

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC JOINT APPLICATION OF)	
LOUISVILLE GAS AND ELECTRIC)	
COMPANY AND KENTUCKY UTILITIES)	CASE NO. 2020-00016
COMPANY FOR APPROVAL OF A SOLAR)	
POWER CONTRACT AND TWO)	
RENEWABLE POWER AGREEMENTS TO)	
SATISFY CUSTOMER REQUESTS FOR A)	
RENEWABLE ENERGY SOURCE UNDER)	
GREEN TARIFF OPTION #3)	

BRIEF OF KENTUCKY UTILITIES COMPANY
AND LOUISVILLE GAS AND ELECTRIC COMPANY

PUBLIC VERSION

Dated: April 9, 2020

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INTRODUCTION

Louisville Gas and Electric Company (“LG&E”) and Kentucky Utilities Company (“KU”) (collectively “the Companies”) have applied to the Commission for approval of a 20-year agreement with Rhudes Creek Solar, LLC for the purchase of the output of a 100 MW solar generation facility to be built in Hardin County, Kentucky (“Solar PPA”). At issue is whether the Solar PPA, which is necessary for the Companies to meet their obligations under Green Tariff Open #3 and whose energy cost, when combined with sales of renewable energy certificates (“RECs”) resulting from the agreement, is less than the forecasted variable costs of existing fossil-fuel generation, meets the criteria set forth in KRS 278.300 and should be approved.

STATEMENT OF THE CASE

I. Announcing that Kentucky Has Solar Options Available for Economic Development Purposes

In response to increased customer demand for renewable energy, the Companies recently added Green Tariff options to their rate schedules to ensure that businesses inside and outside Kentucky knew such options were available.¹

Green Tariff Option #3 is designed to meet the needs of industrial and large commercial users that have corporate sustainability goals or who otherwise have an interest in expanding renewable energy use.² Often large corporations wish to promote their procurement of renewable

¹ Direct Testimony of Robert M. Conroy at 20-22 (filed Sept. 28, 2018 in *Electronic Application of Kentucky Utilities Company for an Adjustment of Its Rates*, Case No. 2018-00294 (Ky. PSC Sept. 28, 2018)); Direct Testimony of Robert M. Conroy at 20-22 (filed Sept. 28, 2018 in *Electronic Application of Louisville Gas and Electric Company for an Adjustment of Its Electric and Gas Rates*, Case No. 2018-00295 (Ky. PSC Sept. 28, 2018)).

² The other two options are: Renewable Energy Certificates (Option #1) and Business Solar (Option #2). Option No. 1 is available to all customers. It involves the aggregation of resources provided by the participating customers to develop green power, purchase green power, or purchase Renewable Energy Certificates. Participation in Option #2 is “limited to Customers who wish to have the Company develop, procure, construct, maintain, manage, and own a solar array. The electrical energy produced by the array will be assigned to the Customer.” Kentucky Utilities Company Tariff, P.S.C. No. 19, Original Sheet No. 69; Louisville Gas and Electric Company Electric Service Tariff, P.S.C. Electric No. 12, Original Sheet No. 69.

energy from a new renewable generation source to support additional renewable generation beyond business as usual generating assets that would be added regardless of their own participation.³ Green Tariff Option #3 thus makes the Companies' service territories more attractive to business investment in Kentucky by new and existing customers.

II. Solar PPA and Renewable Power Agreements

Prior to the issuance of the Commission's decision in the Companies' 2018 rate cases,⁴ in February 2019 the Companies issued a Renewable Request for Proposals ("RFP") to systematically assess the cost of acquiring renewable energy delivered to their transmission system as a means to either reduce customers' energy costs or increase renewable generation at a modest incremental cost. Except for its exclusive focus on renewable energy and its preference for new generation projects, the Renewable RFP was no different from previous RFPs. As noted above, its purpose, in part, was the procurement of lower cost energy that could displace energy on a non-firm basis from the Companies' existing fossil fuel generation fleet.⁵

The RFP sought proposals for 10 MW to 200 MW of renewable electrical power and energy with a preference for delivery starting no later than January 1, 2022. It required that the generation facilities be located in Kentucky or surrounding states and that energy delivery be for a term from five to twenty years and expressed a preference for new generation assets consistent with the requirements of the then pending application for the new Green Tariff Option #3. It was sent to over 50 project developers, marketers, generation asset owners, and renewable energy trade groups, and was advertised on the Companies' website.

³ Testimony of David S. Sinclair ("Sinclair Testimony") at 6.

⁴ *Electronic Application of Kentucky Utilities Company for an Adjustment of Its Electric Rates*, Case No. 2018-00294 (Ky. PSC Apr. 30, 2019); *Electronic Application of Louisville Gas and Electric Company for an Adjustment of Its Electric and Gas Rates*, Case No. 2018-00295 (Ky. PSC Apr. 30, 2019).

⁵ Sinclair Testimony at 5-6.

The Companies received 94 proposals from 16 respondents to the Renewable RFP.⁶ They conducted a vigorous review of these proposals using the same process the Companies typically use to evaluate alternative generation resources. A screening analysis was first performed to identify the lowest-cost proposals. A detailed production cost analysis was then performed of the lowest cost proposals to estimate each proposal's impact to the Companies' system energy costs. Based upon these analyses, the Companies requested a short list of bidders to provide their best proposals and new proposals for a standardized set of contract capacities, terms, and start dates. They then met with the two best bidders to discuss a wide variety of issues, including land control, local and state permits, construction schedule, facility operation and maintenance, and general project development experience and capabilities. Based upon these discussions, a top candidate was identified, and more formal negotiations were conducted.

