

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF EAST KENTUCKY POWER)	
COOPERATIVE, INC. FOR ISSUANCE OF A)	
CERTIFICATE OF PUBLIC CONVENIENCE AND)	CASE NO.
NECESSITY, APPROVAL OF CERTAIN)	2016-00269
ASSUMPTION OF EVIDENCES OF)	
INDEBTEDNESS AND ESTABLISHMENT OF A)	
COMMUNITY SOLAR TARIFF)	

ORDER

On July 21, 2016, East Kentucky Power Cooperative, Inc. ("EKPC") tendered an application requesting a Certificate of Public Convenience and Necessity ("CPCN") to construct and operate an 8.5-megawatt ("MW") community solar facility ("Community Solar Facility") to be located at EKPC's headquarters in Clark County, Kentucky; approval to assume certain evidences of indebtedness related to construction of the proposed project; approval of a wholesale community solar tariff ("Wholesale Tariff"); and approval of a retail community solar tariff template ("Retail Tariff Template"). The projected capital cost for the Community Solar Facility is \$17.7 million. EKPC also filed a motion for deviation from 807 KAR 5:001, Section 15(2)(d)(2), which requires plans, specifications, and drawings of the proposed construction project to be submitted as part of a CPCN application. EKPC stated that the plans, specifications, and drawings of the proposed project will be developed by its contractor, Lendlease (US) Public Partnerships, LLC ("Lendlease"), and that EKPC would supplement its application once

those plans, specifications, and drawings were finalized and made available to EKPC.¹ On August 4, 2016, the Commission granted EKPC's motion to deviate and the application was deemed filed as of that date.

By Order entered August 17, 2016, the Commission found it necessary for good cause to extend the time period to render a decision on EKPC's request for approval of assumption of certain evidences of indebtedness as permitted by KRS 278.300(2). The Commission further found that there was no need to suspend the effective date of the proposed Wholesale Tariff and Retail Tariff Template tariffs pursuant to KRS 278.190(2) because the proposed tariffs did not comply with 807 KAR 5:011, Section 3(2), and thus could not become effective until they are refiled with the required effective date, a date of issue, and a signature. Lastly, the Commission directed EKPC to provide notice of the Retail Tariff Template by publishing notice in a newspaper of general circulation in EKPC's members' service areas, but permitted EKPC to deviate from the requirement in 807 KAR 5:011, Section 8(2)(b), by publishing notice only once rather than three times. EKPC provided proof of notice on September 9, 2016.

Kentucky Industrial Utility Customers, Inc. ("KIUC") was granted intervention but did not participate in discovery or file testimony. Commission Staff issued, and EKPC responded to, one round of discovery. An informal conference was held on September 14, 2016. EKPC filed a motion on September 30, 2016, requesting that this matter be submitted for a decision based on the evidentiary record without the need for a formal hearing. The Commission finds that EKPC's motion to submit the matter for a decision based upon the existing evidentiary record should be granted, given that discovery has

¹ EKPC filed the finalized plans, specifications, and drawings for the proposed project on September 23, 2016.

been completed and there are no outstanding factual issues to be addressed at a formal evidentiary hearing. Accordingly, the matter now stands submitted to the Commission for a decision.

BACKGROUND

EKPC is an electric generation and transmission cooperative that provides wholesale electricity to its 16 member-owner distribution cooperatives (“Members”).² It owns and operates 2,955 MW of net summer generating capability and 3,257 MW of net winter generating capability consisting of coal-fired, natural gas-fired, and landfill gas-to-energy facilities owned and operated by EKPC, and hydropower purchased from the Southeastern Power Administration.³ According to its most recent integrated resource plan, EKPC anticipates growth in both its load and load factors over the next 20 years.⁴

In support of its request, EKPC states that its Members have received requests from customers for solar programs, and that there are a growing number of businesses, such as Facebook, that have renewable energy goals and have not considered locating their operations in Kentucky due to the lack of renewable generating resources in the state.⁵ EKPC asserts that the proposed project will permit its Members’ retail customers to voluntarily participate in a facilities-based renewable energy program at

² Application, paragraph 5.

³ *Id.* at paragraph 6.

