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Commissioner

January 11, 2016

PARTIES OF RECORD

Re: 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

On December 1, 2015, the Commission issued a final order in the above-referenced matter granting East Kentucky Power Cooperative, Inc. ("EKPC") a Certificate of Public Convenience and Necessity to acquire the Bluegrass Generation Station. Page 2 of the December 1, 2015 Order described the purchase price of the acquisition, which information was redacted because the period of time in which EKPC could seek judicial review of the Commission's denial of EKPC's confidentiality petition had not expired. The Commission issued an Order on November 24, 2015 which, among other things, denied EKPC's request to not publically disclose the acquisition purchase price. Pursuant to KRS 278.410(1), EKPC had until December 28, 2015 in which to seek judicial review of the Commission's denial of EKPC's request to treat as confidential the acquisition purchase price. EKPC did not file an action for judicial review of the Commission's November 24, 2015 Order. Accordingly, the redacted information contained on Page 2 of the December 1, 2015 Order should be made public. The attached Order contains the unredacted information.

Sincerely,

Jeff Derouen
Executive Director

QN/ph

Attachment

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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	)	CASE NO. 2015-00267

ORDER

On July 24, 2015, East Kentucky Power Cooperative, Inc. ("EKPC"), filed an application ("Application") pursuant to KRS 278.020, KRS 278.300, 807 KAR 5:001, Sections 12, 14, 15, and 18, seeking a Certificate of Public Convenience and Necessity ("CPCN") in connection with its proposal to acquire from Bluegrass Generation Company, LLC ("Bluegrass") and then operate three existing simple-cycle combustion turbine ("SCCT") generating units known collectively as the "Bluegrass Station" and located in La Grange, Kentucky. Each unit has winter and summer ratings of 198 and 165 megawatts ("MW"), respectively. The output of Bluegrass Station Unit 3 is currently committed to Louisville Gas and Electric Company and Kentucky Utilities Company (jointly "LG&E/KU") under a tolling agreement ("Tolling Agreement") which is scheduled to terminate on April 30, 2019.[1] Under the terms of the Tolling Agreement, LG&E/KU is entitled to 165 MW of firm generation and capacity from Bluegrass Station Unit 3, and

[1] Application at 17.

LG&E/KU would be responsible for the delivery of natural gas through firm transportation agreements to the site of Bluegrass Station Unit 3 and for securing electric transmission service in their balancing area.[2] EKPC also requests approval to assume certain evidences of indebtedness related to the proposed acquisition. The total price to be paid by EKPC for this acquisition is $128.75 million.[3]

The following parties were granted intervention in this matter: (1) the Attorney General of the Commonwealth of Kentucky, by and through his Office of Rate Intervention ("AG"); (2) Nucor Steel Gallatin ("Nucor"); and (3) LG&E/KU. On July 31, 2015, the Commission issued an Order establishing a procedural schedule for the processing of this matter. The procedural schedule provided for two rounds of information requests on EKPC, an opportunity for intervenors to file testimony, discovery on intervenor testimony, and an opportunity for EKPC to file rebuttal testimony. EKPC responded to two rounds of information requests from Commission Staff and LG&E/KU and one information request from the AG. Nucor did not file any information requests, and none of the intervenors filed testimony. EKPC did not file rebuttal testimony.

The Commission conducted a formal evidentiary hearing on this matter on November 4, 2015. EKPC filed post-hearing responses on November 13, 2015. On November 17, 2015, the AG filed notice that he would not file a post-hearing brief.

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[2] *See* Case No. 2014-00321, *Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Declaratory Order and Approval Pursuant to KRS 278.300 for a Capacity Purchase and Tolling Agreement* Final Order at 2-3. (Ky. PSC Nov. 24, 2014).

[3] On November 24, 2015, the Commission issued an Order, which, among other things, denied EKPC's request to not publicly disclose the purchase price. Pursuant to 807 KAR 5:001, Section 13(5), when confidentiality is denied, "the material shall not be placed in the public record for the time period permitted pursuant to KRS 278.410 to bring an action for review." As of the date of this Order, the time period for EKPC to bring an action for review has not expired.

Neither Nucor nor LG&E/KU submitted post-hearing briefs. The matter is now before the Commission for a decision.

BACKGROUND

EKPC is a not-for-profit, member-owned electric generation and transmission cooperative that provides wholesale electricity to its 16 owner-member distribution cooperatives, which serve approximately 525,000 customers across 87 counties. EKPC is a member of PJM Interconnection, LLC ("PJM"), a regional transmission organization that coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia, and operates energy and capacity markets. EKPC currently participates in the PJM capacity market as a Fixed Resource Requirement ("FRR") entity.[4] As such, EKPC is required to submit a FRR capacity plan that identifies specific generating resources that provide EKPC with capacity to meet its reliability obligations and to satisfy its load and generation needs. The FRR plan is submitted annually for a period of three delivery years into the future. EKPC primarily uses its owned generating resources to satisfy its FRR plan.

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[4] EKPC will operate under the FRR construct until June 1, 2016. Testimony of Don Mosier, November 4, 2015 Hearing ("Mosier Hearing Testimony") beginning at 09:07:05. Thereafter, it will operate under the Reliability Pricing Model ("RPM") construct. EKPC participated in the most recent Base Residual Auction ("BRA") under the RPM construct. RPM entities are required to annually offer or "bid" power supply resources into the market that either increase energy supply or reduce demand. In August 2015, PJM's new capacity product, designated as Capacity Performance ("CP"), was part of a BRA for the 2018/19 delivery year. If EKPC acquires Bluegrass Station, Units 1 and 2 can be bid into the third Incremental Auction ("IA") held for non-CP capacity for the 2016/17 delivery year in March 2016 and a second IA for non-CP capacity for the 2017/18 delivery year in July 2016. *See* EKPC's Response to Commission Staff's Second Request for Information ("Staff's Second Request"), Item 3.a.(2). Unit 3 can be bid into the PJM markets for delivery following the expiration of the LG&E/KU Tolling Agreement.

