

**COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION**

**DOMTAR PAPER COMPANY, LLC**

**Complainant**

**v.**

**BIG RIVERS ELECTRIC CORPORATION**

**KENERGY CORP.**

**Defendants.**

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**Case No. 2023- 00017**

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**COMPLAINT**

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**INTRODUCTION**

Pursuant to KRS 278.260, KRS 278.270, KRS 278.040, KRS 278.030 and 807 KAR 5:001 Section 20, Domtar Paper Company, LLC (“Domtar” or “Complainant”) submits this Complaint against Kenergy Corp. (“Kenergy”) and Big Rivers Electric Corporation (“Big Rivers” or “Company”) to the Kentucky Public Service Commission (“Commission”).

Domtar owns an integrated pulp and paper mill that produces copy paper in Hawesville, Kentucky. The Hawesville mill supports approximately 450 local jobs and has an estimated regional economic impact of nearly \$1.2 billion.<sup>1</sup> In 2001, Domtar constructed a 52 MW onsite cogeneration facility powered by renewable wood waste resulting from copy paper production (tree bark, saw dust, and black liquor), which constitutes a “*Qualifying Facility*” (“QF”) under the Public Utility Regulatory Policies Act of 1978 (“PURPA”). Instead of landfilling the wood waste, Domtar burns that renewable fuel to produce steam used for papermaking and running

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<sup>1</sup> Attachment 1 (2022 Hawesville Mill Fact Sheet).

an electric turbine generator. Using one fuel source for two useful thermal outputs is a classic example of the type of cogeneration facility PURPA was intended to promote.

For over twenty years, Domtar has taken standby service to cover planned and unplanned outages at its QF cogeneration facility from Big Rivers/Kenergy at Commission-approved contract rates.<sup>2</sup> Under its contract, Domtar designates a certain portion of its load as firm, pays tariff rates on that portion, and purchases standby service at market-based rates. During the decades-long period in which Domtar took service under this structure, Big Rivers had four rate cases and was able to plan its system and design its rates by fully incorporating Domtar's QF cogeneration facility into its revenue requirement.

In late March 2022, Kenergy terminated this twenty-one-year-old rate structure effective March 31, 2023. Kenergy's decision was motivated by the Commission's approval for Big Rivers of a new Pilot Large Industrial Customer Standby Service ("LICSS") tariff in Case No. 2021-00289. The Pilot LICSS tariff was created in response to Kimberly-Clark Corporation's ("Kimberly-Clark") new 14 MW natural gas cogeneration facility in Owensboro, Kentucky.

Termination of Domtar's current contract would immediately move Domtar to the Pilot LICSS tariff, resulting in Domtar paying \$3.4 million (or 20.9%) more for the exact same standby service provided to Domtar for decades.<sup>3</sup> As a long-existing cogeneration customer, Domtar is markedly different than Kimberly-Clark. Kimberly-Clark's new cogeneration facility and the corresponding loss of firm load were not incorporated into Big Rivers most recent rate case. This raised the possibility of stranded generation or transmission costs. But Big Rivers will not incur any incremental costs to continue providing standby service to Domtar, nor will it be exposed to any stranded generation or transmission costs.

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<sup>2</sup> "Standby Service" refers to both Backup and Maintenance service as defined in the Pilot LICSS tariff.

<sup>3</sup> Attachment 2 (Rate Increase Workpapers).

The \$3.4 million (20.9%) rate increase to Domtar results from the mechanics of the Pilot LICSS tariff rate, which would fundamentally reverse Domtar's current standby service rate structure, particularly with respect to energy charges. Currently, Domtar first designates up to 35 MW of load as firm which is priced at cost-based tariff rates, and then its additional energy requirements are priced at market. Under LICSS, Domtar would pay for up to 52 MW of standby service at the "*higher of*" cost or market energy pricing, and then any additional energy would be priced at cost-based tariff rates.

The federal/state PURPA regulations are intended to promote QFs and require utilities to provide cost-based standby service and prohibit utilities from profiting from such service. Immediately moving to the Pilot LICSS would increase Domtar's rates by 20.9% outside of a rate case and without evidence as to why Big Rivers' cost of providing the same standby service it has provided for decades increased by \$3.4 million annually beginning April 1, 2023.

Therefore, Domtar respectfully petitions the Commission for an Order directing that its current standby service rate will remain in effect until a permanent standby service rate is established. The Commission has already ordered Big Rivers to propose a permanent standby rate by September 2023. Domtar simply asks that the Commission maintain the status quo until that permanent rate is established.

In support of its request, Complainant states as follows:

### **COMMISSION JURISDICTION**

1. The Kentucky Public Service Commission has jurisdiction and venue to hear this complaint under KRS 278.260, KRS 278.270, KRS 278.040, KRS 278.030 and 807 KAR 5:001, Section 20.

