COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

ELECTRONIC TARIFF FILING OF EAST	**)**	
KENTUCKY POWER COOPERATIVE, INC. OF	**)**	
AN AMENDMENT TO AN INDUSTRIAL	**)**	
POWER AGREEMENT WITH	**)**	**CASE NO.**
INTERRUPTIBLE SERVICE BETWEEN EAST	**)**	**2020-00317**
KENTUCKY POWER COOPERATIVE, INC.,	**)**	
OWEN ELECTRIC CORPORATION, INC. AND	**)**	
NUCOR STEEL GALLATIN, LLC F/K/A	**)**	
GALLATIN STEEL COMPANY	**)**	

RESPONSES TO COMMISSION STAFF'S FIRST REQUEST FOR

INFORMATION TO EAST KENTUCKY POWER COOPERATIVE, INC.

DATED OCTOBER 16, 2020

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC JOINT APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. AND INTER-COUNTY ENERGY COOPERATIVE CORPORATION FOR APPROVAL OF AN INDUSTRIAL POWER AGREEMENT WITH ECONOMIC DEVELOPMENT RIDER AND RENEWABLE ENERGY PURCHASES	)))))))	**CASE NO. 2020-00193**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

David Crews, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Commission Staff's First Request for Information in the above-referenced case dated October 16, 2020, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

David Crews

Subscribed and sworn before me on this 5th day of ~~October,~~ November 2020.

GWYN M. WILLOUGHBY
Notary Public
Kentucky – State at Large
My Commission Expires Nov 30, 2021

Gwyn M. Willoughby

Notary Public - #590567
Commission expires - 11/30/2021

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC TARIFF FILING OF EAST KENTUCKY POWER COOPERATIVE, INC. OF AN AMENDMENT TO AN INDUSTRIAL POWER AGREEMENT WITH INTERRUPTIBLE SERVICE BETWEEN EAST KENTUCKY POWER COOPERATIVE, INC., OWEN ELECTRIC CORPORATION, INC. AND NUCOR STEEL GALLATIN, LLC F/K/A GALLATIN STEEL COMPANY	)))))))))	**CASE NO. 2020-00317**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Julia J. Tucker, being duly sworn, states that she has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Commission Staff's First Request for Information in the above-referenced case dated October 16, 2020, and that the matters and things set forth therein are true and accurate to the best of her knowledge, information and belief, formed after reasonable inquiry.

Julia J. Tucker

Subscribed and sworn before me on this 5th day of ~~October,~~ November 2020.

GWYN M. WILLOUGHBY
Notary Public
Kentucky – State at Large
My Commission Expires Nov 30, 2021

Gwyn M. Willoughby

Notary Public - #590567
Commission expires - 11/30/2021

EAST KENTUCKY POWER COOPERATIVE, INC.

PSC CASE NO. 2020-00317

RESPONSE TO INFORMATION REQUEST

COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION DATED 10/16/2020
REQUEST 1
RESPONSIBLE PARTY: David Crews

Request 1. Refer to the Attachment to Commission's September 29, 2020 Order filed in this case. In the response to Commission Staff's Requests dated July 23, 2020, Item 1, EKPC attempts to explain why the special contract was not structured under its Economic Development Rider (EDR) tariff. However, there remain striking similarities between the special contract, EKPC's EDR tariff, and the Findings enumerated in the Commission's September 24, 1990 Order in Administrative Case 327.[1]

Request 1a. Provide further explanation as to why EKPC did not structure this special contract under its EDR tariff.

Response 1a. The $650 million Nucor Ghent Plant expansion will increase its demand by 195 MW from 220 MW to 415 MW. Before the expansion, Nucor was already the largest customer on the EKPC system and, after the expansion, it will be the largest customer by an even wider

[1] See Administrative Case No. 327, *An Investigation into the Implementation of Economic Development Rates by Electric and Gas Utilities* (Ky. PSC Sept. 24, 1990), Order at 25–28.

margin. Another factor making this situation so unique is the flexible nature of Nucor's electric arc steel making operations, which allows EKPC to provide only 15 MW of firm demand to serve the 195 MW expansion. The 180 MW of 10-minute and 90-minute interruptible load provided by Nucor is monetized by EKPC through selling it as a demand response (DR) resource into the PJM Interconnection, LLC (PJM) Reliability Pricing Model (RPM) capacity market. This PJM DR revenue provides a contribution to EKPC's fixed costs and off-sets the interruptible credits paid to Nucor.

