COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

ELECTRONIC TARIFF FILING OF BIG RIVERS	**)**	
ELECTRIC CORPORATION AND KENERGY	**)**	**Case No. 2023-00312**
CORP. TO REVISE THE LARGE INDUSTRIAL	**)**	
CUSTOMER STANDBY SERVICE TARIFF	**)**	

DIRECT TESTIMONY

AND EXHIBITS

OF

STEPHEN THOMAS

ON BEHALF OF

DOMTAR PAPER COMPANY, LLC

December 4, 2023

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In The Matter Of:	**:**	
	:	
Electronic Tariff Filing of Big Rivers Electric Corporation and Kenergy Corp. to Revise the Large Industrial Customer Standby Service Tariff.	**:**	**Case No. 2023-00312**

DIRECT TESTIMONY OF STEPHEN THOMAS ON BEHALF OF DOMTAR PAPER COMPANY, LLC

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Stephen (Steve) Thomas. I am the Sr. Manager of Energy Programs for Domtar Paper Company, LLC ("Domtar"). My business address is 100 Kingsley Park Drive, Fort Mill, SC 29715.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I earned a Bachelor of Science in Electrical and Computer Engineering from the University of South Carolina in 1986 and a Master of Engineering in Electrical and Computer Engineering in 1990. I also earned a Master of Business Administration ("MBA") from Charleston Southeastern University in 1995.

The first eleven years of my professional career were at the South Carolina Public Service Authority, aka Santee Cooper. Santee Cooper is a state-owned electric utility that provides electric generation and transmission services to Central Electric Power Cooperative that, in turn, is the G&T Cooperative for all twenty of South Carolina's electric distribution cooperatives. More than eight of those years were in Power Supply Planning, where I was responsible for Economic Dispatch, Load Forecasting, Unit Commitment, and Transmission Operations of Santee Cooper's NERC Control Area.

I left Santee Cooper to join Duke Energy as the Director of Power Supply and Analytics for their retail open access subsidiary. I worked for Duke Energy for more than ten years before joining Central Electric Power Cooperative as the Vice President of Strategy and Planning. I also worked as a Senior Manager for a management consulting firm, North Highland, before joining Domtar is 2012.

As the Sr. Manager of Energy Programs for Domtar, I am responsible for the purchase and sale of electric energy, capacity, and renewable energy attributes used and generated at Domtar's mills and converting facilities in the US and Canada. This includes facilities that are in regulated territories served by investor-owned utilities like Dominion, American Electric Power, and Alliant. Domtar has several facilities in retail open access areas and Domtar has a paper mill in South Carolina that is served by a G&T and distribution cooperative combination similar to how Big Rivers Electric Corporation ("Big Rivers") and Kenergy Corp. serve our Hawesville, Kentucky facility.

Q. ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A. I am appearing on behalf of Domtar. Domtar is the largest manufacturer and marketer of uncoated freesheet paper in North America and the second largest in the world based on production capacity. Domtar's Hawesville Mill, located in Hancock County, employs approximately 460 people and has an estimated regional economic impact of nearly $1.3 billion. It is one of the largest and strongest economic providers for the region. Its annual production capacity is almost 600,000 tons of paper and 100,000 tons of hardwood market pulp.

Q. HOW WOULD YOU CHARACTERIZE THE HEALTH OF THE UNCOATED FREESHEET PAPER MARKET?

A. The uncoated freesheet paper market has been waning for more than a decade, declining at a rate of between 4% and 6% per year. According to data from the American Forest and Paper Association, over the past 10 years, an average of 1,060,000 tons of North American paper production capacity have been closed annually. That is the equivalent of one Hawesville-sized mill being closed every 7 months. Just recently, in September of 2023, Domtar announced the indefinite idling of 349,000 tons of pulp and paper capacity at our mill in Espanola, Canada that had, prior to its closing, employed 450 people.