## PARTIES

2. Complainant Domtar is a Delaware limited liability company. Domtar's corporate office address is as follows:

234 Kingsley Park Drive  
Fort Mill, SC 29715

3. Counsel for Complainant is:

Michael L. Kurtz, Esq.  
Jody Kyler Cohn, Esq.  
Boehm, Kurtz & Lowry  
36 East Seventh Street, Suite 1510  
Cincinnati, Ohio 45202  
Ph: 513.421.2255; Fax: 513.421.2764  
[mkurtz@BKLawfirm.com](mailto:mkurtz@BKLawfirm.com)  
[jkylercohn@BKLawfirm.com](mailto:jkylercohn@BKLawfirm.com)

4. Defendant Big Rivers Electric Corporation is a rural electric cooperative corporation organized pursuant to KRS Chapter 279 and subject to the jurisdiction of the Public Service Commission. Big Rivers' office address is as follows:

201 Third Street  
P.O. Box 24  
Henderson, KY 42419-0024

Counsel for Defendant Big Rivers is:

Tyson Kamuf  
Senthia Santana  
Big Rivers Electric Corporation  
201 Third Street  
P.O. Box 24  
Henderson, KY 42419-0024

5. Defendant Kenergy Corp. is a non-profit rural electric distribution cooperative organized under KRS Chapter 279. Kenergy is subject to the jurisdiction of the Public Service Commission. Kenergy's office address is as follows:

6402 Old Corydon Rd  
P.O. Box 18  
Henderson, KY 42419

Counsel for Defendant Kenergy Corp. is:

J. Christopher Hopgood  
DORSEY, GRAY, NORMENT & HOPGOOD  
318 Second Street  
Henderson, KY 42420

## **BACKGROUND**

### ***Domtar's Long-Standing Electric Rates For Standby Service***

6. Domtar owns an integrated pulp and paper mill that produces copy paper in Hawesville, Kentucky. The mill opened in 1967 and became part of Domtar forty years later. The Hawesville mill supports approximately 450 local jobs and has an estimated regional economic impact of nearly \$1.2 billion.<sup>4</sup>
7. Domtar's Hawesville facility competes against other paper companies and against other Domtar mills for capital. The cost of electricity is a major component in the cost of operating the Hawesville facility and is a key factor in the decisions of Domtar management with respect to the facility.
8. The copy paper produced at Domtar's Hawesville facility is a declining industry as more business is conducted electronically. Data from the American Forest and Paper Association shows that the paper industry closed 9,538,000 tons of annual production over the last nine years because of declining paper demand (an average of one Hawesville-sized mill every seven months).<sup>5</sup> As paper demand continues to decline, the costliest, least efficient mills will be next. The inability to compete could mean closure of the Hawesville facility or the mill may be starved of capital resources that might allow it to transition to manufacturing products that are not in market decline.

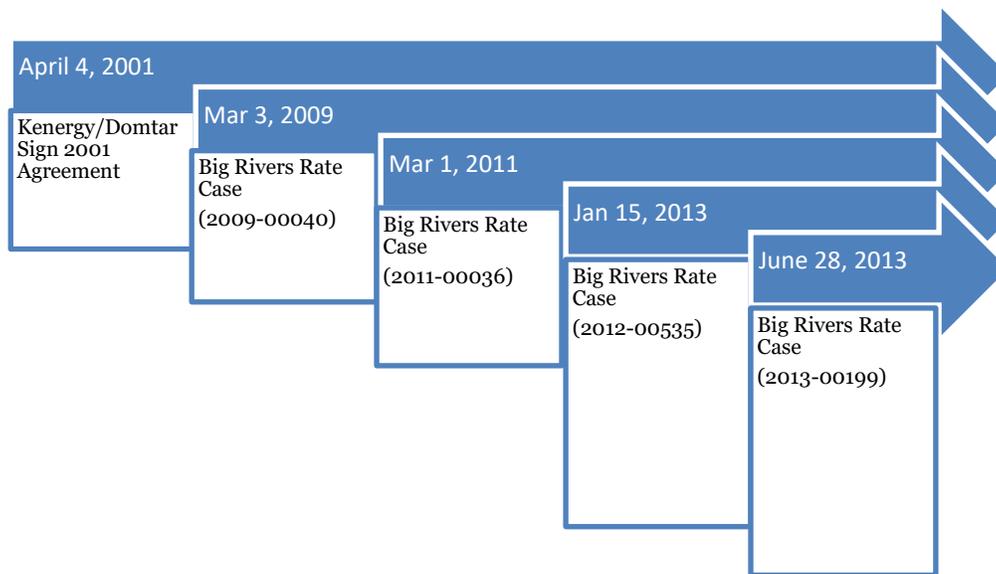
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<sup>4</sup> Attachment 2 (Hawesville Mill Fact Sheet).

