

136 FERC ¶ 61,004  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;  
Marc Spitzer, Philip D. Moeller,  
John R. Norris, and Cheryl A. LaFleur.

Southwest Power Pool, Inc.

Docket No. ER11-3498-000

ORDER ACCEPTING UNEXECUTED GENERATOR  
INTERCONNECTION AGREEMENT

(Issued July 1, 2011)

1. On May 2, 2011, under section 205 of the Federal Power Act (FPA),<sup>1</sup> Southwest Power Pool, Inc. (SPP) submitted for filing an unexecuted generator interconnection agreement (GIA) among SPP as transmission provider, Western Farmers Electric Cooperative, Inc. (Western Farmers) as transmission owner, and WindFarm 66 LLC (WindFarm 66) as interconnection customer. In this order, we accept the GIA for filing, effective April 18, 2011, as discussed below.

**I. Background**

2. SPP is a Commission-approved regional transmission organization (RTO). As such, SPP administers transmission service pursuant to its open access transmission tariff (SPP Tariff) over portions of Arkansas, Kansas, Louisiana, Missouri, Nebraska, New Mexico, Oklahoma, and Texas. SPP currently has 56 members and serves more than five million customers in a 370,000 square mile area.

3. SPP states that the GIA will facilitate the interconnection of WindFarm 66's 150 MW wind generating facility to Western Farmers' transmission system.<sup>2</sup> SPP continues that on April 4, 2011, SPP tendered the GIA to WindFarm 66 for execution. WindFarm 66 declined to execute the GIA. According to SPP, WindFarm 66 objects to the GIA's inclusion of the obligation to install reactive power equipment to meet a certain power

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<sup>1</sup> 16 U.S.C. § 824d (2006).

<sup>2</sup> SPP Filing Letter at 1.

factor requirement. Therefore, WindFarm 66 requested that SPP submit the GIA, in unexecuted form, to the Commission.<sup>3</sup>

## II. SPP's Filing

4. SPP included language in Appendices A and C of the GIA that requires WindFarm 66 to design, procure, construct, install, and maintain reactive power compensation equipment to maintain a 0.95 percent leading and 0.95 percent lagging power factor requirement at the point of interconnection (0.95 leading and 0.95 lagging).<sup>4</sup> SPP states that it included this language in the GIA because the most recent Definitive Interconnection System Impact Study that evaluated the WindFarm 66 project indicates that a power factor requirement is required for such a project. SPP continues that when a power factor requirement is required for a project, the SPP Tariff provides that the power factor range shall be 0.95 leading and 0.95 lagging.<sup>5</sup>

5. SPP contends that Order Nos. 661 and 661-A<sup>6</sup> adopted the 0.95 leading and 0.95 lagging power factor requirement as the standard to be applied to large wind generating plants when reactive power capability is required.<sup>7</sup> SPP states that the Commission has held that even when a system impact study shows that a less onerous power factor requirement could preserve the safety and reliability of the transmission system, it still is appropriate to require that the interconnection customer be capable of meeting the tariff-prescribed standard.<sup>8</sup>

6. SPP also states that it:

cannot determine with any certainty if any particular generation technology will meet the required power factor requirement without knowing the exact

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<sup>3</sup> *Id.* at 1-2. WindFarm 66 Protest at 1.

<sup>4</sup> SPP Filing Letter at 2.

<sup>5</sup> *Id.* at 2 (citing SPP Tariff at Attachment V, Appendix 6, SPP *pro forma* GIA).

<sup>6</sup> *Interconnection for Wind Energy*, Order No. 661, FERC Stats. & Regs. ¶ 31,186, *order on reh'g*, Order No. 661-A, FERC Stats. & Regs. ¶ 31,198 (2005).

<sup>7</sup> SPP Filing Letter at 3.

<sup>8</sup> *Id.* (citing *Midwest Independent Transmission System Operator, Inc.*, 115 FERC ¶ 61,310, at P 16 (2006) (*Whistling Wind*) (rejecting a power factor range of 0.928 leading to 0.977 lagging because such range did not comply with the Midwest ISO tariff)).