EKPC currently owns or purchases a total of approximately 2,794 MW of net summer generating capability and 3,009 MW of net winter generating capability,[5] consisting of 149 at MW Dale Station, 341 at MW Cooper Station and 1,346 MW at Spurlock Station all of which are base-load coal-fired generation. In addition, EKPC's generation includes natural-gas fired units at Smith Station, which has a summer rating capacity of 774 MW and a winter rating capacity of 989 MW, and five landfill gas-to-energy facilities totaling 14.4 MW.[6] Finally, EKPC purchases 70 MW and 100 MW of hydropower from the Southeastern Power Administration at Laurel Dam and the Cumberland River system of dams in Kentucky and Tennessee, respectively.[7]

EKPC'S EFFORTS TO SECURE ADEQUATE CAPACITY

EKPC has endeavored to secure adequate capacity since 2012 because of the potential loss of over 300 MW of capacity from possible plant retirements, i.e., 199 MW from Dale Station and 116 MW from Cooper Unit 1, due to more stringent environmental regulations, and the estimated increase in its total energy requirement of 1.4 percent per year over a 20-year period from 2015 through 2034.[8] EKPC stated its "all-time peak demand of 3,507 MW occurred on February 20, 2015."[9] Without any additional load growth or increase in load factors, EKPC's winter capacity falls nearly 650 MW short of

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[5] Application at 3. The Dale Station consists of four units with a total of 199 MW. Unit 1 and Unit 2 had a combined capacity of 50 MW and were permanently taken out of service on April 15, 2015. Unit 3 and Unit 4 have a combined capacity of 149 MW and are scheduled to be placed in inactive status on April 15, 2016.

[6] *Id.*

[7] *Id.*

[8] *See* Case No. 2015-00134, *The 2015 Integrated Resource Plan of East Kentucky Power Cooperative, Inc.*, Integrated Resource Plan ("IRP") at 2 (filed Apr. 21, 2015).

[9] Application at 4.

its historic peak winter demand when the Dale Station is closed in 2016.[10] This capacity shortfall subjects EKPC to volatile power prices in the wholesale market, as demonstrated during the 2013-2014 winter Polar Vortex event.[11] In addition to the past two winters which were occasioned with periods of extremely cold temperatures, the ongoing nationwide shift in electric generation fuel sources from coal to natural gas and the expansion of stricter federal environmental regulation have combined to make the ownership of electric generation peaking resources a strategic imperative, EKPC states.[12] The need for capacity was recognized several years ago and has been the source of a Request for Proposal ("RFP") issued in 2012 and one prior Commission proceeding.[13]

To address this shortfall of capacity, EKPC retained The Brattle Group ("Brattle") in May 2012 to assist with an RFP solicitation and to provide independent analysis of the power supply offers submitted in response to the RFP.[14] EKPC stated that "[t]he 2012 RFP was structured to compare the costs required to bring the Dale Station and Cooper Station Unit 1 into compliance with the Mercury and Air Toxic Standard [("MATS")], with the costs of alternative power supply options available in the market."[15]

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[10] *Id.*

[11] *Id.*

[12] Application at 1 and 7.

[13] Case No. 2013-00259, *Application of East Kentucky Power Cooperative, Inc. for a Certificate of Public Convenience and Necessity for Alteration of Certain Equipment at the Cooper Station and Approval of a Compliance Plan Amendment for Environmental Surcharge Recovery* (Ky. PSC Feb. 20, 2014).

[14] Application at 6.

[15] *Id.*

Brattle concluded that the reconfiguration of Cooper Station Unit 1 to flow its air emissions through the existing air quality control system servicing Cooper Station Unit 2 was the highest value-added option available to EKPC.[16] In an Order entered on February 20, 2014, the Commission approved EKPC's application, in part, based upon the fact that "EKPC was short approximately 800-900 MW of capacity during its most recent winter peak and that EKPC was dependent on the market to address that capacity shortage."[17]

By retrofitting Cooper Station Unit 1, EKPC was able to retain 116 MW of its existing generation that otherwise would have been lost as a result of MATS.[18] However, EKPC still needed to replace the loss of approximately 199 MW of capacity from the retirement of the Dale Station, as well as plan for future load growth and increases in load factor.[19] The extreme temperatures experienced during the 2014 Polar Vortex, combined with new demand peaks in the 2014-2015 winter and increased market volatility, confirmed that additional capacity was necessary to mitigate market risk arising from EKPC's capacity shortfall. In addition, EKPC contends that the Commission's decision in a 2014 Fuel Adjustment Clause review case underscored the importance of having physical generation capacity on hand.[20]

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[16] *Id.* at 7.

[17] *Id.*

[18] *Id.*

[19] *Id.*

[20] *Id. See* Case No. 2014-00226, *An Examination of the Application of the Fuel Adjustment Clause of East Kentucky Power Cooperative, Inc. from November 1, 2013 through April 30, 2014* (Ky. PSC Jan. 30, 2015).