<sup>5</sup> Attachment 3 (Mill Closure Data).

9. Domtar is a retail member-customer of Kenergy.
10. In 2001, Domtar's Hawesville mill (formerly owned by Willamette Industries) constructed an onsite QF cogeneration facility, which Domtar still operates today. Domtar's QF cogeneration facility consists of boilers fueled by tree bark/sawdust that the mill cannot process as well as "*black liquor*" byproduct compounds recycled from wood cooking. This wood waste is a renewable fuel resource. Domtar's boilers produce steam that is used in the papermaking process and to generate renewable electricity. Hawesville's QF cogeneration system received a Combined Heat and Power Energy Star award from the U.S. Environmental Protection Agency and U.S. Department of Energy in 2005.
11. Domtar's cogeneration facility constitutes a "*Qualifying Facility*" under PURPA.
12. Since April 4, 2001, Domtar's Hawesville mill has operated under a Commission-approved contract with Kenergy Corp. for standby service associated with its QF cogeneration facility, and for other ancillary services (the "2001 Agreement").
13. Under the 2001 Agreement, the Hawesville mill nominated the level of its firm demand within a designated MW range (25-40 MW) and then purchased Backup Power service to cover scheduled or unscheduled outages at the QF cogeneration facility. Backup Power was priced at a market-indexed rate, plus an adder to cover Big Rivers' administrative costs.
14. On February 9, 2007, Domtar was substituted for Willamette in the 2001 Agreement.
15. On December 1, 2020, Big Rivers transferred functional control of its transmission system to the Midwest Independent Transmission System Operator, Inc. (now Midcontinent Independent System Operator, Inc., or "MISO").

16. Shortly thereafter, on March 31, 2011, Big Rivers and Domtar negotiated an amended retail electric service agreement, which became effective after Commission approval on April 1, 2011 and remains effective today (the “2011 Agreement”).
17. Like the 2001 Agreement, the 2011 Agreement allows Domtar to nominate the level of its firm demand within a designated MW range (now 15-35 MW) and to purchase Backup Power to cover scheduled or unscheduled outages at its QF cogeneration facility. Under the 2011 Agreement, Backup Power is provided from the MISO market plus an adder to cover Big Rivers’ administrative costs.
18. Because Domtar has taken service under contract rates for standby service since 2001, Big Rivers has been able to plan its electric system and establish its revenue requirement incorporating Domtar’s QF cogeneration facility. Big Rivers has had at least four general rate cases since the 2001 Agreement, as shown below:



## ***Big Rivers' Standby Service Rate Proposal***

19. In 2021, in response to notice that another Kenergy retail member-customer, Kimberly-Clark, desired to start self-supplying a portion of its own power through a new 14 MW cogeneration facility, Big Rivers/Kenergy filed for approval of an LICSS tariff to provide a default rate for Supplemental, Maintenance, and Backup Power service for large industrial customers who install their own generation.<sup>6</sup>
20. Much of the capacity pricing in the LICSS tariff is based around the customer's amount of "*Self-Supply Capacity*," which is defined as capacity value assigned to the cogeneration facility by MISO. The capacity value assigned by MISO to Domtar's cogeneration facility is approximately 52 MW.
21. With respect to energy pricing, Big Rivers' LICSS tariff requires a standby service customer to pay Backup/Maintenance energy charges set at the "*higher of*" standard LIC energy rates or market rates plus "*all applicable adjustment clauses and adders*." Big Rivers interprets "*all applicable adjustment clauses and riders*" associated with wholesale MISO market energy purchases to include its cost-based retail riders, such as the Fuel Adjustment Clause ("FAC").
22. This LICSS energy rate structure is a direct reversal of Domtar's current standby service pricing structure. Currently, Domtar first designates up to 35 MW of load as firm and then its additional energy requirements are priced at market. Under LICSS, Domtar would pay for up to 52 MW of standby service at "*higher of*" cost or market energy pricing and then any additional energy would be priced at cost-based tariff rates.

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<sup>6</sup> Big Rivers Standby Service Tariff Filing, Case No. 2021-00289 (June 24, 2021); Order, Case No. 2021-00289 (March 3, 2022) at 21.