*as-built* specifications of an Interconnection Customer's wind farm collector system, the size and impedance of its transformers, and the tap settings of all transformers in a particular wind farm until after the wind farm is constructed.<sup>9</sup>

SPP also states that, based on the above lack of information regarding the generation technology, it is specifying that Wind Farm 66 install the necessary equipment to meet the standard power factor requirement in the SPP Tariff.<sup>10</sup> SPP concludes that it does not require "that any particular equipment be installed, only that WindFarm 66 meet the SPP Tariff-prescribed power factor requirement consistent with Order No. 661."<sup>11</sup>

7. SPP requests an effective date of April 18, 2011 for the GIA.

### **III. Notice of Filing and Responsive Pleadings**

8. Notice of SPP's May 2, 2011, filing was published in the *Federal Register*, 76 Fed. Reg. 27,035 (2011) with interventions and protests due on or before May 23, 2011. On May 23, 2011, WindFarm 66 filed a motion to intervene and protest. Western Farmers Electric Cooperative (Western Farmers) filed a motion to intervene and comments. On June 9, 2011, SPP filed an answer. On June 24, 2011, WindFarm 66 filed a response to SPP's answer.

### **IV. Protests and Comments**

#### **A. WindFarm 66 Protest**

9. WindFarm 66 argues that the technical analysis in the Definitive Interconnection System Impact Study does not support requiring it to install additional equipment to maintain a 0.95 leading and 0.95 lagging power factor requirement. It claims that the Definitive Interconnection System Impact Study establishes a minimum power factor requirement for WindFarm 66 that is less stringent than the 0.95 leading and 0.95 lagging set forth in the SPP Tariff; one that WindFarm 66 can meet without the installation of additional reactive power compensation equipment. WindFarm 66 quotes the Definitive Interconnection System Impact Study as stating "that the power factor requirements . . . of 0.9818 leading to 0.9999 lagging are only the minimum power factor ranges."<sup>12</sup>

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<sup>9</sup> SPP Filing Letter at 3.

<sup>10</sup> *Id.* at 3-4.

<sup>11</sup> *Id.* at 4.

<sup>12</sup> WindFarm 66 Protest at 2.

WindFarm 66 adds that it does not object to the SPP Tariff's power factor language in Articles 9.6.1 and 9.6.2 of the proposed unexecuted GIA; rather, WindFarm 66 "objects only to the equipment requirements that SPP seeks to include in Appendices A and C" because the requirements are not supported by the Definitive Interconnection System Impact Study, the text of the GIA, or Order Nos. 661 and 661-A.<sup>13</sup>

10. WindFarm 66 alleges that SPP misinterprets the Definitive Interconnection System Impact Study. This is because, according to WindFarm 66, such study demonstrates that WindFarm 66 inherently meets the levels provided in Table 4-2 (Power Factor Requirements) in the Definitive Interconnection System Impact Study.<sup>14</sup> Moreover, WindFarm 66 states that the Definitive Interconnection System Impact Study concludes that a minimum power factor for WindFarm 66 does not have to be more stringent than what is provided in Table 4-2 for safety and reliability purposes.<sup>15</sup> WindFarm 66 contends that SPP itself acknowledges that the Definitive Interconnection System Impact Study

. . . stated that the minimum power factor requirement for WindFarm 66 required to meet the necessary voltage schedule is 0.9818 leading to 0.9999 lagging—not +/-0.95, and that WindFarm 66 has explained that it can already meet those minimum requirements through its currently planned generating equipment.<sup>16</sup>

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<sup>13</sup> *Id.* Article 9.6.1, Power Factor Design Criteria, requires the facility to maintain power output at the point of interconnection within the range of 0.95 leading to 0.95 lagging, if the transmission provider's system impact study shows that such a requirement is necessary to ensure safety or reliability. Article 9.6.2, Voltage Schedules, requires that the interconnection customer shall operate the generating facility to produce or absorb reactive power within the design limitations set forth in Article 9.6.1. *See also*, Appendix A at A-1 and Appendix C at C-1.

<sup>14</sup> Table 4-2 (Power Factor Requirements) illustrates specific power factor requirements for each project reviewed in the SPP Cluster 1 Group 7 System Impact Study – Restudy. The WindFarm 66 generating plant GEN-2007-032 is shown as requiring a 0.9999 lagging to 0.9818 leading power factor as the minimum required power factor capability at the point of interconnection that must be designed for and installed in the plant.

