123 FERC ¶ 61,173
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;
Suedeen G. Kelly, Marc Spitzer,
Philip D. Moeller, and Jon Wellinghoff.

New Harquahala Generating Company, LLC Docket No. RC08-4-000

ORDER DENYING APPEAL OF ELECTRIC RELIABILITY ORGANIZATION COMPLIANCE REGISTRY DETERMINATION

(Issued May 16, 2008)

1. In this order, the Commission denies an appeal by New Harquahala Generating Company, LLC (Harquahala) challenging a finding by the North American Electric Reliability Corporation (NERC) that Harquahala was properly included on the NERC compliance registry as a transmission owner and transmission operator. Western Electricity Coordinating Council (WECC), a Commission-approved Regional Entity, had registered Harquahala as a transmission owner and transmission operator. Harquahala appealed that decision to NERC, arguing that its transmission facilities did not fall within NERC's registration criteria, and NERC found that WECC properly registered Harquahala as a transmission owner and transmission operator. Harquahala then filed an appeal with the Commission challenging NERC's determination. Based on the facts presented, the Commission finds that NERC has presented adequate support for its determination and affirms NERC's decision.

I. Background

A. Regulatory Background

2. In July 2006, the Commission issued an order certifying NERC as the Electric Reliability Organization (ERO) pursuant to section 215 of the Federal Power Act (FPA).[1] Subsequently, in April 2007, the Commission approved delegation agreements between NERC and eight Regional Entities, including a delegation agreement between NERC and

[1] *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062, *order on reh'g and compliance*, 117 FERC ¶ 61,126 (2006), *order on compliance*, 118 FERC ¶ 61,030, *order on clarification and reh'g*, 119 FERC ¶ 61,046 (2007); 16 U.S.C. § 824o (2000 and Supp. V 2005).

WECC.[2] 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.[3] 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.[4] 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.

B. NERC Registry Criteria

4. NERC defines the bulk-electric system as:

> 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.[5]

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

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

[3] *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).

[4] Order No. 693 at P 92-95. NERC's amended Registry Criteria were approved by the Commission in *North American Electric Reliability Corp.*, 122 FERC ¶ 61,101 (2008).

[5] *Id.* P 51; NERC Glossary of Terms Used in Reliability Standards, May 2007; NERC Registry Criteria, section I.

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
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> 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.[[6]]

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."[7] 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.

C. Description of Harquahala Facilities

8. Harquahala owns and operates a 1,092 MW generating facility located in Northwestern Arizona. Harquahala's generating facility is interconnected to the Hassayampa substation (Hassayampa) through Harquahala's 26 mile, 500 kV sole-use transmission line and a 500 kV switchyard. The Hassayampa and Palo Verde substations serve as a common bus that connects over 10,000 MW to the grid in southwest Arizona. This generation includes the Palo Verde nuclear generating station with a total capacity of 4,050 MW, making it the largest nuclear plant in the country. In addition, an additional 4,100 MW of generation is directly connected to Hassayampa and an additional 2,000 MW of generation located in the immediate vicinity is connected to Hassayampa via the Jojoba substation. This generation hub is critical to the reliability of

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[6] NERC Registry Criteria, section III(d).

[7] NERC Registry Criteria, Notes to Criteria, note 1 (footnote excluded); *see also* NERC Rules of Procedure, Rule 501.1.2.6.

the power grid in the southwest and makes up a large portion of the power needed to serve load in the southwest including Phoenix and Southern California. Palo Verde is also a major trading hub in the Western Interconnection.[8] Salt River Project operates the bus as part of its transmission system and provides services to permit Harquahala to meet its balancing authority obligations, as a generation-only control area.

II. Appeal of NERC Registry Decision

A. NERC Decision

9. In its January 14, 2008 decision (NERC Decision), NERC upheld WECC's registration of Harquahala as a transmission owner and transmission operator.[9] NERC explained that "Harquahala admits that its interconnection facilities are transmission facilities and admits that it owns, operates and controls the 26 miles of transmission facilities that connect its generation facilities with the Hassayampa substation."[10] NERC, therefore, concluded that Harquahala met the NERC Glossary's definitions of transmission owner and transmission operator. Next, NERC held that Harquahala's interconnection facilities are "integrated transmission elements" as described in section III(d)(1) of its Registry Criteria because the interconnection facilities interconnect Harquahala's generating facility to the transmission grid and, thus, "integrate" Harquahala's generating facility with Salt River Project's transmission system.

10. NERC further supported its determination by stating that the Harquahala generating facility was identified as being material to the Bulk-Power System, and that this identification was reflected, by the fact that Harquahala was registered as a generator owner and generator operator and that it is rated at over 1,000 MW. Furthermore, NERC notes that Harquahala is connected to the Salt River Project and Hassayampa, both of which, according to NERC, are material to, and part of, the Bulk-Power System. NERC concludes that Harquahala is "integral" to the Bulk-Power System and that its facilities, operation and maintenance must be coordinated with the Salt River Project facilities, including Hassayampa. NERC has found that Harquahala must be registered as a transmission owner and transmission operator in order to provide for proper coordination between Harquahala and the Salt River Project and the proper operation and maintenance of the interconnection facilities.

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[8] WECC, Regional Assessment of Harquahala Registration Appeal (Oct. 12, 2007) (Regional Assessment), provided in Harquahala's February 4, 2008 filing of its request for appeal of NERC's determination (Appeal) in this proceeding, Attachment C, at 2.

