

FILED
April 30, 2024
Data Center
Missouri Public
Service Commission

Exhibit No. 17

Ameren – Exhibit 17
Williams
Direct
File No. EF-2024-0021

Exhibit No.:
Issue(s): Plant Description, Status,
Decommissioning
Witness: Jim Williams
Type of Exhibit: Direct Testimony
Sponsoring Party: Union Electric Company
File No.: EF-2024-0021
Date Testimony Prepared: November 21, 2023

MISSOURI PUBLIC SERVICE COMMISSION

FILE NO. EF-2024-0021

DIRECT TESTIMONY

OF

JIM WILLIAMS

ON

BEHALF OF

**UNION ELECTRIC COMPANY
d/b/a Ameren Missouri**

**St. Louis, Missouri
November 21, 2023**

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DIRECT TESTIMONY

OF

JIM WILLIAMS

FILE NO. EF-2024-0021

I. INTRODUCTION

1

Q. Please state your name and business address.

2

3 A. My name is Jim Williams. My business address is 1901 Chouteau Avenue,
4 St. Louis, Missouri 63103.

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4

Q. By whom are you employed and what is your position?

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6 A. I am employed by Union Electric Company d/b/a Ameren Missouri
7 ("Ameren Missouri" or "Company") as the Senior Director of Operations Excellence
8 Support in the Company's power operations group, which manages the Company's non-
9 nuclear generation resources.

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10 **Q. Please describe your educational background and employment**
11 **experience.**

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12 A. I have more than thirty years of experience in power plant operations,
13 including specifically in operating baseload coal-fired power plants. Prior to beginning my
14 career, I received a B.S. in Mechanical Engineering from Southern Illinois University
15 ("SIU") at Carbondale, Illinois in 1986. Later, I was awarded a Master's Degree in Business
16 Administration from Eastern Illinois University in Charleston Illinois in 1995. I possess

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1 several other certificates related to my work, including Project Management Professional
2 (2013), as well as serving on the SIU Engineering Advisory Board for the St Louis area.
3 I began my professional career as a Plant Engineer at the Central Illinois Public Service
4 Company, Newton Power Station in 1986. In that role, I performed as the Boiler Engineer,
5 Turbine Engineer, Systems Engineer, and Performance Engineer, and Operations
6 Supervisor. In 1993, I was promoted to the position of Tech Support Coordinator. In that
7 role, I was responsible for all of the engineering, environmental, chemical, planning,
8 scheduling, and budgeting activities for the station. I served in that role until January of
9 2001. At that time, I was promoted to Plant Director at Ameren Energy Generating
10 Company's ("AEG") Coffeen Power Station. In that role, I was responsible for the safe,
11 reliable, and efficient operation at the station. In 2009, I was transferred back to AEG's
12 Newton Power Station as the Plant Director. I had responsibility for the activities at both
13 the Newton and the Hutsonville Power Stations. In 2013, I was promoted to Sr. Director
14 and was accountable for all of AEG's coal-fired plants. After Ameren Corporation's 2014
15 divestiture of AEG, I accepted a position with Ameren Missouri as Plant Director at the
16 Sioux Energy Center. I held that role until I was promoted to the Sr. Director, Power
17 Operations in 2015 where I had responsibility for the non-nuclear generation in Missouri.
18 In 2018, I assumed my current position.

19 **Q. What are your responsibilities in your current position?**

20 A. As Senior Director, Operations Excellence Support, I have responsibility
21 over the engineering teams at each of the Company's non-nuclear energy centers, including
22 Performance Engineering and Turbine Engineering. I also oversee Laboratory Services, a
23 Corrective Actions Team, the Ameren Missouri Power Operations and Maintenance

1 Training Center, Plant Construction Maintenance (a maintenance group that travels
2 between different energy centers), and the Operations Excellence Engineering Group.

3 **Q. What is the purpose of your direct testimony?**

4 A. I provide a description of the Rush Island Energy Center and a brief history
5 of its operations, as well as a discussion of its current status. I also provide details on the
6 upcoming retirement actions to be taken at Rush Island, including a description of
7 necessary safe closure and decommissioning activities. In addition, my direct testimony
8 will address unused inventory disposal.

