COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of an Electronic Examination of the Application of the Fuel Adjustment Clause of Duke Energy Kentucky, Inc. From November 1, 2014 Through October 31, 2016	))))	Case No. 2017-00005

PETITION OF DUKE ENERGY KENTUCKY, INC. FOR CONFIDENTIAL TREATMENT OF INFORMATION CONTAINED IN ITS RESPONSES TO COMMISSION STAFF'S SECOND SET OF DATA REQUESTS ISSUED MARCH 6, 2017

Duke Energy Kentucky, Inc. (Duke Energy Kentucky or Company), pursuant to 807 KAR 5:001, Section 13, respectfully requests the Commission to classify and protect certain information provided by Duke Energy Kentucky in its response to Data Request No. 3, as requested by Commission Staff (Staff) in this case on March 6, 2017. The information contained in Confidential Attachments to that response and that Staff seeks through discovery and for which Duke Energy Kentucky now seeks confidential treatment (Confidential Information), contains confidential and proprietary information including internal work processes and procedures for managing the Company's generating assets and bidding such resources into the competitive energy and capacity markets. These procedures are known only to Duke Energy Kentucky and its parent Duke Energy Corp.

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. The information submitted and for which the Company is seeking confidential protection was developed internally by Duke Energy Corp and Duke Energy Kentucky personnel, is not on file with any public agency, and is not available from any commercial or other source outside Duke Energy Corp and Duke Energy Kentucky. The aforementioned information is distributed within Duke Energy Corp only to those employees who must have access for business reasons, and is generally recognized as confidential and proprietary in the energy industry. This information includes the detailed processes and analysis the Company performs in bidding its generating resources, including evaluation of the unit status and the Company's strategies for making submittals to the relevant markets.

3. The Confidential Information for which Duke Energy Kentucky is seeking confidential treatment is not known outside of Duke Energy Corp.

4. 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.

5. 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).

6. 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.

7. 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.

8. 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.

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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 20th day of March, 2017:

Rebecca W. Goodman
The Office of the Attorney General
Utility Intervention and Rate Division
700 Capital Avenue, Suite 20
Frankfort, Kentucky 40601

Rocco D'Ascenzo

VERIFICATION

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

The undersigned, John A. Verderame, Managing Direct – 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 10th day of March, 2017.

KATIE JAMIESON
Notary Public, North Carolina
Gaston County
My Commission Expires

Katie Jamieson
NOTARY PUBLIC

My Commission Expires: June 14, 2021

VERIFICATION

STATE OF NORTH CAROLINA)
)
COUNTY OF MECKLENBURG)

SS:

The undersigned, John D. Swez, Director of General Dispatch & Operations, Power Trading and 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 D. Swez, Affiant

Subscribed and sworn to before me by John D. Swez on this 7 day of March 2017.

KATIE JAMIESON
Notary Public, North Carolina
Gaston County
My Commission Expires

NOTARY PUBLIC

My Commission Expires: June 14, 2021

VERIFICATION

STATE OF NORTH CAROLINA)
)
COUNTY OF MECKLENBURG)

SS:

The undersigned, Brett Phipps, Managing Direct – Fuel Procurement, 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.

Brett Phipps, Affiant

Subscribed and sworn to before me by Brett Phipps on this 8 day of March, 2017.

KATIE JAMIESON
Notary Public, North Carolina
Gaston County
My Commission Expires

Katie Jamieson
NOTARY PUBLIC

My Commission Expires: June 14, 2021

KYPSC CASE NO. 2017-00005
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Duke Energy Kentucky
Case No. 2017-00005
Staff Second Set Data Requests
Date Received: March 6, 2017

STAFF-DR-02-001

REQUEST:

Refer to the Direct Testimony of Brett Phipps ("Phipps Testimony"), page 3. Provide details of the "established guidelines" referenced on lines 15-17.

