COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF SOUTH KENTUCKY	)	
RURAL ELECTRIC COOPERATIVE	)	
CORPORATION FOR APPROVAL OF	)	**CASE NO.**
MASTER POWER PURCHASE AND SALE	)	**2018-00050**
AGREEMENT AND TRANSACTIONS	)	
THEREUNDER	)	

DIRECT TESTIMONY OF DON MOSIER
ON BEHALF OF EAST KENTUCKY POWER COOPERATIVE, INC.

Filed: April 12, 2018

Q. Please state your name, business address, and occupation.

A. My name is Don Mosier and my business address is East Kentucky Power Cooperative, Inc. ("EKPC"), 4775 Lexington Road, Winchester, Kentucky 40391. I am Executive Vice President and Chief Operating Officer at EKPC.

Q. Please state your education and professional experience.

A. I obtained my Bachelor of Science degree in civil engineering from the University of Virginia and my Master of Business Administration degree from the Kenan-Flagler Business School at the University of North Carolina. My professional experience includes work at Carolina Power & Light (now Duke Energy Carolinas) in Raleigh, North Carolina, developing merchant generation projects and power marketing and deal origination activities, regulatory affairs, and nuclear power plant engineering and operations. I also was an engineering manager of U.S. Operations for Canatom Corp., a Toronto-based engineering firm that provides nuclear plant engineering and construction services. For the ten years immediately prior to joining EKPC, I was Vice President of St. Louis-based Ameren Energy Marketing ("AEM"), a subsidiary of Ameren Corp. At AEM, I managed wholesale power trading, power marketing and deal origination, portfolio management and hedging, plant dispatch, North American Electric Reliability Corporation and SERC compliance, transmission and congestion management activities, and customer account management for Ameren Corporation's unregulated merchant generation fleet located in MISO and PJM, both Regional Transmission Organizations.

Q. Please provide a brief description of your duties at EKPC.

A. I manage the day-to-day operations of power production, engineering, construction, power delivery, power supply and planning, and transmission system operations. I report directly to EKPC's President and Chief Executive Officer, Mr. Anthony S. Campbell.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to offer observations and comments about the transaction between Morgan Stanley Capital Group, Inc. ("Morgan Stanley") and South Kentucky Rural Electric Cooperative Corporation ("South Kentucky") referred to as the Firm Physical Energy Confirmation (the "Energy Confirm"), and its corresponding "Master Power Purchase & Sale Agreement" (the "Master Agreement.") In addition, my testimony includes observations and comments about the "Financial Capacity Confirmation" (the "Capacity Confirm"). Specifically, my testimony in this regard addresses potential concerns regarding the operation and effects of certain provisions of the Energy and Capacity Confirms.

My testimony also sets forth empirical data with respect to existing and anticipated transmission costs in the EKPC system and in the PJM market for purposes of assisting in evaluation of the Net Present Value calculations relied upon by South Kentucky in its economic case for this transaction.

Q. What are the potential concerns that EKPC has regarding the operation and effects of certain provisions of the Energy and Capacity Confirms (or, collectively, "Confirms").

A. There are three substantive areas of the Confirms and the Master Agreement that could potentially create unanticipated expense or risk for South Kentucky and, ultimately, EKPC and other owner-members. This relates to whether the Confirms are in the best interest of South Kentucky and its customers, specifically: (1) the twenty-year term of the Confirms commits South Kentucky to a firm fixed physical energy position and a financial swap transaction premised on expectations about market conditions that can be very difficult to accurately predict. It is unclear from the record whether or how an analysis has been carried out on how potential market fluctuations could affect the economic outcomes of these commitments. Moreover, the term and nature of the contract create additional challenges for EKPC to attempt to mitigate the load loss; (2) the provisions of the Energy Confirm allowing Morgan Stanley to change the "fixed" pricing therein or to pass along additional charges based on "Change in Law," including "Environmental Law," and associated "Additional Environmental Costs," are not well-defined and are unpredictable. These could have a material impact on the operation and perceived economic benefits of the transaction; and, (3) what has been characterized as South Kentucky's purchase of "capacity" from Morgan Stanley is not, in fact, an actual purchase of capacity, but rather a contractual mechanism called a "financial fixed-for-floating swap" by which South Kentucky believes it is assured a fixed price for capacity purchases it has yet to make in the PJM capacity performance market. It is unclear why South Kentucky made a representation and warranty that the Capacity Confirm, a derivative "financial swap" transaction, constitutes an "Alternate Source" per the MOU.

