

126 FERC ¶ 61,022  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

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

Ausra CA I, LLC

Docket No. QF09-37-001

ORDER GRANTING APPLICATION FOR CERTIFICATION  
AS A QUALIFYING SMALL POWER PRODUCTION FACILITY

(Issued January 15, 2009)

1. In this order, the Commission grants Ausra CA I, LLC (Ausra)<sup>1</sup> certification of its solar-powered generating facility located near Bakersfield, California as a qualifying small power production facility.

**Background**

2. On October 21, 2008, in Docket No. QF09-37-001, Ausra submitted an application for Commission certification of its solar-powered generating facility located near Bakersfield, California as a qualifying facility (QF) eligible for benefits under section 210 of the Public Utility Regulatory Policies Act of 1978 (PURPA).<sup>2</sup> In particular, Ausra is seeking certification of its facility as a small power production facility pursuant to 18 C.F.R. § 292.203(a) (2008). Ausra applied for Commission certification

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<sup>1</sup> Ausra is a wholly-owned subsidiary of Ausra, Inc., a privately held company. Shares in Ausra, Inc. are held by Khosla Ventures, Kleiner Perkins Caufield & Byers Holdings, Inc., KERN Energy, Starfish, Generation IM Climate Solutions Fund and various individuals. None of the shareholders in Ausra, Inc. is an electric utility or electric utility holding company. Ausra, Inc.'s subsidiary Ausra CA II, LLC (Ausra II) has signed a power purchase agreement with Pacific Gas and Electric Company for a 177 MW stand-alone compact linear Fresnel solar reflector project in Carrizo Plains, California, which has not yet been constructed. Other than their indirect equity interest in Ausra II, none of the shareholders of Ausra, Inc. or their upstream owners are engaged in the generation or sale of electric power, or have any ownership or operation interest in any electric facilities.

<sup>2</sup> 16 U.S.C. § 824a-3 (2006).

in order to obtain a determination that its facility complies with the requirements for QF status when operated as a solar-powered facility, despite the fact that, at other times, portions of the facility are utilized in the production of non-QF power through the firing of natural gas.

3. Ausra explains in its application that its facility is a solar thermal generating facility which exists to demonstrate that Ausra's proprietary compact linear Fresnel reflector solar collector and steam generation technology is both technically feasible and commercially practical.

4. Ausra explains that it has entered into a lease agreement to use an existing third party's steam turbine in Ausra's electric generation process. Specifically, Ausra leases 19.5 acres of land from Clean Energy Systems, Incorporated (Clean Energy), on which Ausra's solar field is located. Clean Energy owns and operates an experimental natural gas-fired power plant (Kimberlina Plant) located on a separate but adjacent property, which is currently being used as a demonstration facility for Clean Energy's natural gas generator control system. The Kimberlina Plant includes a Clean Energy-owned steam turbine and auxiliary equipment. The steam turbine is capable of producing a gross output of 5 MW, but due to limitations imposed by the installed condenser, actual output of the Kimberlina Plant is limited to 3.5 MW (gross). Clean Energy continues to use the steam turbine from time to time as part of its testing process. Clean Energy also owns the associated switchgear, motor control center, step-up transformer, and other equipment which interconnects the Kimberlina Plant to Pacific Gas & Electric Company's transmission system.

5. Ausra states that its solar thermal generating facility has a gross output of 3.5 MW and a net output of 3.2 MW. The facility uses concentrated solar energy to boil water directly within a row of specially coated carbon steel pipes in an insulated cavity to produce steam. The steam produced in the receivers is collected in a series of steam pipes, routed to a steam turbine generator in the power block to generate electricity, and then condensed and returned to the solar field. The facility will consist of four compact linear Fresnel reflector lines. The steam from Ausra's solar field may be routed to the steam turbine according to the terms outlined below, or, because of the facility's research and development nature, it may be cycled through the system's dump condenser.

6. Ausra explains that it is party to a lease agreement, pursuant to which Ausra and Clean Energy are allotted times during which one or the other has the exclusive right to generate electricity using Clean Energy's steam turbine. Ausra's facility includes the steam turbine during the time periods specified in the lease agreement when Ausra has the exclusive right to generate electricity. Under the lease agreement, Ausra has the exclusive right to deliver steam produced by its solar array and steam generation technology to Clean Energy's steam turbine and associated facilities for nine to ten hours per day, Monday through Friday, excluding certain holidays and other specified periods.