RESPONSE:

The "established guidelines" refers to falling within the Company's Risk Limits guidelines regarding the amounts of future contracted coal purchases based on the projected burns on an annual basis. The Risk Limits are contained in Appendix B of the Company's Regulated Electric Risk Limits that have been provided to the PSC.

PERSON RESPONSIBLE: Brett Phipps

Duke Energy Kentucky
Case No. 2017-00005
Staff Second Set Data Requests
Date Received: March 6, 2017

STAFF-DR-02-002

REQUEST:

Refer to Phipps Testimony, page 5, lines 11-19. Lines 11-12 state that "the Company utilizes firm delivered spot gas as needed...." Lines 16-18 state that "Duke Energy Kentucky has not historically maintained firm transportation on the interstate pipeline that supplies Woodsdale...." Explain what is meant by the term "firm delivered spot gas" as used on Lines 11-12.

RESPONSE:

Firm delivered spot gas for Woodsdale is firm natural gas supply purchased from a third party delivered using the supplier's firm transportation. To have dedicated firm transportation service, Duke Energy Kentucky would need long-term transportation and be obligated to pay the fixed costs every day regardless if it is used or not. Buying firm delivered spot gas supply to Woodsdale is far more economic than the Company procuring long-term firm transportation given the very low capacity factor of these units.

PERSON RESPONSIBLE: Brett Phipps

Duke Energy Kentucky
Case No. 2017-00005
Staff Second Set Data Requests
Date Received: March 6, 2017

PUBLIC STAFF-DR-02-003
(As to Attachments Only)

REQUEST:

Refer to the Direct Testimony of John D. Swez.

a. Refer to page 5, lines 19-22. State whether Duke Kentucky engaged in virtual transactions during the two-year review period. If yes, explain; 1) how the transactions were accounted for; and 2) the effect the transactions had on the calculation of the fuel adjustment clause ("FAC"), if any.

b. Refer to page 6, lines 10-15.

   1. As the paragraph relates to instances when Duke Kentucky's "generation stations are unavailable due to planned maintenance outages," state whether it is referring to hedges entered into as part of Duke Kentucky's back-up power supply plan. If not, explain.

   2. By month for the two-year review period, provide details and the benefits and costs of hedging activities related to Duke Kentucky's back-up power supply plan. Provide the supporting calculations in Excel spreadsheet format with the formulas intact and unprotected.

   3. Explain the types of hedges Duke Kentucky enters into when it generation stations "are not expected to clear the PJM Energy Market in volumes sufficient to serve native load demands." Include in the response details on hedges entered into during the two year review period, how the

transactions were accounted for, and the effect they had on the calculation of the FAC, if any.

c. Refer to page 8, lines 17-18. Explain the meaning of the statement "Fixed Gen units are commited (sic) but intend to remain fixed or otherwise not follow PJM real-time dispatch."

d. Refer to page 9, lines 10-11, and lines 16-18. Provide additional information related to the process of submitting a daily offer and hourly updates. Include in the response an example of a recent daily offering and the hourly updates related to that offering.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachments Only)

a. Duke Energy Kentucky did not enter into any virtual transactions during the two year review period.

b. 1. Yes

2. Please see Attachment STAFF-DR-02-003(b). The total realized amount, including fees, during this time period was a loss of $99,818.99. This includes realized hedging transaction results of a loss of $18,504.54 and transaction costs that covered InterContinential Exchange (ICE) fees, clearing firm fees, and broker commissions of $81,310.45.

3. As described in the Backup Plan, the Company entered into financial hedges when East Bend unit 2 became unavailable due to planned outages. ICE financial future contracts were used as a hedging tool. In a purchase transaction, the hedge would realize a gain if realized power price settled higher than the price we paid.