Q. HOW IS DOMTAR'S HAWESVILLE FACILITY IMPACTED BY UTILITY RATE INCREASES?

A. Utility rate increases significantly impact Domtar's competitiveness, both domestically and internationally. In addition to competing with suppliers in the U.S., Domtar's

Hawesville mill competes for business with foreign suppliers that make and import their paper from overseas. The environmental and labor regulations in many of the exporting countries are well below U.S. standards, giving these imports a significant cost advantage over domestically-produced paper, even when the additional shipping costs are considered. Increases in input costs, like the cost of electricity, make it just that much harder for Hawesville to compete against these foreign imports.

Q. WHY DOES IT MATTER IF THE HAWESVILLE MILL'S POWER RATE IS LESS FAVORABLE THAN OTHER DOMTAR FACILITIES?

The Hawesville facility competes not just against other paper manufacturers, but against other Domtar facilities for production rights and for Domtar's limited capital resources. The entire bundle of mill operational expenses and input costs, along with mill efficiency and location, dictate each mill's per-unit production costs. Domtar's allocation of capital is largely driven by these per-unit production costs. The largest components of these bundled costs are wood fiber, chemical catalysts, and energy.

Each Domtar mill also has regional advantages and disadvantages. Unfortunately, one of the regional disadvantages for Hawesville is that their local "wood basket" is hardwood only. It takes a mixture of hardwood and softwood fiber to make commercial grades of paper. This forces Hawesville to have softwood fiber delivered from as far away as Arkansas and South Carolina rather than the more economical solution of sourcing it locally if it were available. Kentucky's historical price advantage on energy has always been an important offset to the higher cost of fiber supply at Hawesville.

Reduced access to capital and increased costs of production combined with the steady decrease in paper demand could increase both the frequency and duration of idling requests at Hawesville. In addition to economic impacts, idling of the Hawesville mill has environmental impacts. For every two tons of production, our pulping process yields enough residual biomass fuel to offset one megawatt-hour of "brown power" produced from a coal or natural gas-fired facility. In 2022, the Hawesville facility produced renewable energy to offset more than 301,700 MWh of the region's brown power. This is enough renewable energy to power 27,500 average U.S. homes for a year.

There's another important consideration that is driven by the local cost of energy – the possible repurposing of the Hawesville site. There is fierce internal competition within Domtar for the limited amount of capital available to the paper fleet for improvements and technological advancements. Getting the lion's share of these discretionary funds is the difference between maintaining a top position on the Domtar roadmap or languishing as one of the next mills to be slated for closure. Energy costs will weigh heavily in future decisions made by Domtar management whether to close or potentially repurpose the Hawesville mill site. And as history has shown, once Domtar's management decides to shut down a mill, that decision will not be revisited.

Q. PLEASE DESCRIBE THE HAWESVILLE MILL'S COGENERATION FACILITY.

A. Domtar constructed its 52 MW onsite cogeneration facility at the Hawesville mill in 2001. The cogeneration facility consists of boilers fueled by tree bark, sawdust and wood chips that the mill cannot process as well as *"black liquor"* which is a byproduct from the

pulping process. Black liquor is a renewable fuel resource. Domtar's boilers use this renewable fuel to produce steam that is used in the papermaking process and to generate electricity with the additional benefit that converting it to electricity allows Domtar to capture and reuse its pulping catalysts at a 99% efficiency. Hawesville's QF cogeneration system constitutes a *"Qualifying Facility"* under the Public Utility Regulatory Policies Act of 1978. The facility received a Combined Heat and Power Energy Star award from the U.S. Environmental Protection Agency and U.S. Department of Energy in 2005.