[9] The NERC Decision is provided as Attachment E of Harquahala's Appeal.

[10] NERC Decision at 3.

11. NERC also determined that Harquahala's interconnection facilities have a material impact on the Bulk-Power System because a loss of the interconnection facilities would affect the ability of the Harquahala generating station, which is part of the Bulk-Power System, to put its power on the grid. NERC adopted the WECC Regional Assessment findings that the Hassayampa and Palo Verde substations are material to the Bulk-Power System because 10,000 MW of power interconnects at or near Hassayampa, including the Palo Verde nuclear power plant. WECC states that the Hassayampa-Palo Verde generation hub is critical to the reliability of the power grid, serves significant load centers, and is a major trading hub. NERC concluded that Harquahala is "part and parcel" of the generation hub composed by the Hassayampa, Palo Verde and nearby Jojoba substations and found the interconnection facilities to be "crucial to deliver this power to the transmission grid."[11]

12. NERC found that a gap in reliability would be created if Harquahala is not registered as a transmission owner and transmission operator and specifies Reliability Standards that would not apply if Harquahala is not registered as a transmission operator and transmission owner. NERC stated that among other things, a transmission owner and transmission operator must ensure that its operators are certified for transmission system operations[12] and provide operating personnel with the authority to implement real-time actions to ensure the reliability of the Bulk-Power System.[13] In addition, NERC stated that, as a transmission operator and transmission owner, Harquahala is responsible for compliance with several "high risk" Reliability Standard requirements that do not otherwise apply to Harquahala under its other registration functions (generator owner, generator operator and balancing authority). These requirements include administration of a vegetation management program;[14] taking corrective action if a protective relay or equipment failure reduces system reliability; coordinating protection systems with neighboring generators, transmission operators, and balancing authorities;[15] analyzing its transmission protection system misoperations and developing and implementing a

[11] NERC Decision at 4-5.

[12] NERC Decision at 5, *citing* Reliability Standard PER-003-0, Requirement R1 (Operating Personnel Credentials).

[13] *Id.*, *citing* Reliability Standard PER-001-0, Requirement R1 (Operating Personnel Responsibility and Authority).

[14] *Id.*, *citing* Reliability Standard FAC-003-1, Requirements R1 and R2 (Vegetation Management Program).

[15] *Id.*, *citing* Reliability Standard PRC-001-1, Requirements R2.2 and R4 (System Protection Coordination).

corrective action plan to avoid future misoperations of a similar nature;[16] developing procedures for monitoring voltage levels and MVAr flows within its individual area and with the areas of neighboring transmission operators;[17] and exercising the responsibility and clear decision-making authority to take actions needed to ensure the reliability of its area and to exercise specific authority to alleviate operating emergencies.[18] NERC also stated that Harquahala is subject, as a transmission owner and transmission operator, to the requirement that it develop, maintain and implement formal policies and procedures that address the execution and coordination of activities that impact intra- and inter-regional reliability, including equipment ratings, monitoring and controlling voltage levels and real and reactive power flows, switching transmission elements and planned outages of transmission elements.[19] NERC continued, "from a reliability perspective and from the standpoint of section 215 of the FPA, this transmission line is integrated with other elements of the [Bulk-Power System] requiring coordination of operation with those other elements."[20]

13. NERC noted that Harquahala's generator registration status is based on its ownership of generation facilities, while its transmission owner and transmission operator registration status are based on its ownership and operation of transmission facilities. NERC concluded that it must register Harquahala as a transmission owner and transmission operator to ensure that Harquahala is held accountable for the specific requirements and Reliability Standards applicable to transmission owners and transmission operators, so that adequate protection coordination, operation and maintenance of the 26-mile transmission line is assured.

14. The NERC Decision cited a 2003 event in support of its description of the reliability impact that can result from switching errors at this critical location. The switching error, which involved a transmission line connected in the bay adjacent to Harquahala, caused a three-phase fault at Hassayampa.[21] The loss of generation included

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[16] *Id.* at 6, *citing* Reliability Standard PRC-004-1, Requirement R1 (Analysis and Mitigation of Transmission and Generation Protection System Misoperations).

[17] *Id.*, *citing* Reliability Standard VAR-001-1, Requirement R1 (Voltage and Reactive Control).

[18] *Id.*, *citing* Reliability Standard TOP-001-1, Requirement R1 (Reliability Responsibilities and Authorities).

[19] *Id.*, *citing* Reliability Standard TOP-004-1, Requirement R6.

[20] *Id.* at 8.

[21] *See* NERC Decision at 10.

a Palo Verde nuclear unit. NERC states that coordinated protection is necessary to ensure reliable operation of these 500 kV lines into Hassayampa. It also claims that properly trained and NERC-certified transmission operators are critical to reliable operation. According to NERC, this event points out the need to follow communication procedures during bulk power switching operations and the need for adequate knowledge and training of emergency procedures. To the extent that Harquahala is only registered as a generation owner or generation operator, it is not required to have staff that is trained and NERC-certified to operate these facilities in an emergency, nor is it required to coordinate protection for its transmission line and switchyard with other transmission operators and the Regional Entity.