EKPC sought a fresh set of the competitive bids from the 2012 RFP during the summer of 2014 ("RFP Refresh") to address its continued need for capacity, particularly in light of the imminent closure of the Dale Station. Brattle was again engaged to provide independent analysis of the bids received.[21] EKPC asked Brattle to invite firms that had proposed conventional power supply resources in response to the 2012 RFP to submit updated or new proposals.[22] The RFP Refresh stated that EKPC sought proposals with the following characteristics:

- Power purchase (e.g., gas tolling) agreements ("PPA") or purchase and sale agreements ("P&SA") for new or existing power plants or shares thereof;
- Dispatchable generation, with natural gas as the primary generation feedstock;
- A minimum size of 100 MW and maximum of 300 MW;
- A preferred start date of November 1, 2014;
- A minimum term of three years; and
- Energy and capacity delivered to PJM, with a preference for energy and capacity delivered to the EKPC load zone and locational deliverability area.[23]

The RFP Refresh stated that EKPC's Smith site would be available for the construction of a gas-fired generating unit to be transferred to EKPC.[24] It also emphasized that EKPC viewed transmission and fuel supply reliability as high priorities.[25]

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[21] A copy of the Brattle Screening Analysis is contained in the Application as Exhibit JR-2 to the Testimony of James Read.

[22] Two firms that did not participate in the 2012 RFP approached EKPC to express their interest in selling power to EKPC and were invited to submit proposals in the RFP Refresh.

[23] Brattle Screening Analysis at 2.

[24] *Id.*

[25] *Id.*

The RFP Refresh was sent to the invitees on May 12, 2014, with proposals due on June 13, 2014.[26] Twelve firms submitted proposals in response to the RFP Refresh, with some submitting more than one proposal.[27] Unlike the 2012 RFP, EKPC did not submit any self-build proposals in the RFP Refresh. The proposals included PPAs, construction of new gas-fired generating units, and the purchase of existing gas-fired generation.

ECONOMIC ANALYSIS OF THE PROPOSED ACQUISITION

Brattle performed an economic evaluation to identify the most economic proposals for further consideration and possible negotiation. The principal economic criterion utilized in screening the proposals was the net present value ("NPV") of the incremental energy and capacity of each proposal.[28] With the PPAs, NPV was calculated as the present value of energy margins plus the present value of capacity revenues less the present value of fixed contract charges.[29] Brattle utilized the delivery period for each PPA based on its contractual term. With the P&SAs, NPV was calculated as the present value of energy margins, plus the present value of capacity revenues, less the present value of fixed operating and maintenance costs and the purchase price.[30] For the P&SAs, an economic life of 25 years was used for new power plants and 20 years for existing power plants.[31]

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[26] *Id.*

[27] *Id.*

[28] *Id.* at 3.

[29] *Id.*

[30] *Id.*

[31] *Id.*

The energy margins associated with the proposals were calculated using the RTSim production simulation and optimization model.[32] Brattle utilized future market prices of electric energy and natural gas developed by ACES.[33] Electric energy prices were based on the price for delivery to the AEP Dayton Hub, and natural gas prices were based on delivery to the Henry Hub, both as of June 12, 2014.[34]

Brattle divided the proposals EKPC received into the following three categories: (1) intermediate-term PPAs (up to six-year delivery period); (2) longer-term PPAs (greater than six years); and (3) P&SA units.[35] Because they varied in terms of size and duration, Brattle compared the proposals within each category based on a normalized NPV, or the NPV per kilowatt ("kW") of capacity per month. Brattle then determined the most attractive proposals in each category. With respect to the P&SA category, Brattle identified two proposals that merited further evaluation: (1) a proposal to build a new generating unit and (2) a proposal by LS Power, the parent company of Bluegrass,[36] to sell the Bluegrass Station.

In its conclusion of the results of the RFP Refresh, Brattle stated that because EKPC is now fully integrated into PJM, it has the flexibility to acquire additional resources if they are more economic in relation to purchasing energy and capacity in the PJM markets.[37] It further stated that while several of the options were economically

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[32] *Id.*

[33] *Id.* at 3-4.

[34] *Id.* at 4.

[35] *Id.*

[36] *See* Mosier Hearing Testimony beginning at 09:10:39.

[37] *See* Brattle Screening Analysis at 5.

competitive, its analysis indicated that the proposed purchase of Bluegrass Station was the best available power supply alternative, due to both its NPV and the fact that its NPV per kW-month was greater or comparable to the other proposals.[38]

In addition to the screening analysis by Brattle, EKPC subsequently retained ACES to perform a Discounted Cash Flow analysis on the proposed purchase of the Bluegrass Station.[39] The ACES analysis concluded that the acquisition of the Bluegrass Station by EKPC was economically advantageous based upon its evaluation of the PJM Capacity Market, natural gas pricing, and comparable sales.[40] ACES summarized its report by stating, Bluegrass Station "fits perfectly into the EKPC portfolio, significantly reducing their winter peak short position. Bluegrass will also provide excess Reliability Pricing Model (RPM) credits to monetize and allow EKPC to take advantage of their peak load diversity in PJM."[41]

EKPC also retained Navigant Consulting, Inc. ("Navigant") to conduct an independent analysis of the economic value of the Bluegrass Station within PJM.[42] That analysis, which was based upon consideration of PJM Capacity and Energy Market forecasts, fuel access and pricing, environmental regulations, and transmission issues, resulted in a significant NPV of the Bluegrass Station operating margins (excluding

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[38] *Id.* at 6.

[39] Application at 8.

[40] *Id.*

[41] *See* ACES' *East Kentucky Power Cooperative Bluegrass Valuation* at 3 (Jan. 30, 2015). A copy of the report is contained in the Application as Exhibit DC-1 to the Direct Testimony of David Crews, ("Crew's Testimony").

[42] A copy of Navigant's *PJM RTO Market Summary and Forecast for the Bluegrass Power Plant* (June 2015) is contained in the Application as Exhibit RL-2 to the Testimony of Ralph Luciani.

capital costs,[43] transaction costs[44] and transmission expenditures for Unit 1 and Unit 2) over a 20-year period beginning in 2016.[45]

EKPC also performed an internal analysis and concluded that the acquisition of the Bluegrass Station would result in a positive NPV under each of the two scenarios it modeled. EKPC looked only at the capacity benefits of the transaction and did not take into account any energy sales benefits.[46] EKPC's analysis produced a considerably lower NPV than the Navigant analysis because EKPC utilized a more conservative set of assumptions than did Navigant in conducting its analysis of the capacity benefit.