However, if market power price realized lower than the fixed price paid for the same contract, the hedge would realize a loss. Overall for the time period from November 2014 through October 2016, hedge transactions realized a loss of $99,818.99, including broker commissions, clearing firm fees, and monthly ICE exchange fees.

c. The Fixed Gen status informs PJM that the unit will be committed (operating), but will not be responding to or follow PJM dispatch signals and instructions. For example, this status could be used if a unit was performing testing and had to remain at a steady output.

d. Please see Confidential Attachments STAFF-DR-02-003(d-1) through (d-3), which are being filed under protective seal and Attachment STAFF-DR-02-003(d-4):

    1. Confidential Attachment STAFF-DR-02-003(d-1) Procedure 15 Offer Procedure.
    2. Confidential Attachment STAFF-DR-02-003(d-2) Procedure 15B PJM Intraday Cost Schedule Changing Guidelines.
    3. Confidential Attachment STAFF-DR-02-003(d-3) Procedure 15C Offer Procedure Details.
    4. See Attachment STAFF-DR-02-003(d-4) Example of Daily Offer and Real-Time Update.
        i. This example shows how East Bend 2 was offered at a maximum capability of 600 MW for each hour of 2/10/17. The unit developed a tube leak and ramped off-line on the evening of

2/10/17. The real-time offer for Hour Ending 1900 through 2400 was changed to reflect the units new real-time capability.

PERSON RESPONSIBLE: John Swez / John Verderame

Duke Energy Kentucky Native Hedging Details for Nov 2014 through Oct 2016

Month	Hedging Transaction Reults	Transaction Fees	Monthly Total
Nov-14		($2,400.00)	($2,400.00)
Dec-14	($4,584.60)	($2,603.80)	($7,188.40)
Jan-15		($3,774.54)	($3,774.54)
Feb-15		($5,308.84)	($5,308.84)
Mar-15	($9,350.20)	($6,533.20)	($15,883.40)
Apr-15	($31,353.27)	($5,515.00)	($36,868.27)
May-15	$2,646.42	($3,438.20)	($791.78)
Jun-15	($36,400.32)	($7,922.26)	($44,322.58)
Jul-15		($2,400.00)	($2,400.00)
Aug-15	$42,942.52	($3,542.60)	$39,399.92
Sep-15		($2,405.12)	($2,405.12)
Oct-15	($24,505.99)	($3,587.54)	($28,093.53)
Nov-15	($10,574.60)	($2,386.00)	($12,960.60)
Dec-15	($3,188.76)	($2,730.80)	($5,919.56)
Jan-16		($2,398.00)	($2,398.00)
Feb-16		($2,987.89)	($2,987.89)
Mar-16	$21,684.20	($3,660.40)	$18,023.80
Apr-16	$109,151.64	($2,828.28)	$106,323.36
May-16	($2,465.57)	($2,649.47)	($5,115.04)
Jun-16	($15,301.04)	($2,512.96)	($17,814.00)
Jul-16	($57,208.97)	($2,525.55)	($59,734.52)
Aug-16		($2,400.00)	($2,400.00)
Sep-16		($2,400.00)	($2,400.00)
Oct-16		($2,400.00)	($2,400.00)
Total	(18,508.54)	(81,310.45)	($99,818.99)

STAFF-DR-02-003 (d-1) CONF

STAFF-DR-02-003 (d-2) CONF

STAFF-DR-02-003 (d-3) CONF

ARE BEING FILED UNDER CONFIDENTIAL PROTECTIVE SEAL

Example of Daily Offer and Real-Time Update:

Trade Date 02/10/2017 Group DEK GEN Trans Pts All

Filters

Unit Trans Pt	Pricing Trans Pt	Type	Sched Selection	Period End	Status
DEOK EASTBEND 2 F	EBEND 20 KV G2	01 Cost-Based PLS	Not Selected	Off Peak	ERR
DEOK WOODSDALE 1 CT	WOODSDAL 13.5 KV CT1	02 Cost-Based PLS	Selected	On Peak	NEW
DEOK WOODSDALE 2 CT	WOODSDAL 13.5 KV CT2	03 Cost-Based PLS		01:00	SUB
DEOK WOODSDALE 3 CT	WOODSDAL 13.5 KV CT3	04 Cost-Based PLS		02:00	UNK
DEOK WOODSDALE 4 CT	WOODSDAL 13.5 KV CT4	05 Cost-Based PLS		03:00	UPD
DEOK WOODSDALE 5 CT	WOODSDAL 13.5 KV CT5	06 Cost-Based PLS		04:00	
DEOK WOODSDALE 6 CT	WOODSDAL 13.5 KV CT6	07 Cost-Based PLS		05:00	

