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Rocco.D'Ascenzo@duke-energy.com
Rocco O. D'Ascenzo
Associate General Counsel

VIA COURIER DELIVERY

April 24, 2017

Dr. Talina Rose Mathews
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40602-0615

Re: Case No. 2017-00117
In the Matter of the Back-Up Power Supply Plan of Duke Energy Kentucky, Inc.

Dear Dr. Mathews:

Duke Energy Kentucky, Inc. hereby submits an original and ten (10) copies of its responses to *Commission Staff's First Set of Data Requests*. Also included are confidential versions being filed under a Petition for Confidential Treatment enclosed in a sealed envelope.

Please date-stamp the two extra copies of this letter and responses and return to me in the enclosed returned-addressed envelope.

Respectfully submitted,

Rocco D'Ascenzo (92796)
Associate General Counsel
Duke Energy Kentucky, Inc.
139 East Fourth Street, 1313 Main
Cincinnati, Ohio 45201-0960
(513) 287-4320
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Rocco.D'Ascenzo@duke-energy.com
Counsel for Duke Energy Kentucky, Inc.

cc: Rebecca Goodman (w/enclosures)

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE BACK-UP POWER SUPPLY PLAN OF DUKE ENERGY KENTUCKY, INC.) Case No. 2017-00117

PETITION OF DUKE ENERGY KENTUCKY, INC. FOR CONFIDENTIAL TREATMENT OF INFORMATION CONTAINED IN ITS RESPONSES TO COMMISSION STAFF'S FIRST REQUESTS FOR INFORMATION

Duke Energy Kentucky, Inc. (Duke Energy Kentucky or Company), pursuant to 807 KAR 5:001, Section 13, respectfully requests the Kentucky Public Service Commission (Commission) to classify and protect certain information provided by Duke Energy Kentucky in its responses to Data Request Nos. 1, 2, and 4 as requested by Commission Staff (Staff) in this case on April 6, 2017. The information that Staff seeks through discovery and for which Duke Energy Kentucky now seeks confidential treatment (Confidential Information), shows Duke Energy Kentucky's calculations for its future planning reserve margins, estimated costs and results of Duke Energy Kentucky's hedging strategies, and forecasted capacity obligations in PJM Interconnection LLC. This information includes sensitive and business proprietary market analysis and estimated production costs for the Company.

In support of this Petition, Duke Energy Kentucky states:

1. The Kentucky Open Records Act exempts from disclosure certain commercial information. KRS 61.878(1)(c). To qualify for this exemption and, therefore, maintain the confidentiality of the information, a party must establish that disclosure of

the commercial information would permit an unfair advantage to competitors of that party. Public disclosure of the information identified herein would, in fact, prompt such a result for the reasons set forth below.

2. If Duke Energy Kentucky is forced to disclose its future forecasted energy needs, and confidential and proprietary modeling of proposals, Duke Energy Kentucky's competitors and counterparties in the energy markets would be provided an unfair advantage. These counterparties would know the Company's energy positions, how it analyzes and determines the Company's needs and thus could demand higher prices from Duke Energy Kentucky than they otherwise might be able to charge in the absence of this information.

3. The attachment provided in response to STAFF-DR-01-001 and the response to Staff DR-01-004 includes detailed calculations of the Company's future planning reserve margins, overall capacity obligations in PJM through 2020/2021 delivery years, and forecasted peak demands, respectively. Releasing this information would provide potential competitors and potential future suppliers with the proprietary information regarding the Company's capacity positions and load obligations and its management of market risks through implementing its hedging strategies to mitigate forced outage risks. This information would place the Company in a competitive disadvantage as counterparties would know what Duke Energy Kentucky load obligations for future years in PJM, placing the Company at a disadvantage for negotiating for capacity products so to meet its FRR obligation and to manage forced outages. . Further, this information could be used by potential competitors or suppliers to manipulate prices and make decisions they would not otherwise make thereby increasing prices paid by

Duke Energy Kentucky and ultimately its customers or even serve to prevent the Company from being able to successfully manage its risks going forward.

4. Similarly, the information contained in response to Staff DR-01-002 contains a financial analysis of the Company's prior hedging strategy that was used to mitigate exposure to market prices for energy over the last two years. Releasing this information would provide potential future suppliers with the proprietary information regarding the Company's management of market risks through implementing its hedging strategies to mitigate forced outage risks. This information would place the Company in a competitive disadvantage as counterparties would know what Duke Energy Kentucky has paid and may be willing to pay for various risk mitigation products in the future. This information could be used by potential suppliers to manipulate prices and make decisions they would not otherwise make thereby increasing prices paid by Duke Energy Kentucky and ultimately its customers or even serve to prevent the Company from being able to successfully manage its risks going forward.

5. The information for which Duke Energy Kentucky is seeking confidential treatment is not known outside of Duke Energy Corporation.

6. Duke Energy Kentucky does not object to limited disclosure of the confidential information described herein, pursuant to an acceptable protective agreement, with the Attorney General or other intervenors with a legitimate interest in reviewing the same for the purpose of participating in this case.

7. This information was, and remains, integral to Duke Energy Kentucky's effective execution of business decisions. And such information is generally regarded as confidential or proprietary. Indeed, as the Kentucky Supreme Court has found,

"information concerning the inner workings of a corporation is 'generally accepted as confidential or proprietary.'" *Hoy v. Kentucky Industrial Revitalization Authority*, 904 S.W.2d 766, 768 (Ky. 1995).