Both the EDR and interruptible tariffs include a mechanism for reducing a customer's demand charges. However, the nature of Nucor's load and operations makes it an excellent fit for an interruptible tariff. Also, the size of Nucor's interruptible load far exceeds the maximum in Owen's interruptible tariff, so a special contract must be utilized for Nucor's unique service requirements. As with previous special contracts involving Nucor, this contract requires Nucor to interrupt its operations at the direction of EKPC and receive a discount to its demand charges comparable to the discount in Owen's standard interruptible tariff. During the negotiations, Nucor and EKPC agreed on a different manner of discount than could be achieved by coupling the standard EDR tariff with the interruptible discount. Owen and EKPC choose to discount the energy charge to achieve a discount which successfully attracted the new investment in the Nucor facility. Discounts to an energy charge are not contemplated in EDR arrangements. An energy charge discount incentivizes Nucor to run three shifts around-the-clock to maximize its energy usage and associated discount. This means more jobs, payroll and tax revenue. A demand charge discount does not produce a similar incentive as the plant maximum demand will be the same whether running one shift or three. Also, if the EDR discounts were applied in addition to the energy discount, Nucor would receive a double dip economic development benefit.

The impact of the additional 15 MWs of Nucor's firm load is discussed below, but because the contract is structured as an interruptible contract, EKPC does not include the balance of Nucor's interruptible load in its load forecast that drives the need for future generation. This also avoids creating a short-term need for new plant.

Nucor is a sophisticated consumer of energy that is represented by competent and knowledgeable counsel. Arms-length negotiations that have taken place on multiple occasions over the past quarter century have demonstrated that Nucor's best energy supply solution is usually an interruptible contract. This is true both before and after EKPC integrated into PJM. The Commission has agreed, as evidenced by approving numerous special contracts and amendments over the years, including: Second Amendment to Industrial Power Agreement with Interruptible Service, dated July 27, 2017 (new galvanizing line); Agreement for Electric Service, dated April 30, 2013 (EKPC's entry into PJM); Agreement for Electric Service, dated September 1, 2010; Agreement for Electric Service, dated March 25, 2005; Special Agreement for Electric Service, dated October 27, 1994.

Request 1b. Explain why EKPC believes the EDR requirements should not be applied to the special contract.

Response 1b. The Commission's September 24, 1990 Order in Administrative Case 327 provides utilities a choice between a tariffed EDR rate or a special contract. Even though EKPC and Nucor have not negotiated an EDR arrangement (either strictly under the EDR tariff or as an EDR special contract), EKPC believes the proposed special contract would nevertheless satisfy the criteria stated in Administrative Case 327 for an economic development rate. For instance:

- EKPC can provide the 15 MW of firm capacity needed by the Nucor expansion. To the extent that any additional capacity is ever needed over the ten-year term, it can readily be purchased in the PJM RPM capacity market. This was not an option for EKPC when Administrative Case 327 was decided in 1990.
- Nucor will contribute to EKPC's fixed cost recovery in five ways. First, Nucor's $35.477/MWh off-peak energy rate and $38.905/MWh on-peak energy rate are both significantly above EKPC's variable cost of production. This means that the energy charge recovers demand costs. This is true even with the $1.5/MWh to $2.5/MWh credits contained in the proposed special contract. Second, even after its 10-minute and 90-minute interruptible credits, Nucor will pay a positive demand charge to EKPC on 180 MW of interruptible load. Third, Nucor's 15 MW of firm load will pay the full demand charge. Fourth, all 195 MW of demand and associated energy under the expansion will pay EKPC's environmental surcharge. This will reduce the environmental surcharge costs on all other consumers. Finally, the revenue received by selling Nucor's interruptible load into the PJM capacity market will be an additional contribution to fixed costs. Therefore, this contract

will make a significant contribution to EKPC's fixed costs and no customer will be worse off had the special contract not been approved.