9 **II. THE RUSH ISLAND ENERGY CENTER**

10 **Q. Please describe Rush Island.**

11 A. Rush Island is a two-unit, coal fired generating plant with a combined net
12 summer capability of 1,178 megawatts (“MW”). Unit 1 went into service in 1976 and Unit
13 2 in 1977. For much of its life, Rush Island has operated as a baseload facility as part of
14 the Company’s overall generating fleet. Historically, its equivalent availability factor has
15 been around 90% with capacity factors generally between 70 and 75%. By 1996, it was
16 burning low- or ultra-low sulfur Powder River Basin coal, using fuel oil for startup
17 operations.

1 Since September of 2022, Rush Island has been designated by the Midcontinent
2 Independent System Operator (MISO”) as a System Support Resource (“SSR”), pending
3 completion of certain projects on the region’s transmission system necessary to ensure
4 reliable grid operations once Rush Island retires. We now know that Rush Island will retire
5 in either September or October of 2024 as a result of the Company’s December 2021
6 decision not to install flue gas desulfurization equipment, as would have been required to
7 continue to operate Rush Island beyond 2024 due to a decision by the federal District Court
8 for the Eastern District of Missouri. Company witnesses Mark Birk and Matt Michels
9 provide the details surrounding the retirement decision.

10 **Q. In reference to the District Court case, what is that case’s current**
11 **status?**

12 A. As noted, the terms of the District Court’s ruling required the Company to install
13 scrubbers at Rush Island by March of 2024, but the Company determined that doing so was not
14 in our customers’ best interest. Consequently, shortly after the Company determined that it
15 should retire the plant, it filed a motion with the District Court asking that it be allowed to do so
16 instead of installing expensive scrubbers, once transmission system upgrades needed to
17 maintain transmission system reliability in Rush Island’s absence could be completed.

18 In advance of filing that motion, the Company had begun the retirement process with
19 MISO by making a “Y-2” filing, which is a MISO process by which a preliminary assessment
20 of whether a unit can be retired on a given date without compromising transmission system
21 reliability can be obtained from MISO. The Y-2 results, which were provided to the District
22 Court, suggested that certain upgrades were required to ensure reliability prior to the retirement
23 of Rush Island. Additional filings and conferences with the District Court followed, including

1 issuance of an order by the District Court that required Ameren Missouri to proceed with a
2 formal Attachment Y retirement study from MISO. The District Court's order required that the
3 Attachment Y study assume a retirement date of September of 2022.

4 **Q. What were the results of the formal Attachment Y study?**

5 A. As suggested by the Y-2 study and reaffirmed by the results of the Attachment
6 Y study, MISO determined that continued plant operations were required beyond September of
7 2022 so that the Company can complete certain specified transmission system upgrades. A copy
8 of the Attachment Y Report issued by MISO is attached to my testimony as Schedule JW-D1.
9 In summary, the following transmission upgrades need to be completed before Rush Island can
10 retire (the estimated completion timeline is also shown below):

Project	Estimated Completion Date
Installation of a Capacitor Bank at the Overton Substation to address voltage issues.	Spring 2024
Replacement of a Transformer at the Wildwood Substation in St. Louis County to address overload concerns.	Spring 2024
Upgrading of a bus bar tie position at a substation adjacent to Rush Island to address voltage issues.	Fall 2023
Installation of four STATCOMS in the St. Louis Metropolitan area to provide reactive power support; installations to occur as equipment becomes available.	Spring of 2025

11 **Q. What is the status of the transmission projects listed in the table above?**

12 A. As has been reported in the Company's monthly reports in File No. EO-
13 20220215:

- 14 • *Installation of a capacitor bank at Ameren Missouri's Overton Substation*
15 - detailed design work is complete and construction contractors have been
16 selected for civil and electrical work. Construction began at the end of July of
17 2023, with site grading for the substation yard expansion and will continue with

1 the construction of a new position in the substation for the capacitor bank to be
2 connected into the existing energy grid. The capacitor bank is on order and is
3 expected to be delivered in January of 2024. The synchronous breaker delivery
4 has been delayed until January of 2024. Construction is being sequenced such
5 that neither of these delays will impact the final completion of this project. The
6 Company expects this project to go in-service by June of 2024.

7 • ***Installation of a larger transformer at Ameren Missouri's Wildwood***
8 ***Substation*** – The detailed design work is complete and construction contractors
9 have been selected for the civil and electrical work. Civil construction began at
10 the end of September with the construction of the transformer foundation and
11 oil containment pit to make the site ready for the transformer delivery. The
12 345/138kV 700MVA transformer that was originally ordered for a project at
13 our Diaz substation has been repurposed and will be installed at the Wildwood
14 Substation to accommodate an expedited delivery schedule. Anticipated
15 delivery of the transformer is April of 2024. The Company expects this project
16 to go into service by June of 2024.