8. In accordance with the provisions of 807 KAR 5:001, Section 13(3), the Company is filing one copy of the Confidential Information separately under seal, and one copy without the confidential information included.

9. Duke Energy Kentucky respectfully requests that the Confidential Information be withheld from public disclosure for a period of ten years. This will assure that the Confidential Information – if disclosed after that time – will no longer be commercially sensitive so as to likely impair the interests of the Company or its customers if publicly disclosed.

10. To the extent the Confidential information becomes generally available to the public, whether through filings required by other agencies or otherwise, Duke Energy Kentucky will notify the Commission and have its confidential status removed, pursuant to 807 KAR 5:001 Section 13(10)(a).

WHEREFORE, Duke Energy Kentucky, Inc., respectfully requests that the Commission classify and protect as confidential the specific information described herein.

Respectfully submitted,

DUKE ENERGY KENTUCKY, INC.

Rocco O. D'Ascenzo (92796)
Associate General Counsel
Amy B. Spiller (85309)
Deputy General Counsel
Duke Energy Business Services, LLC
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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing filing was served on the following via overnight mail, this 24th day of April 2017:

Rebecca W. Goodman
Executive Director
Office of Rate Intervention
Office of the Attorney General
1024 Capital Center Drive, Suite 200
Frankfort, KY 40601-8204
Rebecca.Goodman@ky.gov

Rocco D'Ascenzo

VERIFICATION

STATE OF NORTH CAROLINA)
) **SS:**
COUNTY OF MECKLENBURG)

The undersigned, John A. Verderame, Managing Director – Power, Trading & Dispatch, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

John A. Verderame, Affiant

Subscribed and sworn to before me by John A. Verderame on this 11th day of April, 2017.

CHRISTOPHER LEE HAMRICK

Christopher Lee Hamrick

NOTARY PUBLIC

County of: Union
State of: North Carolina

My Commission Expires: DECEMBER 2, 2019

VERIFICATION

STATE OF NORTH CAROLINA)
) **SS:**
COUNTY OF MECKLENBURG)

The undersigned, James S. Northrup, Director of Wholesale & Renewables Analytics, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

James S. Northrup, Affiant

Subscribed and sworn to before me by James S. Northrup on this 11 day of April, 2017.

NOTARY PUBLIC

My Commission Expires:

KYPSC CASE NO. 2017-00117
TABLE OF CONTENTS

Duke Energy Kentucky
Case No. 2017-00117
Staff First Set Data Requests
Date Received: April 6, 2017

STAFF-DR-01-001
PUBLIC

REQUEST:

Provide the planning reserve margin that is assigned to Duke Kentucky under PJM Interconnection, LLC's ("PJM") tariff.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment only)

PJM applies a defined "Pool Wide Installed Reserve Margin" to the Duke Energy Kentucky Final Peak Load Obligation. Over the Planning Years from 2016/2017 through 2020/2021 this margin has ranged from 15.7% to 16.6%. PJM then applies other factors, including the coincidence of Duke Energy Kentucky's load to PJM's load and the projected pool wide forced outage rate to arrive at the Zonal Capacity Installed Reserve Margin. These calculations are included in CONFIDENTIAL ATTACHMENT STAFF DR-01-001, which is being filed under protective seal.

The terms referenced in the excel document are described below:

- Installed Reserve Margin (IRM)

The PJM Reserve Requirement is defined to be the level of installed reserves needed to maintain the desired reliability index of ten years, on average, per occurrence (loss of load expectation of one occurrence every ten years) after emergency procedures to invoke load management.

- Forecasted Pool Requirement (FPR)

The determination of the Forecast Pool Requirement is based on two parameters. The first is the PJM Installed Reserve Margin (IRM). The second parameter needed to calculate the FPR is the pool-wide average Equivalent Demand Forced Outage Rate (EFORd) of the units used in the analysis. This average rate is based on a lagging five-year historical period. The Forecast Pool Requirement is calculated as follows:

Forecasted Pool Requirement = (1 + IRM) *(1 - Pool Average EFORd)

It is important to note that the IRM and the FPR represent the identical level of reserves but are expressed at different availability status levels. The IRM is expressed in units of installed capacity whereas the FPR is expressed in units of unforced capacity. Unforced capacity is defined in the RAA to be the MW level of a generating unit's capability after removing the effect of forced outage events

- Zonal Scaling Factor (ZSF) is calculated as:

Zonal Peak Load Forecast / Weather Normalized Summer Peak for the Zone

- Peak Load Contribution (PLC)

After the end of a summer period, PJM identifies the five highest weather normalized PJM system coincident load hours that occurred on different days over the period from June 1 through September 30. The Local Distribution Company (LDC)-specific zones will identify the actual zonal loads associated with these five hours. Each LDC-specific zone will reconcile these five different hours back to the one hour weather normalized, system coincident zonal peak load obligation. PLC will be updated on a yearly basis in accordance with PJM rules and procedures and become effective June 1 of the year based on peak hours of the previous summer.

- UCAP Obligation for FRR Service Area

PJM calculates the UCAP Obligation for each FRR Service Area as follows.

