected transmission operators, which is required by Requirement R2.2.

ii. Operations and operating credentials

66. Without Cedar Creek's complying with certain operations and maintenance Reliability Standards, there will be a reliability gap. Specifically, because of its length, Cedar Creek's 76-mile line is susceptible to outages and faults due to contact with and growth of vegetation. Reliability Standard FAC-003-1, Requirements R1, R2 require a transmission owner to prepare and implement a vegetation management program. NERC found that the agreement between Cedar Creek and PSCo provides that Cedar Creek will maintain the line. Thus, Cedar Creek must comply with FAC-003-1, Requirements R1 and R2 to avoid a reliability gap.

67. Likewise, operational control over transmission line breakers on Cedar Creek's end of the tie-line are not under the control of NERC certified operators. The operation of these breakers must be overseen by NERC-certified operators. Specifically, Reliability Standard PER-003-001 requires NERC certification of all operators that have responsibility for the real-time operation of the interconnected Bulk Electric System. When switching the tie-line in or out of service, operators must have the appropriate credentials and training to properly perform the switching and coordinate the switching to prevent adverse impacts such as the introduction of faults on the system. In the case of Cedar Creek line, PSCo owns and operates the breakers at the remote end, but, as noted above, Cedar Creek operates the breakers at its end of the line. Consequently, Cedar Creek's operators must be certified in accordance with Reliability Standards PER-003-1, Requirements R1, R1.1, R1.2. Additionally, development of coordination protection between Cedar Creek and PSCo is necessary to coordinate switching the line in and out of service since each has control over one end of the line. TOP-004-2, Requirements R6, R6.1, R6.2, R6.3, R6.4 require that transmission operators are required to coordinate activities that impact inter- and intra-regional reliability and are required to develop, maintain, and implement corresponding policies and procedures. In the case of Cedar Creek, these procedures are needed to coordinate operation of the tie-line with PSCo. There will be a reliability gap without Cedar Creek being responsible for these standards.

iii. Restoration and development and communications of system operating limits

68. Cedar Creek must also comply with Reliability Standard, TOP-001-1, Requirement R1. This requires a transmission operator to exercise authority to operate its end of the tie-line facilities to alleviate operating emergencies, including exceedances of system operating limits. The Requirement is to ensure that system operators have the authority to take actions to maintain Bulk-Power System facilities within operating limits. In this case, it ensures clear lines of

authority of personnel within an entity who might have competing goals, e.g., generator personnel may be more focused on maximizing generator output, while the entity's transmission operator personnel is focused on taking the necessary steps to maintain operations within limits and respond to external emergencies. TOP-001-1 Requirement R1 requires that these lines of authority be clearly established and followed. For Cedar Creek, following these lines of authority will allow it to take action to reduce the flow on the line or to switch it in or out of service. Thus, to avoid a reliability gap, Cedar Creek must comply with this standard. In addition, Reliability Standard FAC-014, Requirement R2 requires that a transmission operator must establish system operating limits consistent with the reliability coordinator's system operating limits methodology. Without compliance with FAC-014, Requirement R2, Cedar Creek could avoid establishing the system operating limit for its line or be allowed to establish an operating limit for its line that is not consistent with the requirements of the reliability coordinator's methodology.⁵³ In other words, there is a methodology in place to establish operating limits on transmission lines and without compliance with FAC-014, Requirement R2, no entity would be responsible for determining the system operating limit for the Cedar Creek tie line, thus, a reliability gap would exist.

69. Accordingly, the gaps in reliability that would occur if Cedar Creek is not registered persuade us that Cedar Creek is properly registered as a transmission owner and operator.

c. **Applicable Reliability Standards**

70. Cedar Creek contends that, if registered as a transmission owner and operator, it cannot physically comply with all requirements of mandatory Reliability Standards that pertain to a transmission owner or operator. NERC insists that Cedar Creek should first be registered as a transmission owner and operator, and afterward it can raise with WECC the appropriate scope of its compliance obligations for the transmission tie-line.