The independent analyses of Brattle, ACES, and Navigant and EKPC's internal analysis all reflect that the acquisition of the Bluegrass Station will add value to EKPC's system, benefit EKPC's owner-members and provide long-term economic value by generating capacity revenue and mitigating seasonal market volatility risk. EKPC maintains the acquisition should more than pay for itself and benefit its owner-members by reducing their exposure to long-term capacity and energy market volatility.[47]

DESCRIPTION OF THE BLUEGRASS STATION

Bluegrass leases and operates three natural gas-fired SCCT generating units at the Bluegrass Station pursuant to a lease Agreement ("Lease Agreement"), dated

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[43] The Commission notes that if the net present value calculated by Navigant is reduced by the acquisition cost of Bluegrass Station, the transaction continues to result in a significant positive net present value for EKPC.

[44] In EKPC's Response to Commission Staff's Post-Hearing Data Request ("Staff's-Post Hearing Request"), Item 10, EKPC stated that the estimated transaction costs for the Bluegrass Station acquisition are $0.6 million.

[45] Application at 9.

[46] *Id.*

[47] *Id.* at 9-10.

November 1, 2000, with Oldham County, Kentucky.[48] Each of the units has a rated capacity of 198 MW for a total winter rating of 594 MW and net summer capacity of 165 MW per unit for a total of 495 MW. Unit 3 is currently subject to a Tolling Agreement, as previously mentioned, entered into between Bluegrass and LG&E/KU in 2014.[49] The Tolling Agreement will expire on April 30, 2019 at which time the generation from Unit 3 will become available to EKPC. Bluegrass makes an annual payment of $565,000 to Oldham County in lieu of paying property taxes, pursuant to an agreement, dated November 1, 2000 ("PILOT Agreement").

The Bluegrass Station units were constructed by Dynegy and went into commercial operation in 2002[50] when LG&E/KU were members of the Midcontinent (formerly "Midwest") Independent System Operator, Inc. ("MISO") market. At that time, Dynegy could sell the output of the plant directly into MISO and had a liquid market for the asset. After LG&E/KU left MISO, Dynegy had to purchase transmission rights into MISO and/or PJM, in addition to transmission across the LG&E/KU system. The cost of this transmission service was enough to generally keep the peaking units out of the market on an economic basis. The inability to sell energy and make profit from those sales severely limited the value of the plant to Dynegy and later to LS Power which purchased the units from Dynegy. The units have operated at low capacity due

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[48] A copy of the Lease is contained in the Application as Exhibit 2.

[49] *See* Case No. 2014-00321, *Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Declaratory Order and Approval Pursuant to KRS 278.300 for a Capacity Purchase and Tolling Agreement* (Ky. PSC Nov. 24, 2014).

[50] See EKPC's Responses to Staff's Second Request, Item 10, and AG's Initial Data Request, Item 13.a.

to these transmission costs and Dynergy's not being able to compete in the markets on an economic basis.[51]

The units are 14 years old and are assumed to have a depreciable life of 35 years; thus, the units have a remaining depreciable life of 21 years.[52] In conjunction with the negotiations between EKPC and Bluegrass for the proposed acquisition, EKPC undertook extensive efforts to investigate the condition of the Bluegrass Station units,[53] transmission availability, fuel deliverability and pricing,[54] environmental aspects of the transaction, and other related issues.

EKPC'S DUE DILIGENCE RESULTS

As part of its evaluation of the responses to its 2012 RFP, EKPC retained Burns & McDonnell to perform an inspection of the Bluegrass Station. Although the Burns & McDonnell inspection did not uncover any fatal flaws, it did note a concern regarding a cracked row-four diaphragm on the Unit 3 compressor, which was originally identified in a 2009 borescope inspection by Siemens. In response to Staff's Post-Hearing Request, EKPC stated that Bluegrass informed EKPC on Thursday, November 5, 2015, that during a routine combustion inspection, damage was found in the Unit 3 compressor

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[51] *See* EKPC's Response to Commission Staff's First Request ("Staff's First Request"), Item 14.c.(1)(2), and Staff's Second Request, Item 10

[52] *See* EKPC's Response to Staff's Second Request, Item 11.

[53] In addition to an independent Due Diligence Evaluation Report prepared by Burns & McDonnell Engineering Company, Inc. ("Burns & McDonnell"), EKPC also engaged Siemens (the original equipment manufacturer) to perform detailed borescope inspections on each of the Bluegrass Station units. EKPC witnessed the units in operation, and conducted extensive research into the specifications and quality of the assets it seeks to acquire. With respect to the Bluegrass Station's transmission facilities, EKPC retained a third-party firm, CE Power, to perform complete testing on the three generator step-up and four auxiliary transformers at the Bluegrass Station.

[54] EKPC engaged Bentek Energy and ACES to perform a study on the availability and affordability of natural gas at the Bluegrass Station. EKPC has determined that it will have access to fuel in a reliable and economic basis.

station.[55] Bluegrass is repairing the compressor damage and will also repair the cracked row-four diaphragm. EKPC stated that the estimated cost to repair the diaphragm is not available, but that it is EKPC's understanding that the repair cost will not affect the purchase price of the facility.[56] Siemens also recommended inspection of the rotor winding pole crossovers on the generator rotors, noting that it has found cracking in the generator pole crossovers on the other units with a higher number of start/stop cycles.[57] The maintenance is currently scheduled in the 2018/19 timeframe. The estimated cost of these repairs is $275,000 per unit. EKPC states that the costs have been included in its financial forecasts for Bluegrass Station.[58] EKPC testified that the condition of the units and any issues identified in the Burns & McDonnell Due Diligence Report were consistent with normal operations of SCCTs.[59]

EKPC undertook several transmission studies along with others in association with the contemplated transaction. In March 2015, TranServ International, Inc. ("TranServ"), the Independent System Operator for LG&E/KU, released a System Impact Study ("SIS") as a result of a transmission request made by EKPC to designate Bluegrass Station Units 1 and 2 as Network Resources for the EKPC load.[60] This study identified likely loading constraints, with one being only a near-term year constraint. The constraints identified in the SIS led to the preparation of a Facilities Study by

[55] *See* EKPC's Response to Staff's Post-Hearing Request, Item 11.