⁴ *Id.*; See Case No. 2015-00134, *The 2015 Integrated Resource Plan of East Kentucky Power Cooperative, Inc.*, (filed Apr. 21, 2015) Application, Technical Appendix Vol. 1, at 4–6. (projecting net increase in load forecast from 13.2 to 17.4 million MWh by 2032, an average of 1.4 percent per year; and an increase in the load factor from 47.6 percent in 2015 to 51.7 percent by 2034).

⁵ Informal Conference Memo (“IC Memo”), Exhibit unnumbered at 2–3.

the least possible cost.⁶ Additionally, EKPC contends that the proposed project will address future capacity and energy supply requirements, promote EKPC's strategic goal to diversify its generation portfolio, and implement recommendations from EKPC's demand-side management and renewable energy collaborative⁷ ("Collaborative"), which EKPC established in partnership with public interest groups.⁸ On behalf of the Collaborative, EKPC commissioned a market research study in 2013 which projected that between 7,870 and 15,741 of EKPC's Members' residential customers were likely to enroll in the proposed community solar program.⁹

PROPOSED COMMUNITY SOLAR FACILITY

EKPC requests a CPCN to construct a Community Solar Facility that would consist of 30,400 fixed solar panels and 1,900 sun-tracking panels with a capacity of 8.5 MW at a projected capital cost of \$17.7 million. The capacity would be available for reservation by EKPC's Members on a voluntary, first-come basis. The Members would, in turn, license their allotted capacity to their retail customers on a voluntary, first-come basis. If approved, construction on the Community Solar Facility is scheduled to begin in May 2017 with a commercial operation date of November 1, 2017.

EKPC asserts that, in the event that none of the panels were licensed, there would be a minimal impact on Members' ratepayers. EPKP projects that the total

⁶ Application at paragraph 2.

⁷ The Collaborative consists of EKPC, its 16 Owner-Members, the Sierra Club, the Kentucky Environmental Foundation, and Kentuckians for the Commonwealth.

⁸ Application at paragraph 2.

⁹ Direct Testimony of David Crews ("Crews Testimony"), at 12. The market study identified three segments that represent 55 percent of EKPC's residential customers who would be receptive to participating in the proposed program. From that number, the study projected 8 percent to 17 percent were likely to enroll in the proposed program.

annual cost of the proposed project will be \$1 million, with an estimated benefit of \$700,000 annually.¹⁰ Thus, the annual net cost would be \$300,000, which amounts to a 0.04 percent increase in Members' rates.¹¹ EKPC will share the unsubscribed portion of the Community Solar Facility with its Members as a system resource, with the cost of any unsubscribed capacity shared in the same proportion that costs of the existing generation fleet is apportioned.¹²

EKPC initially considered building smaller-scale solar farms with a capacity of 25 to 30 kilowatts ("kW") each located on EKPC's Members' systems, but concluded that the regulatory and administrative burden associated with multiple small projects and the economies of scale related to a larger-scale facility supported constructing a larger, single facility to serve all its Members.¹³ In order to obtain the reasonable, least-cost option, EKPC issued a request for proposals ("RFP") in October 2015 with a preference for proposals to develop and build a Community Solar Facility, but that EKPC would also consider power purchase agreements.¹⁴ The RFP requested bids for building on two existing EKPC sites, both located in Winchester, Clark County, Kentucky: EKPC's headquarters and EKPC's JK Smith Station.¹⁵ The JK Smith Station site was not selected because it consisted of two, non-contiguous plots of land, which would

¹⁰ EKPC's Response to Staff's First Request for Information ("Response to Staff's First Request"), Item 12 (filed Sept. 9, 2016).

¹¹ *Id.*

¹² *Id.* at Item 23.

¹³ *Id.* at Item 16.

¹⁴ Application, paragraph 13.

