Big Rivers Electric Corporation



710 West 2nd Street Owensboro, KY 42301 www.bigrivers.com

March 18, 2025

Via Electronic Mail Delivery to <u>rodney.andrews@uky.edu</u> and USPS Priority Mail Express

Rodney Andrews University of Kentucky CAER 2540 Research Park Drive Lexington, Kentucky 40511

RE: Notice of Intent to Retire the Robert A. Reid Combustion Turbine

Dear EPIC Executive Director:

Due to a catastrophic failure of our natural gas-fired combustion turbine generating unit known as the Robert A. Reid Combustion Turbine ("Reid CT"), Big Rivers Electric Corporation ("Big Rivers") must retire the unit, and by this letter, we give notice of our intent to retire the Reid CT.

The Reid CT is located in Webster County, Kentucky. It was commercialized in 1976 and has a nameplate capacity of 65 MW. As fully explained below, the Reid CT ceased operating in 2024 as a result of the catastrophic failure. Due to the age of the unit, the uneconomic extensive repairs that would be required to make the Reid CT again operable, as well as other considerations, Big Rivers has no reasonable alternative but to retire the unit.

KRS 278.264 requires that prior to retiring an electric generating unit, a utility must apply to the Kentucky Public Service Commission (the "Commission" or "PSC") for an order approving the retirement. Section 7(i) of KRS 164.2807 states:

No retirement application to the Public Service Commission under KRS 278.264 shall be deemed administratively complete unless it includes either the executive committee's report submitted pursuant to this section or evidence that more than one hundred eighty



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(180) days have passed since notice was submitted to the commission as required in paragraph (b) of this subsection and no executive committee report or determination has been provided to the utility.¹

KRS 278.262 defines "retirement" or "retired" as "the closure or the complete and permanent cessation of operations at an electric generating unit." Big Rivers did not choose to cease operations of the Reid CT and does not consider this event a typical "retirement" within the meaning intended by the General Assembly to invoke KRS 278.262, KRS 278.264,² or KRS 164.2807. Nevertheless, the statutory definition does not expressly exclude a unit's involuntary retirement. As such, Big Rivers submits this notice to EPIC and respectfully requests that the Executive Committee issue a final report so that Big Rivers can move forward with the retirement process.

Additionally, Big Rivers' application to the PSC will include a request for a regulatory asset for the retirement of the Reid CT to mitigate the financial impacts of the retirement, but before Big Rivers can establish a regulatory asset, Big Rivers must obtain the PSC's approval and must show our primary lender, the U.S. Department of Agriculture's Rural Utilities Service ("RUS"), that the unit has officially been retired.

BACKGROUND

Big Rivers is a generation and transmission cooperative incorporated June 14, 1961, with our headquarters in Owensboro, Kentucky. Big Rivers owns, operates and maintains electric generation and transmission facilities, and we purchase, transmit, and sell electricity at wholesale. Our principal purpose is to satisfy the wholesale electricity requirements of, and provide shared services to, our three distribution cooperative Member-Owners, who are Jackson Purchase Energy Corporation, Kenergy Corp. and Meade County Rural Electric Cooperative Corporation (collectively, the "Members"). The Members, in turn provide retail electric service to approximately 121,000 consumer-members located in all or parts of 22 western Kentucky counties: Ballard, Breckenridge, Caldwell, Carlisle, Crittenden, Daviess, Graves, Grayson, Hancock, Hardin Henderson, Hopkins,

¹ Section 7(h) of KRS 164.2807 requires the executive committee's written report and any dissenting statements provided to the PSC to be included in the application to the PSC under KRS 278.264.

² KRS 278.264(1) requires a utility under the jurisdiction of the PSC to obtain **prior** approval from the PSC before retiring an electric generating unit.

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Livingston, Lyon, Marshall, McCracken, McLean, Meade, Muhlenberg, Ohio, Union, and Webster.

In addition to the Reid CT, Big Rivers owns and operates the D.B. Wilson ("Wilson") Station and the Robert D. Green ("Green") Station. Wilson Station consists of a single, 417 MW coal-fired generating unit near Centertown, Kentucky. Green Station includes two units (231 MW and 223 MW) that were converted from coal-fired units to burn natural gas in 2022. The Green Station and the Reid CT are located at Big Rivers' Sebree Station near Sebree, Webster County, Kentucky.

Big Rivers' generation resources total 1,274 MW, including rights to 178 MW of contracted hydro capacity from the Southeastern Power Administration ("SEPA") and 160 MW of contracted solar capacity from the Unbridled Solar, LLC facility near Big Rivers' Sebree Station.³

Big Rivers also owns, operates and maintains a network of 1,353 miles of transmission lines and 29 substations to provide transmission power to its Members and third party entities served under our Open Access Transmission Tariff.