15. NERC disputed Harquahala's claim that, as a transmission owner and transmission operator, it would be required to issue reliability directives to itself rather than to receive them from Salt River Project,[22] and asserted that this would not in fact obviate Harquahala's obligation also to follow directives from Salt River Project. NERC stated that Harquahala recognized that if there is a drop in voltage on the transmission line, as a generation operator, Harquahala would be required to follow directives of Salt River Project or the appropriate reliability coordinator.[23]

16. In addition, NERC stated that Harquahala "owns and operates equipment in its substation capable of switching its 500 kV transmission line and should have certified operators that operate this equipment connecting the generation and associated transmission line to the remainder of the [Bulk-Power System] in the area."[24] NERC stated that Harquahala could demonstrate that specific requirements of the transmission owner and transmission operator Reliability Standards do not apply to its circumstances and that it should not be subject to such requirements. NERC stated that it could work with Harquahala and WECC to develop a list of applicable requirements and Reliability Standards.

B. Harquahala's Appeal to the Commission

17. On February 4, 2008, Harquahala filed its request for appeal of NERC's determination (Appeal). Relying on language in Order No. 693, Harquahala raises four grounds for appeal. First it argues that its interconnection facilities are not "integrated transmission elements" as required by NERC's Registry Criteria. Second, it argues that NERC has not demonstrated that Harquahala's facilities will have a material impact on

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[22] *Id.*

[23] NERC Decision at 6 (citing Harquahala response to WECC Regional Assessment).

[24] *Id.* at 11.

the Bulk-Power System; thus, registration of Harquahala as a transmission owner or transmission operator is unwarranted. Third, it argues that NERC failed to demonstrate a reliability gap in the event that Harquahala is not registered as a transmission owner or transmission operator. Finally, it argues that registration of Harquahala as a transmission owner and transmission operator would result in inconsistent registrations both within WECC and between WECC and other regions.

18. Harquahala asserts that it is one of the few generators to be registered as a transmission owner or transmission operator with respect to its interconnection facilities. Harquahala argues that NERC's denial of its original appeal to NERC is not grounded in reasoned decision making and that NERC failed to respond to Harquahala's arguments advanced in the NERC appeal proceeding. Harquahala argues that NERC, as a quasi-regulatory body, is subject to the same standards of review that typically apply to agency decision making. Harquahala argues that NERC's decision fails to meet this standard of review because NERC failed to respond meaningfully to Harquahala's positions and failed to support its conclusions. Harquahala concludes that NERC's decision is arbitrary and capricious and lacks reasoned decision making.

1. Integrated Transmission Facility

19. Harquahala argues that NERC erred when it found the Harquahala interconnection facilities to be integrated transmission elements under the Registry Criteria.[25] Harquahala argues that, as a sole-use facility, its generator tie line is not an integrated transmission element. Harquahala argues that NERC should have relied on the traditional meaning of "integrated" developed under Commission precedent, which, according to Harquahala, is used to describe facilities that are "looped" with other lines to provide parallel path flows on an integrated network of transmission facilities. Harquahala objects to NERC's definition equating integrated with interconnected, citing the Commission's generator interconnection policies.[26]

[25] Harquahala states that, while it does not deny that its interconnection facilities are part of the Bulk-Power System, that fact does not resolve whether the facilities should be subject to Reliability Standards applicable to transmission owners and transmission operators as an independent transmission element. Harquahala Appeal at 10.

[26] *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, *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).

20. Harquahala argues that NERC's departure from the meaning of "integrated" used in the generator interconnection context is not adequately explained. Harquahala claims that the Commission's interconnection policies are relevant because they are based on engineering and operational factors to distinguish network facilities, i.e., integrated, from non-network facilities. Harquahala argues that NERC failed to support registration, based on the fact that the interconnection facilities connect two Bulk-Power System elements, because, Harquahala states, that fact "leads only to the conclusion that the interconnection facilities also are part of the [Bulk-Power System], a fact that Harquahala does not deny."[27]

21. Harquahala also argues that NERC failed to address arguments made in its appeal. There, Harquahala argued that the transmission owner and transmission operator requirements were not drafted to apply to radial generator tie lines and, therefore, its facilities are not transmission facilities under the Reliability Standards. In addition, Harquahala provides an analysis that it claims demonstrates that the transmission owner and transmission operator Reliability Standard requirements do not apply because they are either clearly intended to apply to integrated facilities, not to generator interconnection facilities, or are duplicative of generator owner or generator operator Reliability Standards requirements. For instance, Harquahala argues that it is inappropriate for it to meet the transmission owner/operator requirements that involve: giving direction to other entities during emergencies; coordinating activities of other entities; directing activities of interconnected entities; or load shedding, as it has no load. Moreover, for some of these requirements, Harquhala suggests it will be required to give direction to itself, as transmission operator to generator operator.

22. Harquahala states that it expects the cost of compliance with transmission operator training requirements to exceed $1 million initially, with similar annual costs thereafter, and argues that such costs are unnecessary and would provide limited reliability benefits, since its operators' actions would ultimately involve activities already governed by the generator owner and generator operator requirements. Harquahala claims that NERC has failed to respond to these arguments,[28] and argues that NERC's offer to determine applicable requirements after the fact is not appropriate.

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[27] Harquahala Appeal at 30.

[28] Harquahala provided a requirement-by-requirement analysis of each transmission owner and transmission operator Reliability Standard requirement in its response to the WECC Regional Assessment. The response, including this analysis, is included in the Harquahala Appeal, Attachment D.

2. Materiality to Bulk-Power System Reliability

23. Harquahala argues that NERC failed to demonstrate that the Harquahala interconnection facilities are material to the operation of the Bulk-Power System, a separate basis for inclusion of a transmission owner/operator on the NERC registry.[29] Harquahala claims that NERC did not explicitly rely on the materiality discussion in its registration decision, and, in any event, failed to support registration on a materiality basis.