Unit Manager Date: 02/10/2017. Points: DEK GEN (All)

Unit Schedules | Overrides

Unit Hourly Updates Date: 02/10/2017, Points: DEK GEN (All)

D	Unit Trans Pt	Period End	Status	Source	Cir MW	Min		Max		Unavail	Econ	Emgcy	Must Run	Fixed Gen	Market	Default Min		Default Max		Not
						Emgcy	Econ	Econ	Emgcy							Emgcy	Econ	Emgcy	Econ	
	DEOK EASTBEND 2 F	09:00	SUB	Internal		600.0	600.0	600.0	600.0				☑		BOTH	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	10:00	SUB	Internal		600.0	600.0	600.0	600.0				☑		BOTH	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	11:00	SUB	Internal		600.0	600.0	600.0	600.0				☑		BOTH	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	12:00	SUB	Internal		600.0	600.0	600.0	600.0				☑		BOTH	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	13:00	SUB	Internal		600.0	600.0	600.0	600.0				☑		BOTH	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	14:00	SUB	Internal		600.0	600.0	600.0	600.0				☑		BOTH	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	15:00	SUB	Internal		600.0	600.0	600.0	600.0				☑		BOTH	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	16:00	SUB	Internal		600.0	600.0	600.0	600.0				☑		BOTH	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	17:00	SUB	Internal		600.0	600.0	600.0	600.0				☑		BOTH	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	18:00	SUB	Internal		600.0	600.0	600.0	600.0				☑		DA	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	18:00	SUB	Internal		400.0	440.0	600.0	600.0				☑		RT	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	19:00	SUB	Internal		600.0	600.0	600.0	600.0				☑		DA	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	19:00	SUB	Internal		400.0	440.0	550.0	550.0				☑		RT	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	20:00	SUB	Internal		400.0	440.0	600.0	600.0				☑		DA	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	20:00	SUB	Internal		400.0	400.0	400.0	400.0				☑		RT	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	21:00	SUB	Internal		400.0	440.0	600.0	600.0				☑		DA	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	21:00	SUB	Internal		250.0	250.0	250.0	250.0				☑		RT	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	22:00	SUB	Internal		400.0	440.0	600.0	600.0				☑		DA	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	22:00	SUB	Internal		100.0	100.0	100.0	100.0				☑		RT	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	23:00	SUB	Internal		400.0	440.0	600.0	600.0				☑		DA	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	23:00	SUB	Internal		0.0	0.0	0.0	0.0	☑					RT	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	24:00	SUB	Internal		400.0	440.0	600.0	600.0				☑		DA	400.0	400.0	600.0	600.0	
	DEOK EASTBEND 2 F	24:00	SUB	Internal		0.0	0.0	0.0	0.0	☑					RT	400.0	400.0	600.0	600.0	

Duke Energy Kentucky
Case No. 2017-00005
Staff Second Set Data Requests
Date Received: March 6, 2017

STAFF-DR-02-004

REQUEST:

Refer to the Direct Testimony of John A. Verderame.

a. Refer to page 6, lines 6-12. Provide details of the first three initiatives listed in this paragraph.

b. Refer to page 9. Lines 14-17. State when Duke Energy Kentucky will submit its initial Fixed Resource Requirement Plan for the delivery period June 1, 2020, through May 31, 2021.