The top candidate proposed a [REDACTED], [REDACTED], and 100 MW contract with 20-year level pricing of [REDACTED], [REDACTED], and [REDACTED], respectively, beginning in December 2021.⁷ When performing their final evaluation, the Companies focused their attention on the 100 MW proposal because that level of capacity would not only lower the rate for Toyota Motor Manufacturing, Kentucky, Inc. ("Toyota") and Dow Silicones Corporation ("Dow") the customers expressing an interest in renewable energy, but also create a volume of energy that could be used to lower future energy costs for all customers.⁸ This evaluation used the Companies' most current fuel price forecasts and involved 48 different scenarios that considered the uncertainty of fuel prices, CO₂ emissions prices, REC prices, and the potential retirement age of the Companies'

⁶ The Companies received 71 initial proposals in response to the Renewable RFP. They subsequently received 23 proposals in response to their requests for revised sizes and terms. *Id.* at 7.

⁷ Sinclair Testimony Exhibit DSS-2 ("2019 Resource Assessment") at 14.

⁸ *Id.*

generation units. The proposed energy rate from the renewable facility was compared to forecasted fossil fuel prices under each scenario. The primary evaluation factor was the proposal's potential to lower customers' energy costs over the life of the contract with the least risk.⁹

Based upon these evaluations, the Companies negotiated a 20-year power-purchase agreement—the Solar PPA—with Rhudes Creek Solar, LLC, (“Rhudes Creek”). Under the Solar PPA, the Companies would purchase the output of a 100 MW nameplate solar generation facility that would be constructed in Hardin County, Kentucky and commence commercial operations no later than December 31, 2021.¹⁰ Under the Solar PPA, the Companies will pay a level price of [REDACTED] for all output delivered to the Companies' transmission system, but no demand or capacity charges. In other words, they only pay for energy received. The Solar PPA requires Rhudes Creek to transfer to the Companies at no additional cost all RECs related to the solar generation facility's production.¹¹ The Companies assume no obligation for the construction, operation, maintenance, or decommissioning of the generation facility.

The Solar PPA provides the Companies with several protections, including the Companies' right to terminate the agreement without penalty if Rhudes Creek does not achieve milestones related to state and local permitting, securing financing, and construction-related activities.¹² The Solar PPA contains energy availability and performance guarantees that, if not met, could result in the payment of liquidated damages to the Companies or termination of the agreement by the Companies. In short, the Companies have ensured the Solar PPA is commercially reasonable and favorable to all of their customers.

⁹ For a detailed listing of the proposals and an extensive discussion of the Companies' evaluation methods and findings, see 2019 Resource Assessment (Sinclair Testimony Exhibit DSS-2).

¹⁰ Power Purchase Agreement Among Rhudes Creek Solar, LLC, Louisville Gas and Electric Company and Kentucky Utilities Company (“Solar PPA”) at Art. 1.4 and Art. 4.1.

¹¹ *Id.* at Art. 7.

¹² *Id.* at Art. 6.2

The Solar PPA also addresses Toyota's and Dow's desire to participate in Green Tariff Option #3. Both previously expressed to KU an interest in renewable energy to meet their own corporate sustainability goals. Toyota had inquired about the purchase of renewables from KU on numerous occasions over several years.¹³ Dow expressed interest in such purchases after the Commission's approval of the Green Tariff in May 2019. After review of the initial responses to the Renewable RFP, the Companies approached each customer with concrete proposals, including draft pricing and terms, that led each to pursue and ultimately to enter retail renewable power agreements ("RPAs") with the Companies. The Companies also approached other customers who had previously expressed interest in renewable energy sources but none elected to pursue an RPA at this time.

Under the terms of the RPAs, Toyota and Dow will receive fifty percent and twenty-five percent, respectively, of the solar energy provided from the solar facility. They will pay the same rate for that energy as the Companies pay Rhudes Creek. Each will receive the RECs related to their portion of the power received from Rhudes Creek. Each RPA provides that, if the solar energy from the Rhudes Creek facility is greater than the customer's load for a particular 15-minute interval, the Companies will repurchase the excess power at their avoided energy cost as provided in the Companies' Large Capacity Cogeneration and Small Power Production Qualifying Facilities standard rate rider.

The RPAs are structured to permit the Companies to pass through to Toyota and Dow all commercial terms, benefits, and risks associated with the Solar PPA. They do not subject the Companies to greater risk exposure than the Companies are already subjected to under the Solar PPA. The RPAs provide that Toyota and Dow only receive credit for the energy from the Rhudes

¹³ Testimony of Robert M. Conroy ("Conroy Testimony") at 6.

Creek Solar facility when it produces energy. Each RPA also requires a guarantee from an affiliate who is financially responsible if the customer is unable to comply with the RPA's terms or a letter of credit from the customer.

The remaining twenty-five percent of the total energy received under the Solar Contract will be allocated to all of the Companies' customers. Of that twenty-five percent, thirty-nine percent will be allocated to LG&E customers and sixty-one percent will be allocated to KU customers based upon the conventions in the Companies' Power Supply System Agreement.¹⁴

All energy purchased under the Solar PPA will be placed at the bottom of the generation dispatch stack through the After-the-Fact Billing ("AFB") process, pushing all other resources higher in the stack and displacing the equivalent highest cost resources.¹⁵ The energy cost from the 25 percent applicable to all customers (9.75 percent to LG&E and 15.25 percent to KU) will be included in the fuel adjustment clause ("FAC") as purchase power expense. The remaining 75 percent of the energy costs will be directly billed to Toyota and Dow under their Renewable Power Agreements. The proceeds from the sale of RECs for the 25 percent portion of the solar energy allocated to native load customers will flow through the FAC charge as an off-set to the purchase power expense.