[56] *Id.*

[57] *See* EKPC's Response to Staff's First Request, Item 14.c.b.

[58] *See* Testimony of Craig Johnson, November 4, 2015 Hearing beginning at 15:28:53.

[59] Mosier Hearing Testimony beginning at 09:18:08.

[60] Application at 14.

TranServ and LG&E/KU, which identified the system upgrades and operating procedures that would be necessary to alleviate the identified constraints.[61] Because of the near-term year constraint, an operating procedure was specified to mitigate the constraint during real-time operating conditions. Bluegrass Station will operate subject to an updated operating guideline under the direction of the three North American Energy Reliability Corporation Reliability Coordinators involved (MISO, PJM, and Tennessee Valley Authority) if an actual constraint develops in the course of operations.[62]

The remaining constraints identified on the LG&E/KU transmission system will be addressed through system upgrades, which will provide sufficient capacity to transmit the output of the Bluegrass Station so that EKPC will be able to serve its load that resides on the LG&E/KU system as it currently does. Following the completion of the aforementioned transmission studies, TranServ accepted EKPC's transmission service request, and EKPC confirmed the request on June 26, 2015, finalizing the service.[63] The Network Integrated Transmission Service ("NITS") Agreement that exists between EKPC and LG&E/KU is being revised to incorporate this transmission service. Pursuant to the revised NITS Agreement, Bluegrass Station Unit 1 and Unit 2 will become Designated Network Resources when the transaction is consumated. LG&E/KU will then file the updated NITS Agreement with the Federal Energy Regulatory Commission

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[61] *Id.*

[62] *Id.*

[63] *Id.* at 15.

("FERC") for approval.[64] EKPC will provide a copy of the amended NITS agreement to the Commission once it is fully executed.[65]

In July 2015, TranServ released an SIS report for a transmission service request made by EKPC to designate Bluegrass Station Unit 3 as a Network Resource for EKPC load. Under the KU/LG&E Tolling Agreement in effect for this unit through April 2019, the requested service would commence on May 1, 2019. The aforementioned constraint was again identified in the July 2015 SIS as a potential short-term constraint, but not as a long-term constraint. TransServ has indicated that it will address this constraint through an operating procedure similar to the one that will be used to mamge the constraint for Units 1 and 2. Other constraints were also identified in the SIS report. All constraints other than the potential short-term constraint identified in the SIS report will be addressed through system upgrades that will provide sufficient capacity to transmit the entire Bluegrass Station output to EKPC's load.[66]

With respect to transmission service needed on the LG&E/KU transmission system to deliver the excess output from the Bluegrass Station to EKPC's transmission system, on October 28, 2015, EKPC submitted a filing to revise certain responses to data requests of the AG, LG&E/KU, and Staff. Initially, EKPC stated that it had discussed developing transmission requirements and procedures with LG&E/KU and TranServ to accommodate delivery of energy to EKPC's system during periods when Bluegrass Station's output was in excess of EKPC's load directly connected to the

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[64] *Id.*

[65] *See* EKPC's Response to Staff's Post-Hearing Request, Item 7.

[66] Application at 15.

LG&E/KU system. EKPC had also indicated that it expected the incremental cost for that additional transmission service to be relatively small, based on the way in which the NITS is administered and billed under LG&E/KU's Open Access Transmission Tariff. In the revised responses, EKPC stated that, after much discussion with LG&E/KU, the transmission service issue has not been resolved. LG&E/KU's position is that EKPC must reserve point-to-point transmission[67] or designate additional delivery points on the EKPC system as network loads under its NITS reservation to provide adequate coverage for potential output from the Bluegrass Station in excess of EKPC load connected to the LG&E/KU transmission. EKPC does not agree with LG&E/KU on this matter; however, under protest, EKPC intends to move forward with transmission agreements specified by LG&E/KU to ensure that it can deliver any excess output from Bluegrass Station to the EKPC transmission system when needed.[68]

EKPC stated that it could also build a transmission line to deliver the output from Bluegrass Station to its existing transmission facilities in order to avoid the point-to-point transmission costs that LG&E states would be required.[69] Whether EKPC pays the point-to-point transmission costs to LG&E/KU or builds a new transmission line, the proposed acquisition of Bluegrass Station is still the lowest-cost option for procuring the needed capacity.[70]

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[67] EKPC has estimated the cost in excess of $10 million annually ("Crews Hearing Testimony") beginning at 10:23:46.

[68] A copy of the Notice of Complaint filed with FERC on October 30, 2015 is attached to EKPC's Response to Staff's Post-Hearing Request, Item 6.

[69] *See* Testimony of David Crews, November 4, 2015 Hearing ("Crews Hearing Testimony") beginning at 10:23:46.

[70] *Id.*, beginning at 12:15:15.