71. As we have explained above, a reliability gap would occur if Cedar Creek is not registered as a transmission owner and operator and required to comply with at least certain Reliability Standards. Based on that analysis, we find that, at a minimum, Cedar Creek should be required to comply with the following Reliability Standards:

⁵³ That methodology includes more than the facility rating. *See* Reliability Standard FAC-011, Requirements R2, R2.1, R2.2.

- PRC-001-1, Requirements R2, R2.2, R4;
- PRC-004-1 Requirement R1;
- TOP-004-2, Requirements R6, R6.1, R6.2, R6.3, R6.4;
- PER-003-1, Requirements R1, R1.1, R1.2;
- FAC-003-1, Requirements R1, R2;
- TOP-001, Requirement R1 and
- FAC-014-2, Requirement R2.

72. We recognize that WECC and/or NERC and Cedar Creek may disagree as to whether Cedar Creek should be required to comply with additional Reliability Standards. To resolve any such disputes, the Commission directs WECC and/or NERC and Cedar Creek to negotiate as to what, if any, additional Reliability Standards and Requirements will be applicable to Cedar Creek. On the one hand, it may not be necessary for Cedar Creek to be subject to any additional Reliability Standards and Requirements that apply to a transmission owner and operator based on its transmission tie-line facilities. On the other hand, Cedar Creek should be required to comply with all standards that are necessary to maintain the Bulk-Power System reliability.

73. WECC and/or NERC should negotiate with Cedar Creek as to whether Cedar Creek should comply with other Reliability Standards and Requirements to maintain Bulk-Power System reliability. We direct NERC to submit, within 90 days from the date of the issuance of this order, a compliance filing identifying the applicable Reliability Standards and Requirements. Cedar Creek will have the ability to comment on NERC's filing. In the event that NERC and/or WECC believe Reliability Standards and Requirements beyond those listed above must be satisfied by Cedar Creek, and NERC and Cedar Creek cannot agree on which Reliability Standards apply, the parties should explain their disagreement and the Commission will resolve the dispute, based on the language of the Reliability Standards and the reliability risks posed by Cedar Creek's facilities.

2. Milford

a. Importance of the Milford Transmission Line

74. We deny Milford's appeal of NERC's registry decision and affirm NERC's decision that Milford is properly registered as a transmission owner and operator. We disagree with Milford that the only meaningful impact on the loss of the line would be the loss of the generation output and, rather, are persuaded by NERC's explanation for registering Milford as a transmission owner and operator based on the reliability impact of Milford's 345 kV tie-line.

75. The record in the proceeding indicates that Milford owns and operates all equipment at one end of the tie-line. Milford has operational and maintenance jurisdiction of all equipment at the Milford Facility. The scope of equipment under Milford's control includes 345 kV circuit breakers, 345 kV transmission line equipment, and protective relays. The operation of this equipment must be coordinated with the equipment at the remote end of the line that is under the control of LADWP. If coordination does not occur, or is conducted improperly, there is the potential that operation of this equipment could have impacts beyond the Milford generating facility and tie-line. For example, if Milford's tie-line relays are not coordinated with relays on other Bulk-Power System facilities connected at the Intermountain Switchyard, a fault on the Milford tie-line could result in unnecessary loss of those facilities, including four transmission lines and generation capacity of approximately 1,800 MW.