UCAP Obligation = PLC * ZSF * FPR

PERSON RESPONSIBLE: John Verderame

CONFIDENTIAL ATTACHMENT STAFF DR-01-001 IS BEING FILED UNDER A PETITION FOR CONFIDENTIAL TREATMENT

REQUEST:

Provide an analysis of the effectiveness of Duke Kentucky's most recent back-up supply plan, which covers the period of June 1, 2015, through May 31, 2017.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET

As explained in the Company's submitted Back-Up Power Supply Plan, PJM daily energy market purchases were used as part of the strategy to manage scheduled outages. In addition, the Company entered into financial agreements, which for the period June 1, 2015 through March 31, 2017, resulted in a loss of [redacted], including exchange and transaction fees. Specifically, for the period from June 2015 through May 2016 financial hedges resulted in a gain of [redacted]; and for the period June 2016 through March 2017 hedges resulted in a loss of [redacted].

Regarding forced outage substitute power costs, those above the cost of fuel which would have been used in plants suffering forced generation or transmission outages, and which are not recovered by the Company through the Fuel Adjustment Clause, the Company primarily used the PJM daily energy market to purchase energy for native load. Between June 1, 2015 and March 31, 2017, the Company incurred energy market costs of [redacted]. Specifically, for the period from June 2015 through May 2016 the Company incurred energy market costs of [redacted]; and for the period June

2016 through March 2017 the Company incurred energy market costs of [redacted]. By comparison, the historical average annual cost from 2007 through 2016 has been roughly [redacted]. Additionally, for the period June 1, 2015 through March 31, 2017 the Company entered into financial agreements resulting in an additional loss of [redacted]. Specifically, from the period June 2015 through May 2016 these hedges resulted in a loss of [redacted]; and for the period June 2016 through March 2017 these hedges resulted in a loss of [redacted]. These costs represent the expense of serving load above the cost of generation units that were not available due to forced outages. A risk of a plan based on purchasing short term energy hedges is exposure to longer term price excursions. For example, daily power hedge costs insulate the Company from real time price exposure; but the cost of these hedges will likely be influenced by unanticipated short term market events, such as the Polar Vortex of 2014, that impact market prices for longer periods. The plan is not designed to completely eliminate exposure to the price differential between the Company's generating units and market prices; but rather it is designed to mitigate temporal displacement risk in the energy market. Weekly hedges mitigate daily exposure, daily hedges mitigate hourly exposure. On the other hand the primary benefit of a short term hedge plan is minimization of paying for the extrinsic option value embedded in products such as energy and financial call options. Sellers of long term optionality price in both volatility and time value premiums into these products. Comparatively, markets during the period covered by the current Backup Supply Plan have exhibited significantly less volatility than the prior period; however, even short term instruments tend to price in potential volatility. If this implied volatility is not manifested in real time markets, this

type of hedge strategy can result in a net cost. Duke Energy Kentucky believes that over the longer term, its strategy has been sound and cost effective.

PERSON RESPONSIBLE: John Verderame

Duke Energy Kentucky
Case No. 2017-00117
Staff First Set Data Requests
Date Received: April 6, 2017

STAFF-DR-01-003

REQUEST:

Explain what exposure Duke Kentucky will have to incremental risks related to PJM Capacity Performance requirements and penalties, and whether and how Duke Kentucky mitigates such incremental risks, if any.

RESPONSE:

The Capacity Performance (CP) construct is a substantial rewrite to the existing PJM capacity market design that fundamentally alters and substantially increases Duke Energy Kentucky's customers to incremental financial risk exposure resulting from both the necessary CP compliance investments and the subsequent operational performance of the Duke Energy Kentucky generation fleet (East Bend and Woodsdale). CP, as described by PJM, is a "no excuses" construct designed to enhance and ensure generation availability through the threat of substantial financial non-performance charges. When PJM achieves full transition to CP for the 2020/21 Delivery Year, every PJM capacity resource in the footprint not on an approved planned outage will be obligated to be available for PJM dispatch during any hour that PJM determines there to be a compliance hour throughout the entire delivery year. Compliance hours are set during periods of capacity or operational stress on the PJM system; and are expected by PJM to average roughly 30 hours per year over time. Duke Energy Kentucky, as a FRR entity, provides its own unit-specific generation to PJM to meet customer load; but is nonetheless held to

the same performance standards as full participants in the PJM capacity market. FRR entities like Duke Energy Kentucky were given an exemption to CP obligations through the 2018/2019 Delivery Year. In order to maintain its status as an FRR entity, all generation committed to meeting the Company's load obligation and included in its FRR Plan must comply with the minimum CP requirements set by PJM. Beyond that, ensuring reliable performance of the fleet is required to minimize exposure to non-performance charges. CP charge exposure is driven by both mechanical reliability and fuel certainty. The "no excuses" enforced by PJM under CP would include a situation where Woodsdale Station could be under a natural gas curtailment in which fuel would not be available to operate the units for load during these times. There is currently no guarantee under these extreme conditions that the natural gas interstate pipeline owned and operated by, Texas Eastern Transmission Company, currently connected to Woodsdale, under the existing contracted transportation levels, would be able to supply natural gas to Woodsdale. If the station were under a curtailment situation and PJM issues a CP compliance event, Woodsdale would be at risk for incurring severe charges.

PJM declares CP compliance hours whenever the system meets certain reliability conditions. Non-performance charge exposure occurs when compliance event hours overlap with either mechanical or fuel-availability driven outages at committed stations. Over the past several years, if PJM CP were in effect, yearly compliance hours would have ranged from 0 to 30 hours. PJM distributes charge collections pro rata to generation that performed beyond their CP commitments at PJM request. While Duke Energy Kentucky's East Bend 2 coal facility will also be subject to the mechanical certainty

requirement of CP performance risk, providing fuel deliverability certainty is unique to Woodsdale as a gas facility.