Ausra pays Clean Energy a fee to operate the steam turbine and associated equipment used by Ausra to produce electricity using the Ausra-supplied steam. Clean Energy must deliver to Ausra all electric energy, as well as all associated capacity and ancillary services, generated at the facility from steam received from Ausra during those hours in which Ausra has the exclusive right to use the steam turbine. Ausra owns and has the contractual right to sell such energy to any party. Importantly, Ausra states that the electric energy that Ausra produces at the facility is “in no way dependent upon [Clean Energy’s] operation of the Kimberlina Plant to produce electric energy using natural gas.”<sup>3</sup>

7. Ausra states that its facility is interconnected with the power block at the Kimberlina Plant via an Ausra-designed pipe system through which steam produced by the Ausra solar equipment is sent to the steam turbine. Because Ausra and Clean Energy have exclusive rights to use the steam turbine at different times of the day, Ausra’s equipment and Clean Energy’s equipment have been configured to connect alternately to the steam turbine. Ausra and Clean Energy both possess a removable spool piece fitting its respective system. The removable spool pieces bolt alternately into the same connection point. Only one removable spool piece can be connected to the steam turbine at any given time, and, as such, the steam turbine physically cannot be operated simultaneously using Ausra’s solar-generated steam and Clean Energy’s natural gas-generated steam. Ausra explains that the process of switching from generation using Clean Energy’s natural gas fuel source to generation using Ausra’s solar energy fuel source, and vice versa, can take as long as twenty-four hours. Ausra states that Ausra and Clean Energy have agreed on the removable spool switching system in order to keep the facilities entirely separate, both for purposes of demonstrating compliance with the QF regulations, and for demonstrating the commercial viability of the compact linear Fresnel reflector system.<sup>4</sup>

8. Pursuant to the terms of the Ausra-Clean Energy lease agreement, Ausra will use the Clean Energy turbine to produce electricity for resale. Ausra states that its facility’s capacity is not currently committed under any contract. Ausra anticipates, however, that it may enter into a power purchase agreement with one of the local publicly owned

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<sup>3</sup> Application at 5.

<sup>4</sup> Ausra further states that its future compact linear Fresnel reflector solar plants, such as the to-be-constructed 177 MW facility at Carrizo Plains, California, will have no gas-fired generation on-site.

utilities, or it may sell uncommitted energy into the energy markets operated by the California Independent System Operator Corporation.<sup>5</sup>

9. Ausra states that whether a facility may share certain essential equipment with an unaffiliated, non-QF entity and still qualify as a small power production facility under section 3(17)(D) of the Federal Power Act<sup>6</sup> and the Commission's implementing regulations appears to be a question of first impression. Ausra argues that, nonetheless, permitting Ausra's facility, as described above, to qualify as a small power production facility is consistent with the Commission's precedent certifying small power production facilities and with the goals of PURPA.

#### **A. Consistency with Commission Precedent**

10. Ausra explains that, in *Hydro Corporation of Pennsylvania*, the applicant proposed to reconfigure its facility to install a water turbine generator, the primary energy source for which would be water, and a natural gas piston engine, for which the primary energy source would be natural gas.<sup>7</sup> Adding the piston engine to the reconfigured facility permitted the applicant to use its generator when the water turbine was not in use or at full output.<sup>8</sup> The applicant noted that the water turbine generator could be driven by both the water turbine and the piston engine simultaneously.<sup>9</sup> The applicant stated that in no event would fossil fuel use exceed 25% of the total energy input to the facility during any calendar year period.<sup>10</sup>

11. Ausra points out that the Commission concluded that the *Hydro Corp.* facility met the requirements of a small power production facility, "with the exception that the electric output attributable to the internal combustion piston engine may not be included

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<sup>5</sup> Pursuant to the terms of the Ausra-Clean Energy lease agreement, Pacific Gas and Electric Company will supply back-up and maintenance power to Ausra through the existing electric system.

<sup>6</sup> 16 U.S.C. § 796(17)(D) (2006).

<sup>7</sup> *Hydro Corporation of Pennsylvania*, 43 FERC ¶ 61,276, at 61,755 (1988) (*Hydro Corp.*).

<sup>8</sup> *Id.* at 61,757.

<sup>9</sup> *Id.* at 61,755.

<sup>10</sup> *Id.* at 61,756.

in the qualifying power production capacity of the facility.”<sup>11</sup> The Commission explained that “approval of the instant application would amount to the approval of an addition of an independent fossil-fired facility to an existing small production facility.”<sup>12</sup>

12. Ausra argues that, unlike *Hydro Corp.*, Ausra is not seeking to certify a facility at which renewable and fossil fuel may be used simultaneously, or even interchangeably. Rather, Ausra is requesting the Commission to certify the facility for which the primary and only energy source is solar. Ausra points out that its steam turbine cannot be driven by steam generated by Ausra and steam generated by Clean Energy simultaneously, since separate spool pieces are required to deliver steam from each of the steam generating processes.<sup>13</sup> Furthermore, Ausra argues, unlike *Hydro Corp.*, Ausra’s facility and Clean Energy’s facility are separate facilities owned, operated and controlled by unaffiliated parties. While Clean Energy will be under contract to operate and maintain the steam turbine on Ausra’s behalf during the time periods specified in the lease agreement, Ausra will effectively control the steam turbine pursuant to the terms of the lease agreement during such times.