RESPONSE:

a. Due to a relatively flat generation to load position, and its status as a Fixed Resource Requirement (FRR) entity within the PJM capacity market construct, Duke Energy Kentucky has generally not been materially impacted by gyrations in capacity prices since joining PJM in 2012. The Company does, however, follow changes in the capacity market closely through the PJM stakeholder process in the context of potential future generation portfolio changes and in evaluation of moving to full participation in the Reliability Pricing Model (RPM). Since its inception, PJM has made periodic significant changes to its capacity market that were intended to either improve the market design or react to unforeseen events or market participant behaviors. The Capacity Performance

construct, a reaction to generation performance deficiencies during the Polar Vortex of 2014, is one such reactive example.

In recent years, PJM has also been focused on incenting the efficient entry and exit of generation into the market and appropriate compensation for Demand Response and other quick response resources such as batteries. PJM, as well as other organized markets, is currently undergoing a structural generation shift as its generation fleet transitions toward low marginal cost resources such as efficient natural gas, and an increasing renewable penetration. This shift is driving down power prices, a key component in the competitive investment decision; and making it increasingly more difficult for existing resources to stay in business or for new investment to enter the market. Two market features that PJM is currently evaluating specifically related to the efficient entry and exit of generation from the market are the impact of state policy objectives on competitive markets, and the impact of energy market offer price caps on generator investment decisions.

In May of 2016 PJM authored a whitepaper titled "Resource Investments in Competitive Markets "in which it posited that competitive markets provided generation investment signals that were superior to the integrated utility cost of service model; and that generation participating in the PJM market receiving out of market payments either through cost of service or targeted incentives had a potentially anti-competitive, price suppressive, impact on the PJM market. Recent state level activities in Ohio and Illinois related to restructuring and potentially re-regulating certain asset types undoubtedly adds to PJM concerns of these types of impacts on its capacity market.

In March 2017, PJM initiated a new stakeholder group, the Capacity Construct/Public Policy Senior Task Force, which will explore opportunities to harmonize RPM with emerging state energy policies. The FERC has also called for a Technical Conference in May, 2017 to explore solutions that could reconcile the competitive market framework with the increasing interest by states to support particular resources or resource attributes. PJM anticipates filing further changes to RPM prior to the 2018 Base Residual Auction for the 2021/2022 Planning Year.

Since subsidized resources are guaranteed some or all cost recovery, they are not incented to offer capacity at their true cost. Many, in fact, are incented to offer at $0, rather than risk forgoing revenues. In the PJM capacity market, all sellers that clear a particular zonal product are paid the same price, regardless of their specific offer price. A key component of RPM designed to limit the suppressive price effect of subsidized generation is the Minimum Offer Price Rule (MOPR). The MOPR sets administratively defined generation class capacity market price floors for new gas fired generation. 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 in the PJM footprint. The later extreme has been endorsed by the PJM market monitor. PJM has not identified the FRR construct as having an adverse impact on its market; and one of the PJM

proposed solutions to mitigating the price suppressive impacts of subsidized generation is an auction process that removes subsidized generation, and a commensurate amount of load, from the auction to determine the market clearing price. Currently FRR generation and its corresponding load are also removed from the auction.

The direct impact of changes to the MOPR rule, current exemptions, and applicability to Duke Energy Kentucky would be the potential impact of changes 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.

While the Capacity Performance initiative directly addressed capacity market design changes related to impacts from the Polar Vortex of 2014, PJM also identified a desired design change in the energy markets; specifically, how market participants offer units in the Day Ahead and Real Time markets, and the offer price cap applied to those offers.

Differing gas market and power market trading "days" has long been an issue for the energy markets. The power market "day" begins at 0700, while the gas market "day" begins at 1000. Generation owners like Duke Energy Kentucky can now bifurcate their offers to match the gas trading day. Additionally, owners now have hourly flexibility to lower and raise their prices in real-time to reflect changing gas prices. While PJM has always allowed for these changes, the process was cumbersome and impractical.