24. Harquahala claims that the only consequence of failure on the interconnection facilities would be the inability to put Harquahala's power on the grid and execute sales. According to Harquahala, the generator operator and generator owner Reliability Standards adequately ensure that an operating generating facility operates reliably; i.e., they ensure that protective devices and relays protect the grid during outages at the generating unit. Harquahala argues that: (1) its power output is not dedicated to load; (2) its operation is dependent on market conditions; and (3) it is not a reliability must-run unit as determined by operators of the transmission network to which it is interconnected, and thus is not counted on for grid support services. Additionally, Harquahala notes that it is a member of a reserve sharing group pursuant to its balancing authority responsibilities and that an unexpected outage on its facilities would be compensated for by the activation of shared reserves.

25. Harquahala also states that "pursuant to FPA section 215(a)(1)(B), the only electric energy that is relevant to the [Bulk-Power System] is 'electric energy from generation facilities needed to maintain transmission system reliability.'" Harquahala states that such support may be provided in the form of black-start service or voltage support when running, and notes that it is not a black-start unit and is not required to run to provide voltage support.

26. Harquahala objects to NERC's position that Harquahala is material by association with Hassayampa and the Palo Verde nuclear facility, because there is nothing unique about Harquahala's delivery of power to the Hassayampa hub when compared to any other generator interconnection facility.

27. Harquahala also questions NERC's reliance on WECC's description (in confidential materials) of the impact of a 2003 switching error at Hassayampa as evidence that its interconnection facilities are material. Harquahala challenges NERC's position that a similar event could occur on interconnection facilities near the switchyard and cause similar impacts. It bases this view on a recent lightning strike where no impacts occurred. It adds that neither NERC nor WECC explained which transmission

[29] Harquahala Appeal at 44 (*citing* Registry Criteria at 8 n.1, and NERC Rules of Procedure, section 501.1.2.6).

owner and transmission operator Reliability Standard requirements would prevent such an event. Harquahala argues that it does not need to be certified as a transmission owner and transmission operator because the applicable Reliability Standards that govern relays and protection systems, such as by requiring relay maintenance and testing, already apply to both transmission owners and operators and generation owners and operators.[30] Harquahala argues that only the proper operation of relays and protection systems (not maintenance and testing) will prevent relay incidents of the type described by WECC, and that application of the exact same Reliability Standards applicable to relays to Harquahala as transmission owner/operator and generator owner/operator will provide no additional reliability benefits.

28. Harquahala claims that NERC failed to respond in a meaningful way to its counterexample of a ground fault caused by lightning on its system that, it claims, failed to cause any transmission-related reliability concerns. According to Harquahala, in that 2006 event, on the highest peak load day for the Palo Verde transmission system, a full three-phase ground was experienced on the interconnection facilities during a lightning storm, but failed to cause an adverse impact on the Bulk-Power System.[31] Harquahala questions whether NERC's example, based on the potential impact of switching errors at Hassayampa, demonstrates the potential for a similar impact from errors on Harquahala's interconnection facilities.

3. Reliability Gap

29. Harquahala argues that NERC has not identified a gap in reliability that would exist if Harquahala is not registered as a transmission owner and transmission operator. Harquahala argues that NERC's reasoning is circular, because it assumes that the transmission owner and transmission operator Reliability Standards apply. In particular, Harquahala repeats its objection to the requirement that it hire, train and retain a corps of certified transmission operators, because it asserts that the duties to be performed by such personnel are more appropriately performed in this instance by Salt River Project personnel. Harquahala states that NERC "cannot have it both ways," by arguing that there is a gap because certain requirements apply, but elsewhere arguing that the question of what Reliability Standards apply is "irrelevant to a registration determination."[32]

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[30] Harquahala Appeal at 51-52 (*citing* Reliability Standards PRC-001-1, PRC-004-1, and PRC-015-0 through PRC-0018-1).

[31] Harquahala Appeal at 53.

[32] Harquahala Appeal at 54 (*citing* NERC Decision at 12, WECC Regional Assessment at 5).

30. Furthermore, Harquahala argues that having it act as a transmission owner with respect to certain requirements could degrade reliability because it would be required to give instructions to itself as the interconnected generator, and that such authority was intended to rest with operators of interconnected transmission facilities. Harquahala argues that such a result would either interfere with established chains of authority or would duplicate the coverage of Reliability Standards, which is inconsistent with NERC's Rules of Procedure.[33]

31. Harquahala disputes the assertion in the WECC Regional Assessment that it is critical that Harquahala be registered as a transmission owner to ensure facility ratings and relay maintenance programs are properly implemented because generator facility ratings are addressed in Reliability Standards FAC-008-1, Requirement R1 and FAC-009-1, Requirement R1 (requiring a generator owner to develop a facility ratings methodology and rate its facilities) and relay maintenance is addressed in Reliability Standards PRC-001-1, Requirement R2 and PRC-004-1, Requirements R2 and R3 (requiring generator owners and generator operators to notify responsible entities of relay or equipment failures and misoperations and take corrective action). Harquahala concludes that to the extent that NERC can identify a reliability gap, consistent with reasoned decision-making, NERC should develop a consistent, uniform approach through revisions to the generator owner and generator operator requirements.