76. Additionally, Milford's appeal includes a system impact study that Milford contends supports its position that it does not have a material impact on Bulk-Power System reliability. While the system impact study does not evaluate the impact of protection system miscoordination or switching errors, the Commission notes that it does identify the need for the Milford facilities to be included in a special protection system.⁵⁴ A special protection system is a system used to "maintain system stability, acceptable voltage, or power flows..."⁵⁵ Proper operation of a special protection system is needed keep the system from exceeding system operating limits or interconnection reliability operating limits. If a special protection system does not function properly, the system will be placed outside of its stability, voltage, or power flow limits, which will expose the system to an increased risk of cascading outages. In this case, the special protection system is designed to trip Milford facilities and other facilities in response to certain contingencies in order to maintain stability of the WECC system. Therefore, in addition to the Commission's concerns with proper coordination of tie-line protection system with adjoining facilities, the Commission finds that improper coordination of the special protection system with other Bulk-Power System facilities could lead to wide area impacts on the WECC system. All of these factors adequately support a finding that the Milford facilities are material to the Bulk-Power System. Additionally, the Commission observes that the system impact study was performed in 2008. The Commission does not find the results of a three-year old study persuasive. System conditions could have changed in the past three years that could alter the results of the study. Accordingly, we deny Milford's appeal of NERC's registry decision.

⁵⁴ Milford Appeal Ex. C-3, Milford Wind Corridor Interconnection Project System Impact Study at 4.

⁵⁵ NERC Glossary of Terms, Definition of Special Protection Systems.

b. Reliability Gap

77. Milford must also comply with certain Reliability Standards applicable to transmission owners and operators to prevent a reliability gap. We agree with NERC that no other entity has been assigned compliance duties for the Milford transmission tie line. Indeed, LADWP has disclaimed all compliance responsibility for the Milford transmission line.⁵⁶ If adequate reliability requirements, including coordination of protection systems, operations and maintenance and properly trained and certified staff are not provided for on the Milford facilities, there is a reliability risk that would affect the Bulk-Power System in WECC. As discussed below, if Milford is not required to comply with certain Reliability Standards applicable to a transmission owner and operator, there will be reliability gaps in (1) coordination of protection systems, (2) operations and operating credentials, and (3) restoration and development and communications of system operating limits.

i. Protection system coordination

78. With regard to protection system coordination, there is a risk of an adverse impact on reliability if the Milford line protection relays or protection systems are not coordinated with neighboring transmission network facilities. Protection system coordination is required by several Reliability Standard Requirements. Reliability Standard PRC-001-1, Requirements R2 and R2.2 require a transmission operator to communicate and coordinate with the reliability coordinator and affected transmission operators and balancing authorities regarding relay or equipment failures that reduce system reliability.⁵⁷ These provisions also require the transmission operator to take corrective action as soon as possible when a relay failure occurs. Reliability Standard PRC-001-1, Requirement R4 requires a transmission operator to “coordinate protection systems on major transmission lines and interconnections with neighboring Transmission Operators, Generator Operators and Balancing Authorities.” Reliability Standard PRC-001-1, Requirement R6 requires a transmission operator to “monitor the status of each Special Protection System in their area” and “notify

⁵⁶ Milford Decision at 14.

⁵⁷ Reliability Standard PRC-001-1, Requirement R2.1 requires a generator operator to communicate with “its transmission operator and host balancing authority” regarding relay or equipment failures. However, this provision does not require communication with the reliability coordinator or all other affected transmission operators, which is required by Requirement R2.2.

affected Transmission Operators and Balancing Authorities of each change in status.” Reliability Standard PRC-004-1, Requirement R1 requires a transmission owner that owns a protection system to develop a Corrective Action Plan to avoid misoperations.

79. Milford’s facilities include protection systems and are part of a Special Protection System that could cause the line to trip automatically in response to a fault. Milford must coordinate this protection, or else other transmission operators will not have adequate information to prevent the spread of a fault on the Milford line and avoid tripping of other interconnected Bulk Power System facilities. As noted above, LADWP has disclaimed all compliance responsibility for the Milford transmission line. Thus, unless Milford is registered as a transmission owner and operator, it does not appear that any entity would be responsible for system protection coordination or misoperation for the Milford tie-line. Thus, Milford’s compliance with the Reliability Standards identified above is necessary to prevent a reliability gap.

ii. Operations and operating credentials

80. Because of its length, the 88-mile Milford line is susceptible to outages and faults due to contact with and growth vegetation. Reliability Standard FAC-003-1, Requirements R1, R2 require a program to prevent contact of vegetation and to maintain clearances between lines and vegetation. No entity has claimed responsibility to implement a plan to protect the line from faults due to vegetation contact and the record indicates that Milford owns the tie-line. Thus, to prevent a reliability gap, Milford must comply with these requirements.