III. The Solar PPA's Expected Effects

The exhaustive and thorough analyses that the Companies conducted of the Solar PPA's potential effects on all customers indicate that the Solar PPA will likely reduce the cost of energy for all customers over the term of the PPA. To this point, these analyses demonstrate that the purchases under [REDACTED] scenarios considered will result in savings over the PPA's term. Notably,

¹⁴ Conroy Testimony at 11.

¹⁵ Companies' Response to KPSC 1-10.

of the six scenarios in which the Solar PPA does not result in savings over the 20-year term of the contract, four assume zero REC prices for the entire 20-year term, and the remaining two assume average REC prices of just \$2 for 20 years beginning in 2022.¹⁶ Such low REC prices seem unlikely: the Companies received over \$10 on average for each Brown Solar REC in 2019, and current forward markets indicate significantly higher pricing than \$2 per REC.¹⁷ Therefore, it is reasonable to infer that the six scenarios in which the Solar PPA and related REC revenues might slightly increase NPVRR are, on the whole, less likely than the 42 scenarios in which Solar PPA and related REC revenues would decrease NPVRR.

Moreover, in those scenarios in which the Solar PPA [REDACTED] net present value for revenue requirements (“NPVRR”), the average [REDACTED] was [REDACTED]. In those [REDACTED] cases in which the Solar PPA [REDACTED] NPVRR, the average [REDACTED] was [REDACTED].¹⁸ Under the worst-case scenario, Solar PPA has the potential to slightly increase annual fuel expense (likely less than [REDACTED] out of the Companies’ total fuel expense of around \$800 million). Although the renewable energy is not likely to result in lower energy costs in every hour of the Solar PPA’s 20-year term, it is expected to reduce NPVRR over that period (net of REC sale revenues), all while allowing two large Kentucky employers and major customers of the Companies to achieve their corporate sustainability goals.¹⁹

The proposed Solar PPA will not cause the retirement of any fossil fuel-fired generation, strand any fossil-fuel purchases, or materially affect future fossil-fuel purchases. To the contrary, because of the intermittent and must-take nature of the non-firm energy from the Solar PPA, the

¹⁶ See 2019 Resource Assessment at 23-24.

¹⁷ *Id.* at 23.

¹⁸ Sinclair Testimony at 16.

¹⁹ *Id.* at 17.

reliability and grid services that are provided by the Companies' existing coal and natural gas fleet are necessary to the Solar PPA's economic viability.²⁰

ARGUMENT

I. Standard of Review

In Administrative Case No. 350, the Commission noted that “in this era of increasing competition, [electric] utilities should be able to purchase power without prior approval” but suggested that an agreement obligating an electric utility to purchase power may constitute an evidence of indebtedness and thus require the prior Commission approval under KRS 278.300.²¹ Eleven years later, the Commission found that wholesale power contracts that obligated a utility to pay monthly minimum demand charges over the life of the contract constituted evidences of indebtedness requiring prior Commission approval.²²

More recently, the Commission has equated an electric utility's purchase of additional energy through a power purchase agreement with the construction of additional generation facilities and has found that the same standard used in KRS 278.020(1) to review the construction of utility-owned generation facilities should be used to review some power purchase agreements,

²⁰ *Id.* at 12-13.

²¹ *Consideration and Determination of the Appropriateness of Implementing a Ratemaking Standard Pertaining to the Purchase of Long-Term Wholesale Power by Electric Utilities*, Adm. Case No. 350 (Ky. PSC Oct. 25, 1993) at 8-9. KRS 278.300(1) provides that “[n]o utility shall issue any securities or evidences of indebtedness or assume any obligation or liability in respect to the securities or evidences of indebtedness of any other person until it has been authorized so to do by order of the commission.” KRS 278.300(4) allows the Commission to authorize a utility to issue an evidence of indebtedness only if the evidence of indebtedness is “for some lawful object within the corporate purposes of the utility, is necessary or appropriate for or consistent with the proper performance by the utility of its service to the public and will not impair its ability to perform that service, and is reasonably necessary and appropriate for such purpose.”

²² *Application of Kentucky Utilities Company for an Order Pursuant to KRS 278.300 and For Approval of Long-Term Purchase Contract*, Case No. 2004-00395 (Ky. PSC Dec. 30, 2004); *Application of Louisville Gas and Electric Company for an Order Pursuant to KRS 278.300 and For Approval of Long-Term Purchase Contract*, Case No. 2004-00396 (Ky. PSC Dec. 30, 2004).

namely whether a need for the additional generation capacity exists and whether the purchase will result in a wasteful duplication of facilities.²³

This standard, however, has not been consistently applied. In Case No. 2013-00252, the Commission implicitly rejected this standard by choosing not to employ it when reviewing a water utility's agreement to purchase a minimum of 60 million gallons of water annually for 50 years.²⁴ Despite the purchasing water utility's intent to replace and augment existing water treatment production capacity, the Commission viewed the agreement as the purchase of a commodity rather than the acquisition of additional water treatment capacity.