- Customer-specific fixed costs are very minimal – approximately $60,000, including labor. This cost will be recovered in the rates Nucor pays.
- Nucor's expansion involves a capital investment of $650 Million and will create approximately 75 new direct jobs. There will also be permanent on-site contractors to service the expansion. Steel jobs have a significant job multiplier effect. In Case No. 2019-00365, the Commission approved a twenty-year economic development special contract between Nucor Steel Brandenburg and Big Rivers Electric Corporation for a $1.35 Billion new facility outside of Louisville. In that case, the Commission cited Nucor's economic development study that 400 direct jobs would result in over 2,600 indirect jobs across Kentucky.[2] That is a job multiplier of 6.5 times.

Nucor has moved forward with its $650 million plant expansion in Owen's service territory on the good faith belief that this special contract will be approved. Additional expansions are being considered at the Nucor Ghent Plant. However, future capital investment and job creation will be significantly hindered or rendered impossible if that good faith belief is misplaced.

This is clearly a situation where the contract needed to be tailored into a special contract. The size of the current and expanded load is unique and both loads have unique operational characteristics. This contract was structured so that the operator cannot bias orders to the new plant

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[2] Case No. 2019-00365, *In the Matter of the Electronic Joint Application of Big Rivers Electric Corporation and Meade County Rural Electric Cooperative Corporation for (1) Approval of Contracts for Electric Service with Nucor Corporation; and (2) Approval of Tariff*, August 17, 2020 Order at 3.

over the existing plant. Nucor is the bulk of EKPC's participation in the PJM Demand Response Market. The Nucor contracts have been developed to help Nucor be successful while ensuring the balance of the EKPC members are not adversely affected by Nucor.

Request 1c. Assuming the EDR requirements do apply, state whether EKPC seeks deviations from the specific requirements that the special contract does not satisfy.

Response 1c. EKPC has not negotiated an EDR contract with Nucor and therefore does not believe that any deviations are necessary.

EAST KENTUCKY POWER COOPERATIVE, INC.

PSC CASE NO. 2020-00317

RESPONSE TO INFORMATION REQUEST

COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION DATED 10/16/2020
REQUEST 2
RESPONSIBLE PARTY: Julia J. Tucker

Request 2. Refer to the Attachment to Commission's September 29, 2020 Order filed in this case. In EKPC's response to Commission Staff's Requests dated July 23, 2020, the spreadsheet entitled, EKPC Expected Reserve Margins w/ 15 MW Nucor Firm Load Included. In EKPC's pending Integrated Recourse Plan, its preferred plan contained two seasonal purchases of 100 MW each, in 2024 and in 2029 respectively to mitigate reserve margin erosion.[3] Explain whether the lack of capacity additions in the discovery response means that EKPC has changed its long range plan for how it will mitigate the erosion of its reserve margin. If so, explain EKPC's new preferred plan.

Response 2. EKPC has not changed its long-range plans. EKPC supplied the data in its previous response assuming only existing capacity in the calculations. An updated spreadsheet including the long-term plans as filed in the 2019 Integrated Resource Plan of East Kentucky Power Cooperative is included on pages 2 through 5 of this response.

[3] See Case No. 2019-00096, *Electronic 2019 Integrated Resource Plan of East Kentucky Power Cooperative, Inc.* (filed Apr. 1, 2019), Application, Table 1-4 at 20.