### ***The Commission-Approved Standby Service Pilot***

23. On March 3, 2022, the Commission approved Big Rivers' proposed LICSS tariff, but only on a Pilot basis until the Commission could comprehensively review and approve a permanent standby service rate.
24. In its Order, the Commission held that *“because there is not sufficient information in the record to determine the most-appropriate rates for both Maintenance Power Service and for Backup Power Service, the Commission finds that in the absence of a better alternative, BREC’s proposed LICSS rates for Maintenance and Backup Power Service are a fair, just and reasonable initial arrangement for providing Maintenance Power Service and Backup Power Service, until a better alternative is supported and developed.”*<sup>7</sup>
25. The Commission raised several issues with respect to the Pilot LICSS tariff, including the bundling of Maintenance and Backup Power,<sup>8</sup> the use of the Green Station conversion cost to set capacity value,<sup>9</sup> MISO’s movement toward a seasonal construct, and potential incremental savings to the system resulting from industrial customer cogeneration (e.g. transmission benefits).<sup>10</sup>
26. In light of these issues, the Commission directed Big Rivers to file new rates for service under the LICSS tariff along with cost support and testimony by September 1, 2023. The Commission explained that *“[w]ith the guidance provided in this Order, the interim time period will provide the parties time to continue discussions and BREC time to take into*

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<sup>7</sup> Order, Case No. 2021-00289 (March 3, 2022) at 16.

<sup>8</sup> Order, Case No. 2021-00289 (March 3, 2022) at 20.

<sup>9</sup> Order, Case No. 2021-00289 (March 3, 2022) at 21.

<sup>10</sup> Order, Case No. 2021-00289 (March 3, 2022) at 22-25.

*account possible changes at MISO and to design forward looking rates that are fair, just and reasonable.”*

### ***Kenergy’s Notice of Contract Termination***

27. Weeks after the Commission’s decision in Case No. 2021-00289, Kenergy sent letter notice to Domtar indicating that Kenergy was terminating the 2011 Agreement effective March 31, 2023.
28. Since the termination notice was sent, Big Rivers, Kenergy, and Domtar have had numerous discussions but have been unable to reach consensus on the terms of a new standby rate. In the absence of such an agreement, Domtar will be moved to the Pilot LICSS tariff rate, resulting in a rate increase of approximately \$3.4 million, or 20.9%, on April 1, 2023 for the same service it has received since 2001, outside of a rate case and without any cost-based justification supporting that rate increase.

### **BASIS FOR COMPLAINANT’S CLAIMS**

29. KRS 278.030(1) provides that Kentucky utilities *“may demand, collect and receive fair, just and reasonable rates for the services rendered or to be rendered by it to any person.”*
30. 18 C.F.R. 292.305 (part of the federal PURPA regulations) provides that rates for sales to Qualifying Facilities shall be just and reasonable and in the public interest, nondiscriminatory, and cost-based.
31. Similarly, Kentucky’s PURPA regulation, 807 KAR 5:054, at Section 6(5), provides that *“[r]ates for sale [to a qualifying facility] shall be just and reasonable, in the public interest and nondiscriminatory. Rates for sale which are based on accurate data and consistent system costing principles shall not be considered to discriminate against any qualifying facility to the extent that such rates apply to the utility's other customers with*

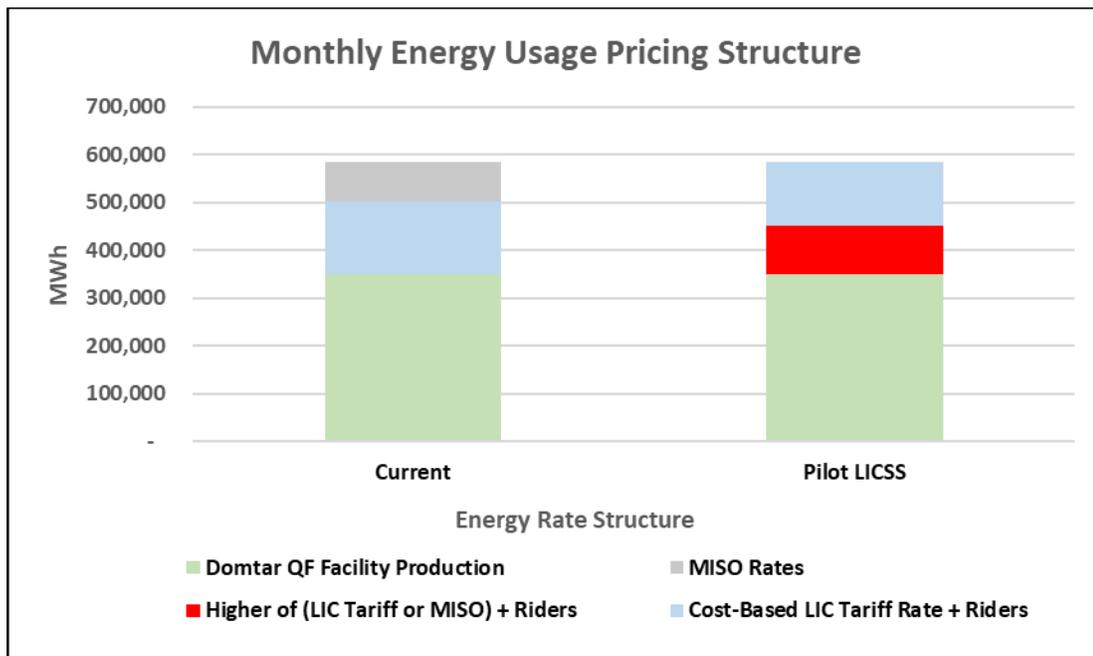
*similar load or cost-related characteristics. If a utility provides back-up or supplementary power to a qualifying facility, then costs associated with that capacity reservation are properly recoverable from the qualifying facility.”*