II. The KRS 278.020(1) Criteria Do Not Apply to the Proposed Solar PPA Because the PPA Is a Pure Energy Purchase, Does Not Involve Capital Investment, Capacity Payments, or Operational Responsibilities for the Companies, and Is Therefore Entirely Unlike Constructing or Acquiring Generating Capacity.

On its face, KRS 278.020(1) does not apply to power-purchase agreements. The most potentially relevant portion of the statute refers only to “construction of any plant, equipment, property, or facility for furnishing to the public any of the services enumerated in KRS 278.010”;

²³ *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*, Case No. 2009-00545 (Ky. PSC June 28, 2010) at 5-6 (“[I]n examining the statutory criteria for approving financing under KRS 278.300(3), the ‘purposes and uses of the proposed issue’ are for the acquisition of new generation; and for the debt to be ‘for some lawful object within the corporate purposes of the utility,’ there must be a need for additional generation and the absence of wasteful duplication.”); *Electronic Application of South Kentucky Rural Electric Cooperative Corporation for Approval of Master Power Purchase and Sale Agreement and Transactions Thereunder*, Case No. 2018-00050 (Ky. PSC Sep. 27, 2018) at 31-32.

²⁴ *Investigation into The Proposed Water Purchase Agreement Between Louisville Water Company and Hardin County Water District No. 2*, Case No. 2013-00252 (Ky. PSC Sep. 12, 2014). See also *Investigation Into The Proposed Water Purchase Agreement Between Louisville Water Company And Hardin County Water District No. 1*, Case No. 2013-00251 (Ky. PSC Sep. 12, 2014); *Investigation Into The Proposed Water Supply Agreement Between Frankfort Electric and Water Plant Board and South Anderson Water District*, Case No. 2013-00250 (Ky. PSC Sep. 12, 2013). The Commission has also reviewed and permitted several water purchase agreements to become effective without applying the standard set forth in KRS 278.020 or considering the agreement as an acquisition of water treatment capacity. See, e.g., TFS 2020-00022, Water Purchase Contract Between Crittenden-Livingston Water District and Caldwell County Water District (effective Feb. 9, 2020).

it makes no mention of the purchase of electrical energy. Therefore, KRS 278.020(1) is inapplicable to power purchases on its own terms.

Even if a power-purchase agreement with significant capacity-cost and operational obligations could be sufficiently like constructing and owning a generating unit to permit application of KRS 278.020(1), the statute’s criteria of need and avoidance of wasteful duplication have no application to the power-purchase agreement at issue in this case because the proposed agreement is entirely unlike the construction or acquisition of generating resources.²⁵ The Commission’s stated reasoning for applying the KRS 278.020(1) review standard to previous power-purchase agreements has been that “[a] proposal to enter into a long-term contract to purchase such generation will have the same operational and financial implications and impacts to the utility and its ratepayers as if new generation were being constructed.”²⁶ Whatever may have been true of the previous power-purchase proposals to which the Commission has applied this standard, it is not the case that the Solar PPA “will have the same operational and financial implications and impacts to the utility and its ratepayers as if new generation were being constructed,” rendering any application of the KRS 278.020(1) criteria to the proposal inapposite.

First, unlike building the Companies’ own generating units—including their own solar capacity—the Solar PPA contains no capacity payment or obligation of any kind. When the Companies build generating units with Commission approval, the capital and fixed operating and maintenance costs of those units necessarily become part of the Companies’ future ratemaking

²⁵ See, e.g., *Application of Kentucky Power Company for Approval of the Terms and Conditions of the Renewable Energy Purchase Agreement for Biomass Energy Resources Between the Company and ecoPower Generation-Hazard LLC; Authorization to Enter into the Agreement; Grant of Certain Declaratory Relief; and Grant of All Other Required Approvals and Relief*, Case No. 2013-00144 (Ky. PSC Oct. 10, 2013); *Electronic Application of South Kentucky Rural Electric Cooperative Corporation for Approval of Master Power Purchase and Sale Agreement and Transactions Thereunder*, Case No. 2018-00050 (Ky. PSC Sep. 27, 2018).

²⁶ *Kentucky Power Company*, *supra* note 23 at 5-6.

calculations irrespective of how much energy the units produce. But that is not true of the Solar PPA, which has no capacity or other fixed payment component of any kind, and no part of the Solar PPA's cost will be included in the Companies' rate base or capitalization. No return will be earned on or added to this expenditure.

Second, unlike the Companies' building their own generating units, the Solar PPA will not affect their balance sheets. As articulated under oath by the Companies' Treasurer, Dan Arbough, the two leading rating agencies have published guidance indicating that purchase power agreements like the Solar PPA will not be treated as a form of debt.²⁷ Therefore, the Solar PPA will have no direct impact on the Companies' balance sheets and is not considered an asset or liability for the Companies' financial reporting purposes. In turn, the rating agencies are unlikely to treat the Solar PPA as a debt-like obligation or impute debt to the Companies, meaning that the Solar PPA will not raise the Companies' risk profile for determining a reasonable return on equity.

Third, unlike the Companies' construction and ownership of their own generating units, the Companies' proposed RPAs with Toyota and Dow contain indemnification and other risk-mitigation provisions regarding 75 percent of the solar facility's energy production under the Solar PPA.²⁸ As the Commission's history shows, utilities sometimes construct facilities in anticipation of having certain customers use the facilities, only to have the anticipated load reduced or eliminated entirely. Such an event can place additional burdens on the affected utility's remaining customers. Unlike that scenario, under the proposed Solar PPA, two highly credit-worthy and economically significant entities (Toyota and Dow) have committed to purchase 75 percent of the energy produced by the Rhudes Creek facility under the proposed RPAs and Solar PPA. Indeed, this commitment by Toyota and Dow helps ensure the Solar PPA will not have a balance sheet

²⁷ Companies' Response to AG 3-8. See also Companies' Supplemental Response to AG 2-1.