EKPC Expected Reserve Margins w/ 15 MW NUCOR Firm Load Included

	2019 Load Forecast		Existing Capacity		Retirement/ Derate		CAPACITY ADDITIONS										Total Addition		Total Capacity		Planning Reserves (Excl Seas Pur)	
							SCGT		CCGT		Purchased		Baseload		RE							
YEAR	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
2020	3,248	2,376	3,434	3,132													-	-	3,434	3,132	6%	32%
2021	3,296	2,530	3,434	3,132													-	-	3,434	3,132	4%	24%
2022	3,363	2,543	3,434	3,132													-	-	3,434	3,132	2%	23%
2023	3,356	2,581	3,434	3,132													-	-	3,434	3,132	2%	21%
2024	3,383	2,599	3,534	3,132							100						100	-	3,634	3,132	7%	21%
2025	3,395	2,616	3,434	3,132													100	-	3,534	3,132	4%	20%
2026	3,420	2,638	3,434	3,132													100	-	3,534	3,132	3%	19%
2027	3,440	2,657	3,434	3,132													100	-	3,534	3,132	3%	18%
2028	3,468	2,680	3,434	3,132													100	-	3,534	3,132	2%	17%
2029	3,479	2,696	3,534	3,132							100						200	-	3,734	3,132	7%	16%
2030	3,494	2,710	3,434	3,132													200	-	3,634	3,132	4%	16%
2031	3,511	2,730	3,434	3,132													200	-	3,634	3,132	4%	15%
2032	3,536	2,756	3,434	3,132													200	-	3,634	3,132	3%	14%

EKPC Expected Reserve Margins w/o 15 MW NUCOR Firm Load Included

	2019 Load Forecast		Existing Capacity		Retirement/ Derate		CAPACITY ADDITIONS										Total Addition		Total Capacity		Planning Reserves (Excl Seas Pur)	
							SCGT		CCGT		Purchased		Baseload		RE							
YEAR	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
2020	3,248	2,376	3,434	3,132													-	-	3,434	3,132	6%	32%
2021	3,296	2,530	3,434	3,132													-	-	3,434	3,132	4%	24%
2022	3,348	2,528	3,434	3,132													-	-	3,434	3,132	3%	24%
2023	3,341	2,566	3,434	3,132													-	-	3,434	3,132	3%	22%
2024	3,368	2,584	3,534	3,132							100						100	-	3,634	3,132	8%	21%
2025	3,380	2,601	3,434	3,132													100	-	3,534	3,132	5%	20%
2026	3,405	2,623	3,434	3,132													100	-	3,534	3,132	4%	19%
2027	3,425	2,642	3,434	3,132													100	-	3,534	3,132	3%	19%
2028	3,453	2,665	3,434	3,132													100	-	3,534	3,132	2%	18%
2029	3,464	2,681	3,534	3,132							100						200	-	3,734	3,132	8%	17%
2030	3,479	2,695	3,434	3,132													200	-	3,634	3,132	4%	16%
2031	3,496	2,715	3,434	3,132													200	-	3,634	3,132	4%	15%
2032	3,521	2,741	3,434	3,132													200	-	3,634	3,132	3%	14%

Existing Capacity (as of 2020)

					1x116					Smith CTs						BG CTs		Total	Total		TOTAL		Total		Total	
	SEPA	LFG		Solar	1x225	1x300	1x510	1x268	1x268	#1-3		#4-7		#9-10		#1-3		Coal fired	Gas fired		FOSSIL FLEET		Other		Capacity	
Year		WIN	SUM		Cooper	Spur 1	Spur 2	Spur 3	Spur 4	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM		WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
2020	170	16.1	16.1	5.2	341	300	510	268	268	426	312	357	292	206	149	567	501	1,687	1,556	1,254	3,243	2,941	191	191	3,434	3,132
2021	170	16.1	16.1	5.2	341	300	510	268	268	426	312	357	292	206	149	567	501	1,687	1,556	1,254	3,243	2,941	191	191	3,434	3,132
2022	170	16.1	16.1	5.2	341	300	510	268	268	426	312	357	292	206	149	567	501	1,687	1,556	1,254	3,243	2,941	191	191	3,434	3,132
2023	170	16.1	16.1	5.2	341	300	510	268	268	426	312	357	292	206	149	567	501	1,687	1,556	1,254	3,243	2,941	191	191	3,434	3,132
2024	170	16.1	16.1	5.2	341	300	510	268	268	426	312	357	292	206	149	567	501	1,687	1,556	1,254	3,243	2,941	191	191	3,434	3,132
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2026	170	16.1	16.1	5.2	341	300	510	268	268	426	312	357	292	206	149	567	501	1,687	1,556	1,254	3,243	2,941	191	191	3,434	3,132
2027	170	16.1	16.1	5.2	341	300	510	268	268	426	312	357	292	206	149	567	501	1,687	1,556	1,254	3,243	2,941	191	191	3,434	3,132
2028	170	16.1	16.1	5.2	341	300	510	268	268	426	312	357	292	206	149	567	501	1,687	1,556	1,254	3,243	2,941	191	191	3,434	3,132
2029	170	16.1	16.1	5.2	341	300	510	268	268	426	312	357	292	206	149	567	501	1,687	1,556	1,254	3,243	2,941	191	191	3,434	3,132
2030	170	16.1	16.1	5.2	341	300	510	268	268	426	312	357	292	206	149	567	501	1,687	1,556	1,254	3,243	2,941	191	191	3,434	3,132
2031	170	16.1	16.1	5.2	341	300	510	268	268	426	312	357	292	206	149	567	501	1,687	1,556	1,254	3,243	2,941	191	191	3,434	3,132
2032	170	16.1	16.1	5.2	341	300	510	268	268	426	312	357	292	206	149	567	501	1,687	1,556	1,254	3,243	2,941	191	191	3,434	3,132