Q. Explain EKPC's concern regarding the term of this contract in light of the nature of the financial commitments that are involved.

A. The 20-year term is unusual based on the type of power purchase agreement that is at issue. The subject of the Energy Confirm and Master Agreement is a firm LD physical energy product delivered at the EKPC load zone in PJM at a 100% load factor. The term for this type of agreement, as an industry norm, is for very short periods, which would be a fraction of the term for the subject agreement. 20-year or longer terms are typically associated with all-requirements type contracts and specific asset-based tolling agreements. Not having an identified resource associated with the Alternate Source that likely is sourced outside of the Commission's jurisdiction creates a high degree of regulatory, market and economic risk for South Kentucky that has not been accounted for in its due diligence. The product that is subject to this Application is generally illiquid (fewer buyers and sellers) beyond a 3-5 year period, correlated closely to NYMEX natural gas price forward views which generally serve as the basis for future energy price forecasting, and is not easily hedged by Morgan Stanley beyond that time frame, unless, as in both Confirms, there are contractual repricing mechanisms such as provided for in the Confirms' broad "Change in Law" provisions that allow Morgan Stanley, at its sole discretion, to pass along certain pricing increases. Thus, neither of these Confirms are truly "fixed" and both the energy price and the financial hedge "fixed" price can and likely will change over the 20-year term.

Despite the stated risks, there is no indication in South Kentucky's Application or materials that indicates that South Kentucky conducted an empirical analysis of varying market conditions, the range of outcomes, how it would affect the propriety of the transaction, or identified what the degree of risk tolerance was for South Kentucky and its customers. Morgan Stanley, and other similar market participants, have a vast array of analysts, empirical data and marketing that allow it to make very sophisticated predictions and ensure a high likelihood that it will benefit from the transaction. There does not appear to have been similar analysis performed by South Kentucky. Likewise, Morgan Stanley has the ability, and will use it, to limit much of its market risk by contracting with other parties.

Q. Does the term and nature of the South Kentucky contract have an impact on the manner in which EKPC would attempt to mitigate the load loss that results?

A. Yes. Due to the length of the term and the size of the load involved, it is not feasible or prudent to attempt to immediately mitigate the entire loss of 58MW of baseload energy leaving EKPC's portfolio. The current market in PJM for baseload energy is well below what South Kentucky is paying Morgan Stanley. To hedge any period of this load loss at such pricing would effectively lock in a loss of revenue and margins, shifting more costs, and thus further exacerbating the negative financial impact on EKPC and, in turn, on its other owner-members. Instead, EKPC will seek to take advantage of its generating portfolio to capture seasonal spikes in energy pricing and will continue to bid all of its assets into the PJM Base Residual Auctions including the upcoming BRA for planning year 2021/2022 in May. In the long term the mitigation efforts may include seeking new distribution cooperatives and non-traditional all-requirements load such as municipals, joint action agencies and acquisition opportunities.

Q. Explain EKPC's concern regarding the provisions of the Confirms that allow Morgan Stanley to modify the financial terms of the contract based on "Change in Law," "Environmental Law," "Additional Environmental Costs," and "Environmental Change in Law" as allowed for in both Confirms.

A. Related to my testimony above, Section 6 of Schedule P of the Master Agreement notes that Morgan Stanley is not constrained to owned generation or to purchase energy from a specific party or parties, and, as a result, Morgan Stanley could fulfill its obligations under the Agreement by purchasing energy from a number of different generators in a number of different jurisdictions within PJM's 13 state footprint. Over the course of 20 years, this results in significant unpredictability and increases a myriad of risks, including but not limited to, entering into a long-term transaction with potentially struggling coal or gas generators. In addition to those risks associated with contracting with financially strapped generators, there is also an increased risk of those generators experiencing, and claiming, an environmental change in law, as for example defined in Section 17 of the Confirmation for the sale of Firm Physical Energy (Tab 7 of the South Kentucky Application), which could result in significantly increased costs. This risk is real and foreseeable, and not just limited to coal generation assets, and reasonably spanning all asset-based sources like wind, solar, tolling transactions, natural gas-fired turbines, and so on. Section 17, Environmental Change in Law, introduces significant opportunity for Morgan Stanley to reprice the transaction based on a "good faith market-based quotation." Reasonable questions arise such as what market is Morgan Stanley contemplating and what has South Kentucky agreed to?