¹⁵ *Id.* at paragraph 13; Application, Exhibit TB-2, at 7-9.

ultimately increase development costs.¹⁶ The Headquarters site was chosen because of its contiguous nature and public relations value due to the site's location adjacent to I-64, which makes it visible to passing drivers and passengers.¹⁷ EKPC received 12 proposals in response to the RFP. The proposals were evaluated on technical, commercial, and economic bases, and six were short-listed.¹⁸ EKPC selected Lendlease because its bid was most competitive, it had experience in developing projects of similar scope and size, it had substantial financial backing, and it was the only short-list bidder to respond quickly, completely, and thoroughly during the post-interview process.¹⁹ Although Lendlease submitted proposals to build a Community Solar Facility and for a power purchase agreement, EKPC determined that building the Community Solar Facility was more economical and less risky than entering into a power purchase agreement.²⁰

The Community Solar Facility will connect directly to a substation owned and operated by EKPC ("Office Substation"). EKPC identified improvements that are required to connect the Community Solar Facility to the Office Substation, along with Office Substation improvements unrelated to the Community Solar Facility that EKPC elects to make in conjunction with the proposed project. The cost of improvements related to the Community Solar Facility is included in the project's total capital cost projection. EKPC will set up two separate accounts to track actual costs for Office

¹⁶ Application, Exhibit TB-2 at 7–9.

¹⁷ *Id.*

¹⁸ Application at paragraph 13.

¹⁹ *Id.* at Exhibit 3, Direct Testimony of Todd Bartling ("Bartling Testimony"), at 7–8.

²⁰ *Id.* at Exhibit 2, Direct Testimony of Tom Stachnik ("Stachnik Testimony"), at 7.

Substation improvements: one for improvements necessary to connect the Community Solar Facility and one for elective improvements.

A portion of the energy generated by the Community Solar Facility will flow onto the Louisville Gas & Electric (“LG&E”) and Kentucky Utilities Company (“KU”) transmission systems for delivery to EKPC load delivery points connected to LG&E/KU transmission systems. Under an existing Network Integration Transmission Service Agreement with LG&E/KU, EKPC will incur no additional transmission service charges due to the flow of Community Solar Facility output onto the LG&E/KU transmission systems.²¹

The Community Solar Facility will be integrated into PJM Interconnection, LLC (“PJM”), a regional electric grid and market operator that operates EKPC’s transmission system. EKPC will receive a capacity payment and energy payment from PJM, which will ultimately be passed on and credited to participating retail customers.

PROPOSED WHOLESALE AND RETAIL TARIFFS

EKPC requests Commission approval of its proposed Wholesale Tariff as well as the proposed Retail Tariff Template. EKPC states that each EKPC Member that participates in the project will have to obtain Commission approval for its Member-specific retail tariff, but has requested approval of the Retail Tariff Template because a uniform retail tariff is necessary for the project’s feasibility.²²

Under the Wholesale Tariff, solar power up to the cumulative capacity of 8.5 MW is available to EKPC’s Members on a voluntary, first-come basis for the benefit of the

²¹ Application at paragraph 10.

²² Application at paragraph 18.

Members' retail customers. If any Member is unable to participate in the licensing of this Community Solar Facility, that Member will be given a preference to participate in the licensing of any future solar generation facilities. Each Member who participates is, in turn, responsible for obtaining a signed 25-year licensing agreement and collecting a licensing fee from participating retail customers and forwarding the licensing fee to EKPC. EKPC will credit Members on a monthly basis for capacity payments and energy payments from PJM, which are passed through and applied to participating retail customers' bills in proportion to their licensed interest in the Community Solar Facility. Participating retail customers also receive solar renewable energy credits ("SREC") which is a certificate that certifies that one MWh of solar energy was produced. SRECs can be bought, sold or otherwise traded. Retail customers who opt to sell their SRECs will also receive a monthly credit that is passed through the Members from EKPC. A customer may either retire or sell to EKPC SRECs associated with their licensed interest. The proceeds of SRECs sold by EKPC will accumulate over a calendar year, and then be credited in equal installments over 12 months beginning April 1 of the following year, along with interest on the proceeds accrued at the rate established by the Commission for customer deposits.

Members will not be required to convert billing credits to cash; excess credit can be carried forward by Members to offset a later billed amount. Operation and Maintenance ("O&M") costs for the Community Solar Facility will be determined in aggregate on an annual basis, passed through the Members, and netted against credits applied to participating retail customers' bills. Neither the fuel adjustment charge nor the

environmental surcharge is applicable to the power generated by the Community Solar Facility.