**I. Forcing Domtar Onto The Pilot LICSS Rate On April 1, 2023 Would Allow Big Rivers To Profit On QF Sales In Violation Of PURPA And KRS 278.030(1).**

32. The Pilot LICSS tariff rates have not been proven to be cost-based for sales of Backup and Maintenance power to a long-existing QF cogeneration customer such as Domtar. Subjecting Domtar to those rates on April 1, 2023 would therefore violate federal and state requirements regarding sales of power to QFs.
33. Under Domtar’s long-standing rate structure, Domtar pays cost-based LIC energy tariff rates for its entire amount of firm usage (presently 35 MW) and market energy rates on any incremental backup/maintenance usage. The level of that incremental backup/maintenance usage may fluctuate, and the market rates paid for that usage may be higher or lower than the cost-based LIC tariff rates. This structure fully compensates Big Rivers for the energy costs incurred to serve Domtar.
34. In contrast, the Pilot LICSS Backup/Maintenance energy rates would require Domtar to pay “*higher of*” cost or market rates up to the 52 MW “*Self-Supply*” threshold. Incremental energy usage above that threshold would be billed at cost-based LIC tariff rates. Under the Pilot LICSS tariff, Domtar’s Backup/Maintenance energy usage would always be priced at the highest possible rate, even if that rate is above Big Rivers’ costs.
35. Presently, Domtar’s energy is supplied as follows: 1) the renewable energy produced by its QF cogeneration facility is consumed first; 2) additional energy is provided by Big Rivers at its standard cost-based tariff rate for up to 35 MW of load designated by Domtar

as “firm;” and 3) any incremental energy above the “firm” amount is supplied through MISO market purchases.

36. If moved onto the Pilot LICSS rate, Domtar’s energy would be provided much differently: 1) the renewable energy produced from its QF cogeneration facility would still be consumed first; 2) Domtar would then pay for energy at the “higher of” a) Big Rivers’ cost-based tariff rate; or b) a MISO market-based rate for up to 52 MW (Domtar’s “Self-Supply Capacity” value in MISO) plus “all applicable adjustment clauses and riders;” and 3) any incremental energy above the 52 MW threshold would be priced at Big Rivers’ cost-based tariff rates. Big Rivers interprets “all applicable adjustment clauses and riders” associated with its wholesale MISO market purchases to include its cost-based retail riders, such as the FAC. This rate structure reversal is illustrated in the following chart:



37. Big Rivers’ LIC rates have been calculated for over twenty years in full knowledge of Domtar’s 52 MW QF cogeneration facility and its operations. Indeed, Big Rivers has had at least four general rate cases since Domtar began taking standby service.

38. Big Rivers also purchased renewable energy from Domtar's QF cogeneration facility for years and accounted for Domtar in its Integrated Resource Plan assessment of system energy requirements.<sup>11</sup>
39. The Pilot LICSS rate is aimed at addressing the risk of stranded costs caused by new cogeneration facilities. But that risk does not apply to long-existing cogeneration facilities like Domtar's whose operations have been factored into Big Rivers' ratemaking for decades.
40. Allowing Big Rivers to dramatically increase Domtar's rates by approximately \$3.4 million on April 1, 2023 by forcing Domtar onto the Pilot LICSS tariff would result in an unjustified rate increase to Big Rivers and rate shock to Domtar. The Commission has previously acted to avoid rate shock to customers and should do so again here.<sup>12</sup>
41. Additionally, the \$3.4 million unjustified rate increase would be approximately 26% over the \$13.13 million net margin authorized in Big Rivers' last rate case (Case No. 2013-00199).<sup>13</sup> Allowing Big Rivers to profit from sales to a QF cogeneration facility is contrary to the PURPA regulations requiring such sales to be cost-based.
42. The Commission has already expressed concern about several aspects of the Pilot LICSS rate structure as well as a desire to examine that structure more comprehensively in the very near future (with a case to be opened no later than September 1, 2023). The Commission should therefore allow Domtar to maintain the current status quo until the Commission has undergone its comprehensive review and has established a permanent structure.