4. Regional Consistency

32. According to Harquahala, few generators are registered as a transmission owner or transmission operator based on their connection to the Bulk-Power System through tie line facilities. Harquahala cites WECC correspondence to the effect that WECC intends to register similarly situated generators after the Harquahala dispute is resolved, as demonstrating that it is being unfairly singled out as a test case. Harquahala argues that the disparate treatment conflicts with NERC rules that require NERC to ensure "consistency . . . and comparability of outcomes within each regional entity's . . . registration program and among all of the programs."[34] Harquahala disputes NERC's reliance on the Texas Regional Entity registration decisions as demonstrating consistency, contending that the Texas decisions constitute an exception, not the rule.

33. Harquahala also objects to what it calls NERC's case-by-case approach, because, according to Harquahala, it appears to allow a Regional Entity to follow its preference without coordinating with other regions. Harquahala states that the few entities selected for registration are unfairly exposed to immediate compliance with transmission owner and transmission operator requirements and potential penalties, and could be forced to

[33] Harquahala Appeal at 56 (*citing* NERC Rules of Procedure, section 501.1.4).

[34] *Id*.

spend hundreds of thousands of dollars to come into compliance while its registration status is uncertain. Therefore, Harquahala concludes that it is patently discriminatory to require a few generator owners to comply with the transmission owner and transmission operator Reliability Standards and face penalties.

C. Interventions and Comments

34. Timely interventions and comments were filed by: NERC; WECC; American Transmission Company LLC (ATC LLC); California Independent System Operator (CAISO); the Cogeneration Association of California (California Cogeneration); Calpine Corporation (Calpine); Direct Energy Services, LLC; Dynegy Inc. (Dynegy); Electricity Consumers Resource Council (ELCON); Electric Power Supply Association (EPSA); Horizon Wind Energy LLC, Invenergy Investment; LS Power Associates, L.P.; Mesquite Power, LLC (Mesquite); Pacific Gas and Electric Company (PG&E); the PPL Companies;[35] Reliant Energy, Inc. (Reliant); Tyr Energy, LLC and Starwood Power-Midway, LLC; and Union Carbide Corporation. Timely interventions were filed by: Constellation Energy Commodities Group, Inc. and Constellation Power Source Generation, Inc.; Edison Mission Energy and Edison Mission Marketing & Trading, Inc.; PPM Energy, Inc.; the PSEG Companies;[36] and TransAlta Centralia Generation LLC (TransAlta).[37] Cedar Creek Wind Energy (Cedar Creek) filed a motion for leave to intervene out of time and comments.

35. On March 20, 2008, Harquahala, NERC and Dynegy filed motions for leave to answer and answers responding to positions made in the comments.

36. NERC intervened to support its registration determination. WECC and PG&E support NERC's registration of Harquahala as a transmission owner and transmission

[35] For purposes of its participation in this proceeding, the PPL Companies include those subsidiaries of PPL Corporation that are registered as generator owners and generator operators: Lower Mount Bethel Energy, LLC; PPL Brunner Island, LLC; PPL Holtwood, LLC; PPL Martins Creek, LLC; PPL Montana, LLC; PPL Montour, LLC; PPL Susquehanna, LLC; PPL University Park, LLC; and PPL Wallingford Energy, LLC.

[36] The PSEG Companies consist of PSEG Power LLC and PSEG Global L.L.C., each of which is a wholly-owned, direct and/or indirect subsidiary of Public Service Enterprise Group Inc.

[37] TransAlta also filed a motion requesting expedited consideration.

operator. The remaining commenters oppose the NERC registry determination and support the arguments made in Harquahala's appeal.[38]

37. Several commenters argue that NERC failed to adequately support its interpretation of the term "integrated," based on industry definitions or technical analysis.[39] Some commenters support the use of the definition of "integrated facilities" based on the Commission's existing precedent.[40] Several commenters object to what they characterize as an attempt to re-write the registry criteria after the fact, or to determine what requirements apply, and argue that NERC should develop guidelines indicating which entities are subject to registration and what standards would apply, through the registry or stakeholder processes.[41] Dynegy characterizes the NERC registry determination as applying supplemental registry criteria beyond the scope of the Registry Criteria. CAISO objects to what it characterizes as NERC's proposal to register an entity and then permit the entity to petition for exemption from certain requirements.

38. EPSA and ELCON support Harquahala's position that the unavailability of its generator due to outage or outage of the transmission facilities is a commercial matter and does not have a material impact on the grid reliability. EPSA views NERC's efforts to obtain reliable service from the Harquahala interconnection facilities, and thus the generator itself, as an improper attempt to avoid the restriction in FPA section 215(i)(2) stating that NERC is not authorized "to set and enforce compliance with standards for adequacy or safety of electric facilities or services." Dynegy argues that NERC's determination that Harquahala is a facility that is material to the Bulk-Power System is inconsistent with WECC's exclusion of the generator from its key facility list. Calpine distinguishes the transmission owner and transmission operator registration proceedings cited by NERC, based on ownership and operation of a tie-line, because the generator in question was included on the Regional Entities' critical facility list.[42]

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[38] To the extent that these comments repeat arguments already raised in the Harquahala Appeal, and do not reflect new and significant positions, a separate summary is not provided.

[39] *See* ATC LLC and Dynegy Comments.

[40] *See* California Cogeneration, Calpine, EPSA, Dynegy, PPL Companies, Mesquite and Reliant Comments.

[41] *See*, *e.g.*, California Cogeneration, CAISO, ELCON and EPSA Comments.

[42] *See* Calpine Comments at 6 and n.4 (citing the Kiowa Power Partners, LLC (issued September 25, 2007) and Western Farmers Electric Cooperative (issued September 2, 2007) NERC registry proceedings for facilities located in Texas).