PJM only? State of Maryland? Pennsylvania? Virginia? Kentucky? Ohio? With thirteen states and D.C., the opportunity for a triggering environmental event to occur that allows Morgan Stanley to declare an upward price adjustment in its contract with South Kentucky is significantly heightened. If, for instance, Pennsylvania joins the Regional Greenhouse Gas Initiative ("RGGI"), Morgan Stanley could declare a force majeure/change in law and demand a price increase to pay the resulting greenhouse gas tax imposed on carbon emissions. Such an increase would arguably be reasonable, is certainly market-based, and is definitely transparent because it can be determined by simply going to the RGGI website.

South Kentucky's testimony suggests that they are not assuming any additional risks that they otherwise would not face with EKPC's assets. Such a statement is clearly without merit. The statement by South Kentucky that it "faces the same or essentially similar risks whether it purchases from Morgan Stanley, EKPC or any other energy provider"[1] is simplistic and demonstrates the lack of robust analyses and understanding of the inherent risks that can and likely will occur during the term of the Confirms. In contrast, EKPC's internal governance and environmental compliance responsibilities coupled with the regulatory oversight by the Kentucky Public Service Commission ensures that EKPC serves its owner-members by safely delivering reliable and affordable energy and related services. Morgan Stanley is not subject to those same inherent obligations and regulatory controls, causing South Kentucky to forfeit those prudency

[1] South Kentucky Response to Attorney General's initial Data Requests, Item 5.

responsibilities.[2] EKPC has deep and thorough knowledge of its generating assets and is confident it will be in compliance with all legal requirements for the foreseeable future and has reasonably projected and included those costs already in its rates. EKPC must demonstrate to the PSC that these costs are necessary, just and reasonable in order to include them in its rates, as part of the regulatory process, which regulatory oversight South Kentucky would forfeit by entering into this transaction. EKPC also has thorough knowledge of its relevant markets and has the ability, for instance, to forecast changes in environmental law through daily involvement with its regulators and through its projections of coal and natural gas pricing in the future. EKPC can hedge accordingly and has the ability to share the market risks should PJM, for instance, develop a Green House Gas carbon trading market or reform Locational Margin Pricing, that will be clear and applicable to all generators (i.e. broad and market-based). If, for instance, Pennsylvania (or any state other than Kentucky) joined RGGI, that event would not impact EKPC's costs. Changes in environmental laws are administered on a state-by-state basis. EKPC has a thorough knowledge of all applicable federal and state environmental laws and regulations and has facilities in place in the Commonwealth of Kentucky to hedge against these changes. Some states may choose different compliance levels and, accordingly, may subject the generator to increased costs compared to Kentucky. In my opinion, South Kentucky and/or its consultant have not demonstrated that they have vetted these very serious considerations over the term

[2] See also, PSC Mission Statement, stating as its mission: "to foster the provision of safe and reliable service at a reasonable price to the customers of jurisdictional utilities while providing for the financial stability of those utilities by setting fair and just rates, and supporting their operational competence by overseeing regulated activities."

of a 20-year power purchase agreement. This contract, in fact, subjects South Kentucky and its members to unnecessary future and material price adjustments that are not consistent with those in the EKPC system.

Q. The Agreement's Capacity Confirm appearing under Tab 8 of the Application describes the product being purchased by South Kentucky as a "Financially-settled PJM unforced Capacity" (UCAP) Annual Capacity Performance" product. Furthermore, it states Morgan Stanley does not represent or warrant that this product will satisfy any of South Kentucky's RPM-imposed performance obligations to PJM. South Kentucky's representation in the Application, on the other hand, indicates that it has already purchased firm capacity for this transaction. Do you have an opinion as to the proper characterization of the product that South Kentucky purchased from Morgan Stanley?

A. Yes, I do have an opinion. Under the terms of the Capacity Confirm, South Kentucky purchased a financial "fixed-for floating" swap hedge product and not physical firm PJM capacity. However, in the conclusion to Mr. Holts' testimony, page 14, he states "In addition to those significant financial benefits, the arrangement with Morgan Stanley Capital Group also addresses both the energy and capacity needs of South Kentucky." This statement is confusing and leads the Commission to expect the Capacity Confirm to satisfy South Kentucky's PJM Reliability Pricing Model ("RPM") capacity performance obligation. However, in South Kentucky's Responses to EKPC's Second Data Request, EKPC and the Commission first learned that South Kentucky's Capacity Confirm was merely intended to financially hedge its 68MW capacity plus reserves obligation and would be relying on EKPC to purchase firm capacity. While South Kentucky represents to the Commission that EKPC will purchase firm capacity on their behalf through a yet to be negotiated agency agreement, the confusion and the unanswered questions are concerning to me and should concern this Commission.