²⁸ Companies' Response to AG 3-8.

impact: Mr. Arbough cited Moody's as stating that it treats PPA costs recovered via pass-through arrangements (in this case in the form of the 75 MW RPAs) as "operating costs with no long-term debt-like attributes."²⁹ This arrangement renders the proposed PPA entirely financially dissimilar to the Companies' construction of their own generating facilities.

Fourth, the Companies will have no operational obligation associated with the proposed solar facility. Unlike the operational responsibilities for their own generating units, the Companies will have no obligation to construct, operate, repair, maintain, or decommission the solar facility; all operating, maintenance, and repair costs and obligations fall on the solar facility's operator, not the Companies.

Indeed, the only way in which the Companies' entry into the Solar PPA is remotely like owning their own generation is that the Companies will adjust their fossil-fueled energy production to account for energy flowing from the solar facility. Energy balancing is already a function the Companies perform at every moment, so entering into the Solar PPA will not create a new burden in that regard. Perhaps more importantly, the uncontradicted evidence in this proceeding shows that the energy produced by the Rhudes Creek facility, when coupled with the revenue from REC sales, will likely be a net benefit to the Companies' customers across the 20-year contract period.

In sum, there is no material way in which entering into the Solar PPA "will have the same operational and financial implications and impacts to the utility and its ratepayers as if new generation were being constructed." The Companies, in collaboration with two significant Kentucky manufacturers and employers, have negotiated a solar purchase power agreement that will help these two vital entities achieve their corporate objectives and give them additional incentives to remain and expand in Kentucky, all while providing energy-cost benefits to all of the

²⁹ *Id.*

Companies' customers over 20 years. Therefore, there is no basis in this record for applying the need and wasteful duplication criteria of KRS 278.020(1) to the Solar PPA when determining whether the Companies have satisfied the requirement of KRS 278.300.

III. Although the Requirements of KRS 278.020(1) Should Not Apply to It, the Solar PPA Meets the “Need” and “Wasteful Duplication” Criteria Because It Provides Renewable Energy Desired by Two of the Companies’ Largest Customers and Will Provide Low-Cost Energy (Net of REC Sale Revenues) to All of the Companies’ Customers without Imposing Capital Investment, Capacity Payments, or Operational Responsibilities on the Companies.

If the Commission determines to apply the need and wasteful duplication criteria of KRS 278.020(1) to the Solar PPA in this proceeding, it should still approve the PPA in its entirety because it is the least-cost alternative to meet the energy needs of all its customers, not just Toyota and Dow.

Kentucky’s highest court has held that an applicant for a certificate of public convenience and necessity under KRS 278.020(1) must demonstrate a need for the new facilities and the absence of wasteful duplication.³⁰ To demonstrate need, an applicant must show a “substantial inadequacy” of existing facilities great enough “to make it economically feasible for the new system or facility to be constructed and operated.”³¹ It must also show that the inadequacy is due to “a substantial deficiency of service facilities beyond what would be supplied by normal improvements in the ordinary course of business.”³²

In the current proceeding, the Companies have demonstrated the existence of a substantial inadequacy or deficiency in their existing generation facilities in two respects: (1) regarding 75 percent of the Solar PPA’s energy, Toyota and Dow have requested solar energy the Companies’ current facilities cannot provide; and (2) regarding the remaining 25 percent of the Solar PPA’s

³⁰ *Kentucky Utilities Company v. Public Service Commission*, 252 S.W.2d 885, 890 (Ky. 1952).

³¹ *Id.*

³² *Id.*

energy, the energy cost of the Companies' non-renewable generating units is expected to be higher than the Solar PPA's costs net of projected REC revenues over the 20-year PPA term and across most fuel-price and REC-price scenarios. This makes the Solar PPA economically feasible for the Companies while producing economic savings for their native load customers. In short, the Solar PPA meets all the "need" requirements, reduces costs for customers, and is in complete accord with the Commission's long-standing policy of operating at the lowest reasonable cost.³³

The Solar PPA also does not result in wasteful duplication because it will likely produce reduced NPVRR over the 20-year PPA period without requiring the construction of a single utility-owned generating facility. Kentucky's highest court has defined wasteful duplication to be "an excessive investment in relation to productivity, and an unnecessary multiplicity of physical properties."³⁴ Relatedly, the Commission has previously found that an absence of wasteful duplication may be demonstrated by showing that all reasonable alternatives were considered prior to the selection of a proposal and that the selected proposal is consistent with least cost principles.³⁵ As discussed in detail earlier in this brief, the Companies thoroughly evaluated the Solar PPA against other reasonable alternatives and found the Solar PPA's energy costs combined with the sale of RECs over the term of the Solar PPA will likely result in lower NPVRR over the term of the contract. Moreover, under the Solar PPA, the Companies will make **no investment at all** in the Rhudes Creek solar facility and will pay a fixed rate per MWh for energy actually produced.