In addition to performance charge risk, PJM's CP rules create significant risk that Woodsdale Station (462 MWs), in its present fuel configuration, will not be accepted as a compliant resource for Duke Energy Kentucky to meet its obligation as a PJM Load Serving Entity (LSE) beginning June 1, 2019. The CP rules provide for broad discretion on the part of PJM and the Independent Market Monitor (IMM) to challenge generators as being CP compliant. Absent modifications to the facility or securing firm fuel transportation, Duke Energy Kentucky would face a 462 MW capacity shortfall that would need to be remedied through incremental unit-specific capacity purchases in the bilateral market. The Company would need to seek approval from the Kentucky Public Service Commission to enter into any long-term PPA to meet this shortfall and recover such costs.

Under the PJM Reliability Assurance Agreement (RAA), Duke Energy Kentucky must commit sufficient capacity to meet its load obligation in the April three years prior to the PJM Planning Year. If PJM were to reject the Company's capacity plan, Duke Energy Kentucky would be subject to a penalty of two (2) times the current planning year Cost of New Entry (CONE). If Woodsdale is rejected as a compliant resource, the penalty for a 462 MW shortfall would be roughly $133 Million for the 2020/2021 Planning year.

Given PJM and the IMM's authority to question a resource as being CP compliant, and with the significant penalties associated with the PJM not accepting the resource in Duke Energy Kentucky's FRR plan, Duke Kentucky customers cannot risk

rejection of Woodsdale in the initial or final FRR Plan by PJM. Based upon discussions with PJM senior executives and legal interpretations, Duke Kentucky believes that submitting Woodsdale in its current arrangement, with no further action or investment, could potentially be viewed as a violation of PJM's FERC-approved tariff.

Beyond capacity compliance, the risk for CP non-performance instances can similarly have severe financial implications. The CP performance charge formula is as follows: (Net Cost of New Entry (CONE) *365)/30 per MWH, where 30 is the number of expected compliance hours. At the current approximate Net CONE of $280 per MW-day, the charge would be ($280*365)/30 = $3,400 per MW hour.

Depending on the number of MWs committed to the FRR Plan, the charge for Woodsdale could be as much as $1.6 Million per hour if the station were not available during a CP compliance event, with the maximum single planning year stop loss charge of $70.5 Million. The charge for an East Bend non-performance outage would be roughly $2.0 Million per hour, with a single year planning stop loss charge of approximately $90 Million.

In early 2016, a Kepner-Tregoe (KT) team performed a KT Decision Analysis (DA) to select a PJM CP risk mitigation plan for Duke Energy Kentucky to minimize exposure to risks of noncompliance. Specific recommendations from the analysis focused on identifying ongoing and future capital investments and Operating and Maintenance strategies at East bend and Woodsdale so to improve and maintain operational reliability. Additionally Duke Energy Kentucky believes that the least cost path to compliance and effective compliance risk mitigation for customers will include a capital investment at Woodsdale to bring the station into CP compliance. Duke Energy Kentucky intends to

file a Certificate for Public Convenience and Necessity related to that investment to the KPSC in the near future. Duke Energy Kentucky has also been in negotiations with insurance providers regarding additional risk mitigation. Capacity Performance insurance is a new product to insurance underwriters. While insurance is not an acceptable alternative to ensuring generating assets meet minimum CP standards, it could offer a potential hedge against the risks of a compliant resource suffering an outage during a declared CP event. Duke Kentucky believes it is prudent to fully evaluate these products and the value they bring as risk mitigation as the CP construct matures.

PERSON RESPONSIBLE: John Verderame

REQUEST:

Refer to the Application, page 5, Table 1. For the Delivery Year 2017-2018 period, provide Duke Kentucky's forecasted summer and winter peak demands.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET

PJM determines the summer peak load obligation for the DEK load zones. They are included in the CONFIDENTIAL ATTACHMENT STAFF-DR-01-001 "DEK Capacity Obligation Calculations", [redacted]. Duke Kentucky also internally models peak load expectations. The results of the internal forecast for the combined DEK summer and winter peak from the Fall 2016 forecast are:

[redacted]

PERSON RESPONSIBLE: John Verderame

Duke Energy Kentucky
Case No. 2017-00117
Staff First Set Data Requests
Date Received: April 6, 2017

STAFF-DR-01-005

REQUEST:

Refer to the Application, pages 2-3, regarding Duke Kentucky's participation in PJM under the Fixed Resource Requirement ("FRR") option. Duke Kentucky states that it regularly evaluates the merits of exiting the FRR option in light of Duke Kentucky's relative capacity position and changing PJM, Federal Energy Regulatory Commission, or environmental rules. Explain whether the evaluation is periodic or ongoing, and describe the types of conditions that might trigger Duke Kentucky to re-evaluate its participation in the FRR option.

RESPONSE:

Duke Energy Kentucky's review of its participation status as a PJM member is both periodic and ongoing. From a periodic perspective, Duke Kentucky can only practically change status at the beginning of the Planning Year. Duke Kentucky intends to remain an FRR entity until it can prove to the Commission that there is sufficient customer benefit in moving to RPM. From an ongoing perspective, Duke Energy Kentucky is always watchful for signposts that the benefits of joining RPM outweigh potential risks. There are both pros and cons to full participation in RPM. To date the Company believes that customers are, on balance, better off remaining under the self-supply option.

