

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF OWEN ELECTRIC	)	
COOPERATIVE, INC. FOR A CERTIFICATE OF	)	
PUBLIC CONVENIENCE AND NECESSITY FOR	)	CASE NO.
THE CONSTRUCTION OF A TWO MEGAWATT	)	2015-00213
DISTRIBUTED GENERATION FACILITY IN	)	
OWEN COUNTY, KENTUCKY	)	

ORDER

On June 26, 2015, Owen Electric Cooperative, Inc. ("Owen Electric") filed an application seeking a Certificate of Public Convenience and Necessity ("CPCN") to construct an approximately two-megawatt ("MW") distributed generation facility ("DG Facility") in Owen County, Kentucky. The Attorney General of the Commonwealth of Kentucky, by and through his Office of Rate Intervention ("AG"), and Nucor Steel Gallatin intervened in this proceeding. Neither intervenor filed testimony, and only Commission Staff and the AG issued requests for information. The matter is now before the Commission for a decision based upon the evidentiary record.

Owen Electric's Application

Owen Electric is a distribution cooperative which purchases power from East Kentucky Power Cooperative, Inc. ("EKPC") for resale and serves approximately 59,000 members. The proposed Harshaw Trane DG Facility is a 1,988-kilowatt ("kW") natural gas-fueled generator. Owen Electric states that the proposed DG Facility is necessary, will not result in wasteful duplication, and will result in substantial cost savings for its members. Owen Electric also states that the energy generated from the proposed

project will displace nearly two MW of higher-cost energy that Owen Electric currently purchases from EKPC, and the lower-cost energy from the DG Facility will be supplied to Owen Electric's retail members.<sup>1</sup> Owen Electric estimates the cost savings realized by its members from the DG Facility will be approximately \$9.4 million over the next 20 years and has a net present value of \$3.29 million.<sup>2</sup>

Owen Electric proposes to locate the DG Facility on property it owns at its headquarters.<sup>3</sup> The three-phase synchronous-distributed generator will be powered through a continuous-duty natural gas-fueled reciprocating engine. The load-following generator will tie to the EKPC Bromley substation through a one-mile, 12.5/7.2-kV overhead three-phase feeder circuit.<sup>4</sup> EKPC will provide an additional feeder bay with over-current protection within the Bromley substation.<sup>5</sup> The generator will synchronize to system voltage and frequency, link to Owen Electric's Supervisory Control and Data System ("SCADA"), and will generate the native load power required at the Bromley substation.<sup>6</sup> At no time will the generator produce more power than can be used by the native load on the Bromley substation; therefore, there will be no net-metering at the substation.<sup>7</sup> If more power than can be supplied by the DG is demanded at the Bromley substation, Owen Electric will rely on EKPC to supply the additional energy. Owen

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<sup>1</sup> Application at 1–2.

<sup>2</sup> Direct Testimony of Mark Stallons ("Stallons Testimony") at 2–3.

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

<sup>4</sup> *Id.* at 7.

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

<sup>6</sup> *Id.*

<sup>7</sup> Updated response to Commission Staff's Second Request for Information, Item 2, Bromley Natural Gas Generator System Impact Study at 2.

Electric estimates the capacity factor of the generator to be 85.5 percent capable of producing 14,889,000 kWh annually.<sup>8</sup> Lastly, because there is an existing natural gas pipeline located near Owen Electric's headquarters, a pipeline extension to the proposed DG Facility would not be needed.<sup>9</sup>

Owen Electric plans to finance the proposed construction with general operating funds.<sup>10</sup> The estimated capital cost of the facility is \$2.6 million, with the following cost breakdown:<sup>11</sup>

Harshaw Trane Consulting	\$ 764,297
1988 kW Generator and Electric Set	\$1,485,000
Automatic Fire Suppression	\$ 28,750
Sound Attenuating Enclosure	\$ 23,750
Methane Detection	\$ 3,500
CO Detection	\$ 1,200
Heat Detection	\$ 2,000
Strobe Detection Lighting	\$ 1,875
Emergency Stop Button	<u>\$ 2,500</u>
	\$2,312,872
Owen Electric SCADA Systems	\$ 250,000
3% Adder on Options	\$ 2,000
3% Adder on Harshaw Trane	\$ 23,000
3% Adder on Whayne Supply	<u>\$ 45,000</u>
Total Capital Cost	\$2,632,872

The estimated annual operating costs for the facility are expected to be \$648,207 – including an annual insurance expenditure of \$7,622 – and the annual maintenance costs are projected to be \$112,750.<sup>12</sup> The natural gas required to fuel the

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<sup>8</sup> Owen Electric's Response to Commission Staff's Initial Request for Information ("Staff's First Request"), Item 2.b.

<sup>9</sup> *Id.*, Item 13.

<sup>10</sup> Application at 3.

<sup>11</sup> Owen Electric's Response to Staff's First Request, Item 2.a.