EKPC states that with completion of the proposed transaction, Bluegrass Station Unit 1 and Unit 2 will be available for use by EKPC in the PJM energy market. This is a material aspect of the transaction, as it gives EKPC a physical hedge on energy pricing during the coldest portion of the upcoming winter as well as the opportunity to offer the units into the PJM day-ahead and real-time energy markets.[71]

With regard to the PJM Capacity Market, EKPC expects that the transaction will result in a net benefit to EKPC so long as capacity prices are at or above a certain level. This break-even amount is significantly lower than the approximately $120/MW-day rate that was established in the most recent PJM incremental capacity auction for planning year 2016/2017.[72] Moreover, EKPC and Navigant both believe that capacity prices will increase in the future, thereby providing a greater net capacity benefit to EKPC.[73] In PJM's 2018/19 BRA, CP capacity cleared at $164.77/MW-day and non-CP capacity cleared at $149.98/MW-day, indicating significant positive value in the proposed purchase of Bluegrass Station. Due to the higher values in PJM's CP Capacity market, EKPC is considering options including dual fuel capability or firm gas transportation service at Bluegrass Station if the proposed transaction is consummated.[74]

To facilitate the Bluegrass units' participation in the PJM Capacity Market, Bluegrass has executed transmission service agreements with PJM (allowing the output energy from the Bluegrass units to be delivered) commencing on June 1, 2018, the

[71] Application at 16.

[72] *Id.*

[73] *Id.*

[74] *See* EKPC's Response to Staff's Second Request, Item 4, and Crews Hearing Testimony beginning at 11:00:25.

beginning of PJM's 2018/19 Delivery Year.[75] Accordingly, Unit 1 and Unit 2 of the Bluegrass Station could be bid into any incremental auctions that apply to the 2018/19 Delivery Year, as well as any subsequent BRA and incremental auctions. After expiration of the KU/LG&E Tolling Agreement, Unit 3 can also be bid into the BRA.

ENVIRONMENTAL ISSUES

With respect to environmental issues, EKPC performed a comprehensive due-diligence review of all legal and technical aspects of Bluegrass Station based upon extensive materials and environmental compliance supplied by the current operator. In addition, EKPC also witnessed emission tests of the Bluegrass Station units, held several on-site reviews and meetings, and hired Lineback Funkhouser, Inc. to conduct a Phase I Environmental Site Assessment of the property. The Assessment Report revealed no evidence of recognized environmental conditions in connection with the subject property.[76] EKPC's due diligence confirmed that Bluegrass Station's current operator is complying with Clean Air Act Title V operating permit requirements and Kentucky Pollutant Discharge Elimination System permits, applicable requirements for Aboveground Storage Tanks, and noise limits established by existing real property agreements, among other environmental obligations.[77]

The Bluegrass Station has a Kentucky Air Permit limitation of 95 tons of NOx emissions over a rolling 12-month period. As such, each of the three units can operate at a 7 percent capacity factor and not exceed the annual NOx limit.[78] Units 1 and 2

[75] Crews Testimony at 16.

[76] Direct Testimony of Jerry Purvis ("Purvis Testimony") at 29-30.

[77] *Id.* at 30.

[78] *See* EKPC's Response to Staff's First Request, Item 35.

were originally equipped with Selective Catalytic Reduction ("SCR")/ammonia reduction system, but they have not been used to date.[79] EKPC stated that the catalyst in each of the SCRs has not been operated or used to date and has deteriorated in condition.[80] EKPC further stated that, currently under the air permit, the SCRs are not needed.[81] However, since Oldham County is not in attainment with the new ozone NOx standard, EKPC is working with the Kentucky Division of Air Quality ("KDAQ") as the EPA works with the KDAQ in making those designations.[82] EKPC stated that it recognized in its financial forecast of the proposed transaction that it would need to replace the catalysts in the Units 1 and 2 SCRs and equip Unit 3 with an SCR at a later date.[83]

EKPC believes the Bluegrass Station is well positioned to comply with upcoming environmental requirements and faces fewer environmental challenges and a more favorable regulatory outlook than coal-fired generation.[84] EKPC stated that the Coal Combustion Residual Rule ("CCR Rule") and MATS do not concern natural-gas fired generation resources.[85] EKPC also stated that Bluegrass Station was not affected by the recently enacted National Effluent Limitation Guidelines ("ELG").[86] However, since

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[79] Mosier Hearing Testimony Hearing beginning at 09:21:25.

[80] *Id.*

[81] *Id.*

[82] Testimony of Jerry Purvis, November 4, 2015 Hearing ("Purvis Hearing Testimony") beginning at 12:41:25. In the Hearing, Mr. Purvis testified that under the new rule, NOx was limited to 70 parts per million ("ppm") and currently Oldham County is at 74 ppm.

[83] *Id.*

[84] Purvis Direct Testimony at 31.

[85] *Id.*

[86] *See* Mosier Hearing Testimony beginning at 09:20:31; *See also,* Purvis Hearing Testimony beginning at 12:43:16.

the CCR Rule and the ELG water rules are interdependent, EKPC elected not to move ahead separately for each rule. With the ELG rule now finalized, EKPC will file an amended environmental compliance plan with the Commission in the near future.[87]

EKPC believes Bluegrass Station is an environmentally sound investment that will help it achieve its strategic goals in both the near and long term.[88] Furthermore, with Bluegrass Station being located in Kentucky, EKPC's future compliance with the Clean Power Plan ("CPP") will be less complicated than if it had acquired an out-of-state generating facility.[89]

<u>THE ASSET PUCHASE AGREEMENT AND OTHER APPROVALS</u>

The Asset Purchase Agreement ("Agreement") whereby Bluegrass agreed to sell and assign, and EKPC agreed to purchase and assume, substantially all of the assets and certain specified liabilities of Bluegrass, subject to certain terms and conditions set forth in the Agreement, was entered into by EKPC and Bluegrass on June 26, 2015.[90] Because the Bluegrass Station is currently leased by Bluegrass from Oldham County as part of a complex financing plan put in place as part of the development of the plant, EKPC will take an assignment of the Lease Agreement between Bluegrass and Oldham County and certain bonds held by Bluegrass and payable by Oldham County, the Tolling Agreement, and the PILOT agreement.