Big Rivers became a fully-integrated member of the Midcontinent Independent System Operator ("MISO") on December 1, 2010, and participates in MISO's real-time and day-ahead energy and capacity markets. While much of Big Rivers' generating capacity is dedicated to Big Rivers' native load, it has capitalized on its available resources both by its participation in MISO and through bilateral power sales contracts.

Big Rivers' Reid CT went into service in March of 1976, as a fuel oil unit. It was retrofitted to a dual-fueled unit, to burn natural gas as well as fuel oil, in 2001 for SO₂ and NO_X control. The Reid CT was converted to primarily natural gas fired in July of 2010. The Reid CT has been utilized as a peaking unit.

In FERC Case Number ER22-495-000, filed by MISO in November 2021 and accepted by FERC in September 2022, MISO introduced seasonal capacity requirements to the annual MISO capacity auction (the Planning Resource Auction or "PRA") to account for the unique risk profile of each season. While the Reid CT's nameplate capacity is 65 MW, the unit's MISO seasonal capacity accreditation is 44.5 MW for Spring, 65.6 MW for Fall, 59.4 MW for Winter, and 41.8 MW for Summer.

³ In PSC Case No. 2022-00296, Big Rivers sought and received PSC approval of an amendment to a solar purchase power agreement, the "Unbridled PPA," that was originally approved in PSC Case No. 2020-00183. Unbridled Solar's 160 MW facility located in Henderson and Webster Counties, began its operations in the first quarter of 2025.

EXPLANATION OF THE REASON FOR RETIREMENT

Big Rivers' Integrated Resource Plans ("IRPs"), filed triennially with the PSC, have explained that "the expected Retirement Date of the Reid CT will depend greatly on the number of operating hours experienced over the next several years." Due in part to its comparatively low operations and maintenance ("O&M") expenses and despite its age, Big Rivers did not intend to retire the unit. However, in 2024, the Reid CT experienced several significant Forced Outages.

GE Vernova, the unit's Original Equipment Manufacturer ("OEM"), was brought in multiple times in 2024. Ultimately, during the most recent Forced Outage, GE opened the unit for a major inspection and found that a sheared shaft was causing a lube oil reservoir to over-pressurize, resulting in gear box pressurization and oil blowing past labyrinth seals (see Photo No. 3).

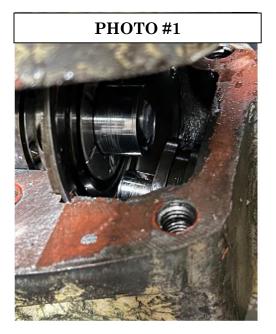


Photo #1 shows the sheared shaft in the atomizing air compressor, which caused a Forced Outage. The compressor was removed and the piping system was refabricated to make the unit operable. The lead time for the compressor was 24 weeks. Photo #2 shows the refabrication of the piping.



PHOTO #3



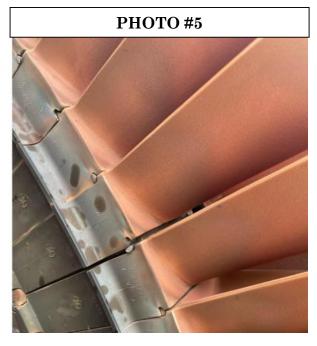
Photo #3 shows oil coming from the labyrinth seals due to air over-pressurizing the system, which was caused by the sheared shaft shown in the above image.

The inspections' major discoveries included:

- 1. 1st, 2nd, and 3rd stage buckets need replacement;
- 2. 2nd stage shrouds need replacement due to rubbing;
- 3. Oil and air seals for T2 and T3 damaged and out of specifications;
- 4. T3 Babbit damage;
- 5. Thermocouple wires melted;
- 6. Cracked welds in diffuser struts;
- 7. Cracked welds throughout the exhaust; and
- 8. Rotor unable to return to service (see discussion below).

The following photos illustrate the discoveries.





The above photos show turbine blades with excessive clearance. The blades are designed to lock together with centrifugal force. However, they cannot lock together due to the damage. The turbine blades require replacement.

Photo #6 shows the damage to an oil deflector that prevents sealing oil inside the unit.



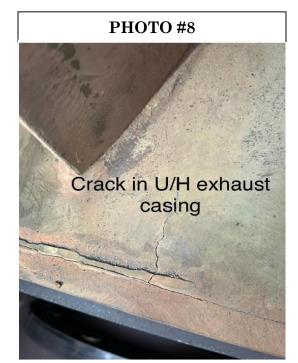


PHOTO #7



Photo #8 is one example of severe cracks on the exhaust due to age and heat cycles.

Photo #7 shows one of the damaged air seals in need of replacement. The damage allows air into the oil system causing over pressurization.