39. CAISO and Dynegy are concerned that the registration of Harquahala as a transmission owner in WECC has carry-over implications for other generating entities in other regions. While neither raises specific issues with respect to Harquahala, they are concerned about the possibility that other generating entities in other regions (*e.g.*, California) will also be registered as transmission owners or transmission operators. CAISO is concerned that if that occurs, it will have difficulties complying with the information sharing prohibitions in section 20 of the CAISO Tariff and its Information Availability Policy that governs the sharing of confidential (transmission) information. Likewise, CAISO references several provisions of the Reliability Standards that require it to provide certain information to transmission owners that it believes are not consistent with these information sharing prohibitions.

40. In NERC's answer responding to comments filed in this proceeding (Answer),[43] NERC argues that "[t]he [Harquahala] 26-mile radial 500 kV transmission line [connected] to a switching station adjacent to the Palo Verde nuclear plant can directly impact the bulk power system. If the owner of that line (or a third party on its behalf) is not registered as a [transmission owner or transmission operator], then the transmission line protection system at either end of that line is not subject to either Standard PRC-001 – System Protection Coordination or standard PRC-005 – Transmission and Generation Protection System Maintenance and Testing."[44] NERC emphasizes that no entity would be required to comply with the requirements of PRC-001 and PRC-005 for the 26-mile 500 kV line if Harquahala is not considered the transmission operator for that line and therefore required to perform the necessary coordination. NERC argues that compliance with those Reliability Standards with respect to Harquahala's 500 kV transmission facilities is critical to the reliability of the Bulk-Power System.[45]

41. In the Answer, NERC argues that a protection system that is not maintained or coordinated can and does cause disturbances beyond the boundaries of the line on which the system is located whenever a breaker or protection system failure requires the remote clearing of a fault. NERC further explains that, if the protection systems are not maintained or coordinated with the rest of the system, the problem is exacerbated. NERC cites an event on June 14, 2004 in which a single-line-to-ground fault on a 230 kV transmission line in the same vicinity as Harquahala, coupled with a protection system failure that caused the breaker not to open, led to a delayed, remote clearing of the fault. That event caused all three of the Palo Verde nuclear units to trip, along with other

[43] NERC, Answer to Comments Regarding the Harquahala Appeal, Docket No. RC08-4-000, at 10 (Mar. 20, 2008).

[44] *Id.*

[45] *Id.*

generation, totaling about 5,000 MW.[46] The NERC Answer cited Order No. 693, in which the Commission expressly noted the importance of having competent transmission personnel, stating that it "expects the entity registered as the transmission operator to ensure that these personnel are competent for the tasks that they perform."[47]

42. The Harquahala and Dynegy answers largely repeat the positions raised in their prior pleadings in this proceeding.

III. Discussion

A. Procedural Matters

43. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure,[48] 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,[49] the Commission will grant Cedar Creek's late-filed motion to intervene given its interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay. The Commission's Rules generally prohibit an answer to a protest unless otherwise ordered by the decisional authority.[50] We will accept the parties' answers, because they have provided information that assisted us in our decision-making process.

B. Commission Determination

44. The Commission denies Harquahala's appeal and affirms the registration of Harquahala as a transmission owner and transmission operator by NERC and WECC. We conclude that NERC and WECC adequately supported the registration of Harquahala as a transmission owner and transmission operator pursuant to NERC's plenary authority to register entities that own or operate assets that are "material to the reliability of the bulk power system."[51] The Commission therefore affirms NERC and WECC's findings,

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[46] *Id.*

[47] *Id.* at 12 (*citing* Order No. 693 at P 1344 n.368).

[48] 18 C.F.R. § 385.214 (2007).

[49] 18 C.F.R. § 385.214(d).

[50] *See, e.g.*, Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2).

[51] NERC Registry Criteria, Notes to Criteria, note 1 (footnote excluded); see also NERC Rules of Procedure, Rule 501.1.2.6.

based on the specific facts of this case, that the reliable operation and maintenance of the interconnection facilities that connect the Harquahala generator to Hassayampa are necessary to the reliability of the Bulk-Power System.[52] In making this finding, we need not address the issues raised regarding the interpretation of Section III(d)(1) of NERC's Registry Criteria and the definition of an "integrated transmission element."

1. Importance of Harquahala Transmission Facilities

45. The NERC Decision describes the Harquahala interconnection facilities as being located in a critical position to affect Bulk-Power System reliability by virtue of their interconnection with Hassayampa, which WECC defines as critical to the reliability to the Bulk-Power System.

46. Harquahala owns and operates a 1,092 MW generator, which is interconnected to the Salt River Project transmission network at Hassayampa through a 26-mile, 500 kV sole-use tie line and a 500 kV switchyard.[53] NERC highlights the importance of this interconnection, and describes Hassayampa as being a common bus with the substation that connects the 4,000 MW Palo Verde nuclear power plant; these facilities are operated by Salt River Project as part of its transmission system.[54] According to NERC and WECC, 10,000 MW of generation connects directly or indirectly to Hassayampa, and the substation facilities deliver the Palo Verde output to two of five of the nuclear facility's transmission paths to San Diego Gas and Electric Company, Arizona Public Service and Southern California Edison.[55] NERC endorses WECC's assessment that "this generation hub is critical to the reliability of the power grid in the southwest and makes up a large portion of the power needed to serve load in the southwest, including Phoenix and Southern California."[56] NERC concludes, "Harquahala's generation is part and parcel of this generation hub and Harquahala's transmission facilities are crucial to deliver this power to the transmission grid."[57]

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[52] As noted above, Harquahala does not contest that its interconnection facilities are part of the Bulk-Power System but rather, whether the facilities meet the thresholds set forth in the NERC Registry Criteria.