³³ See, e.g., *General Adjustment of Electric Rates of Kentucky Utilities Company*, Case No. 8624 (Ky. PSC Mar. 18, 1983) at 54 (finding that an electric utility "has an obligation to pursue, for Kentuckians, an energy strategy that represents least cost consistent with appropriate reliability"); *The Application of East Kentucky Power Cooperative, Inc. for A Certificate of Public Convenience and Necessity, and a Certificate of Environmental Compatibility for the Construction of 300 MW (Nominal) of Combustion Turbine Peaking Capacity and Related Transmission Facilities in Clark and Madison Counties In Kentucky*, Case No. 92-112 (Ky. PSC Mar. 11, 1993) (finding that construction of combustion turbines without purchasing additional capacity from other sources is the least cost alternative available)

³⁴ *Kentucky Utilities Company v. Public Service Commission*, 252 S.W.2d 885, 890 (Ky. 1952).

³⁵ *Kentucky Power Company*, *supra* note 24 at 5-6.

In other words, the Solar PPA easily passes the “wasteful duplication” test because the Companies will pay only when the facility is productive, will have zero investment in the facility, and will not construct, own, or have operational or maintenance obligations associated with the Rhudes Creek solar facility, and because the Solar PPA will not result in stranding existing fossil-fuel resources.

In addition, the Commission has previously found that an absence of wasteful duplication may be demonstrated by showing that all reasonable alternatives were considered prior to the selection of a proposal and that the selected proposal is consistent with least cost principles.³⁶ The Companies thoroughly evaluated the Solar Power Contract against other reasonable alternatives and found the Solar Power Contract’s energy costs combined with the sale of RECs over the term of the Solar Power Contract are expected to result in customers achieving lower energy costs over the term of the contract.

The energy that will result from the Solar Power Contract is not *per se* wasteful or uneconomical merely because it adds to the Companies’ present potential energy supply or because the Companies’ existing fossil-fuel generation capacity is sufficient to generate the energy needed by their native customers. Indeed, if it were always wastefully duplicative to acquire energy, no matter how low-cost, any time a utility had adequate existing energy resources, then a utility could not enter into an agreement to acquire even zero-cost energy. Such an outcome would only harm customers, and it is precisely why Kentucky’s highest court has cautioned against using a mechanistic approach to ascertain whether the construction of utility facilities results in a wasteful duplication of facilities.³⁷

³⁶ *Id.*

³⁷ *Kentucky Utilities Company v. Public Service Commission*, 252 S.W.2d 885, 890 (Ky. 1952)(“An inadequacy of service might be such as to require construction of an additional service facility to supplement an inadequate existing facility, yet the public interest would be better served by substitution one large facility, adequate to serve all the consumers, in place of the inadequate existing facility, rather than constructing a new small facility to supplement the

Moreover, the cost-saving nature of the Solar PPA distinguishes it from other cases in which the Commission has applied KRS 278.020(1) criteria to deny approval to purchase power agreements. For example, the Commission denied Kentucky Power Company authorization to enter a wind-power contract largely because the agreement had “not been shown to be least-cost compared to Kentucky Power’s available energy sources.”³⁸ Similarly, the Commission denied South Kentucky RECC’s request to enter into a PPA for firm energy and a capacity hedge because of the lack of evidence that the agreement would produce savings.³⁹ Unlike those cases, here the Companies have shown through extensive and uncontradicted evidence that the Solar PPA will likely reduce NPVRR net of REC-sale revenues across the 20-year PPA period and across a variety of fuel- and REC-price scenarios.

Applying the KRS 278.020(1) criteria in this way is consistent with Kentucky courts’ guidance to the Commission not to overlook cost-effectiveness and the Commission’s core policy objective of having utilities provide service at the lowest reasonable cost. For example, in a case involving a biomass purchase power agreement, the Court of Appeals held that the Commission was “required to consider ... **the reasonableness of the costs in comparison with other alternatives.**”⁴⁰ The Commission itself has stated that “‘least cost’ is one of the fundamental principles utilized when setting rates that are fair, just and reasonable,”⁴¹ and that the principle of

existing small facility. **A supplementary small facility might be constructed that would not create duplication from the standpoint of an excess of capacity, but would result in duplication from the standpoint of an excessive investment in relation to efficiency and a multiplicity of physical properties.**”(emphasis added).

³⁸ *Kentucky Power Company*, *supra* note 23 at 6 (finding the cost of wind energy to be approximately \$43/MWh and Kentucky Power’s existing cost of generation to be \$34/MWh).

³⁹ *Electronic Application of South Kentucky Rural Electric Cooperative Corporation for Approval of Master Power Purchase and Sale Agreement and Transactions Thereunder*, Case No. 2018-00050 (Ky. PSC Sep. 27, 2019).

⁴⁰ *Kentucky Industrial Utility Customers, Inc. v. Kentucky Public Service Commission*, 504 S.W.3d 695 (Ky. App. 2016) at 709 (emphasis added).

⁴¹ *Kentucky Power Company*, *supra* note 23, at 5.

least cost is “embedded in KRS 278.020(1).”⁴² Moreover, the Commission has firmly declared that it “is responsible for ensuring that utilities provide safe and reliable electric service at **the least cost.**”⁴³ It has directed all electric generation utilities to develop on a regular ongoing basis a “resource assessment and acquisition plan for providing an adequate and reliable supply of electricity to meet forecasted electricity requirements at the lowest possible cost.”⁴⁴ And Kentucky’s highest court has noted that one of the Commission’s most important objectives is “providing **the lowest possible cost** to the ratepayers.”⁴⁵ The Solar PPA is in complete accord with these high-court directives and the Commission’s cornerstone lowest-reasonable-cost policy because it will likely reduce NPVRR (net of REC-sale revenues).