<sup>12</sup> Stallons Testimony at 9.

generator will be furnished under a firm contract with Carrolton Utilities, which in turn receives gas supply from Texas Gas Transmission.<sup>13</sup> The generator is projected to burn 120,869 MMBtu of natural gas annually at a cost in 2016 of \$527,835, which Owen projects to increase annually based on NYMEX Henry Hub Futures prices.<sup>14</sup> The fuel costs associated with the DG Facility will not be passed through Owen Electric's fuel adjustment clause. The DG Facility will allow Owen Electric to reduce its demand and energy as billed by EKPC, and Owen Electric intends to use these savings to defer a future rate case.<sup>15</sup>

#### Discussion

No utility may construct or acquire any facility to be used in providing utility service to the public until it has obtained a CPCN from this Commission.<sup>16</sup> To obtain a CPCN, the utility must demonstrate a need for such facilities and an absence of wasteful duplication.<sup>17</sup>

"Need" requires:

[A] showing of a substantial inadequacy of existing service, involving a consumer market sufficiently large to make it economically feasible for the new system or facility to be constructed or operated.

[T]he inadequacy must be due either to a substantial deficiency of service facilities, beyond what could be supplied by normal improvements in the ordinary course of business; or to indifference, poor management or disregard

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<sup>13</sup> *Id.* at 5.

<sup>14</sup> Response to Staff's First Request, Item 11.

<sup>15</sup> Stallons Testimony at 9 and Owen Electric's Response to Staff's First Request, Item 10.b.

<sup>16</sup> KRS 278.020(1).

<sup>17</sup> *Kentucky Utilities Co. v. Pub. Serv. Comm'n*, 252 S.W.2d 885 (Ky. 1952).

of the rights of consumers, persisting over such a period of time as to establish an inability or unwillingness to render adequate service.<sup>18</sup>

“Wasteful duplication” is defined as “an excess of capacity over need” and “an excessive investment in relation to productivity or efficiency, and an unnecessary multiplicity of physical properties.”<sup>19</sup> To demonstrate that a proposed facility does not result in wasteful duplication, we have held that the applicant must demonstrate that a thorough review of all reasonable alternatives has been performed.<sup>20</sup> Selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.<sup>21</sup> All relevant factors must be balanced.<sup>22</sup> The statutory touchstone for ratemaking in Kentucky is the requirement that rates set by the Commission be fair, just and reasonable.<sup>23</sup>

Owen Electric states that it is tasked with providing safe, reliable and affordable electric service to its members. It further states that 81 percent of the total costs for providing electric service to its members is directly attributable to wholesale energy

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<sup>18</sup> *Id.* at 890.

<sup>19</sup> *Id.*

<sup>20</sup> Case No. 2005-00142, *Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity for the Construction of Transmission Facilities in Jefferson, Bullitt, Meade, and Hardin Counties, Kentucky* (Ky. PSC Sept. 8, 2005).

<sup>21</sup> See *Kentucky Utilities Co. v. Pub. Serv. Comm'n*, 390 S.W.2d 168, 175 (Ky. 1965). See also Case No. 2005-00089, *Application of East Kentucky Power Cooperative, Inc. for a Certificate of Public Convenience and Necessity for the Construction of a 138 kV Electric Transmission Line in Rowan County, Kentucky* (Ky. PSC Aug. 19, 2005).

<sup>22</sup> Case No. 2005-00089, *East Kentucky Power Cooperative, Inc.* (Ky. PSC Aug. 19, 2005), Order at 6.

<sup>23</sup> KRS 278.190(3).

costs paid to EKPC.<sup>24</sup> Owen Electric filed an application for a DG Facility to reduce costs to serve its members. Specifically, Owen Electric states that the DG facility will save its customers approximately \$9.4 million over the next 20 years at a net present value of approximately \$3.29 million.<sup>25</sup>

As part of its evaluation in determining the least-cost reasonable solution for reducing electric service costs, Owen Electric issued a Request for Proposals for a turn-key two-MW, gas-fired distributed generator.<sup>26</sup> Owen Electric received eight responses from four vendors.<sup>27</sup> In addition to the proposed Harshaw Trane DG Facility, Owen Electric received bids from Wellhead Energy for a 1,966-kW distributed generator at \$1.985 million; three bids from Fagen, Inc. for distributed generators with capacities of 2,485 kW, 1,988 kW, and 1,894 kW at a total cost of \$2.648 million, \$2.438 million, and 2.433 million, respectively; and three bids from Power Secure with capacities of 2,055 kW, 2,055 kW, and 1,151 kW at a total cost of \$2.229 million, \$1.361 million, and \$1.370 million, respectively.<sup>28</sup> Owen Electric evaluated the responses and ultimately selected Harshaw Trane based upon its base of knowledge and experience of distributed generation systems, the low heat rate of Harshaw Trane's DG equipment, the low expected operation and maintenance costs, and the projected 5.4-year payback period, which was the shortest payback period of all of the bids received.<sup>29</sup>

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<sup>24</sup> Stallons Testimony at 2.

<sup>25</sup> *Id.* at 2–3.

<sup>26</sup> Owen Electric's Response to Staff's First Request, Item. 4.a. at 2.

<sup>27</sup> *Id.*, Item 4.b. at 9.

<sup>28</sup> *Id.*

<sup>29</sup> *Id.*, Item 4.c.