The key driver behind the ongoing decision to remain FRR or move to RPM will likely remain Duke Energy Kentucky's net generation position, the difference between

generation available to serve as PJM capacity and the expected customer load obligation. For Duke Energy Kentucky, the primary benefit to customers from owned generation is its use as a hedge against capacity and energy market prices. Additionally, the ability to utilize the market as a resource and to monetize the value of customer generation assets is a key benefit of participation in a market like PJM. Currently, the Company believes that near term net position to remain relatively flat. In other words, Duke Energy Kentucky does not expect to be a significant buyer or seller of capacity in the market; and when it does need to transact in the market for capacity outside of RPM the Company has found that there is adequate liquidity in that bilateral market for current needs. The Company is watchful however for changes in market liquidity, particularly in response to the Capacity Performance construct.

As the Company considers the future of the generation assets however, the net capacity position may move away from that relatively neutral position, forcing the Company to reevaluate its participation. When Duke Energy Kentucky last retired an asset, Miami Fort 6, it was able to economically replace it with a similar amount of generation. If the opportunity or need to retire another asset were to arise, it is possible that it would be beneficial to procure or sell capacity directly from or to the PJM (RPM) capacity market for some time, either from a long or short perspective. If that were the case, and the Company did not feel that it could efficiently cover or monetize the position in the bilateral market, there could be an argument to move to RPM. Additionally, there are limitations on both long and short net capacity margins on FRR entities and holdback reserves that have not been material limitations to date.

While the deep liquidity of RPM is a benefit to full RPM participation, a moderate long position would not necessarily prompt an immediate status change. Duke Energy Kentucky remains watchful for indications of potential changes in PJM market rules that could have significant impacts on its customers. One of the more contentious market rules in PJM is the Minimum Offer Price Rule (MOPR). Currently, generation included in FRR Plans is not subject to the MOPR. The MOPR sets administratively defined generation class capacity market price floors for gas fired generation that has never cleared in an auction. The impact on generation owners not exempt from the rule is increased risk that generation investments do not clear capacity auctions; thus not receiving market payments. While PJM has not filed specific changes to RPM, it has identified a continuum of potential changes ranging from maintaining the status quo to the expansion of MOPR applicability to all existing subsidized generation, such as Duke Energy Kentucky's assets supported under cost of service regulation, in the PJM footprint. The later extreme has been endorsed by the PJM market monitor. The direct impact of changes to the MOPR rule, current exemptions, and applicability to Duke Energy Kentucky would be the potential impact on investment decisions as Duke Energy Kentucky's load grows beyond its current generation capacity, or current generation resources either reach the end of their useful lives or become economically obsolete due to environmental regulation. While currently exempt from the MOPR under the Self Supply exemption, if Duke Energy Kentucky and the Kentucky Public Service Commission determined a move to full participation in RPM would be beneficial to customers, either the elimination of that exemption, or the expansion of the MOPR to existing resources could expose Duke Energy Kentucky customers to the risk of paying

twice for new build or existing capacity, once through rates and again through a capacity allocation from PJM.

The Company remains open to the benefits of RPM and will continue to monitor markets and market rules for indications that a change in status would be beneficial to our customers.

PERSON RESPONSIBLE: John Verderame

Duke Energy Kentucky
Case No. 2017-00117
Staff First Set Data Requests
Date Received: April 6, 2017

STAFF-DR-01-006

REQUEST:

Refer to the Application, page 4, which states that Duke Kentucky is "strongly considering enhancing the hedging portfolio" by adding business-interruption insurance product tailored to mitigate exposure to market prices from forced outages at East Bend Unit 2, Duke Kentucky's only base load unit. Also refer to the Application, pages 18-19, regarding further negotiation on specific terms and conditions for an insurance product.

a. Provide the status of Duke Kentucky's negotiations to obtain such insurance and when negotiations are expected to be concluded.

b. Explain whether the business interruption insurance products Duke Kentucky is considering would also mitigate any Capacity Performance penalties that could be levied against Duke Kentucky by PJM due to non-performance during a Capacity Performance assessment hour.

RESPONSE:

a. The insurance provider short listed from the Request For Proposal process is currently refreshing the business interruption product offer pricing. If the refreshed pricing does not materially differ from the indicative pricing received through the RFP process, Duke Kentucky intends to negotiate final terms and secure internal Risk Department approval to move forward with a policy to be in place for the beginning of the 2017/2018 Planning Year. If the pricing varies

significantly either due to market conditions or through the expected updated diligence that the insurance underwriter is expected to perform, then Duke Energy Kentucky may choose to delay or forgo execution.

b. The business interruption insurance under consideration as part of the Backup Power Plan does not cover exposure to CP non performance charges. The payout function of the business interruption insurance is based on the difference between the expected cost of East Bend 2 and the cost of replacement power. Duke Energy Kentucky is considering Capacity Performance insurance separately; but it is not part of the current Request For Proposals. Capacity Performance Insurance will be evaluated as Duke Energy moves into the compliance requirement for CP, specifically June 1, 2019.

PERSON RESPONSIBLE: John Verderame

STAFF-DR-01-007

REQUEST:

Refer to the Application, page 8, regarding a Request for Proposals ("RFP") that was issued by Duke Kentucky on September 2, 2016.

a. Provide a copy of the RFP.

b. Define and describe a "Back Stand Energy Call Option."

c. Define and describe a "Daily Call Option."