Q. PLEASE DESCRIBE DOMTAR'S LONG-STANDING STANDBY SERVICE RATE STRUCTURE.

A. For over twenty years, Domtar has taken standby service to cover planned and unplanned outages at its QF cogeneration facility from Big Rivers in accordance with a Commission-approved rate structure. Over this twenty-year period, Big Rivers has had four base rate cases where it was able to plan its system and establish its revenue requirement incorporating Domtar's QF cogeneration facility.[1]

Under that Commission-approved rate structure, Domtar designates a certain portion of its load (between 15 MW and 35 MW) as firm, pays Large Industrial Customer ("LIC") tariff rates on that portion, and purchases standby service at Big Rivers' market-based costs plus an adder to cover Big Rivers' administrative costs.

[1] Case Nos. 2009-00040, 2011-00036, 2012-00535 and 2013-00199.

Even under the current rate structure, Domtar has experienced significant rate increases over time. Between 2012 and 2021, with the effects of the market and monthly allocation differences removed, the Big Rivers portion of power supply costs at the Hawesville mill have increased from $35.85/MWh in 2012 to $57.79/MWh in 2021 - or 61.2%. I have excluded the 2022 costs – which averaged $81.91/MWh – because market conditions affecting capacity nominations make the comparison less meaningful. These cost increases have made it increasingly difficult for the Hawesville mill to compete against foreign imports, direct North American-based competitors, and other mills in the Domtar fleet for its share of the dwindling paper market.

Q. HAS BIG RIVERS CALCULATED HOW MUCH ADDITIONAL REVENUE IT WILL RECEIVE AND HOW MUCH ADDITIONAL COSTS DOMTAR WILL PAY IF ITS PROPOSED LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF IS APPROVED?

A. No. In Response to Domtar 1-16, Big Rivers claimed that an accurate projection requires information not available to it, including information not regularly maintained, compiled or prepared by Big Rivers. In other words, the utility is asking the Commission to approve a new rate without any indication of the financial impact to it or to its customer. The federal PURPA regulation (18 C.F.R. 292.305) and the state regulation implementing PURPA (807 KAR 5:054 Section 6(5)) both require that supplemental, back-up and maintenance rates to QFs be just and reasonable and in the public interest. Based upon my regulatory background, I don't understand how the Commission can make those findings based on the evidence presented by the utility.

Q. HAS DOMTAR CALCULATED HOW THE BIG RIVERS LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF PROPOSED IN THIS PROCEEDING WILL IMPACT HAWESVILLE'S ELECTRIC RATES?

A Yes. According to the analysis of Stephen Baron, replacing our current contract with Big Rivers' proposed Large Industrial Customer Standby Service ("LICSS") tariff would increase the cost of electric supply at the Hawesville mill by 45.5% ($6.48 million per year) based on a five-year study period from January 2018 through December of 2022. See the Annual Averages in my Exhibit 2 – Annual Rate Comparisons. This new rate structure would increase the Hawesville mill's per unit cost, amplify Hawesville's fiber cost disadvantage, and weaken its position in the Domtar hierarchy of mills.

Also, there would be a corresponding increase of $6.48 million to Big Rivers' bottom-line margin because there would be no incremental increase to its costs by simply repricing a service that it is already providing.

Q. WHAT WAS BIG RIVERS' MARGIN IN 2022?

A. In 2022, Big Rivers' margin was $14,026,548, which produced the 1.30 TIER authorized in its most recent rate case.[2] The $6.48 million proposed rate increase to Domtar (with no associated increase in its costs) would increase Big Rivers' 2022 margin by 46% and would result in a TIER of 1.44. A rate increase of this magnitude to one customer would be better decided in a full base rate case where all revenues and expenses are examined.

[2] Case No. 2013-00199, April 25, 2014 Order at 32.

Q. **HOW DOES THE UPDATED BIG RIVERS LICSS TARIFF COMPARE TO THE CURRENTLY-APPROVED LICSS RATE AND ARE THE DIFFERENCES SIGNIFICANT?**

A. The most significant change is the replacement of a fixed $3.80/kW-month demand discount with a monthly demand discount that is identical to the MISO Planning Resource Auction ("PRA") Auction. The 5-year average of the MISO PRA Auction between 2018 and 2022 was $0.988/kW-month. The reduced discount has a material effect by increasing the impact of the new LICSS tariff rate by $1,690,279 annually. This singular change is responsible for 11.9% of the total projected 45.5% rate increase.