As supported by the GE inspection report attached here to as <u>Exhibit A</u>, Big Rivers evaluated multiple repair options. The total cost of a rotor replacement alone was estimated at \$15 million with an 18-month lead time. Based on the unit's number of starts, GE recommended not returning the rotor to service. The Reid CT currently has experienced 4,417 Actual Starts in its operating history. However, the Factored Starts, which take into account different operating conditions that may significantly impact the stress on the turbine components such as start type

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(hot, warm, cold), are around 5,750 starts.⁴ There is a rotor life extension option; however, GE would not recommend that option due to other equipment failures outside of the rotor. Big Rivers also considered a "Flange to Flange" upgrade of the unit. However, the upgrade would cost around \$26 million for equipment only. The Reid CT's current Net Book Value is around \$5 million. Due to the age of the generator, such an investment would be risky. The Generator Stator is still original (1976). Based on the age alone, GE would recommend to rewind, which is a costly process. The rewind and turbine repairs would exceed \$20 million. Also, a significant amount of auxiliary equipment is still original.

As depicted below in Table No.1, the Reid CT's total run number hours increased significantly in 2024, due in part to the decrease in natural gas prices. The Reid CT has exceeded its NO_X emission limits based on the 2024 run time and will now be required to install Continuous Emissions Monitoring System ("CEMS") for NO_X and CO₂ monitoring or perform periodic stack testing per the methodology outlined in 40 CFR Part 75 Appendix E.⁵ If Big Rivers chose the "Flange to Flange" upgrade option, in addition to the above referenced significant cost of construction, Big Rivers would be required to enter in a New Source Review for air permitting based upon the generation change to the unit.

$\frac{\text{MISO REQUIREMENT FOR NOTICE OF GENERATOR SUSPENSION OR}}{\text{RETIREMENT}}$

Under the MISO Tariff, market participants that have decided to retire or suspend a generation resource must submit a notice (Attachment Y Notice). A copy of the completed Attachment Y Notice that Big Rivers submitted to MISO on January 22, 2025, for the suspension of the Reid CT is attached hereto as Exhibit B. On February 3, Big Rivers received notification via mail that MISO had received the suspension notification and that Reid CT would be suspended from the MISO market effective March 1, 2025. A copy of MISO's letter dated January 30, 2025, is attached hereto as Exhibit C. The Reid CT may remain in a Suspension Status for thirty-six (36) cumulative months during any five (5) year period. Therefore, MISO requires that prior to March 1, 2028, Big Rivers will either officially retire the unit or make the unit available to the market again.

⁴ See GE Power's GER3620P Heavy Duty Gas Turbine Operating Maintenance Considerations, *available at* https://id.dcsmodule.com/is/htmledit/kindeditor/attached/20210911/20210911093317 93385.pdf .

 $^{^5}$ https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-75/appendix-Appendix%20E%20to%20Part%2075

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EPIC FORM 1

A completed EPIC Form 1- Notice of Proposed Retirement of Fossil Fuel-Fired Electric Generating Plant is enclosed.

SYSTEM IMPACT STATEMENT

MISO's January 30, 2025, letter acknowledged that the unit was inoperable due to a Forced Outage and confirmed that "as the Reid CT is not an operational generation resource, the System Support Resource ("SSR") provisions of the MISO Tariff do not apply." This letter gives Big Rivers the right to suspend the unit for up to three years, at which point we would have to officially retire the unit or return it to service. Since retirement requires the EPIC's final report and the PSC's approval, we cannot file for retirement with MISO until the report is issued and PSC approval is obtained. But we have had multiple discussions with MISO that the path that we are heading down is retirement, so they are aware of our final plans. At no point during our conversations with MISO were any reliability concerns brought up relating to the retirement of this unit. This unit has been inoperable for almost a year, and it has not had any major system impacts. Most likely, Big Rivers will keep the unit in MISO"s Suspension status for the full three years, allowing us to retain the MISO Generation Interconnection rights associated with the Reid CT. This would help to lower interconnection costs should Big Rivers build at that site.

A. Unit Dispatch History

Attached hereto as <u>Exhibit D</u> is an Excel file with worksheets showing the Reid CT's hourly Real Time Meter Data from June 1, 2015 through December 31, 2024 and MISO Commitment Reasons from May 1, 2019 through December 31, 2024. Below are tables summarizing the data.

Unit operating conditions have changed as of the last two years, with the unit being called on more frequently. As Table 2 below shows, MISO called upon the Reid CT in 2023 and 2024 mostly for economic reasons, due in part to a decrease in natural gas prices.