Owen Electric studied the historic loading at the Bromley substation and determined that the proposed two-MW DG Facility was not only the most economical size to purchase, but that it could operate 85 percent of the year without allowing power to flow back on the EKPC transmission system.<sup>30</sup> When the generator is inoperative for any reason, Owen Electric will purchase power from EKPC through its Wholesale Power Contract at its tariffed rate.<sup>31</sup>

Owen Electric states that it can produce power for its members utilizing the DG Facility for less than it can purchase power from EKPC. Amendment 3 of the Wholesale Power Contract allows a member system of EKPC to serve up to 15 percent of its load from a power supplier other than EKPC.<sup>32</sup> Owen Electric gave notice to the EKPC Board of its DG Facility plan on March 31, 2015, and received approval at the May 12, 2015, EKPC Board meeting.<sup>33</sup> Owen Electric and EKPC will coordinate the addition of the facility into EKPC's Bromley substation.<sup>34</sup> As previously stated, Owen Electric believes that savings from the project will allow it to delay future rate cases.<sup>35</sup>

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<sup>30</sup> *Id.*, Item 1.

<sup>31</sup> Stallons Testimony at 6.

<sup>32</sup> This is allowable under Amendment 3 provided the aggregate amount of all member cooperatives does not exceed 5 percent of the rolling average of EKPC's coincident peak demand for the single calendar month with the highest peak demand occurring during each of the three 12-month periods immediately preceding any election by the member cooperative. See page 2 of 5 of Amendment 3 filed as Exhibit MAS-2 of the Stallons Testimony.

<sup>33</sup> Stallons Testimony at 3.

<sup>34</sup> *Id.* at 4–5.

<sup>35</sup> *Id.* at 9.

Owen Electric will purchase the turn-key system from Harshaw Trane and estimates a six-month timeframe to have the DG Facility online once it receives Commission approval.<sup>36</sup> Owen Electric will not increase staffing with the addition of a generator; but will train current staff in its operation and general maintenance. All major maintenance will be contracted to Whayne Power.<sup>37</sup> Owen Electric has applied for and received a permit from the Kentucky Division of Air Quality. It further provided a System Impact Study which found no adverse effects on Owen Electric's distribution system.

When authorizing a CPCN, the Commission must find that there is a need for such facilities and an absence of wasteful duplication. In addition, the proposal must be reasonable in terms of its impact on rates. Having reviewed the record and being otherwise sufficiently advised, the Commission finds that Owen Electric has established a need to provide the lowest-cost power to its ratepayers and that the proposed DG Facility is the lowest reasonable-cost alternative to satisfy that need. We note that the proposed DG Facility is optimally sized to meet Owen Electric's load at the Bromley substation and has the shortest payback period of all the alternatives considered by Owen Electric. The Commission takes administrative notice of Case No. 2015-00267,<sup>38</sup> wherein EKPC indicated that upon the closure of the Dale Generating Station in April 2016, EKPC's winter capacity would be approximately 650 MW short of its highest winter peak demand. As a result of its capacity deficit position, EKPC is currently

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<sup>36</sup> *Id.* at 4.

<sup>37</sup> *Id.* at 8.

<sup>38</sup> Case No. 2015-00267, *Application of East Kentucky Power Cooperative, Inc. for Approval of the Acquisition of Existing Combustion Turbine Facilities from Bluegrass Generation Company, LLC at the Bluegrass Generating Station in LaGrange, Oldham County, Kentucky and for Approval of the Assumption of Certain Evidences of Indebtedness* (Ky. PSC July 24, 2015).



requesting to acquire the 594 MW Bluegrass Generating Station. Further, in Case No. 2015-00134,<sup>39</sup> we take administrative notice that EKPC projects a need to add 150 MW and 250 MW of intermediate/peaking capacity assets in 2016 and 2017, respectively. We note that the proposed DG Facility would enable Owen Electric to be relatively less dependent on EKPC for its capacity and energy needs, which in turn could enable EKPC to mitigate its planned future capacity needs. We further note that the DG Facility will allow Owen Electric and EKPC to diversify their generating portfolio and serve as a hedge against future CO<sub>2</sub> compliance costs.

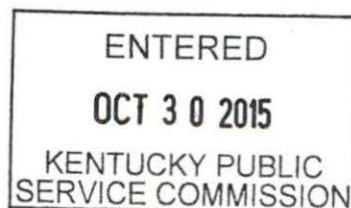
The Commission further finds that the facility will not conflict with the existing certificates or service of other utilities under the Commission's jurisdiction. Owen Electric's proposal is the most reasonable lowest-cost available option and, as the construction of the DG Facility is expected to result in a cost savings, the proposal is reasonable in terms of its impact on rates.

IT IS THEREFORE ORDERED that Owen Electric's request for a Certificate of Public Convenience and Necessity to construct a two-MW distributed generation facility is approved.

By the Commission

ATTEST:

  
Executive Director



<sup>39</sup> Case No. 2015-00134, *In the Matter of the 2015 Integrated Resource Plan of East Kentucky Power Cooperative, Inc.* (Ky. PSC filed Apr. 21, 2015).

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