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<sup>11</sup> Order, Case No. 2007-00126 (July 19, 2007); Big Rivers 2014 Integrated Resource Plan, Case No. 2014-00166 (May 15, 2014) at 43; Big Rivers 2020 Integrated Resource Plan, Case No. 2020-00299 (March 3, 2022) at 34.

<sup>12</sup> Order, Case No. 2020-00264 (December 30, 2020) at 14; Order, Case No. 2020-00141 (November 6, 2020) at 18.

<sup>13</sup> Order, Case No. 2013-00199 (April 25, 2014) at 32.

## **II. The Pilot LICSS Tariff Cannot Lawfully Be Read To Allow Big Rivers To Add FAC Charges To Market Energy Rates.**

43. Requiring Domtar to pay retail FAC charges on energy usage priced at wholesale market rates would be unfair, unjust, unreasonable, and discriminatory.
44. The Pilot LICSS Tariff includes language indicating that standby service customers are subject to “*all applicable adjustment clauses and riders.*” This language cannot reasonably be interpreted to include retail riders such as the FAC.
45. The monthly FAC reflects the totality of the utility’s coal, natural gas, and economy purchased power costs (less replacement costs related to forced outages) to serve retail load, compared to the amount of fuel costs included in base rates. The FAC can be either a charge or credit.
46. In contrast, wholesale energy from the MISO market is independent of the retail FAC. Wholesale energy prices reflect the locational marginal price across the entire MISO footprint (adjusted only for line losses and congestion).
47. No valid rationale supports adding retail FAC charges/credits to wholesale market energy procured for a standby service customer.

**REQUESTED RELIEF**

**WHEREFORE**, Complainant respectfully petitions the Commission for an Order maintaining the current standby pricing status quo until the Commission establishes a permanent standby service tariff. Complainant also asks that the Commission issue an expedited ruling in this matter on or before the March 31, 2023 expiration of its current standby service contract.

Respectfully submitted,

/s/ Michael L. Kurtz

Michael L. Kurtz, Esq.

Jody Kyler Cohn, Esq.

BOEHM, KURTZ & LOWRY

36 East Seventh Street, Suite 1510

Cincinnati, Ohio 45202

Ph: 513.421.2255; Fax: 513.421.2764

[Mkurtz@BKLawfirm.com](mailto:Mkurtz@BKLawfirm.com)

[Jkylercohn@BKLawfirm.com](mailto:Jkylercohn@BKLawfirm.com)

**COUNSEL FOR DOMTAR PAPER  
COMPANY, LLC**

January 11, 2023



# **ATTACHMENT 1**



# HAWESVILLE MILL

Hwy 1406, 58 Wescor Road, Hawesville, KY 42348



2022

## AT A GLANCE

Domtar's integrated pulp and paper mill in Hawesville, Kentucky, produces fine specialty paper. The mill opened in 1967 and became part of Domtar 40 years later. A distinctive focus for the mill is hardwood market pulp, but you'll see more than wood on the mill's property. Nearly one third of the mill's 2,000 acres is leased to farmers growing corn, hay and wheat.

## CERTIFICATIONS & AWARDS

- Forest Stewardship Council® (FSC®)
- Sustainable Forestry Initiative® (SFI®)
- Programme for the Endorsement of Forest Certification™ (PEFC™)

### THE BASICS

**1** 412,000  
Air Dry Metric Tonnes  
Annual Capacity

Fiber Line

**2** 596,000  
Short Tons  
Annual Paper  
Production Capacity

Paper  
Machines

### ENVIRONMENTAL & COMMUNITY INVESTMENT

- The Hawesville Mill's mile-long chip conveyer from the Ohio River to the facility helps eliminate the need for over a half million miles of truck traffic each year, reducing both noise and greenhouse gas emissions.
- The Hawesville Mill's support of STEM (Science, Technology, Engineering and Math) education goes back to 2007, when the facility partnered with the local technical college to allow local youth the opportunity to further their education and gain valuable life skills.
- Each year, the Hawesville Mill contributes about **\$72,000** in grassroots giving to the local community.

### ECONOMIC CONTRIBUTIONS

The Hawesville Mill supports approximately **450** local jobs.

Domtar's Hawesville Mill has an estimated regional economic impact of nearly **\$1.2 BILLION**



The Hawesville Mill is one of the largest employers in Hawesville, Kentucky.