TABLE #1			
Real-Time Meter Data			
June 1, 2015-December 31, 2024			
Numbers of			

Numbers of			
Hou	Hours		
Online/	Online/Year		
2015	47		
2016	240		
2017	115		
2018	143		
2019	234		
2020	114		
2021	205		
2022	45		
2023	335		
2024	703		
Total:	2181		

MWhs/Year			
2015	944.00		
2016	3,931.61		
2017	1,340.69		
2018	2,317.39		
2019	4,176.35		
2020	1,460.74		
2021	2,840.48		
2022	575.95		
2023	6,154.76		
2024	19,164.84		
Total:	42,906.81		

TABLE #2 MISO Commitment Reasons						
	May 1, 2019 - December 31, 2024					
Percentage/Year						
	Capacity	Must Run	T-xx	VLR	SRPB	
2019	53.33%	2.42%	21.21%	23.03%	0.00%	
2020	75.23%	13.76%	11.01%	0.00%	0.00%	
2021	61.50%	9.09%	13.37%	16.04%	0.00%	
2022	80.00%	17.50%	2.50%	0.00%	0.00%	
2023	96.92%	1.54%	1.54%	0.00%	0.00%	
2024	95.90%	3.70%	0.00%	0.13%	0.26%	
Total	85.79%	4.80%	4.93%	4.36%	0.13%	

Capacity = The unit ran for economic reasons

Must Run = Most likely ran for testing related reasons

T-xx = Transmission/ Reliability Event

VLR = Voltage Reliability Event

SRPB = South Regional Power Balancing Event. MISO requires the unit to run to help balance the two footprints.

B. <u>Compliance Plan</u>

Per MISO market rules, Big Rivers obtained replacement capacity for the Reid CT for the Spring 2025 capacity auction, satisfying our capacity obligation for this period.

MISO annually determines seasonal minimum Planning Reserve Margin ("PRM") requirements that would result in the MISO system experiencing a less than one-day loss-of-load event ("LOLE") every 10 years, per the MISO Tariff.⁶ MISO's PRM requirement for 2025, which includes transmission losses, is 10.6%.

Big Rivers' projections for our capacity position fluctuate with new information and changes from MISO related to its capacity accreditation for generating units and other processes. The loss of the Reid CT in current projections results in seasonal capacity deficits for the 2026-2027 MISO Planning Year. Big Rivers will make bilateral capacity purchases or participate in the annual MISO capacity auction to alleviate any shortages and satisfy the MISO PRM requirements. Beginning in Planning Year 2027-28, Big Rivers is projected to have excess capacity as a result of the expiration of an off-system power sales agreement.

Big Rivers' plan for compliance with KRS 278.262 and KRS 278.264 (collectively '2023 Senate Bill 4' requirements) mirrors our plan to continue compliance with KRS 278.030(2), which requires every utility to furnish adequate, efficient and reasonable service to its customers. The base case from Big Rivers' 2023 Integrated Resource Plan included the addition of a 635 MW natural gas combined cycle generator, which would be located near Big Rivers' existing Sebree plant location. If this facility were to get built, it would likely be completed sometime between 2029 and 2032. However, since the conclusion of the 2023 IRP proceeding, Big Rivers is taking a fresh look at our next resource, and Big Rivers' analysis to determine our future resource needs is underway. Big Rivers plans to file its next IRP and any required requests for certificates of public convenience and necessity with the PSC in 2026.

Big Rivers is located in MISO Local Resource Zone ("LRZ") 6, and the seasonal LOLE targets determined in the Planning Year 2025-2026 LOLE study are shown

⁶ To determine the LOLE targets for each season that will be used to calculate the PRM and Local Reliability Requirements ("LRR"), MISO followed the process first solving the LOLE model to an annual value of 0.1 and then checking the seasonal distribution. If a season had an LOLE value of at least 0.01, then its target would be set to that LOLE. If a season had less than 0.01 LOLE, additional analysis was performed until the target of 0.01 LOLE was met.

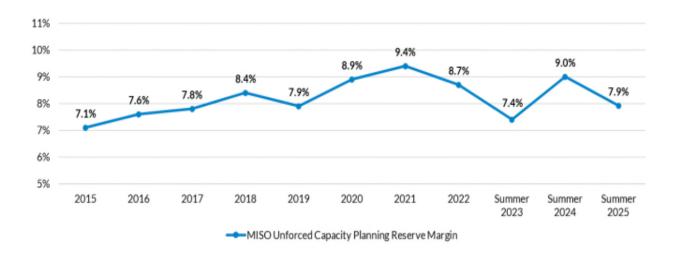
in Table 4, below, which is a copy of Table 3-11 from the MISO 2025–2026 Loss of Load Expectation Study Report.⁷

Region	Summer	Fall	Winter	Spring
MISO-wide	0.10	0.01	0.01	0.01
LRZ 1	0.099	0.01	0.01	0.01
LRZ 2	0.091	0.01	0.01	0.01
LRZ3	0.098	0.01	0.01	0.01
LRZ 4	0.01	0.01	0.10	0.01
LRZ 5	0.01	0.01	0.094	0.01
LRZ 6	0.091	0.01	0.01	0.01
LRZ7	0.099	0.01	0.01	0.01
LRZ 8	0.01	0.01	0.093	0.01
LRZ 9	0.026	0.047	0.02	0.01
LRZ 10	0.069	0.015	0.01	0.012

Table 3-11: Planning Year 2025-2026 Seasonal LOLE Distribution

MISO's Planning Reserve Margin requirement changes over time, and its history is shown in Chart 2 below, which a copy of Figure 1-1 from the MISO 2025–2026 Loss of Load Expectation Study Report.