RESPONSE:

a. Please see attached RFP.

b. The Backstand Energy Call Option product is a day-ahead, financially settled call option that can be used in the event of an unplanned outage at East Bend Unit 2. The call can only be used in the event of an unplanned outage. When an unplanned outage occurs at East Bend, Duke Energy Kentucky will have the right, but not the obligation, to call on a financially settled amount of replacement energy proposed by the Bidder on a day-ahead scheduled basis. The backstand energy call option will equal the amount of unplanned outage energy at the time of the strike. Energy pricing may be a fixed price dollar per megawatt hour($/MWH) or heat rate call option tied to natural gas or coal (Henry Hub and NYMEX Coal indices respectively). The called energy will be financially settled on a day-ahead basis price at the Settlement Point throughout the term of the

offer. This product will cover the financial difference in bidder proposed strike price (fixed price or index price) of the energy that would have been produced from East Bend Unit 2 in the absence of an unplanned outage as compared to replacement energy from the PJM AD Hub (preferred) or PJM Western Hub settlement point.

c. Daily Call Options are financial energy products for up to 600 MW per hour beginning on June 1, 2017, that must be available for a term of two to three years. Energy pricing may be a fixed price ($/MWh) or heat rate call option tied to natural gas or coal (Henry Hub and NYMEX Coal indices respectively) at the Settlement Point. This product can be called upon anytime as a financially settled product on a day-ahead price basis at the Settlement Point throughout the term of the offer. Daily Call Options are not tied to forced outages at East Bend.

PERSON RESPONSIBLE: James S. Northrup

Duke Energy Kentucky, Inc.

Request for Proposals for

Backstand Energy for

Planning Years

2017/2018 thru 2019/2020

PowerAdvocate Event #62168

Dated: September 2, 2016

Proposals Due: October 17, 2016

I. Purpose of Request for Proposals

Duke Energy Kentucky, Inc. (DEK) offers this Request for Proposals (RFP) for the purpose of acquiring financial products for up to 600 megawatts (MW) of energy for its East Bend Unit 2 coal unit during the period of June 1, 2017 through May 31, 2020.

DEK is looking for a variety of financial offerings such as backstand call options, daily call options, and insurance products. DEK seeks proposals that will provide the greatest value to DEK and its customers during unplanned outages at East Bend Unit 2, as well as products that can be called on anytime as a financially settled product.

DEK will utilize PowerAdvocate to administer the RFP. PowerAdvocate is a web-based platform that provides centralization of proposals and communications from RFP issuers while maintaining confidentiality among respondents. PowerAdvocate will provide information and instructions for respondents to this RFP. Respondents must submit their proposals to the PowerAdvocate platform on or before 5:00 pm EPT on October 17, 2016. Bids from affiliates of Duke Energy Kentucky will not be accepted.

Duke Energy Corporation's regulated operations serve 7.4 million electric retail customers located in six states in the Southeast and Midwest. Duke Energy is a Fortune 125 company traded on the New York Stock Exchange under the symbol DUK. More information about the company is available on the internet at www.duke-energy.com.

II. Product Definition & Eligibility

DEK is requesting proposals for the purchase of the following products:

1. Backstand Energy Call Option: The Backstand Energy Call Option product is a day-ahead, financially settled call option that can be used in the event of an unplanned outage at East Bend Unit 2 beginning June 1, 2017 through May 31, 2020. Backstand Energy products can be proposed for a maximum rate of energy of 600 MW per hour and a minimum rate of 50 MW per hour.

   When an unplanned outage occurs at East Bend Unit 2, DEK will have the right, but not the obligation, to call on a financially settled amount of replacement energy proposed by the Bidder on a day-ahead scheduled basis. The backstand energy call option will equal the amount of unplanned outage energy at the time of the strike. Energy pricing may be a fixed price dollar per megawatt hour($/MWH) or heat rate call option tied to

natural gas or coal (Henry Hub and NYMEX Coal indices respectively). The called energy will be financially settled on a day-ahead basis price at the Settlement Point (defined as the hub at which the financial settlement takes place) with a preference for the PJM AD Hub or alternatively the PJM Western Hub throughout the term of the offer. This product will cover the financial difference in bidder proposed strike price (fixed price or index price) of the energy that would have been produced from East Bend Unit 2 in the absence of an unplanned outage as compared to replacement energy from the PJM AD Hub (preferred) or PJM Western Hub settlement point. Different product options for the number of strike limitations per year and the time periods covered are shown below in the Product Parameters matrix in Section III.

2. Daily Call Options: Daily call options are financial energy products for up to 600 MW per hour beginning on June 1, 2017, that must be available for a term of two to three years. Minimum financial product quantity will be 50 MW per hour. Energy pricing may be a fixed price ($/MWh) or heat rate call option tied to natural gas or coal (Henry Hub and NYMEX Coal indices respectively) at the Settlement Point. This product can be called upon anytime as a financially settled product on a day-ahead price basis at the Settlement Point (with a preference for the PJM AD Hub or alternatively the PJM Western Hub) throughout the term of the offer. Different product options for number of strike limitations per year and time periods covered are shown below in the Product Parameters matrix in Section III.

3. Insurance Products: Insurance products are financial products in which a premium is paid as financial insurance against the backstand energy during an unplanned outage at DEK's East Bend Unit 2. Insurance products may include premiums, deductibles, and insurance payment caps. This insurance product will cover the financial difference in strike price preset in this RFP (fixed price in $/MWh) as compared to backstand energy for the unplanned outage from the PJM AD Hub (preferred) or PJM Western Hub Settlement Point.