Under the Retail Tariff Template, participating retail customers would enter into a 25-year license agreement, which is incorporated into the Retail Tariff Template, and pay a licensing fee of \$460.00 per panel; the \$460.00 licensing fee represents the per panel net present value of the capital and financing costs.²³ In exchange for the licensing fee, retail customers would receive a monthly credit for electric power produced by the solar panel in proportion to the retail customers' licensed interest, which may offset up to 100 percent of the customer's energy consumption based on average annual electric consumption from the previous three years. If three years' consumption data is not available, the data that is available will be used to determine the maximum offset available to the customer. If there is a significant investment, such as the replacement of an inverter, it will be amortized over the remaining term of the license agreement.

PROPOSED FINANCING

The projected capital cost for the proposed project is \$17.7 million, and future O&M expense is projected to be \$60,000 annually.²⁴ EKPC seeks Commission approval to finance the Community Solar Facility with New Clean Renewable Energy Bonds ("New CREBS"). EKPC would issue taxable bonds directly to the National Rural Utilities Cooperative Financing Corporation ("CFC") at a market rate of interest, with the interest rate offset by a direct subsidy payment from the U.S.

²³ Crews Testimony at 15.

²⁴ Application, paragraph 14.

Treasury.²⁵ The subsidy is set at 70 percent of the published Internal Revenue Service (“IRS”) Tax Credit Bond Rate; as of June 7, 2016, the CFC bond rate was 4.00 percent and the subsidy was 2.99 percent, resulting in an effective interest rate of 1.01 percent.²⁶ The New CREBs bonds will be secured by EKPC’s existing Trust Indenture.

EKPC structured the licensing fee so that participating retail customers will pay for the capacity and future O&M costs of the Community Solar Facility, with the revenues from the license agreements providing the funds to repay the New CREBS obligation.²⁷ EKPC considered other forms of financing, such as tax-equity partnerships and purchase power agreements, but determined that those options bore significant risks, with increased complexity and higher costs.²⁸

DISCUSSION

CPCN

The standard of review for a request for a CPCN is well settled. 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 the Commission.²⁹ To obtain a CPCN, the utility must demonstrate a need for such facilities and an absence of wasteful duplication.³⁰

“Need” requires:

²⁵ *Id.* at paragraph 15.

²⁶ *Id.*

²⁷ *Id.* at paragraph 16.

²⁸ Stachnik Testimony at 7.

²⁹ KSR 278.020(1).

³⁰ *Kentucky Utilities Co. v. Pub. Serv. Comm’n*, 252 S.W.2d 885 (Ky. 1952).

[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.³¹

“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.”³² 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.³³ Selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.³⁴ All relevant factors must be balanced.³⁵ The statutory

³¹ *Id.* at 890.

³² *Id.*

³³ 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).

³⁴ 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).

³⁵ Case No. 2005-00089, *East Kentucky Power Cooperative, Inc.* (Ky. PSC Aug. 19, 2005), Final Order at 6.

touchstone for ratemaking in Kentucky is the requirement that rates set by the Commission must be fair, just and reasonable.³⁶

Having reviewed the record and being otherwise sufficiently advised, the Commission finds that EKPC has sufficiently established an interest in and need for the proposed Community Solar Facility. The Commission further finds that there is an inadequacy of existing renewable energy service, and thus the Community Solar Facility will not be a wasteful duplication of plant, equipment, property, or facilities.

The capital cost of the Community Solar Facility is \$17.7 million for 8.5 MW, which is typical of the cost of solar facilities of similar size installed recently.³⁷ The proposed project is designed so that it will not be meaningfully subsidized by non-participating customers. Capital costs and financing costs will be recovered from participating customers through the licensing fee. O&M costs will be recovered from participating customers through monthly bills. If none of the panels were licensed, the projected impact would be a 0.04% increase in costs to ratepayers. EKPC proposes to share the unsubscribed portion of the Community Solar Facility with its Members as a system resource, with the cost of any unsubscribed capacity shared in the same proportion that costs of the existing generating fleet is apportioned. EKPC is not proposing a base rate increase to pay for unsubscribed costs, but requests that costs

³⁶ KRS 278.190(3).