Chart 2 Comparison of PRM Targets across 10 years



 $^{^7}$ MISO's 2025-2026 LOLE Report is available at: <u>https://cdn.misoenergy.org/PY%202025-2026%20LOLE%20Study%20Report662942.pdf</u> .

C. <u>EEA Declaration History</u>

Attached hereto as <u>Exhibit E</u> is a list of "Maximum Generation Emergency Declarations," EEA 1 or higher events from MISO that included Big Rivers from 2010-2024, including event details.

ECONOMIC IMPACT STATEMENT

A. Direct and Indirect Employment Impacts

There will be no direct employment impact. As discussed above, the Reid CT is located at the Sebree Station with the Green plant. All operation and maintenance of the Reid CT was performed by Green plant employees. There are no employees assigned directly to the Reid CT. As discussed below in Subsection C, Big Rivers does not anticipate any indirect employment impact as a result of the Reid CT retirement.

B. Supply Chain Impacts

Big Rivers does not have any contracted fuel or reagents for the Reid CT. The only fuel that was supplied to that unit was natural gas. When the unit was called on from MISO to run, Big Rivers would purchase natural gas on the market for that requested run. Big Rivers did not have any firm gas or contracted fuel of any sort for that unit. There should not be any supply chain impacts.

C. Other Local Economic Impacts

As described above, the Sebree Station, where the Reid CT is located, is not being closed. The maintenance work contracted to local third parties, such as grounds maintenance, security, environmental sampling, and supply vendors will still be needed. Big Rivers will no longer incur the cost of operations and maintenance directly related to the Reid CT, but we do not contemplate any local economic impact from the reduced spending.

CONCLUSION

We thank EPIC and its Executive Committee and staff and look forward to working with you on this new process.

Please feel free to contact me if you have any questions related to this submission.

Sincerely,

/s/ Tyson Kamuf

Tyson Kamuf General Counsel

Phone: 270-844-6185

E-Mail: tyson.kamuf@bigrivers.com

Enclosures (2): EPIC Form 1

The hard copy version includes a USB flash drive containing

Exhibit D.

EPIC Form 1 - Notice of Proposed Retirement of Fossil Fuel-Fired Electric Generating Plant

Version 2025.01.29

Submitting Entity's Information:

In accordance with KRS 164.2807 Section 1, subsection (7)(b),	
Big Rivers Electric Corporation ("Big Rivers")	("Submitting Entity")
gives Notice to the Commonwealth of Kentucky Energy Planning Commission of its intent to retire an existing coal, oil, or natural g generating plant or unit.	•
Submitting Entity's percent ownership stake in generating plant/u	nit: [100]%
Submitting Entity's Business Address:	
Mailing address: P.O. Box 20015, Owensboro, Kentucky 4230 Street address: 710 W. Second Street, Owensboro, Kentucky	

Submitting Entity's Ownership Information:

Big Rivers is a rural electric cooperative corporation organized pursuant to KRS Chapter 279. Its three Member–Owner distribution electric cooperatives include Jackson Purchase Energy Corporation, Kenergy Corp., and Meade County Rural Electric Cooperative Corporation.

Submitting Entity's Jurisdiction of Organization/Incorporation:

Big Rivers was incorporated in the Commonwealth of Kentucky on June 14, 1961.

	(-
(Person 1)	(Person 2)
Name: Tyson Kamuf	Name: Don Gulley
Title: General Counsel	Title: President and CEO
Address: 710 W. Second Street Owensboro, Kentucky 42301	Address: 710 W. Second Street Owensboro, Kentucky 42301
Email: tyson.kamuf@bigrivers.com	Email: don.gulley@bigrivers.com
Telephone : (270)844-6185	Telephone: (270)844-6101
dentity of Generating Plant/Unit Subject to Location (Address): Sebree Station 9000 Highway 2096	
Robards, Webster County, Kentucky 424 Unit Name: Reid CT - Unit 2	452 ("Unit")
Nameplate Rating in MW: 65 MW	
Primary Fuel: Natural Gas	-
Back-up Fuel: Fuel Oil	_
RTO/ISO Market Participation: <u>Midcontinent</u>	Independent System Operator (MISO)
Desired Date of Retirement:The Unit is I	noperable

Submitting Entity Authorized Representative Contact information:

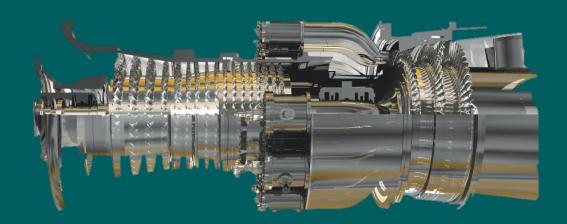


EPIC Submission Reid CT, 2025 Exhibit A





7C – BIG RIVERS



Date 10/17/2024

GE Power

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Rotor Concerns

Compressor / Turbine Rotor lifetime starts

Rotor Life Extension (RLE) required at 5000 factored starts. Max life post RLE is 7,400 starts

Turbine rotor wheel wear

Excessive bucket movement indicating wheel wear and potential for seal pin liberation

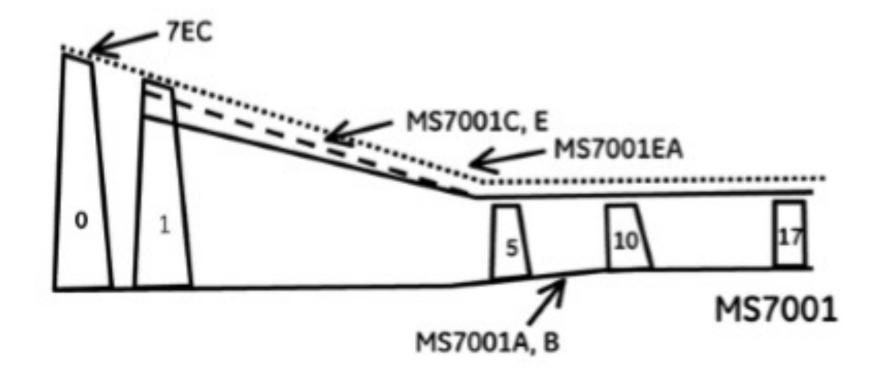
Conclusion

If indeed rotor has ~4,600 actual starts, a conservative factor of factored starts is 1.25

This effectively puts the rotor at approx. 5,750 factored starts which is after the point of need for rotor life extension inspection and replacement parts.



7 E Class Rotor Differences





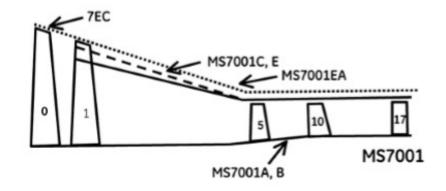
7E history

	7A/B	7C/E	7EA
Years	1970-79	1974-84	1984-present
Output (MW)	51 - 62	68.5 – 77.9	80.1 - 88.5
Air Flow (pph)	1850 - 1967	2129 - 2210	2300 - 2400
Tfire (°F)	1650 - 1850	1950 – 2020	2020 – 2055
Compressor	7B	7C/E	7EA (1/4" longer)
Hot Gas Path	7A-uncooled,	S2B cooled	Materials / Seals
	7B – S1B cooled		AA S3B/N
Fleet Size	~220 units	~130 units	~880 units

New Design IGV Introduction Dates: 1977, 1987







Rotor Conversions

Replacing 7C Rotor using <u>7E</u> Parts

This option takes a New or Refurbished **7E** rotor and adapts it to a 7C configuration.

Scope of Supply (not exhaustive):

- Modified No. 2 Bearing Housing (adds spacer to Forward Air Seal).
- New Thrust bearing Shims for axial alignment.
- New set of compressor blades (Stage 1-8 are 7B-specific, Stages 8-17 are same as 7E).
- New Load Coupling to match flange bolt circle radius.

Replacing 7C Rotor using <u>7EA</u> Parts

This option takes a New or Refurbished **7EA** rotor and adapts it to a 7C configuration.

Scope of Supply (not exhaustive):

- Modified No. 2 Bearing Housing (adds spacer to Forward Air Seal).
- New Thrust bearing Shims for axial alignment.
- New compressor casings due to larger diameter
- New set of compressor blades (Stage 1-17)
- New Load Coupling to match flange bolt circle radius.



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7C conversion to 7EA

This option replaces the existing 7C and converts it to a 7EA. The estimated scope of supply is as follows:

- New or Refurbished 7EA Unit Rotor (un-bucketed) including Unit Rotor Marriage hardware
- New Compressor Casing (Inlet & Bearing Assembly, Compressor and Compressor Discharge Casing)
- Inlet IGV 7EA
- Inlet Number 1 Bearing Machining
- Number 2 Bearing Housing Modification (or a new Number 2 Bearing)
- Bolting & Doweling Arrangement
- Turbine Base Modifications
- Inlet Plenum Modifications
- Feed and Drain Piping Modifications for Number 1 Bearing

With the upgrade to the 7EA compressor, the Gas Turbine(s) will require additional airflow which may impact the inlet filter house.