**ATTACHMENT 2**  
**(PUBLIC VERSION)**

# Rate Impact of Canceling Domtar Standby Service Contract

Big Rivers Electric Corp

Summary Comparison of As Invoiced and Pro Forma Approaches

	2021	YTD Nov 2022	Total	Monthly Avg.	Annual Avg.
As Invoiced	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]
Pro Forma	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]
Delta	\$ 3,100,665 22.8%	\$ 3,490,830 19.5%	\$ 6,591,495 20.9%	\$ 286,587 20.9%	\$ 3,439,041 20.9%
Riders on Pro Forma Market	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]
Revised Pro Forma Delta	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]

## **ATTACHMENT 3**

2014-2021 Mill Data (Source: <https://www.afandpa.org/>)

Grade	Company and Location		Date	CY	Comments	Annual Capacity Added/(Removed)	Notes
Newsprint & Uncoated Mechanical	Great Northern Paper, East Millinocket, ME		Dec 2014	2014	Mill Closure. Idled Jan 2014.	-288,000	
Newsprint & Uncoated Mechanical	Resolute, Calhoun, TN		Sep 2017	2017	PM3 and PM5 Shui	-369,000	
Newsprint & Uncoated Mechanical	NORPAC, Longview, WA		2019, 2H	2019	PM1 Shift	Reduction	
Uncoated Mechanical	UPM (Madison Paper), Madison, ME		May 2016	2016	Mill Shut	-215,000	
Uncoated Mechanical	Nippon, Pt. Angeles, WA		Dec 2016	2016	PM2 Shut. Idled Dec 2014.	-61,000	
Uncoated Mechanical	Nippon, Pt. Angeles, WA		Dec 2016	2016	PM3 Shift	-102,000	
Uncoated Mechanical	Verso, Duluth, MN		Jan 2020	2020	PM Conversion	-90,000	
Uncoated Mechanical	Verso, Duluth, MN		Dec 2020	2020	Mill Shut. Idled Jul 2020	-180,000	
Uncoated Mechanical & Unbleached Packaging Paper	FutureMark, Manistique, MI		Oct 2015	2015	Mill Shut. Idled Mar 2015.	-133,000	Mill was restarted subsequently by new owners to make unbleached packaging paper
Coated Mechanical	Resolute, Catawba, SC		May 2014	2014	PM1 Shut. Idled Jun 2012.	-146,000	
Coated Mechanical	FutureMark, Alsip, IL		Sep 2014	2014	Mill Closure	-165,000	
Coated Mechanical & Specialty	Verso, Bucksport, ME		Dec 2014	2014	Mill Closure	-405,000	
Coated Mechanical	Verso, Jay, ME		Oct 2015	2015	PM2 Shut	-150,000	
Coated Mechanical	Resolute, Catawba, SC		Jun 2017	2017	PM2 Shut	-209,000	
Coated Papers	Verso, Jay, ME		Jul 2017	2017	PM3 Shut. Idled Jan 2017.	-200,000	
Coated Papers	ND Paper, Rumford, ME		End of 2020	2020	PM15 Conversion	-280,000	Coated paper grades made on PM15 transitioned to the newly rebuilt PM10 at the mill and the company's Biron mill. PM12 will produce uncoated freesheet besides packaging paper grades.
Coated Mechanical	UPM Blandin, Grand Rapids, MN		Dec 2017	2017	PM5 Shut	-128,000	
Coated Mechanical	ND Paper, Biron WI		2019, 4Q	2019	PM25 Conversion	-114,000	
Coated Mechanical	New-Indy, Catawba, SC		May 2020	2020	Mill Conversion	-345,000	
Coated Mechanical	Pactiv Evergreen, Pine Bluff, AR		Oct 2021	2021	PM1 Shut	-190,000	
Coated Mechanical	ND Paper, Biron, WI		End of 2022	2022	PM26 Conversion	-260,000	
Coated Free Sheet	West Linn Paper, West Linn, OR		Oct 2017	2017	Mill Shut	-270,000	
Coated Free Sheet	Verso, Luke, MD		May 2019	2019	Mill Shut	-450,000	
Coated Free Sheet	Verso, Wisconsin Rapids, WI		Feb 2021	2021	PM14 Shut. Idled Jul 2020.	-185,000	
Coated & Uncoated Free Sheet	Verso, Wickliffe, KY		Apr 2016	2016	Mill Shut. Idled Nov 2015	-285,000	
Coated & Uncoated Free Sheet	Midwest Paper Group, Combined Locks, WI		2018	2018	Shift	Reduction	
Coated & Uncoated Free Sheet	Willamette Falls Paper, West Linn, OR		Aug 2019	2019	Restart of Shut Mill	260,000	