Prior to 2015, the maximum energy offer price allowed by PJM was $1000/ MWh. When natural gas prices exceeded $100/ MMBTU, the actual cost of running some generation in PJM exceeded that cap. Generators could recover those costs, but the recovery would come through uplift charges socialized across load rather than reflected in the PJM energy price, LMP. In late 2015, PJM stakeholders voted to raise the offer cap to $2,000 for cost based offers, and PJM made tariff filing with FERC.

FERC agreed with PJM's proposal, but contemporaneously released a broad RTO/ISO NOPR on Offer Caps in 2016. The implementation date of the offer cap change will likely be during 2017.

Because Duke Energy Kentucky is a generation owner and a load serving entity, changes to energy and capacity markets impact it differently than nonintegrated market participants.

As a generator, the ability to offer different gas prices for the same trading day is a positive change, improving Duke Energy Kentucky's ability to better match energy market offers with actual fuel costs, particularly in Real Time.

When there are large price moves in the intraday market, Duke Energy Kentucky will be able to change offers in order to reflect higher or lower prices.

As a load serving entity, raising the energy market offer cap, and reflecting actual system requirements costs through LMP rather than through uplift charges, allows Duke Energy Kentucky to better hedge customer exposure to unforeseen price spikes. While unforeseen system conditions always carry potential risk to customers, Duke Energy Kentucky can hedge price exposure through financial instruments and our generations' physical hedge. There is no hedge mechanism for uplift charges.

Reconciling the "no excuses" and annual requirement nature of the Capacity Performance construct with the seasonal nature of most Demand Responses (DR) and the short duration of battery storage energy availability has also been a significant topic in the PJM stakeholder forum. Both PJM and stakeholders have interest in finding ways for Demand Response to participate in the market. While PJM allows DR resources to participate as non-Capacity Performance, or Base Capacity resources in the 2018-2019 and 2019-2020 transitional CP years, seasonal resources could face large penalties by participating as Capacity Performance resources. PJM has proposed an aggregation scheme that would facilitate matching of winter and summer resources to create a compliant annual CP product. PJM filed these changes in November 2016 and is awaiting FERC response. If approved by FERC, Duke Energy Kentucky could potentially utilize more of its Demand Response program

as resources in the FRR Plans it files with PJM to meet customer load capacity obligation.

As battery storage technology has improved, and more resources enter the market, PJM has been focused on the role these resources should play in both capacity and energy markets. Storage has historically received most revenues from the ancillary services market. PJM has defined a problem statement to address all aspects of energy storage and how they may be implemented into the wholesale markets. FERC has also initiated a NOPR for Electric Storage in RTO/ISO regions which as a Final Rule could expand storage participation in RTO/ISO wholesale markets.

A Potential impact to Duke Energy Kentucky resulting from changes in capacity, energy and ancillary market participation due to the storage resource entry into those markets is the possibility that future increases in the supply of ancillary and energy resources could lower prices for those products in PJM.

b. Duke Energy Kentucky will submit its initial Fixed Resource Requirement Plan for the delivery period June 1, 2020, through May 31, 2021, to PJM by April 10, 2017.

PERSON RESPONSIBLE: John Verderame

Duke Energy Kentucky
Case No. 2017-00005
Staff Second Set Data Requests
Date Received: March 6, 2017

STAFF-DR-02-005

REQUEST:

Refer to Duke Kentucky's response to the Commission's February 6, 2017, Request for Information, Item 42.

a. Confirm that Duke Kentucky classifies an outage meeting the definition of "Maintenance Outage" as a scheduled outage.

b. Confirm that Duke Kentucky classifies an outage meeting the definition of any of the three "Unplanned (Forced) Outage" categories listed on the North American Electric Reliability Corporation website as a forced outage.

RESPONSE:

a. Correct.

b. Correct, except there are actually four categories of forced outages; Startup Failures (SF) and Forced Outages U1, U2, and U3.

PERSON RESPONSIBLE: John Swez