[53] NERC Decision at 5.

[54] *Id.*

[55] *Id.* (citing WECC Regional Assessment at 2, provided in Harquahala Appeal, Attachment C).

[56] *Id.*

[57] *Id.*

47. Descriptions provided in the materials filed in this proceeding demonstrate that the configuration of Harquahala's facilities create the potential for an event on the Harquahala 500 kV tie line or at the 500 kV switchyard to affect the operation of Hassayampa, the transmission network, the Palo Verde facility or the other interconnected facilities. Similarly configured generating facilities with transmission lines connected to Hassayampa have been involved in events that resulted in not only the loss of the generator tied to the faulted transmission line but the additional loss of generators connected by other transmission lines to Hassayampa, including the loss of one or more Palo Verde nuclear units.

48. We disagree with Harquahala that the only effect of a severe fault on the Harquahala transmission line would be loss of its own generation, i.e., that it would have no impact on Hassayampa or beyond. NERC has correctly highlighted a potential reliability gap that could result if Harquahala is not registered as a transmission owner and transmission operator. The size and importance of Hassayampa, to which Harquahala is connected, necessitates careful consideration of the adverse impact that a severe fault involving any of the connected transmission elements could have on this critical infrastructure hub.

49. NERC cites an event that highlights the reliability impact which can result from switching errors at this critical location. A switching error that occurred while energizing a transmission line serving as a generator interconnection tie line caused a three-phase fault at Hassayampa. We agree with NERC that coordinated protection is necessary to ensure the reliable operation of these 500 kV lines into Hassayampa by properly trained and NERC-certified transmission operators. Communication procedures during bulk power switching operations and knowledge and training in emergency procedures are both critical functions that are assured by Reliability Standards applicable to transmission owners and transmission operators. If Harquahala is only registered as a generator owner and generator operator, and not a transmission owner and transmission operator, it will not be required to have its staff trained and NERC-certified to operate these facilities in an emergency or to coordinate protection for its transmission line and switchyard with other transmission operators and the Regional Entity. A similar disturbance could occur involving Hassayampa and the Harquahala generator tie line or any of the 500 kV transmission lines similarly connected to Hassayampa.

50. In its pleadings in this proceeding, NERC provides evidence of a second fault incident[58] that bolsters its conclusion that fault incidents on nearby facilities affect grid reliability in this area and highlight the need for proper protection, communication during emergencies, and adherence to explicit communication standards during switching operations. A single-line-to-ground fault occurred on a 230 kV transmission line in the same vicinity as Hassayampa. This, coupled with a protection system failure, caused the

[58] NERC Answer at 10-11.

breaker not to open requiring secondary protection to operate. This greatly delayed clearing of the fault from the system, which resulted in the three Palo Verde nuclear units being forced off line.[59] NERC points out that Palo Verde and Hassayampa are located approximately one and one half miles from each other and are connected by three 500 kV lines. Electrically they function as one long 500 kV bus.[60] Adequate transmission system protection is the responsibility of transmission owners and transmission operators, as is alarm interpretation and communication among operators, especially during emergencies.

51. A switching error or a failure of a transmission element interconnecting the Harquahala transmission line to Hassayampa could cause a severe fault resulting in high fault current and low voltage. If the fault is not detected and cleared — in fractions of a second — high fault current and low voltage could cause the Palo Verde Nuclear units to trip by operation of the nuclear generator's under-voltage protection relays that trip the unit off line to protect the equipment from damage. Harquahala's protection system must be coordinated with the transmission owners, transmission operators and the regional coordinator in the Hassayampa control area to prevent a situation where primary protection is inadequate and remote relays must operate, thereby delaying clearing time for a fault. Harquahala would only be required to coordinate its protection system with these other entities if it is subject to the Reliability Standards applicable to transmission owners and transmission operators. Other 500 kV lines connected to Hassayampa substation could be affected by such a severe fault and either trip off line, if properly protected, or add to the fault and precipitate a cascading event, if not adequately protected.

2. Reliability Gap

52. Based on the record in the 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 Harquahala's tie-line, there is a reliability risk that would affect a significant portion of the Bulk-Power System in WECC. Specifically, if Harquahala is not required to comply with at least some of the Reliability Standards applicable to a transmission owner and operator, there will be reliability gaps in coordination of protection systems, (System Protection Coordination PRC-001-1, R2, R2.2, R4), operations (*e.g.*, Operating Personnel Credentials, PER-003-1, R1, R1.1, R1.2), maintenance (Transmission Vegetation Management Program, FAC-003-1, R1, R2), restoration for the transmission line and the associated switching facilities, and measurement devices from the Harquahala generating station to Hassayampa (Reliability Responsibilities and Authorities, TOP-001-1, R1).

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[59] *Id.*

[60] NERC Decision at 1 n.3.