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[87] *See* EKPC's Response to Staff's First Request, Item 40; *See also* Purvis Hearing Testimony beginning at 12:43:45.

[88] Purvis Direct Testimony at 31.

[89] The carbon obmissions from SCCTs are not counted toward a state's carbon limits in the CPP. *See* Purvis Hearing Testimony beginning at 12:54:45.

[90] A copy of the Agreement is contained in the Application as Exhibit 3.

The evidences of indebtedness associated with the proposed transaction are the assumption of the Lease Agreement between Oldham County and Bluegrass and the PILOT provision between those parties. EKPC requests approval of these evidences of indebtedness, pursuant to KRS 278.300, related to the proposed acquisition.

EKPC intends to finance the proposed acquisition through funds currently available from its $500 million unsecured credit facility established with the National Rural Utilities Cooperative Finance Corporation and other banks, and then replace that short-term financing with long-term financing pursuant to the terms of its trust indenture with the U.S. Bank National Association. EKPC plans to secure that long-term financing through a Rural Utilities Service ("RUS") loan; however, in the event that RUS financing is not timely available, EKPC will pursue long-term financing of the acquisition through a private placement debt offering.[91]

Along with this Commission's approval, Bluegrass or EKPC must receive consents under the law, or by virtue of the terms of various material contracts, from the following agencies and entities: Federal Trade Commission (Hart-Scott-Rodino approval); Kentucky Department of Water (permit transfer); KU/LG&E (Tolling Agreement and Interconnection and Operating Agreement assignment); PJM (NITS Agreement assignment); and Oldham County Sanitation District (service agreement). Bluegrass determined that no approval was required under Section 203 of the Federal Power Act from the FERC for the transfer of the transmission assets and the Tolling Agreement covered by the transaction, since those assets are valued at less than the

[91] Application at 20-21.

$10 million threshold required for approval.[92] In responses to information requests and hearing testimony, EKPC states that it has or will receive all necessary approvals to consummate the proposed transaction.[93]

Concurrent with the acquisition of Bluegrass Station, there are a number of agreements affected by the transfer that will either be assigned to or terminated by EKPC as part of the transaction in addition to those mentioned above. These agreements are detailed in the Due Diligence Evaluation Report and the Agreement itself. Several of these were addressed at the hearing, with the two following agreements addressed in some detail.

Operation and Maintenance Agreement ("O&M Agreement")

Bluegrass Station is currently operated by North American Energy Services ("NAES") under an O&M Agreement with Port River LLC, an affiliate of Bluegrass. EKPC testified that the O&M Agreement would be assigned to it and it would retain the contract with NAES.[94] EKPC also plans to create five new, skilled, well-compensated full-time equivalent positions ("FTE") in addition to the current five FTE positions due to the increased usage of Bluegrass Station.[95]

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[92] *See* Application at 19, Crews Direct Testimony at 15, and EKPC's Response to Staff's Second Request, Item 1.

[93] *See* EKPC's Response to Staff's Second Request, Item 1; *See also,* Mosier Hearing Testimony Hearing beginning at 09:02:35.

[94] Mosier Hearing Testimony Hearing beginning at 09:19:04.

[95] *See* EKPC's Response to Staff's First Request, Item 17. Four of the positions will be at the Bluegrass Station and one will be within EKPC's environmental group.

Energy Management Agreement ("EMA")

Currently, energy generated at Bluegrass Station is marketed and sold by EDF Trading North America, LLC under the EMA.[96] EKPC testified that the EMA would be terminated in conjunction with the proposed transaction and that it will internally administer this function subsequent to the consummation of the transaction.

LEGAL STANDARD

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.[97] To obtain a CPCN, the utility must demonstrate a need for such facilities and an absence of wasteful duplication.[98]

"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 of the rights of consumers, persisting over such a period of time as to establish an inability or unwillingness to render adequate service.[99]

"Wasteful duplication" is defined as "an excess of capacity over need" and "an excessive investment in relation to productivity or efficiency, and an unnecessary

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[96] Burns & McDonnell Due Diligence Evaluation Report at ES-3.

[97] KRS 278.020(1).

[98] *Kentucky Utilities Co. v. Pub. Serv. Comm'n*, 252 S.W.2d 885 (Ky. 1952).

[99] *Id.* at 890.

multiplicity of physical properties."[100] 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.[101] Selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.[102] All relevant factors must be balanced.[103] The Commission has long recognized that the principle of least-cost is one of the fundamental foundations utilized when setting rates that are fair, just, and reasonable and that this principle is embedded in KRS 278.020(1).[104]

DISCUSSION

EKPC identified numerous reasons why the acquisition of the Bluegrass Station is the most reasonable, least-cost option for addressing its long-term capacity needs. These reasons include: acquiring generation capacity at a substantially lower cost than the estimated cost for new construction, avoiding construction-cost risk; replacing the loss of the Dale Station's capacity; mitigating winter peak exposure and increasing market price volatility during those periods; providing a physical hedge against future energy and market price volatility; diversifying its generation portfolio by becoming less

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[100] *Id.*

[101] 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).

[102] *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).

[103] Case No. 2005-00089, Aug. 19, 2005 Order at 6.