³⁷ See Case No. 2014-00002, *Joint Application of Louisville Gas & Electric Company and Kentucky Utilities Company for Certificates of Public Convenience and Necessity for the Construction of a Combined Cycle Combustion Turbine at the Green River Generating Station and a Solar Photovoltaic Facility at the E.W. Brown Generating Station* (Ky. PSC Dec. 19, 2014) (approving a ten-MW solar photovoltaic facility with an estimated capital cost of \$36 million); Case No. 2016-00274, *Electronic Joint Application of Kentucky Utilities Company and Louisville Gas and Electric Company for Approval of an Optional Solar Share Program* (Ky. PSC Nov. 4, 2016) (approving a four-MW community solar facility with an estimated capital cost of \$9.8 million).

be considered as a cost of service for future ratemaking purposes. The Commission finds that a determination whether unsubscribed costs will be treated as a cost of service is a matter to be reviewed in future rate cases.

As previously discussed, an RFP was issued soliciting bids to design and construct a Community Solar Facility, as well as offers for a power purchase agreement. After EKPC reviewed the responses, it determined the proposed Community Solar Facility was the most economical and least risky option to obtain solar energy. The Commission finds this reasonable.

The Commission further finds it reasonable for EKPC, upon the completion of the construction of the Community Solar Facility, to file with the Commission annual reports providing information on the total number of participating retail customers, the number of participating retail customers identified by Member, and a copy of marketing materials used to promote participation in the Community Solar Facility.

Tariff

The Commission finds that the Wholesale Tariff and the Retail Tariff Template should be approved. As discussed above, a participating retail customer will pay \$460 licensing fee per panel for a 25-year license agreement. Participating retail customers will receive monthly credits, less a prorated share of O&M costs.

EKPC commissioned an analysis comparing the economics of the Retail Tariff Template with the principal alternative available to residential customers, a residential-scale rooftop solar system. The analysis determined that the cost per kW for the Community Solar Facility will be \$2,077 per kW, which is significantly less expensive

than installing a residential solar system, which has a median cost of \$4,000 per kW.³⁸ The O&M cost for the Community Solar Facility is projected to be \$16 per kW, which is less than the \$21 per kW for the O&M costs for a residential solar system.

Financing

The Commission finds that EKPC's request for approval for evidences of indebtedness should be approved. Because EKPC is a non-profit organization, it is unable to take advantage of Federal tax credits normally available to tax-paying entities. Under IRS rules, EKPC qualifies for a special type of financing known as CREBS, discussed above. The CREBS offer an effective interest rate of 1.01 percent and are available for terms up to 30 years. The Commission notes that the alternative financing methods available to EKPC were more expensive, presented significant risks, and were more complex than the CREBS.³⁹

IT IS THEREFORE ORDERED that:

1. EKPC's request for a CPCN for construction of the Community Solar Facility as described in EKPC's application is granted.
2. EKPC's request to assume evidences of indebtedness associated with the Community Solar Facility as described in EKPC's application is approved.
3. EKPC's motion to submit the case for a decision based upon the existing record is granted.
4. The proposed Wholesale Tariff is approved for service rendered on and after the date of this Order.

³⁸ Application, paragraph 14; Read Testimony, at 9.

³⁹ See Stachnik Testimony, at 7; Bartling Testimony, at 7-8.

5. The proposed Retail Tariff Template is approved for use by EKPC Members in future retail community solar tariff filings.

6. Within 20 days of the date of this Order, EKPC shall file with this Commission, using the commission's electronic Tariff Filing System, the Wholesale Tariff reflecting that it was approved pursuant to this Order.

7. EKPC shall file annual reports, after the Community Solar Facility is constructed, providing information on the total number of participating retail customers, the number of participating retail customers identified by Member, and a copy of marketing materials used to promote participation in the Community Solar Facility.

8. Any documents filed pursuant to ordering paragraph 7 of this Order shall reference the number of this case and shall be retained in the utility's general correspondence file.

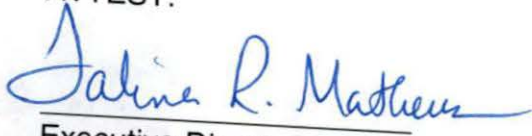
The Executive Director is delegated authority to grant reasonable extensions of time for filing of any documents required by this Order upon EKPC's showing of good cause for such extension.

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
NOV 22 2016
KENTUCKY PUBLIC
SERVICE COMMISSION

ATTEST:



Executive Director

Case No. 2016-00269

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