### **B. Consistency with PURPA**

13. Ausra argues that granting its petition would be consistent with the Commission’s mandate under section 210 of PURPA to encourage the development of renewable and energy efficient power generation through innovative technologies.<sup>14</sup> Ausra states that it has entered into the lease agreement with Clean Energy as an efficient and cost-effective means of demonstrating the commercial viability of Ausra’s solar technology. Ausra could have built a separate stand-alone facility that would have operated thermally in precisely the same way, and qualified for QF status, but at greater expense. Instead,

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<sup>11</sup> *Id.* at 61,758.

<sup>12</sup> *Id.* at 61,757.

<sup>13</sup> Ausra compares this circumstance to *Lyonsdale Biomass, LLC*, where the Commission approved an application for recertification that permitted the applicant to employ an audible alarm system in its control room to ensure that operators kept the facility from generating in excess of 20 MW at any given time. Ausra argues that the system of manually switching the removable spool pieces in the instant case provides even greater assurance that in no event will the facility use any fossil fuel to produce electric energy, and that the facility will at all times meet the requirements of a small power production facility. *Lyonsdale Biomass, LLC*, 116 FERC ¶ 61,133 (2006).

<sup>14</sup> *Citing American Paper Institute v. American Electric Power Service Corp.*, 461 U.S. 402 (1983), and *FERC v. Mississippi*, 456 U.S. 742 (1982).

Ausra explains, it has contracted to use an existing facility to demonstrate its solar technology, and, in doing so, has reduced the impacts of additional generating site development while simultaneously increasing the availability of energy supplies.

### **Notice and Interventions**

14. Notice of the application was published in the *Federal Register*, 73 Fed. Reg. 64612 (2008), with protests and interventions due on or before November 12, 2008. None was filed.

### **Discussion**

15. A small power production facility is defined in section 3(17)(A) of the Federal Power Act (FPA) as a facility which “produces electric energy solely by the use, as a primary energy source, of biomass, waste, renewable resources, geothermal resources, or any combination thereof.”<sup>15</sup> Our regulations incorporate this requirement.<sup>16</sup> Ausra’s application raises the issue of whether its proposed facility satisfies the statutory and regulatory requirement that it produce energy solely from a permitted fuel as a primary energy source. As discussed below, we find that the proposed facility does satisfy the statutory and regulatory requirements for qualifying status and we will grant certification as a qualifying small power production facility.

16. As described above, the steam turbine to be used by Ausra was built by another entity, Clean Energy, to test its own natural gas technology. Ausra proposes to lease the turbine during specified times to test and demonstrate its innovative solar technology.<sup>17</sup> As described in the application, the turbine physically cannot be used to generate power simultaneously using the natural gas technology and the solar technology.<sup>18</sup> The power to be produced and sold by Ausra will be produced using the solar technology only and thus the output of the Ausra facility will be attributable to solar energy only.

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<sup>15</sup> 16 U.S.C. § 796(17)(A) (2006).

<sup>16</sup> 18 C.F.R. § 292.204(b) (2008).

<sup>17</sup> The proposal to test the solar technology using a turbine that can also be used to generate electrical energy with steam produced by natural gas is for the demonstration project only. Ausra intends that future plants using its solar technology will have no gas-fired generation on-site. *Id.* at 7.

<sup>18</sup> Application at 5.

17. Under these circumstances, we find that the facility, if operated as described in Ausra's application and in this order, will satisfy the statutory and regulatory requirements for status as a qualifying small power production facility, including the requirement that the facility produce electric energy solely by the use of a permitted fuel.<sup>19</sup> To the extent that facts or representations which form the basis of this order change, this order cannot be relied upon. While the Ausra small power production facility might still meet the technical requirements for QF status under the changed circumstances, self- or Commission-recertification at that point will be necessary to maintain QF status.<sup>20</sup>

The Commission orders:

Ausra's application for certification as a qualifying small power production facility is hereby granted, as discussed in the body of the order.

By the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.

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<sup>19</sup> Certification as a QF serves only to establish eligibility for benefits provided by PURPA, as implemented by the Commission's regulations. 18 C.F.R. Part 292 (2008). It does not relieve a facility of any other requirements of local, state or federal law, including those regarding siting, construction, operation, licensing, and pollution abatement. Certification does not establish any property rights, resolve competing claims for a site, or authorize construction.

<sup>20</sup> See *Revised Regulations Governing Small Power Production and Cogeneration Facilities*, Order No. 671, 71 Fed. Reg. 7852 (Feb. 15, 2006), FERC Stats. & Regs. ¶ 31,203, at P 82 (2006), *order on reh'g*, Order No. 671-A, 71 Fed. Reg. 30,585 (May 30, 2006), FERC Stats. & Regs. ¶ 31,219 (2006).