III. Product Parameters

Backstand Energy Call Options

The table below outlines the product requirements for Backstand Energy Call Options. The bid contract duration terms must be for two and/or three years in the June 1, 2017 to May 31, 2020 timeframe with a minimum size of 50 MW per hour and a maximum size of 600 MW per hour. The Settlement Point will be on day-ahead price basis from the AD Hub

(preferred) or PJM Western Hub. Gas index call options must be priced on either a 7.0 MMBtu/MWh or 11.0 MMBtu/MWh heat rate using Henry Hub index gas prices. Coal index call options must be priced on a 10 MMBtu/MWh heat rate using NYMEX coal index prices. All options must be exercised by 10:30 AM Eastern Prevailing Time (EPT) on a day-ahead basis for the 16 weekday on-peak hours (including Sunday notifications for Monday) as called upon by the buyer. Options will be priced with annual strike limitations of 15, 25, 40, or unlimited. Calls can only be exercised during an unplanned outage at East Bend Unit 2.

Product Parameters – Backstand Energy Call Options	
Condition Precedent	Unplanned Outage at East Bend Unit 2
Term	2-3 years in the June 1, 2017 – May 31, 2020 timeframe Term 1: June 1, 2017-May 31, 2019 Term 2: June 1, 2017-May 31, 2020
Minimum Size Offering	50 MW per Hour
Maximum Size Offering	600 MW per Hour (50 MW Increments)
Power Price Index (Settlement Point)	PJM AD Hub (Preferred), PJM Western Hub
Gas Price Index	Henry Hub
Coal Price Index	NYMEX Coal
Gas Heat Rate Index	7.0 MMBtu/MWh
	11.0 MMBtu/MWh
Coal Heat Rate Index	10.0 MMBtu/MWh
Fixed Strike Price	$/MWh
Time Period Covered	16 hours weekday on-peak (HE 0800 EPT - 2300 EPT) or (07:00 am EPT through 11:00 PM EPT)
Exercise Notification	10:30 AM EPT Day Ahead (including Sunday notification for Monday)
Strike Limitations	15 Strikes/Year
	25 Strikes/Year
	40 Strikes/Year
	Unlimited Strikes

Daily Call Options

The table below outlines the requirements for daily call options. The bid contract duration terms must be for two and/or three years in the June 1, 2017 to May 31, 2020 timeframe with a minimum size of 50 MW per hour and a maximum size of 600 MW per hour. The Settlement Point will be on a day-ahead price basis from the AD Hub (preferred) or PJM Western Hub. Gas

index call options must be priced on either a 7.0 MMBtu/MWh or 11.0 MMBtu/MWh heat rate with Henry Hub index gas prices. Coal index call options must be priced on a 10.0 MMBtu/MWh heat rate using NYMEX coal index prices. All options must be exercised by 10:30 AM EPT on a day-ahead basis for the 16 weekday on-peak hours (including Sunday notification for Monday) as called upon by the buyer. Options will be priced with annual strikes limitations of 15, 25, 40, or unlimited. Calls options can be exercised at any time with no bearing on the availability of the East Bend Unit 2.

Product Parameters – Daily Call Options	
Condition Precedent	None
Term	2-3 years in the June 1, 2017 – May 31, 2020 timeframe Term 1: June 1, 2017-May 31, 2019 Term 2: June 1, 2017-May 31, 2020
Minimum Size Offering	50 MW per Hour
Maximum Size Offering	600 MW per Hour (50 MW Increments)
Power Price Index (Settlement Point)	PJM AD Hub (Preferred), PJM Western Hub
Gas Price Index	Henry Hub
Coal Price Index	NYMEX Coal
Gas Heat Rate Index	7.0 MMBtu/MWh
	11.0 MMBtu/MWh
Coal Heat Rate Index	10 MMBtu/MWh
Fixed Strike Price	$/MWh
Time Period Covered	16 hours weekday on-peak (HE 0800 EPT - 2300 EPT) or (07:00 am EPT through 11:00 PM EPT)
Exercise Notification	10:30 AM EPT Day Ahead (including Sunday notification for Monday)
Strike Limitations	15 Strikes/Year
	25 Strikes/Year
	40 Strikes/Year
	Unlimited Strikes

Insurance Products

The table below outlines the requirements for the insurance product. The term must be for two and/or three years in the June 1, 2017 to May 31, 2020 timeframe with a minimum size of 50 MW per hour and a maximum size of 600 MW per hour. The bidders must use the RFP preset strike price that will be settled on a day-ahead basis against AD Hub (preferred) or PJM Western

Hub. Bidders should also provide any premiums based on deductibles or insurance payment caps as listed in the Product Parameters table below. The time period covered will be the PJM on-peak 16 weekday hours. Insurance products will only be applicable during unplanned outages at East Bend Unit 2.

Product Parameters – Insurance Products	
Condition Precedent	Unplanned Outage at East Bend Unit 2
Term	2-3 years in the June 1, 2017 – May 31, 2020 timeframe Term 1: June 1, 2017 – May 31, 2019 Term 2: June 1, 2017 – May 31, 2020
Minimum Size Offering	50 MW per Hour
Maximum Size Offering	600 MW per Hour (50 MW Increments)
Power Price Index (Settlement Point)	PJM AD Hub (Preferred), PJM Western Hub
Fixed Strike Price/Insured Price	$23/MWh
Annual Deductible	$0.5 million
Annual Premiums	Please Provide
Time Period Covered	16 hours weekday on-peak (HE 0800 EPT - 2300 EPT) or (07:00 am EPT through 11:00 PM EPT)
Event Duration Limit	Please provide premium quotes based on consecutive 15-day and consecutive 180-day event duration limits respectively
Annual Insurance Payment Caps/Policy Limit	Please Provide premium quotes based on $10 million and $20 million policy limits respectively
Time Deductible	Please use consecutive 0-hour, 48-hour and 168-hour (only applicable to 180 day event duration limit) time deductible respectively.