<sup>15</sup> WindFarm 66 Protest at 5.

<sup>16</sup> *Id.* at 4-5.

11. WindFarm 66 notes that the Definitive Interconnection System Impact Study also states that “[w]ith the assumptions described in this report, the Cluster #1 Group 7 projects [which include WindFarm 66] should be able to connect without causing any stability problems on the SPP transmission grid.”<sup>17</sup>

12. WindFarm 66 also argues that SPP’s requirements in Appendices A and C contravene Order No. 661 because in that order, the Commission required wind plants to maintain a required power factor “only on a case-by-case basis if the Transmission Provider, in the System Impact Study, shows that it is necessary to ensure safety or reliability.”<sup>18</sup> Wind Farm 66 contends that SPP’s *pro forma* GIA and the unexecuted GIA at issue in this case state that a 0.95 leading and 0.95 lagging power factor requirement applies “if the Transmission Provider’s System Impact Study shows that such a requirement is necessary to ensure safety or reliability.” Wind Farm 66 argues that imposing a 0.95 leading and 0.95 lagging power factor requirement conflicts with the Definitive Interconnection System Impact Study, Order Nos. 661 and 661-A, and the *pro forma* GIA.<sup>19</sup>

13. WindFarm 66 argues that Commission precedent underscores this principle. Citing *Midwest ISO*,<sup>20</sup> WindFarm 66 states that the Commission affirmed its rejection of the Midwest ISO proposal to require all wind generating facilities to have reactive power capability without demonstrating a specific need for reliability or safety through a system impact study and to maintain all power factors over 0.95 leading to 0.95 lagging. WindFarm 66 cites the Commission’s explanation as follows:

We will deny rehearing of the March 17 Order with regard to the case-by-case approach for determining the necessity of reactive power capability for wind plants . . . . The Commission’s policy, as expressed in Order Nos. 661 and 661-A, is that, if required for safety or reliability, a wind plant must possess reactive power regardless of cost . . . . But the case-by-case approach does reduce costs for wind plants that demonstrably do not need reactive power capability for safety or reliability. Although not all wind plants will be able to experience this cost savings, the Commission’s policy expressed in Order Nos. 661 and 661-A represents an appropriate

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<sup>17</sup> *Id.*

<sup>18</sup> *Id.* at 7, n. 21.

<sup>19</sup> *Id.* at 7-8.

<sup>20</sup> WindFarm 66 Protest at 9-10 (citing *Midwest ISO*, 135 FERC ¶ 61,065 (2011) (*Midwest ISO*)).

compromise between the goal of preventing wind plants from paying unnecessary reactive power costs and the need to ensure system safety and reliability.<sup>21</sup>

14. Based on this precedent, WindFarm 66 alleges that: (1) SPP has not met the burden imposed under Order No. 661 to require a 0.95 leading and 0.95 lagging power factor range, (2) the proposed language in Appendices A and C relating to meeting a 0.95 leading and 0.95 lagging power factor range should be deleted from the GIA, and (3) SPP should not be permitted to require more than what the Definitive Interconnection System Impact Study shows is necessary to ensure safety and reliability. WindFarm 66 also claims that SPP's filing shows that SPP is engaged in an effort to impose standard power factor requirements that are not required by Order No. 661 by attempting to apply the 0.95 leading to 0.95 lagging power factor range uniformly on a generic basis.<sup>22</sup> WindFarm 66 states that it identified to SPP three GIAs that contained language in Appendices A and C related to maintaining 0.95 leading and 0.95 lagging standard power factor requirements when the Definitive Interconnection System Impact Study did not demonstrate the need to meet those requirements.<sup>23</sup>

15. WindFarm 66 maintains that it is not seeking to apply a less onerous power factor requirement than necessary for safety or reliability or to modify the SPP *pro forma* GIA; rather WindFarm 66 argues that the 0.95 leading and 0.95 lagging power factor requirements do not apply here and that SPP has not established that they should apply.