53. Harquahala could be involved in an event that is triggered at Harquahala's 500 kV switchyard, 26 mile 500 kV transmission line, or at its connection to Hassayampa. There is a risk of a significant adverse impact on reliability beyond Hassayampa if the protection relays or protection systems on the Harquahala line are not coordinated with those on the transmission network facilities in the area.[61]

54. Harquahala claims that an outage of its facilities would not have an impact beyond curtailing its ability to deliver its generation power to the grid. However, the facts presented show that operation of the interconnection facilities could affect the operation of the transmission network beyond Harquahala's connection with that network at Hassayampa. The potential impacts include disruption of service at Hassayampa and loss of the substantial generation supply that runs through transmission paths associated with that substation, and loss of the generation output of the Palo Verde nuclear power plant, the nation's largest nuclear power plant. Based on this information, the Commission finds that a reliability gap would exist if the Harquahala interconnection facilities, which are necessary for the reliable operation of the Bulk-Power System, are not subject to Reliability Standards applicable to transmission owners and transmission operators.

55. We also reject Harquahala's claim that it is being unduly discriminated against due to its status as one of the initial entities to be registered as a transmission owner and transmission operator on the basis of its ownership and operation of generator tie lines. The Commission examines each compliance registry decision on the merits of the particular case. Here, the facts demonstrate that NERC and WECC were justified in requiring this tie-line owner and operator to be registered even though other tie-line owners and operators are not. Our decision to affirm the registration decision of WECC and NERC is not a finding that all tie-line owners and operators should be registered as transmission owners and operators, and thus Harquahala is not a "test case."[62]

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[61] *See* System Protection Coordination, PRC-001-1, Requirements R2, R2.2, R4; Analysis and Mitigation of Transmission and Generation Protection System Misoperations, PRC-004-1 Requirement R1; and Transmission Operations, TOP-004-1, Requirements R6, R6.1, R6.2, R6.3, R6.4, R6.5, R6.6.

[62] Likewise, we reject Harquahala's claims of inconsistency among Regional Entities in the registration process. In *Direct Energy Services, LLC*, 121 FERC ¶ 61,274 at P 41 (2007) (*Direct Energy*), the Commission reversed NERC's determination that three retail power marketers should be registered as load-serving entities and faulted the NERC decision because the record indicated that some Regional Entities had considered the same matter and reached an opposite conclusion. Unlike *Direct Energy*, the record in the immediate proceeding does not indicate disparate findings among Regional Entities.

3. Compliance

56. As mentioned above, Harquahala is concerned that it physically is unable to comply with all Reliability Standards applicable to transmission owners and transmission operators. NERC responded that this is a compliance issue that can be addressed after registration. It also committed to work with Harquahala and WECC to develop a list of applicable requirements within the Reliability Standards applicable to transmission owners and transmission operators. EPSA and others have urged the Commission to provide for a grace period to afford an entity required to comply with a set of Reliability Standards for the first time sufficient time to comply, particularly when the set of applicable Reliability Standards has not yet been identified.

57. To resolve disputes about the applicability of the transmission owner and transmission operator Reliability Standards, the Commission directs NERC and Harquahala to negotiate regarding the Reliability Standards and Requirements that will be applicable to Harquahala. We direct NERC to submit, within 60 days from the date of the issuance of this order, a compliance filing identifying the applicable Requirements. Harquahala will have the ability to comment on NERC's filing. In the event that NERC and Harquahala 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 Harquahala's facilities.

4. Information Sharing Concerns

58. While CAISO and Dynegy express concerns about the implications of registering Harquahala as a transmission owner vis-à-vis registering generating entities in other regions as transmission owners, neither identified specific concerns about the inappropriate sharing of transmission information with respect to Harquahala to support their arguments that Harquahala should not be registered as a transmission owner. Furthermore, NERC and Harquahala have not completed their review of the Reliability Standards to determine whether the Reliability Standards that require distribution of non-public information to transmission owners apply to Harquahala's circumstances. Moreover, as the Commission said in the recently issued Notice of Proposed Rulemaking on the Standards of Conduct, "the first order of business on the part of a transmission provider [is] to ensure reliability of operations."[63] In fact, the Commission proposed an exception to the prohibitions against information sharing in the Standards of Conduct, referencing some of the same Reliability Standards identified by the CAISO, to permit

[63] *See Standards of Conduct for Transmission Providers*, Notice of Proposed Rulemaking, 72 Fed. Reg. 3,958 (Jan. 29, 2007), FERC Stats. & Regs. ¶ 32,611 (2007); Notice of Proposed Rulemaking, 73 Fed. Reg. 16,228 (Mar. 27, 2008), FERC Stats. & Regs. ¶ 32,630, at P 33 (2008).

the exchange of information necessary to maintain or restore operation of the transmission system.[64] In addition, the Commission notes that the decision here is based on the reliability oversight provisions under section 215 of the FPA and may not be dispositive of whether registration as a transmission owner under section 215 of the FPA would subject an entity to particular restrictions on the sharing of transmission information that are based on other FPA provisions. Finally, to the extent that CAISO actually encounters the difficulties identified in its comments (they are described as a hypothetical future circumstance), it can seek specific guidance from the Commission through a No-Action Letter or request an exemption (full or partial) from the Standards of Conduct under section 358.1(d).

59. Accordingly, as discussed above, the Commission finds that NERC has provided adequate support for its registry determinations regarding Harquahala. This finding is based on the factual circumstances and engineering characteristics of Harquahala's interconnection to the Bulk-Power System at the Hassayampa substation.

The Commission orders:

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

(B) The Commission hereby finds that NERC has presented adequate support for its determination and affirms NERC's decision allowing WECC to register Harquahala as a transmission owner and transmission operator, as discussed in the body of this order.

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

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

[64] *See* Proposed section 358.7(h).