In addition, the Commission should not mechanically apply KRS 278.020(1) to deny approval of economically beneficial agreements like the Solar PPA solely because the applying utility has adequate generating capacity. The Commission has stated, “The existence of excess capacity cannot be considered in isolation but must be carefully weighed with other relevant factors,”⁴⁶ and has instructed utilities filing for base rate changes to provide testimony concerning “the existing programs to achieve improvements in efficiency and productivity”⁴⁷ The Solar PPA, in addition to meeting the needs of two major Kentucky manufacturers, employers, and utility customers, will increase efficiency by reducing net fuel costs. It will do so without

⁴² *Id.*

⁴³ *Application of Kentucky Power Company For: (1) A General Adjustment of Its Rates For Electric Service; (2) An Order Approving Its 2014 Environmental Compliance Plan; (3) An Order Approving Its Tariffs And Riders; and (4) An Order Granting All Other Required Approvals and Relief*, Case No. 2014-00396 (Ky. PSC Jun. 22, 2015) at 34 (emphasis added).

⁴⁴ 807 KAR 5:058, Section 8(1) (requiring all electric generation utilities to develop a “resource assessment and acquisition plan for providing an adequate and reliable supply of electricity to meet forecasted electricity requirements at the lowest possible cost.”).

⁴⁵ *Public Service Commission v. Continental Telephone Company*, 692 S.W.2d 794, 799 (Ky. 1985) (emphasis added).

⁴⁶ *The Application of Kentucky-American Water Company for A Certificate of Convenience and Necessity Authorizing the Construction of Kentucky River Station II, Associated Facilities and Transmission Main*, Case No. 2007-00134 (Ky. PSC Apr. 25, 2008) at 41. *See also South Kentucky RECC*, *supra* note 23, at 29-30.

⁴⁷ 807 KAR 5:001 Section 16(7)(a).

increasing the Companies' owned capacity and without adding a single capacity or operating cost obligation. Essentially, the Companies have found a way to reduce fuel costs while making their service territories—and the Commonwealth—more attractive to two of their largest customers, all without adding to their rate bases or affecting their financial statements or credit ratings, which is to the benefit of all customers and the Commonwealth. It will also send a strong signal to other companies with sustainability goals that the Commonwealth is open for their business, thus promoting economic development and potentially adding load to the Companies' system that could help make even more economical use of the Companies' existing generating resources to the benefit of all of the Companies' customers.

In contrast, mechanistically applying KRS 278.020(1) to deny this application simply because the Companies have adequate generating resources to supply forecasted load could have significant negative implications. Such action could also limit the ability of important businesses in the Commonwealth to meet their corporate sustainability goals. In addition, it could discourage utilities across Kentucky from continuously investigating whether lower costs can be achieved. Such an outcome benefits no one. It is a powerful reason for the Commission to follow its own precedents and those of Kentucky's courts by approving the economically beneficial Solar PPA in its entirety and the related RPAs as proposed.

IV. The Solar PPA Is Reasonably Necessary and Appropriate to the Companies' Performance of Their Duties as Regulated Utilities and Therefore Meets the Requirements of KRS 278.300.

The Solar PPA is reasonably necessary and appropriate for the Companies to meet their statutory duty to provide the services listed in their tariffs, and therefore satisfies the requirements of KRS 278.300.⁴⁸ KRS 278.030(2) requires utilities to provide “adequate, efficient and

⁴⁸ KRS 278.300 states in relevant part:

reasonable service” in accordance with reasonable conditions established for the provision of such service. KRS 278.160 requires the Companies to comply with the provisions of their filed tariffs and to provide the services set forth in those tariffs.

Under Green Tariff Option #3, eligible customers may request that the Companies provide renewable power to meet some or all of their energy needs. Green Tariff Option #3 obligates the Companies to seek out and acquire new sources of renewable energy for these customers and to provide that power consistent with the tariff’s provisions to meet the needs of their customers. The Solar PPA is necessary if the Companies are to provide enough renewable power necessary to satisfy two of their largest customers’ requests for renewable energy and to do so at the lowest reasonable available price. Without the proposed PPA, the Companies cannot meet their statutory duty to these customers.

Toyota and Dow requested renewable energy to meet their corporate sustainability goals and have agreed to take such service in accordance with this tariff. These customers meet the eligibility requirements and have entered into the required RPAs.

Moreover, the 25 percent of the energy received under the Solar PPA that is proposed to be allocated to native load is also reasonably necessary for the Companies to meet their statutory duties as public utilities to **all of their customers**. The Companies must “furnish adequate, efficient and reasonable service” to all customers.⁴⁹ This foundational policy includes the obligation to procure energy at the lowest reasonable cost. The Commission has previously

The commission shall not approve any issue or assumption unless ... [it] finds that the issue or assumption is for some lawful object within the corporate purposes of the utility, is necessary or appropriate for or consistent with the proper performance by the utility of its service to the public and will not impair its ability to perform that service, and is reasonably necessary and appropriate for such purpose.