Q. DOMTAR WITNESS STEPHEN BARON IS RECOMMENDING THAT THE COMMISSION REJECT BIG RIVERS' LICSS TARIFF AND PROPOSES A BACK-UP, MAINTENANCE AND SUPPLEMENTAL POWER RATE BASED ON DUKE ENERGY KENTUCKY'S GSS TARIFF. IF THE GSS TYPE TARIFF IS ADOPTED, MR. BARON HAS SHOWN THAT IT WOULD PRODUCE AN 17.8% RATE INCREASE ($2.54 MILLION PER YEAR) ON DOMTAR'S TOTAL BILL. WILL SUCH AN INCREASE CREATE PROBLEMS FOR THE DOMTAR PAPER PLANT IN KENTUCKY?

A. Yes. While the Commission-approved Duke's GSS type rate is a significant improvement over Big Rivers' proposed LICSS tariff, it still will result in a very large increase, creating significant challenges to maintain the economic viability of our facility in Kentucky. A 17.8% rate increase amounts to over $2.5 million per year in additional costs, which will significantly impact our operations. As discussed previously, because

there will be no incremental increase to its costs by simply repricing a service it is already providing, this $2.54 million rate increase will go straight to the utility's bottom line. Again, a rate increase of $2.54 million to a single customer would be better addressed in a base rate case.

Q. DO YOU HAVE AN ALTERNATIVE RECOMMENDATION THAT WOULD PROVIDE BACKUP AND MAINTENANCE SERVICE TO DOMTAR IN A WAY THAT PROTECTS OTHER RATEPAYERS AND HAS NO FINANCIAL IMPACT ON THE UTILITY?

A. Yes. My alternative proposal would be to have our backup and maintenance service provided by Big Rivers at its cost of purchasing those products from the MISO market. Big Rivers would purchase the required capacity and energy to serve our load in the event that our generator was either forced out or out for scheduled maintenance. The capacity rate would be the MISO Planning Resource Auction capacity rate and the energy price would be the MISO location marginal price in MISO's Zone 6 (the zone that includes Big Rivers). The mill's firm load would continue to be served by Big Rivers. This structure would not negatively impact other Big Rivers customers and Domtar would meet all of its revenue obligations to the shared system.

This structure will also have no effect on Big Rivers' margins because its increased MISO costs would be directly offset by increased Domtar revenues. This "*hold harmless*" approach would be reasonable until the utility's next base rate case where all revenues and expenses will be examined by the Commission.

Q. COULD BIG RIVERS' PROPOSED LICSS TARIFF BE MODIFIED TO ACCOMMODATE THIS ALTERNATIVE?

A. Yes. There would only be a need to make two changes to Big Rivers' LICSS tariff. First, "Backup Power demand" would be charged at the MISO PRA clearing price, rather than the full standard LIC demand charge with a credit for the MISO PRA clearing price. Second, Backup Power energy would be priced at the MISO LMP at the applicable node, rather than the greater of the LIC energy charge or the MISO LMP. With those two changes, Domtar and other standby customers would obtain backup and maintenance service from Big Rivers through the MISO market. All market risk would be on Domtar. This would protect existing Big Rivers' customers from any harm due to the provision of backup and maintenance service. It would also avoid increasing the utility's margins outside of a rate case. Operationally this is very similar to our existing contract so it will not cause any new obligations to Big Rivers or other Big Rivers customers. This method would work equally well for new Standby Customers locating on the Big Rivers system since it does not put a generation planning burden on Big Rivers, the Big Rivers system, or other Big Rivers customers.