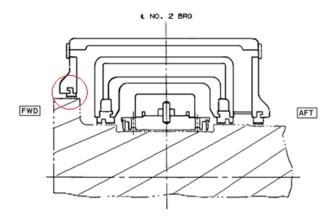
Estimated GT Performance Improvement Output >+12.5%; Heatrate -1.2%



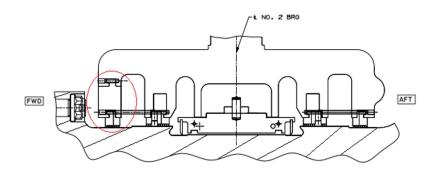
7C vs. 7E/7EA rotor & Number 2 Bearing

Compressor / Turbine

Rotor overall length is the same, however compressor rotor is 5.5" longer, Turbine rotor is 5.5" shorter. This changes where the Number 2 bearing seals on the rotor.



<u>Current No. 2 Bearing housing with a Stationary Air Seal landing on the OD of the flange on the</u> forward side of TR.



Modified No. 2 Bearing housing with a spacer in between the Stationary Air Seal old location and the new Stationary Air Seal on the forward side of TR (not on the OD of flange in this case).





EPIC Submission Reid CT, 2025 Exhibit B



ATTACHMENT Y

Notification of Generation Resource/SCU/Pseudo-tied Out Generator Change of Status.

Including Notification of Rescission

This is a notification of change of status of a Generation Resource, Synchronous Condenser Unit ("SCU"), or Pseudo-tied out Generator in accordance with Section 38.2.7.a of the Tariff. An electronic copy of the completed form will be accepted by the Transmission Provider, however, a form will not be considered complete until the original form containing an original signature, including all attachments, is received by the Transmission Provider at the following address:

MISO, Attention: Director Resource Utilization; 720 City Center Drive, Carmel, IN 46032.

The Transmission Provider may request additional information as reasonably necessary to support operations under the Tariff.

Owner of the Generation Resource, SCU or Pseudo-tied out Generator:	
Big Rivers Electric Corporation (BRPS)	
Name of Market Participant: Big Rivers Electric Corporation (BRPS)	
Owner's state of organization or incorporation Kentucky	
1	

Generation Resource/SCU/Pseudo-tied Out Generator [plant and unit number(s)] BREC.REIDCT - Common Name: Reid CT Unit 2

Source/Identification of Generation Interconnection Service [name of agreement, parties, date, date filed and docket number, and any other information to identify an agreement] N/A - Unit started commercial operation in 1976.

COUNTY OF Daviess

ATTACHMENT Y Notification of Resource/SCU/Psuedo-tied Out Generator Chang 34 0 0

Pursuant to the terms of the MISO Tariff, Owner hereby certifies that it will Suspend for economic reasons operation of all or a portion of the Generation \mathbb{K} Resource/SCU/Pseudo-tied out Generator commencing on 1st [day] of March [month] of 2025 [year] Rescind the current notice to SuspendThe facility is further described as follows: Location: Robards, KY Unit **CPNode** Nameplate Change in Name (if applicable) Capacity(MW) Capacity(MW) Reid CT - Unit 2 **BREC.REIDCT** 65 MW 65 MW - All capacity is being suspended Note: This unit is currently in forced outage. Owner understands and agrees that this notification is provided in accordance with Section 38.2.7 of the Transmission Provider's Tariff and will not be made public by the Transmission Provider except as provided for under Section 38.2.7 of the Tariff. The undersigned certifies that he or she is an officer of the owner of the Generation Resource/SCU/Pseudo-tied out Generator, that he or she is authorized to execute and submit this notification, and that the statements contained herein are true and correct. Signature Name: Don Gulley **Contact Information** Email: Don.Gulley@bigrivers.com Title: President & CEO Date: 01/22/2025 Phone: 270-844-6101 STATE OF Kentucky

Before me, the undersigned authority, this day appeared Don Gulley ______, known by me to be the person whose name is subscribed to the foregoing instrument, who, after first being sworn by me deposed and said:

"I am an officer of Big Rivers Electric Corp., I am authorized to execute and submit the foregoing notification on behalf of Big Rivers Electric Corp; and the statements contained in such application are true and correct."

SWORN TO AND SUBSCRIBED TO BEFORE ME, the undersigned authority on this the <a href="https://dx.ncbi.nlm.ncbi.n

Notary Public, State of KENTUCKY

Kalpl Lynn Jones KYNP43026

My Commission expires __1-14-26



EPIC Submission Reid CT, 2025 Exhibit C



Andrew Witmeier

Director, Resource Utilization 317-249-5585 awitmeier@misoenergy.org



VIA TWO-DAY-AIR DELIVERY

January 30, 2025

Don Gulley President & CEO Big Rivers Electric Corporation 710 W 2nd St Owensboro, KY 42301

Subject: Response to Attachment Y Suspension Notice for Reid CT Unit 2

Dear Mr. Gulley:

On January 29, 2025, Big Rivers Electric Corporation submitted an Attachment Y Notice to MISO for the suspension of Reid CT Unit 2, effective March 1, 2025 as a result of a forced outage. Tariff Section 38.2.7.a.i provides for such notice but states that the System Support Resource ("SSR") provisions of the MISO Tariff pertain to operational generation resources and specifically excludes generators that are forced out of service. Section 38.2.7.a.i. states:

A Generation Resource or SCU that is inoperable due to Forced Outage or a Pseudo-tied out Generator shall not be designated as an SSR Unit.