81. Operational control over transmission line breakers on the local end of the tie-line must be under the control of NERC certified operators. The operation of these breakers must be overseen by NERC-certified operators. Specifically, Reliability Standard PER-003-1, Requirements R1, R1.1, R1.2 require NERC certification of all operators that have responsibility for the real-time operation of the interconnected Bulk Electric System. NERC identified the need to have staff trained and certified to operate the Milford facilities. As noted above, Milford controls equipment at its end of the tie-line. Consequently, Milford must comply with Reliability Standards PER-003-1, Requirements R1, R1.1, R1.2.

82. In addition, development of coordination protection between Milford and LADWP is necessary to coordinate switching the line in and out of service. Transmission operators are required to develop, maintain, and implement formal policies and procedures to provide for transmission reliability pursuant to Reliability Standard TOP-004-2, Requirements R6, R6.1, R6.2, R6.3, R6.4. Specifically, TOP-004-2, Requirements R6, R6.1, R6.2, R6.3, R6.4 require that

transmission operators are required to coordinate activities that impact inter- and intra-regional reliability and are required to develop, maintain, and implement corresponding policies and procedures. In the case of Milford, these procedures are needed to coordinate operation of the tie-line with LADWP. Thus, there will be a reliability gap without Milford's being responsible for these requirements.

iii. Restoration and development and communications of system operating limits

83. Milford must also comply with Reliability Standard, TOP-001-1, Requirement R1. This requires a transmission operator to exercise authority to operate its end of the tie-line facilities to alleviate operating emergencies, including exceedances of system operating limits. The Requirement ensures that system operators have the authority to take actions to maintain Bulk-Power System facilities within operating limits. In the case of Milford, it ensures clear lines of authority of personnel within an entity who might have competing goals, e.g., generator personnel may be more focused on maximizing generator output, while the entity's transmission operator personnel is focused on taking the necessary steps to maintain operations within limits and respond to external emergencies. TOP-001-1 Requirement R1 requires that these lines of authority be clearly established and followed. Following these lines of authority will allow Milford operating personnel to take action to reduce the flow on the line or to switch it in or out of service. Thus, to avoid a reliability gap, Milford must comply with this standard.

84. In addition, no entity has established system operating limits for the Milford tie-line. Reliability Standard FAC-014, Requirement R2 requires that system operating limits must be established in accordance with established methodologies. Therefore, Milford must establish system operating limits for its tie-line in accordance with Reliability Standard FAC-014, Requirement R2.

85. As noted above, Milford's facilities are part of a special protection system. Specifically, this means that Milford's facilities are tripped offline, along with other transmission facilities, in response to certain contingencies, in order to keep the system within stability-related operating limits. In other words, the special protection system keeps the system from exceeding system operating limits or interconnection reliability operating limits, and if it does not function properly, the system will be placed outside of its stability, voltage, or power flow limits, increasing the risk of cascading outages. In this case, the special protection system is designed to trip Milford facilities and other facilities in response to certain contingencies in order to maintain stability of the WECC system. This requires compliance with standards that involve development of system operating limits and interconnection reliability operating limits and coordination of these

limits with other entities, particularly with Reliability Standards FAC-014-2, Requirement R.2 which requires a transmission operator to establish system operating limits consistent with the reliability coordinator's system operating limits methodology. In addition, compliance with Reliability Standard PRC-001, Requirement R6 requires transmission owners to monitor the status of each special protection system in its area. Because Milford is part of a special protection system, it must monitor the system consistent with these Reliability Standards. Consequently, Milford must be responsible for the Reliability Standards noted above to prevent a reliability gap.

c. **Applicable Reliability Standards**

86. Milford contends that, if registered as a transmission owner and operator, it cannot physically comply with all requirements of mandatory Reliability Standards that pertain to a transmission owner or operator. NERC insists that Milford should first be registered as a transmission owner and operator, and afterward it can raise with WECC the appropriate scope of its compliance obligations for the transmission tie-line.