⁴⁹ KRS 278.030(2).

declared: “All jurisdictional electric utilities should be intent on delivering electricity at the lowest possible cost.”⁵⁰ This duty is further reflected in the Commission’s fuel adjustment clause regulation, which imposes upon electric utilities the obligation to engage in fuel procurement practices that result in reasonable fuel costs for their ratepayers.⁵¹ It is also reflected in the Commission’s integrated resources planning regulation which requires the “state’s electric utilities to meet future demand with an adequate and reliable supply of electricity at the lowest possible cost for all customers within their service areas.”⁵²

Twenty-five percent of the energy supplied under the Solar PPA will be allocated to all of the Companies’ customers. The Companies’ analyses of the proposed cost and expected fuel market prices, which no party to this proceeding has challenged and no evidence in the record has contradicted, shows that these ratepayers will benefit by receiving energy that is expected to be less costly⁵³ over the term of the Solar PPA than energy generated from the Companies’ existing fossil fuel generation units or units that may be constructed in the future when the existing units are retired. This analysis shows that the purchased solar energy may [REDACTED] annual NPVRR by as much as [REDACTED] over the life of the Solar PPA.⁵⁴

The Solar PPA will allow the Companies to substitute lower cost power for higher cost generation. The Companies’ acquisition of the renewable energy to meet the needs of all customers is the functional equivalent of economy energy purchases.⁵⁵ Even though a utility may

⁵⁰ *Purchase of Long-Term Wholesale Power by Electric Utilities*, supra note 21 at 5.

⁵¹ See, e.g., 807 KAR 5:056, Section 3 (providing for the disallowance of unreasonable fuel charges).

⁵² 807 KAR 5:058.

⁵³ This cost takes into consideration the revenues that the Companies are expected to receive from the sales of the RECs related to the portion of the purchased renewable energy allocated to all customers.

⁵⁴ 2019 Resource Evaluation at 24.

⁵⁵ “Economy energy is ‘energy produced and supplied from a more economical source in one system, substituted for that being produced or capable of being produced by a less economical source in another system. Economy energy sales occur when utilities purchase energy from other utilities that can generate the energy at lower cost.’ *East Kentucky Power Cooperative’s Request for A Declaratory Ruling on The Application of Administrative Regulation*

have generation capacity to meet customer demand and thus energy, such adequacy does not excuse the utility from the Commission's approved duty to seek lower cost energy regardless of form. Where, as here, it is more economical and more beneficial to its customers if the utility purchases the energy rather than use its existing generation assets, the utility has a duty to do so. This duty is confirmed in the Commission's established position that "electric utilities should be intent on delivering electricity at the lowest possible cost"⁵⁶ and the longstanding view of Kentucky courts that one of the most important objectives of utility regulation is "providing **the lowest possible cost** to the ratepayers."⁵⁷

The Companies' unrebutted analysis of the Solar PPA shows that in most of the periods that power is likely to be purchased it is expected to be less than the cost of fuel necessary for the Companies' fossil fuel generation units to produce the same energy. Moreover, the purchase of this energy will not result in any stranded purchased fossil fuel. In addition, it will allow the Companies to reduce their CO₂ emissions in a cost-effective manner and will provide the Companies with greater experience in the integration of solar generation into their existing generation fleet.

In summary, the Solar PPA is reasonably necessary and appropriate for the Companies to fulfill their obligations under Green Tariff Option #3 to procure renewable power for eligible customers and their statutory duty to provide efficient and reasonable service to all customers, a duty that includes providing electrical power to customers at the lowest reasonable cost. As noted above, the Solar PPA will also make the Companies' service territories more attractive to two of

807 KAR 5:056 *To Its Proposed Treatment of Non-Economy Energy Purchases*, Case No. 2004-00430 (Ky. PSC Feb. 7, 2005) (citations omitted) at 4, fn. 2.

⁵⁶ *Purchase of Long-Term Wholesale Power by Electric Utilities*, supra note 21 at 5.

⁵⁷ *Public Service Commission v. Continental Telephone Company*, 692 S.W.2d 794, 799 (Ky. 1985) (emphasis added).

their largest customers and will also send a powerful signal to other companies with sustainability goals that the Commonwealth is open for their business. It could therefore promote economic development and potentially add load to the Companies' system that could help make even more economical use of the Companies' existing generating resources. All of these are lawful objects for the Companies, consistent with the Companies' proper performance of service to the public, and will not impair the Companies' ability to perform that service, and the Solar PPA is reasonably necessary and appropriate for such purposes; in short, the proposed Solar PPA therefore meets all of the requirements for approval under KRS 278.300.

CONCLUSION

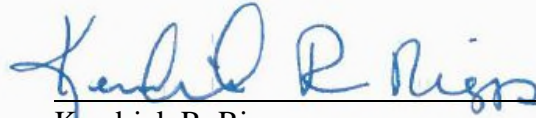
The Commission's decision in this case will send an unmistakable message to other companies with sustainability goals on whether the Commonwealth is open for their business and to customers on whether solar is a viable source of energy for Kentuckians in the future.

The Solar PPA is necessary for the Companies to meet their obligations under Green Tariff Option #3 and delivers energy at a cost, when combined with sales of renewable energy certificates, less than the variable costs of existing fossil-fuel generation over the term of the contract, and thus meets the criteria set forth in KRS 278.300. The duty to serve at the lowest reasonable cost is not trumped by a mechanical application of the KRS 278.020 criteria.

The Solar PPA and associated RPAs should be approved.

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Respectfully submitted,




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CERTIFICATE OF COMPLIANCE

In accordance with 807 KAR 5:001 Section 8(7), this is to certify that Louisville Gas and Electric Company's and Kentucky Utilities Company's April 9, 2020 electronic filing of their Brief is a true and accurate copy of the document being filed in paper medium; that the electronic filing has been transmitted to the Commission on April 9, 2020; that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding; and that an original in paper medium of the filing will be filed with the Commission within 30 days of the end of the state of emergency declared in Executive Order 2020-215.



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