Furthermore, in the Capacity Confirm, South Kentucky makes a representation and warrants in Section 18 that "This Transaction constitutes an "Alternate Source" as such term is used in the MOU." This financial swap transaction is not defined in the MOU, is an incorrect interpretation of the MOU's underlying intent for the "Alternate Source" to be of firm physical energy and capacity, and furthermore is unnecessary to effect the reduced demand for which an "Alternate Source" is intended to provide. This misunderstanding of the meaning of Alternate Source is concerning and the affirmation to Morgan Stanley that it complies with the MOU appears to be flawed. The Capacity Confirm is, in its entirety, an unnecessary and risky derivative instruction to effect a "hedge" to South Kentucky's yet-to-be-sourced capacity obligation.

Q. Have you reviewed the treatment of Transmission costs incorporated into South Kentucky's Net Present Value ("NPV") analysis?

A. EnerVision incorporated a cost for transmission service based on EKPC's 2016-2017 NITS rate and escalated it by a fixed percentage beginning in the 2017-2018 PJM year and continuing through the end of the 20-year transaction. The supporting schedule is found on the "Adder" tab in the NPV analysis spreadsheet.

Q. Do you have any concerns about the transmission service rates shown in the NPV analysis?

A. EnerVision assumed EKPC's NITS rate was the same for the 2012-2013 year as it was in the 2013-2014 year. EKPC joined PJM effective June 1, 2013 and submitted a NITS rate based on the established formula approach. Prior to joining PJM, EKPC's NITS rate had been \$1.62 / kW-month. In addition, EnerVision did not utilize the actual EKPC NITS rate for the 2017-2018 year, which was \$2.202 / kW-month. I also question the reasonableness of the escalation factor EnerVision used given the actual historic transmission rates.

Q. Based on the actual EKPC NITS transmission rates from 2012 through 2017, what do you believe is an accurate escalation factor?

A. The schedule below shows the calculation of the escalation factor that I believe is reflected by the EKPC actual rates.

Period	Rate (\$/kW-month)	Percentage Change
2012-2013	\$1.62	n/a
2013-2014	\$1.668	2.963%
2014-2015	\$2.146	28.657%
2015-2016	\$1.638	-23.672%
2016-2017	\$1.778	8.547%
2017-2018	\$2.202	23.847%
Sum of Percentage Change		40.342%
Average for 5 years		8.068%

Q. Have you reviewed the changes in transmission service charges reported by PJM for the same period EnerVision included in the NPV analysis?

A. The Independent Market Monitor for PJM annually issues a "State of the Market" report that examines multiple cost variables including transmission service charges.

EnerVision used information from these annual reports to determine its ancillary charges that were incorporated into the NPV analysis. For the 2012 through 2017 period, the change in transmission service charges were as follows:

Period	Percentage Change
2012-2013	8.7%
2013-2014	14.5%
2014-2015	19.0%
2015-2016	10.1%
2016-2017	13.1%
Sum of Percentage Change	65.4%
Average for 5 years	13.08%

Q. Based on your review of EKPC's historic NITS rates and the information published by PJM, what do you believe would have been a reasonable escalation factor for transmission in the NPV analysis?

A. I believe a reasonable range for the escalation factor would be between 10 percent and 13 percent.

Q. Does this conclude your testimony?

A. Yes.

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VERIFICATION OF DON MOSIER, P.E.

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF CLARK)

Don Mosier, P.E., Executive Vice President and Chief Operating Officer at East Kentucky Power Cooperative, Inc., being duly sworn, states that he has read the foregoing prepared direct testimony and that he would respond in the same manner to the questions if so asked upon taking the stand, and that the matters and things set forth therein are true and correct to the best of his knowledge, information and belief.

Don Mosier

Don Mosier, P.E.

The foregoing Verification was signed, acknowledged and sworn to before me this 12th day of April, 2018 by Don Mosier.

Gregory M. Willoughby

NOTARY PUBLIC

Commission No. 590567

My Commission Expires: 11/30/2021