Coated Bleached Bristols & Boxboard	International Paper, Riegelwood, NC		Dec 2015, Jan 2016	2015	Mill Conversion	-350,000	
Uncoated Free Sheet, Coated Free Sheet & Bleached Kraft Paper	International Paper, Courtland, AL		Nov 2013 & Feb 2014	2013	Mill Closure	-950,000	
Uncoated Free Sheet & Bleached Packaging Paper	Gorham Paper & Tissue, Berlin, NH		Dec 2015	2015	2 PMs Shut. PMs idled Jan 2014.	Reduction	
Uncoated Free Sheet	Whiting Paper, Menasha, WI		Mar 2016	2016	Mill Shut	Reduction	
Uncoated Free Sheet	Domtar, Ashdown, AR	1	Mar 2016	2016	PM64 Conversion	-364,000	
Uncoated Free Sheet	Neenah, Appleton, WI		2016, 4Q	2016	PM4 Conversion	-22,000	
Uncoated Free Sheet	Turners Falls Paper, Turners Falls, MA		Aug 2017	2017	Mill Shut	-9,000	
Uncoated Free Sheet	Glatfelter, Chillicothe, OH		Sep 2017	2017	PM24 Shut	-80,000	
Uncoated Free Sheet	Flambeau Rivers Paper, Park Falls, WI		Jan 2018	2018	PM3 Shut	-78,000	
Uncoated Free Sheet	Georgia-Pacific, Camas, WA		May 2018	2018	PM20 Shut	-237,000	
Uncoated Free Sheet	Georgia-Pacific, Port Hudson, LA		Mar 2019	2019	2 PMs Shut	-630,000	
Uncoated Free Sheet	Neenah, Appleton, WI		2019, 3Q	2019	PM Shut	-20,000	
Uncoated Free Sheet	Domtar, Ashdown, AR	1	Oct 2019	2019	PM63 Shut	-170,000	As a result of the closure of the paper machine, the mill will produce an incremental 77,000 tons of softwood and fluff pulp
Uncoated Free Sheet	Domtar, Port Huron, MI	1	Nov 2019	2019	PM6 Shut	-34,000	
Uncoated Free Sheet	Phoenix Paper, Wickliffe, KY		2019, 4Q	2019	Shift	Addition	Mill restarted in May 2019 producing market pulp. It shifted to uncoated free sheet in the fourth quarter.
Uncoated Free Sheet	International Paper, Selma, AL		2020, 1Q	2020	PM15 Conversion	-235,000	
Uncoated Free Sheet	Domtar, Ashdown, AR	1	Aug 2020	2020	PM62 Shut. Idled Apr 2020.	-200,000	Shut and fiberline conversion to SW resulted in increase capacity of SW paper grade and fluff pulp capacity
Uncoated Free Sheet	Domtar, Kingsport, TN	1	Aug 2020	2020	Mill Conversion. Idled Apr 2020	-426,000	
Uncoated Free Sheet	PCA, Jackson, AL		Nov 2020	2020	PM3 Shift & Conversion	-365,000	
Uncoated Free Sheet	Appvion, Roaring Spring, PA		Mar 2021	2021	Mill Shut	-150,000	
Uncoated Free Sheet	Midwest Paper, Combined Locks, WI		Mar 2021	2021	PM6 Shift	-65,000	
Uncoated Free Sheet	PCA, Jackson, AL		2021, 3Q	2021	PM1 Shift	-90,000	Machine retains the capability to produce uncoated free sheet.
Uncoated Free Sheet	Park Falls Paper, Park Falls, WI		Nov 2021	2021	Mill Shut. Idled Mar 2021	-68,000	
Uncoated Free Sheet	Domtar, Ashdown, AR	1	Jan 2022	2022	PM62 Restart. Shut Aug 2020.	185,000	Restart resulted in reduction of Bleached SW market paper grade pulp
Special Industrial & Uncoated Free Sheet	Packaging Corp. of America, Wallula, WA		May 2018	2018	PM3 Conversion	-200,000	
Uncoated Free Sheet & Bleached Packaging Paper	Domtar, Port Huron, MI	1	2021, 1Q	2021	Mill Shut	-95,000	
Coated Free Sheet and Consumer Packaging Grades	Sappi, Skowhegan, ME		2018, 2Q	2018	PM1 Rebuild		Machine will have capability to produce both coated free sheet and consumer packaging grades. Three-year ramp-up packaging grades to be 385,000 tons.

2013	950000
2014	1004000
2015	633000
2016	1049000
2017	1265000
2018	515000
2019	1158000
2020	2121000
2021	843000
<b>Total</b>	<b>9,538,000</b>
	1,104,000 tons
Domtar	or 11.6%
Average	1,059,778
Hawesville	596,000
Months	7