#### **B. Western Farmers' Comments**

16. Western Farmers supports SPP's filing requesting Commission acceptance of the GIA.<sup>24</sup> Western Farmers notes that the power factor requirements language in Appendices A and C is consistent with SPP's Tariff.<sup>25</sup> Western Farmers asserts that the power factor requirements in Appendices A and C do not require any specific equipment; rather the language requires compliance with the power factor requirements consistent with Commission precedent and the SPP Tariff. Finally, Western Farmers, like SPP, cites *Whistling Wind* as support for the imposition of a standard 0.95 leading and 0.95

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<sup>21</sup> *Midwest ISO*, 135 FERC ¶ 61,065 at P 27, 31.

<sup>22</sup> WindFarm 66 Protest at 9-10.

<sup>23</sup> *Id.*

<sup>24</sup> Western Farmers Comments at 3.

<sup>25</sup> *Id.*

lagging power factor requirement even when a generator claims that a lesser requirement might suffice.<sup>26</sup>

## V. Discussion

### A. Procedural Matters

17. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2011), the notices of intervention and timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

18. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2)(2011), prohibits answers to protests unless otherwise ordered by the decisional authority. We are not persuaded to accept SPP's answer or WindFarm 66's response, and will, therefore, reject them.

### B. Substantive Matters

19. We will accept the GIA for filing, effective April 18, 2011. We will also grant SPP waiver of the Commission's 60 day prior notice requirement, because SPP filed the GIA no later than 30 days after the requested effective date.<sup>27</sup> We reject Wind Farm 66's arguments regarding the power factor requirements and SPP's interpretation of the Definitive Interconnection System Impact Study. In Order No. 661, the Commission explained that a reactive power standard that applies if needed for safety and reliability provides assurances to wind developers that their interconnection will not be frustrated by uncertainty or a lack of standards.<sup>28</sup> Consistent with this approach, SPP's *pro forma* GIA requires that wind generators meet a standard power factor range of 0.95 leading to 0.95 lagging, if a system impact study shows that reactive power capability is necessary. When that is the case, the wind generator must meet the standard power factor range established for the relevant control area. Here, the Definitive Interconnection System Impact Study shows that reactive power capability is needed, and therefore, the power factor range that SPP proposes is consistent with Appendix G of SPP's *pro forma* GIA.

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<sup>26</sup> *Id.* at 4 (citing *Whistling Wind*, *passim*).

<sup>27</sup> *Prior Notice and Filing Requirements Under Part II of the Federal Power Act*, 64 FERC ¶ 61,139, at 61,983-84, *order on reh'g*, 65 FERC ¶ 61,081 (1993) (the Commission will grant waiver of the 60-day prior notice requirement "if service agreements are filed within 30 days after service commences.")

<sup>28</sup> Order No. 661, FERC Stats. & Regs. ¶ 31,186 at P 50; *see* Order No. 661-A, FERC Stats. & Regs. ¶ 31,198 at P 36-50.

20. While we understand WindFarm 66's assertion that WindFarm 66's minimum power factor requirement of 0.9999 lagging to 0.9818 leading, as determined in the Definitive Interconnection System Impact Study, is within the power factor capability of the turbines for its project, once a system impact study indicates that reactive power capability is necessary to ensure safety and reliability, the wind plant must be able to operate within the established standard power factor range set forth in SPP's Tariff. Therefore, because SPP's Definitive Interconnection System Impact Study determined that reactive power capability is necessary for WindFarm 66's interconnection to the SPP transmission system to ensure safety and reliability, WindFarm 66 must supply reactive power support at the range set forth in the SPP Tariff, which is 0.95 leading and 0.95 lagging. This is consistent with Commission policy in Order Nos. 661 and 661-A, *Whistling Wind, Midwest ISO*, and the SPP *pro forma* GIA. Order No. 661, in particular, states that if required to provide reactive power capability, the wind generating plant "should be able to operate anywhere in the +/- 0.95 power factor range."<sup>29</sup>

The Commission orders:

(A) The GIA is accepted for filing effective April 18, 2011, as discussed in the body of this order.

(B) Waiver of the Commission's 60-day prior notice requirement is granted, as discussed in the body of this order.

By the Commission.

( S E A L )

Kimberly D. Bose,  
Secretary.

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<sup>29</sup> Order No. 661, FERC Stats. & Regs. ¶ 31,186 at P 53; *see* Order No. 661-A, FERC Stats. & Regs. ¶ 31,198 at P 36-50.