The adoption of this "*hold harmless*" alternative until the next rate case is my primary recommendation.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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AFFIDAVIT OF STEPHEN THOMAS

STATE OF SOUTH CAROLINA)
) *SS*
COUNTY OF YORK)

Stephen Thomas, being first duly sworn deposes and states that:

1. He is Sr. Manager of Energy Programs for Domtar Paper Company, LLC.

2. He is the witness who sponsored the accompanying testimony entitled "*Direct Testimony of Stephen Thomas on behalf of Domtar Paper Company, LLC*";

3. Said testimony was prepared by him and under his direction and supervision;

4. If inquiries were made as to the facts in said testimony he would respond as therein set forth; and

5. The aforesaid testimony is true and correct to the best of his knowledge, information and belief.

Stephen Thomas, Sr. Manager of Energy Programs
Domtar Paper Company, LLC

SUBSCRIBED AND SWORN TO before me by Stephen Thomas, as Sr. Manager of Energy Programs for Domtar Paper Company, LLC, on this 4th day of December, 2023.

Notary Public
My Commission Expires: 12/3/2030

ANN M DINARDO
Notary Public
State Of South Carolina
My Commission Expires 12/03/2030

EXHIBIT 1

Domtar Actual Billing from Kenergy/Big Rivers Electric Cooperative for 2018

	Note	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Annnual
Demand-Firm		15,000 @ $10.7150 $ 160,725	15,000 @ $10.7150 $ 160,725	15,000 @ $10.7150 $ 160,725	15,000 @ $10.7150 $ 160,725	15,000 @ $10.7150 $ 160,725	15,000 @ $10.7150 $ 160,725	15,000 @ $10.7150 $ 160,725	15,000 @ $10.7150 $ 160,725	15,000 @ $10.7150 $ 160,725	15,000 @ $10.7150 $ 160,725	15,000 @ $10.7150 $ 160,725	15,000 @ $10.7150 $ 160,725	$ 1,928,700
Energy-Firm		10,982,375 @ $0.03805 $ 417,879	9,935,938 @ $0.03805 $ 378,062	11,080,541 @ $0.03805 $ 421,615	10,695,911 @ $0.03805 $ 406,979	11,092,848 @ $0.03805 $ 422,083	10,787,369 @ $0.03805 $ 410,459	11,155,984 @ $0.03805 $ 424,485	11,136,052 @ $0.03805 $ 423,727	10,068,863 @ $0.03805 $ 383,120	11,159,375 @ $0.03805 $ 424,614	10,750,115 @ $0.03805 $ 409,042	11,138,819 @ $0.03805 $ 423,832	$ 4,945,898
Demand-Adders	1	15,000 @ $2.7300 $ 40,951	15,000 @ $2.6628 $ 39,942	15,000 @ $2.0796 $ 31,194	15,000 @ $2.6702 $ 40,054	15,000 @ $2.5780 $ 38,670	15,000 @ $2.9958 $ 44,936	15,000 @ $2.7447 $ 41,171	15,000 @ $3.1794 $ 47,691	15,000 @ $1.6184 $ 24,277	15,000 @ $3.0239 $ 45,359	15,000 @ $3.0238 $ 45,357	15,000 @ $3.1391 $ 47,087	$ 486,688
Energy-Adders	2	10,982,375 @ $0.00205 $ 22,558	9,935,938 @ $0.00334 $ 33,226	11,080,541 @ $0.00519 $ 57,453	10,695,911 @ $0.00288 $ 30,836	11,092,848 @ $0.00235 $ 26,024	10,787,369 @ $0.00182 $ 19,644	11,155,984 @ $0.00173 $ 19,278	11,136,052 @ $0.00245 $ 27,317	10,068,863 @ $0.00272 $ 27,367	11,159,375 @ $0.00322 $ 35,978	10,750,115 @ $0.00457 $ 49,139	11,138,819 @ $0.00182 $ 20,228	$ 369,046
Admin & Other Charges	3	$ 7,540	$ 7,761	$ 7,876	$ 7,890	$ 8,106	$ 8,031	$ 7,825	$ 8,289	$ 7,477	$ 7,760	$ 7,899	$ 7,412	$ 93,864
MISO Energy	4	15,203,154 @ $0.04228 $ 625,614	9,921,882 @ $0.01349 $ 118,543	7,276,804 @ $0.02580 $ 170,636	6,198,842 @ $0.03169 $ 179,892	8,912,694 @ $0.03347 $ 281,201	7,577,902 @ $0.02959 $ 176,747	12,476,976 @ $0.03033 $ 329,245	18,023,786 @ $0.03273 $ 540,667	7,428,627 @ $0.03377 $ 203,378	6,961,049 @ $0.03442 $ 190,361	6,769,785 @ $0.03786 $ 208,788	3,613,753 @ $0.03077 $ 61,968	$ 3,087,040
MISO: Other	5	$ 154,816	$ 122,547	$ 148,350	$ 142,964	$ 144,475	$ 286,771	$ 189,248	$ 186,397	$ 180,266	$ 192,997	$ 161,437	$ 185,245	$ 2,095,514
Contract Adders	6	$ 23,554	$ 17,031	$ 15,771	$ 14,489	$ 17,253	$ 15,744	$ 21,015	$ 26,490	$ 13,294	$ 15,369	$ 15,062	$ 12,287	$ 207,358
TOTAL		**$ 1,453,637**	**$ 877,838**	**$ 1,013,619**	**$ 983,829**	**$ 1,098,537**	**$ 1,123,057**	**$ 1,192,991**	**$ 1,421,302**	**$ 999,903**	**$ 1,073,163**	**$ 1,057,450**	**$ 918,784**	**$ 13,214,109**