Purchases (MW)

Year	Pumping Station Mkt Purch		Purchase		Purchase		Purchase		Purchase		**Total**	
	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
2020											0	0
2021											0	0
2022											0	0
2023											0	0
2024			100								100	0
2025											0	0
2026											0	0
2027											0	0
2028											0	0
2029					100						100	0
2030											0	0
2031											0	0
2032											0	0

Budget October 2019: 2020-2022; LT 2023-2039

						PJM SUMMER								
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Winter Peak (MW)	Summer Peak (MW)
2020	3247.9	3069.3	2576.8	2110.3	2039.8	2375.8	2349.7	2280.7	2319.9	1930.1	2490.9	2894.3	3,248	2,376
2021	3296.5	3122.2	2750.9	2253.8	2190.7	2529.8	2410.7	2340.6	2471.9	2074.9	2682	3038.5	3,296	2,530
2022	3362.6	3267.1	2770	2261.5	2205.1	2543	2441.5	2356	2492.8	2084.8	2695.8	3072.8	3,363	2,543
2023	3356.1	3272.6	2762.2	2287.3	2238.7	2581.3	2449.8	2375.9	2506.4	2097.4	2677.5	3087.5	3,356	2,581
2024	3382.7	3297	2779.7	2300.5	2255.1	2598.9	2469.4	2394.4	2524	2111.2	2694.2	3109.3	3,383	2,599
2025	3394.8	3308.9	2787.1	2305.6	2270.4	2616.4	2487.8	2412	2541.5	2118.2	2701.6	3117.6	3,395	2,616
2026	3419.6	3331.4	2804.8	2319.1	2289.1	2638.3	2510.7	2434.6	2562.4	2131.3	2718.5	3136.4	3,420	2,638
2027	3440.4	3349.9	2818.7	2330.7	2305.8	2657.3	2530.5	2432.8	2580.3	2144	2731.4	3150.3	3,440	2,657
2028	3468.3	3375.6	2838.7	2345.3	2326.6	2680.3	2554.5	2476.4	2602.3	2159.3	2750.5	3172.5	3,468	2,680
2029	3478.9	3385.9	2845.3	2350.8	2340.3	2696.2	2571.3	2493.1	2618.2	2166.2	2757.2	3183.3	3,479	2,696
2030	3493.6	3399.4	2855.1	2357.3	2352.9	2709.9	2586	2507.9	2632	2175.9	2766.1	3190	3,494	2,710
2031	3511.3	3415.7	2866.9	2366.8	2370.6	2729.9	2606.9	2527.8	2651	2185	2778	3205	3,511	2,730
2032	3536.3	3483.8	2884.8	2380.4	2389.3	2756.5	2639.9	2549.7	2670.9	2201	2769.1	3190.3	3,536	2,756