87. As we have explained above, a reliability gap would occur if Milford is not registered as a transmission owner and operator and required to comply with at least certain Reliability Standards. Based on that analysis, we find that, at a minimum, Milford should be required to comply with the following Reliability Standards:

- PRC-001-1, Requirements R2, R2.2, R4, R6;
- PRC-004-1 Requirement R1;
- TOP-004-2, Requirements R6, R6.1, R6.2, R6.3, R6.4;
- PER-003-1, Requirements R1, R1.1, R1.2;
- FAC-003-1, Requirements R1, R2;
- TOP-001, Requirement R1 and
- FAC-014-2, Requirement R2.

88. We recognize that WECC and/or NERC and Milford may disagree as to whether Milford should be required to comply with additional Reliability Standards. To resolve any such disputes, the Commission directs WECC and/or NERC and Milford to negotiate as to what, if any, additional Reliability Standards and Requirements will be applicable to Milford. On the one hand, it may not be necessary for Milford to be subject to any additional Reliability Standards and Requirements that apply to a transmission owner and operator based on its transmission tie-line facilities. On the other hand, Milford should be required to comply with all standards that are necessary to maintain the Bulk-Power System reliability.

89. WECC and/or NERC should negotiate with Milford as to whether Milford should comply with other Reliability Standards and Requirements to maintain Bulk-Power System reliability. We direct NERC to submit, within 90 days from the date of the issuance of this order, a compliance filing identifying the applicable Reliability Standards and Requirements. Milford will have the ability to comment on NERC's filing. In the event that NERC and/or WECC believe Reliability Standards and Requirements beyond those listed above must be satisfied by Milford, and NERC and Milford cannot agree on which Reliability Standards apply, the parties should explain their disagreement and the Commission will resolve the dispute, based on the language of the Reliability Standards and the reliability risks posed by Milford's facilities.

3. Ad Hoc Report on Generator Requirements at the Transmission Interface

90. Numerous commenters raise generic concerns that are beyond the immediate decision before us regarding the registration of Cedar Creek and Milford as transmission owners and operators. For example, many commenters urge the Commission to consider or adopt (or direct NERC to adopt) the recommendations of the GO/TO Report. We decline to address these broader issues in the context of the two registry appeals. However, we recognize that the application of Reliability Standards to generator tie-lines is an ongoing concern and encourage NERC to develop an approach to this matter that satisfies Bulk-Power System reliability concerns and also allows entities to understand upfront the scope of their compliance responsibilities.⁵⁸

The Commission orders:

(A) The Commission hereby denies Cedar Creek's appeal of NERC's registration determination, as discussed in the body of this order.

(B) The Commission hereby denies Milford's appeal of NERC's registration determination, as discussed in the body of this order.

(C) The Commission hereby directs NERC and Cedar Creek to develop and submit for Commission review, as described in the body of this order, a list of transmission owner and transmission operator Reliability Standards and

⁵⁸ In this regard, we note that NERC initiated Reliability Standards Project 2010-07 (Generator Requirements at the Transmission Interface) to generically address matters involving reliability obligations at the interface of the transmission grid.

Requirements that apply to Cedar Creek, based on the factual circumstances underlying this proceeding.

(D) The Commission hereby directs NERC and Milford to develop and submit for Commission review, as described in the body of this order, a list of transmission owner and transmission operator Reliability Standards and Requirements that apply to Milford, based on the factual circumstances underlying this proceeding.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.