1 Demand Adders: MRSM and Environmental Surcharge
2 Energy Adders: FAC, Non-Smelter Non-FAC, and Unwind Surcredit
3 Admin & Other Charges: Power Factor, Metering and Billing Charge, and Customer Charge
4 MISO Energy is the total MISO back-up charge minus the Monthy Capacity Settlement - this is the amount used as the actual MISO LMP, Locational Marginal Price for energy
5 MISO Other includes Monthly Capacity Settlement, MISO Transmission and MISO True-up
6 Contract Adders: Back-up and Replacement and Total Energy Consumed Charges - these charges go away under the LIC/LICSS Schedule

EXHIBIT 2

Domtar As-Billed vs. LIC/LICSS Rates for CY2018 through CY2022

	As-Billed	LIC/LICSS	Difference	Percentage
2018	$ 13,214,109	$ 20,504,184	$ 7,290,075	55.2%
2019	$ 13,132,940	$ 21,461,597	$ 8,328,658	63.4%
2020	$ 11,277,928	$ 19,427,446	$ 8,149,518	72.3%
2021	$ 13,624,513	$ 20,217,476	$ 6,592,964	48.4%
2022	$ 20,044,343	$ 22,096,890	$ 2,052,547	10.2%
TOTAL	$ 71,293,833	$ 103,707,594	$ 32,413,761	
ANNUAL AVERAGE	$ 14,258,767	$ 20,741,519	**$ 6,482,752**	**45.5%**

Domtar As-Billed vs. Duke GSS Rate Proxy for CY2018 through CY2022

	As-Billed	LIC/LICSS	Difference	Percentage
2018	$ 13,214,109	$ 16,120,138	$ 2,906,029	22.0%
2019	$ 13,132,940	$ 17,346,682	$ 4,213,742	32.1%
2020	$ 11,277,928	$ 15,955,034	$ 4,677,107	41.5%
2021	$ 13,624,513	$ 15,455,424	$ 1,830,911	13.4%
2022	$ 20,044,343	$ 19,113,694	$ (930,649)	-4.6%
TOTAL	$ 71,293,833	$ 83,990,973	$ 12,697,140	
ANNUAL AVERAGE	$ 14,258,767	$ 16,798,195	**$ 2,539,428**	**17.8%**

Exhibit SRT 2- Five Year Rate Comparisons - Stephen Thomas