IV. Instructions to Bidders

A. Initial RFP Access

PowerAdvocate will be used for the administration of this RFP. PowerAdvocate will provide information and instructions for respondents.

Existing PowerAdvocate Supplier Account:

- Please share your interest in reviewing the Event # 62168: RFP with Support@poweradvocate.com. PowerAdvocate will grant you access to the RFP event.

Register a New PowerAdvocate Supplier Account:

- For respondents that require a new PowerAdvocate Supplier Account, please visit www.PowerAdvocate.com, click on "Registration" link at the top right hand corner of the screen, and follow the instruction to complete registration as a Supplier for Event # 62168: RFP. Following approval as a Supplier by PowerAdvocate, you will be granted access to the RFP event.

All communications and responses will be shared within the PowerAdvocate Messaging function. Responses to frequently asked questions may be placed within PowerAdvocate under FAQs for the benefit of all respondents, although care will be taken not to identify any specific respondents.

B. Schedule

The RFP process will include the activities and events as indicated in the schedule shown below. Proposals will be reviewed for completeness, and offers that do not include the information requirements will be notified and allowed a reasonable period to conform.

Schedule

The schedule as outlined below and referred to throughout this document is based on DECs expectations of the RFP release, selection of winning respondent(s), and project in-service date. This schedule is subject to change:

Event	Anticipated Date
Release of RFP	September 2, 2016
Notice of Intent to Bid/Nondisclosure Agreement	September 15, 2016
Proposal Submittal Deadline	October 17, 2016
Selection of Short List	November 21, 2016

1. Notice of Intent to Bid (Attachment A)

Each bidder is required to advise DEK of its intent to bid into the RFP by submitting a Notice of Intent to Bid (NOIB) which is included in PowerAdvocate as **Attachment A: Notice of Intent to Bid.**

Bidder's contact information, as supplied in the NOIB, will provide a vehicle for DEK to communicate any updates/revisions to the RFP in a timely manner. We request that bidders submit a NOIB by **September 15, 2016**.

2. Nondisclosure Agreement (Attachment B)

Bidders to this RFP are also required to sign **Attachment B: Nondisclosure Agreement (NDA)** in its present form which is included in PowerAdvocate. Bidders who submit a NOIB and sign the NDA will receive supplementary information on East Bend Unit 2 that may help in developing their bids. Therefore, we request that bidders submit the NDA by **September 15, 2016**.

3. Deadline and Method for Submitting Proposals

All proposals submitted in response to this RFP must submitted to PowerAdvocate no later than **5:00 PM EPT on October 17, 2016**. DEK will not guarantee evaluation of proposals associated with this RFP if submitted after this time.

Phone inquiries regarding this RFP will not be entertained. All correspondence will take place through the PowerAdvocate messaging platform.

V. Proposal Organization

1. Executive Summary

Please provide a detailed overview of the proposal.

2. Technical Proposal & Cost

Proposals should contain a detailed description of the pricing terms and conditions. Please refer to Section III.

3. Company Data

Please include information on the bidder's corporate structure (including identification of any parent companies), a copy of the bidder's most recent quarterly report containing unaudited consolidated financial statements that is signed and verified by an authorized officer of bidder attesting to its accuracy, a copy of bidder's most recent annual report containing audited consolidated financial statements, and a summary of bidder's relevant

experience. Financial statements, annual reports, and other large documents may be referenced via a web site address.

VI. Proposal Evaluation and Contract Negotiations

1. Initial Proposal Review

After the proposal submittal deadline, DEK will open and review all responses for completeness and responsiveness. DEK may request that a bidder provide additional information or clarification to its original proposal. DEK will make such requests through PowerAdvocate and specify a deadline for compliance. Failure to provide the requested information or clarification by the deadline may result in disqualification of the proposal.

2. Short List Development

DEK will then evaluate all proposals to meet energy needs. Proposals will be evaluated based on present value economics and other factors that may include, but will not be limited to location, credit, relevant experience, technology, availability, outage history, permitting, and deliverability.

During the evaluation process, DEK may or may not choose to initiate discussions with one or more bidders. Discussions with a bidder shall in no way be construed as commencing contract negotiations.

3. Contract Negotiations

DEK may contact the bidder of its interest in commencing contract negotiations. DEK's commencement of and participation in negotiations shall not be construed as a commitment to execute a contract. If a contract is negotiated, it will not be effective unless and until it is fully executed with the receipt of all required regulatory approvals.

VII. Reservation of Rights

Nothing contained in this RFP shall be construed to require or obligate DEK to select any proposals or limit the ability of DEK to reject all proposals in its sole and exclusive discretion.

DEK further reserves the right to withdraw and terminate this RFP at any time prior to the proposal deadline, selection of a short list, or execution of a contract.

All proposals submitted to DEK pursuant to this RFP shall become the exclusive property of DEK and may be used for any reasonable purpose by DEK. DEK shall consider materials provided by bidder in response to this RFP to be confidential only if such materials are clearly designated as "Confidential." Bidder should be aware that their proposal, even if marked "Confidential", may be subject to discovery and disclosure in regulatory or judicial proceedings that may or may not be initiated by DEK. Bidders may be required to justify the requested confidential treatment under the provisions of a protective order issued in such proceedings. If required by an order of an agency or court of competent jurisdiction, DEK may produce the material in response to such order without prior consultation with the bidder.