This letter acknowledges that Big Rivers Electric Corporation will suspend Reid CT Unit 2, effective March 1, 2025. MISO will continue to preserve the confidentiality of the Attachment Y Notice.

Please do not hesitate to contact me if you have any questions regarding this matter.

Respectfully,

Andrew Witmeier

Director, Resource Utilization



EPIC Submission Reid CT, 2025 Exhibit D

Meter Data and Commitment Reasons Data <u>Provided Separately as a Microsoft Excel File</u>





EPIC Submission Reid CT, 2025 Exhibit E



Big Rivers Electric Corporation EPIC Submission – Reid CT Exhibit E

MISO Maximum Generation Emergency Declarations (EEAs)

- 07/21/2016 13:00 16:00 EST: MISO declared Maximum Generation Emergency Event 1B/C and Energy Emergency Alert Level 1 (EEA 1) due to forced generation outages, above normal temperatures, and higher than forecasted loads
- 2. <u>09/22/2017 14:30 18:15 EST</u>: MISO declared a Maximum Generation Event Step 1 b/c NERC EEA 1 due to generation outages, above normal temperatures, seasonally high load, and heavy congestion
- 3. <u>01/30/2019 08:00 22:00 EST:</u> MISO declared a Maximum Generation Event Step 2 a/b NERC EEA 2 for the following entities: Central Region area(s) of: ALT, ALTE, AMIL, AMMO, AMRN, ATC, BREC, CIN, CONS, CWLD, CWLP, DECO, HE, IPL, ITC, MECS, METC, MGE, MIUP, NIPS, PION, SIGE, SIPC, UPPC, WEC, WPS and North Region area(s) of: ALTW, DPC, GRE, ITCM, MDU, MEC, MP, MPW, NSP, OTP, SMP due to forced generation outages and high load
- 4. <u>01/31/2019 07:00 11:00 EST:</u> MISO declared a Maximum Generation Event Step I b/c NERC EEA 1 for the following entities: Central Region area(s) of: ALT, ALTE, AMIL, AMMO, AMRN, ATC, BREC, CIN, CONS, CWLD, CWLP, DECO, HE, IPL, ITC, MECS, METC, MGE, MIUP, NIPS, PION, SIGE, SIPC, UPPC, WEC, WPS and North Region area(s) of: ALTW, DPC, GRE, ITCM, MDU, MEC, MP, MPW, NSP, OTP, SMP due to extreme low temperatures and high loads
- 5. <u>02/16/2021 07:30 14:00 EST:</u> MISO declared a Maximum Generation Emergency Event Step Ib NERC EEA 1 for the following entities: Central Region area(s) of: ALT, ALTE, AMIL, AMMO, AMRN, ATC, BREC, CIN, CONS, CWLD, CWLP, DECO, GLH, HE, HMPL, IPL, ITC, MECS, METC, MGE, MIUP, NIPS, PION, RTX, SIGE, SIPC, UPPC, WEC, WPS and North Region area(s) of: ALTW, DPC, GRE, ITCM, MDU, MEC, MP, MPW, NSP, OTP, SMP due to forced generation outages and transmission constraints
- 6. <u>06/10/2021 14:00 18:00 EST:</u> MISO declared a Maximum Generation Emergency Event Step 2a NERC EEA 2 for the following entities: Central Region area(s) of: ALT, ALTE, AMIL, AMMO, AMRN, ATC, BREC, CIN, CONS, CWLD, CWLP, DECO, GLH, HE, HMPL, IPL, ITC, MECS, METC, MGE, MIUP, NIPS, PION, RTX, SIGE, SIPC, UPPC, WEC, WPS and North Region area(s) of: ALTW, DPC, GRE, ITCM, MDU, MEC, MP, MPW, NSP, OTP, SMP due to forced generation outages, above normal temperatures, higher than forecasted load
- 7. <u>12/23/2022 17:30 18:00 EST:</u> MISO declared a Maximum Generation Emergency Event Step lb –NERC EEA1 for the following entities: MISO

Balancing Authority Area due to forced generation outages, higher than forecasted load

- 8. <u>12/23/2022 18:00 21:00 EST:</u> MISO declared a Maximum Generation Emergency Event Step 2a EEA2 for the MISO Balancing Authority Area due to forced generation outages, higher than forecasted load
- 08/24/2023 12:00 19:30 EST: MISO escalated to a Maximum Generation Emergency Event Step 2a – NERC EEA2 for the MISO Balancing Authority Area due to forced generation outages, above normal temperatures, higher than forecasted load