[104] Case No. 2009-00545, *Application of Kentucky Power Company for Approval of Renewable Energy Purchase Agreement for Wind Energy Resources Between Kentucky Power Company and FPL Illinois Wind, LLC* (Ky. PSC June. 28, 2010).

reliant on coal-fired generation and taking advantage of increases in, and lower cost of, natural gas supplies in the region; providing greater geographical diversity to its generation fleet; eliminating the need to rely upon more costly market-based power purchase agreements to satisfy its load; gaining significant additional generation capacity without sacrificing financial stability or threatening its improved equity position and credit ratings; being well positioned to comply with existing and forthcoming environmental regulations and mandates while mitigating compliance and market locational risks of investing in out-of-state resources; minimizing technology and performance risk by acquiring reliable SCCT technology with proven field experience and a large fleet base; maximizing EKPC's core strengths by acquiring facilities and technology similar to the facilities at its Smith Station; complying with the Commission's stated policy that utilities should seek to have adequate capacity to serve native load; and assuring that a generation asset located in Kentucky remains operational, thereby contributing to the local economy through the payment of skilled-labor wages and property taxes.[105] In addition, at the hearing, EKPC testified that SCCTs support renewables due to their ability to ramp up or down in a very rapid manner, aiding states for future compliance with the CPP.[106]

EKPC is not proposing to increase rates in conjunction with the proposed transaction. Recovery through base rates of the capital or fixed and variable operating and maintenance expenses would not commence until its base rates are re-established in a future rate case. However, fuel costs incurred to operate the Bluegrass Station will be passed through EKPC's fuel adjustment clause.

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[105] Application at 23-24.

[106] Crews Hearing Testimony beginning at 11:19:45.

EKPC's ability to maximize the energy and capacity value of the Bluegrass Station through its involvement in PJM means that retail customers on its system will benefit from both excess energy sales to non-native load and revenues realized from participation in the capacity market. These benefits will result in increasing margins and capital patronage for EKPC's owner-members.

Having reviewed the record and being otherwise sufficiently advised, the Commission finds that EKPC's shortage of capacity over the past two winters, the extreme volatility of market prices during those periods, and its projected load growth over the next 20 years clearly demonstrate a need for additional generating capacity. We also note that EKPC will need to replace the capacity and energy that will be lost due to retirement of the Dale Station Accordingly, we find that EKPC has sufficiently demonstrated a need for the capacity and energy which will be provided by purchasing the Bluegrass Station.

The Commission also finds that the record, including EKPC's economic analysis as well as the economic evaluations of independent firms retained by EKPC, is sufficient to demonstrate that the Bluegrass Station acquisition represents the most reasonable least-cost resource to meet EKPC's capacity and energy needs upon the retirement of the Dale Station. The Commission further finds that the proposed purchase is reasonable, will not result in wasteful duplication of utility facilities, and is feasible in terms of its impacts on rates, and should be approved as a reasonable addition to EKPC's generating fleet.

Notwithstanding our approval of EKPC's request to acquire the Bluegrass Station, the Commission has some concerns over the condition of the Bluegrass Station units and existing and potential environmental issues. Therefore, we will require EKPC to file annual operating reports ("Operating Report") providing the Commission with detailed updates on the performance of the Bluegrass Station units and EKPC's assessment of any potential changes in existing or potential environmental regulations that would impact the Bluegrass Station. The annual Operating Report shall cover a 12-month period ending December 31 and shall include, for that year, at a minimum, a discussion and evaluation of the performance of each of the three Bluegrass Station units, unplanned system outages, heat rate, budgeted and actual capital expenditures for the prior year and budgeted capital expenditures for the reporting year, budgeted and actual operation and maintenance ("O&M") expenditures for the reporting year and budgeted O&M expenses for the next year, and a discussion of existing and potential environmental regulations that may impact the Bluegrass Station.

We also note that PJM is currently implementing a complete redesign of its capacity market. PJM is transitioning from the RPM construct to the Capacity Performance market in response to the extreme forced outage rate experienced by power generators across PJM during the 2014 Polar Vortex. For the next two BRAs, the transition period will allow generating resources to offer in as a CP product or as a non-CP, or base, product. Beginning in the 2020/21 Delivery Year, PJM will require all generating resources to be a CP product. To qualify as a CP product, a generating resource would have to be capable of sustained, predictable operation and be available to provide energy and reserves whenever PJM determines an emergency condition exists. Payments for a CP resource are expected to rise; however, generating resources will also be exposed to significant penalties if the generating resource is not available when called upon by PJM during an emergency condition. In response to information requests and testimony at the hearing, EKPC generally addressed its options for participating in PJM's new CP market. With respect to the CP capacity market, EKPC discussed its consideration of its fuel supply and the possibility of converting the units for dual fuel supply or contracting firm gas transportation in order to maximize the value of the Bluegrass Station capacity. EKPC also indicated that it would consider the option of being exposed to the penalty, noting that the amount of penalties could be less than the costs of upgrading the facilities to dual-fuel capability or entering into firm gas transportation contracts. Accordingly, the Commission will direct EKPC to include in the Operating Report its evaluation of how the Bluegrass Station units would qualify as a CP product and how EKPC will address the related risk exposure.

IT IS THEREFORE ORDERED that:

1. EKPC's requests to acquire Bluegrass Station and to assume the evidences of indebtedness associated with the Bluegrass Station acquisition are approved.

2. Within seven days after the closing of the Bluegrass Station transaction, EKPC shall file written notification to the Commission detailing the status of the transaction.

3. EKPC shall file an annual Operating Report setting forth details of the performance of the Bluegrass Station as discussed in the findings above no later than March 31, 2017, and annually thereafter until the Commission orders otherwise.

4. EKPC shall include in its Operating Report an annual evaluation of how the Bluegrass Station units would qualify for the CP market in the PJM capacity markets product and how EKPC is addressing the related risk exposure.

5. Within 30 days of the closing of the transaction, EKPC shall file the journal entries reflecting how the transaction was recorded.

6. Any documents filed pursuant to ordering paragraph 2, 3, 4, and 5 of this Order shall reference the number of this case and shall be retained in the utility's general correspondence file.

Nothing contained herein shall be construed as a finding of value for any purpose or as a warranty on the part of the Commonwealth of Kentucky or any agency thereof as to the securities authorized herein.

By the Commission

ENTERED
DEC 01 2015
KENTUCKY PUBLIC
SERVICE COMMISSION

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