17 • ***Upgrading of a busbar*** – detailed design work is complete and the electrical
18 contractor has been selected. Construction will begin at the end of November
19 2023. The Company expects this project to go in service by year end 2023.

20 • ***Installation of four STATCOMS in and around the St. Louis region*** – The
21 current schedule calls for three of the STATCOMs to be in-service by
22 December of 2024. Construction is underway for these three STATCOMS with
23 site grading and foundation installations. Electrical construction will begin later

1 this year. The final STATCOM (needed for summer reliability) is planned to be
2 in-service by June of 2025. Design work for the last STATCOM is underway
3 and the Company plans to receive bids for civil and electrical construction in
4 January of 2024.

5 **III. SAFE CLOSURE AND DECOMMISSIONING**

6 **Q. The energy transition costs addressed in Company witness Mitch**
7 **Lansford's testimony include estimated safe closure and decommissioning costs. How**
8 **were those costs developed?**

9 A. The estimated costs consist of two primary components, including safe
10 closure and decommissioning costs. The safe closure costs are expenditures that are
11 necessary to safely close Rush Island after it no longer produces energy while
12 decommissioning are the costs of demolition, net of salvage, related to the upcoming Rush
13 Island retirement. Ameren Missouri anticipates these components will cost \$46,907,500,
14 collectively, to safely close and decommission the facility. A summary of the safe closing
15 costs and the Black & Veatch decommissioning study are attached as Schedules JW-D1
16 and JW-D2 to this testimony.

17 **Q. What activities are required to safely close the Rush Island Energy**
18 **Center?**

19 A. There are several activities that need to be completed to protect the
20 environment, increase safety to employees and neighbors, reduce potential contamination
21 risks, and other costs including, but not limited to:

- 22 • Removal of chemicals stored on site (Acid/Caustic/Hydrazine);
23 • Removal of oils and coolants used on rotating equipment;
24 • Removal of chemicals used for water treatment (Resins);
25 • Removal of remaining coal residuals;

- 1 • Removal of remaining ash within the boiler and ductwork areas;
2 • Removal of nuclear devices used for measuring ash levels;
3 • Disposal/transfer of fuel oil;
4 • Disposal of waste from the sanitary sewer system;
5 • Ballasting the closed ash ponds to prevent contamination in the event of a
6 flood event; and
7 • Providing isolation to comply with our Worker Protection Assurance
8 ("WPA") program, which fulfills OSHA requirements to provide safe
9 energy isolation to protect co-workers while they are working in or around
10 equipment.

11 **Q. What activities were included in developing the decommissioning or**
12 **demolition costs for Rush Island?**

13 A. Ameren Missouri engaged the engineering firm of Black and Veatch, one
14 of the top ranked design firms in fossil fuel generation and requested that they conduct a
15 study to determine a level 4 cost estimate to demolish Rush Island so that it would be left
16 in a brownfield condition. In that study, Black and Veatch developed estimates for the
17 demolition project, focusing on the following:

- 18 • Demolition of the power block area;
19 • Demolition of unused structures in the river structure area;
20 • Clean-up and covering of the coal pile area (35 Acres);
21 • Overall site removal of unused structures including the railroad tracks; and
22 • Removal of other unused structures at the site.

23 Black and Veatch will also conduct a hazardous waste survey to identify any
24 required asbestos abatement (expected to be minimal), and its estimate includes necessary
25 engineering costs and site monitoring and security costs, including an amount for
26 contingency (20% of the direct costs).

27 Table 1 below outlines the Black and Veatch estimate, by component, and Figure
28 1 provides an overview of the area in which demolition activities will occur:

1

Table 1 Cost Estimate

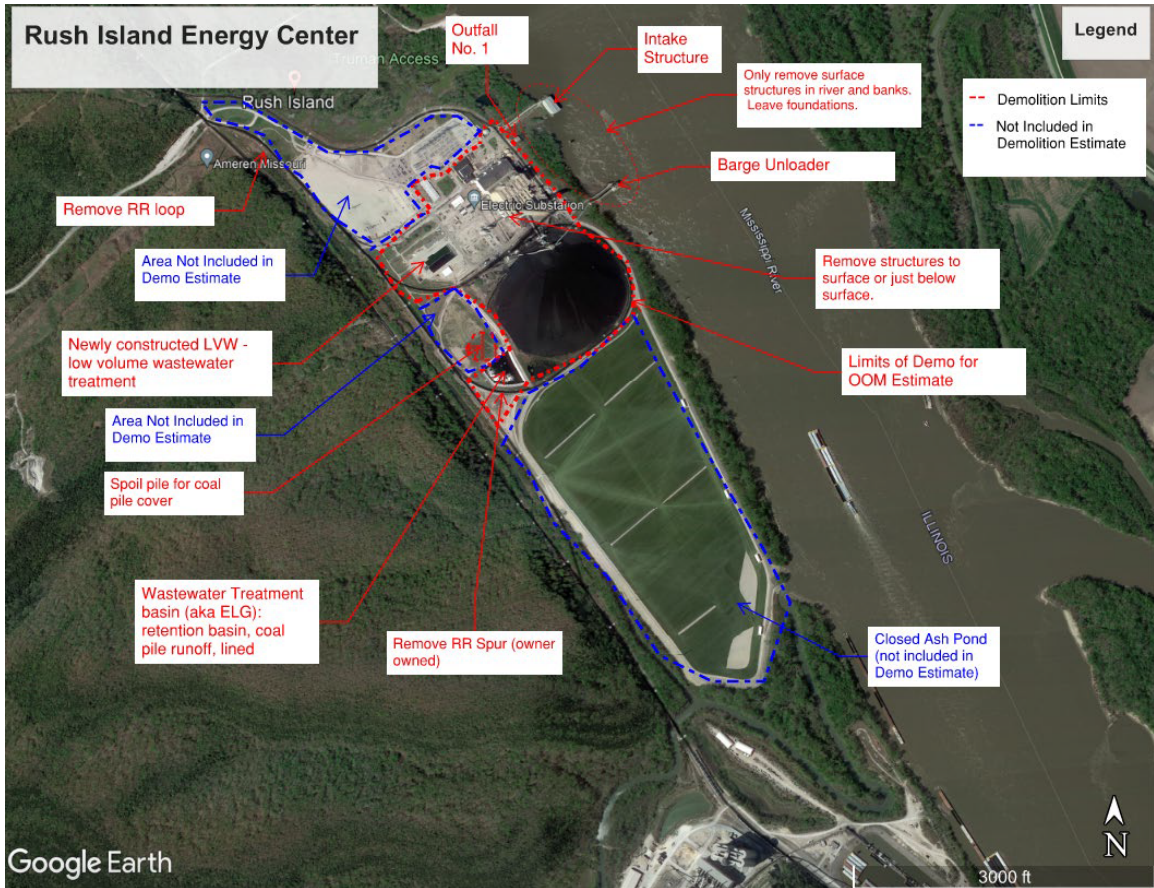
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Figure 1 – Overview of Area for Demolition



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3 **Q. What do you anticipate the schedule for safe closure and**
4 **decommissioning will be?**

5 A. When power generation ends by October 2024, the demolition is expected
6 to be completed by June of 2028. The demolition and site restoration is estimated to take
7 18-24 months (after the Demo contractor is selected). Post demolition activities, site
8 monitoring and vegetation management, to be an additional 12 months. Major components
9 to the schedule include hazardous waste and asbestos abatement, contract specification and
10 contract preparation, bidding and contractor selection, demolition, and site restoration. This
11 is a high-level schedule estimate subject to unforeseen items such as weather and resource
12 availability.

1 **Q. Does Ameren Missouri believe the Black and Veatch demolition**
2 **estimate is reasonable?**

3 A. Yes, based on our engineering review of the estimate and our experiences
4 closing other energy centers, including our recent closure of the Meramec Energy Center
5 and the work done there to date, we believe the estimate is reasonable. It should be noted
6 that as a Class 4 estimate, it is reasonable to expect that actual costs could vary from the
7 estimate by plus or minus 30%. Cost estimates (and salvage estimates) will continue to be
8 updated as the scope of work is established, actual quantities are determined, and bids are
9 received. We will also continue to explore cost savings opportunities and will work to
10 optimize contracting and execution strategies as plans are developed.

11 **IV. UNUSED INVENTORY/PLANT-IN-SERVICE TRANSFERS**

12 **Q. Company witness Lansford's Direct Testimony calculation of energy**
13 **transition costs to be securitized include approximately \$18.3 million of unused**
14 **materials and inventory costs. How were those costs developed?**

15 A. The Company's engineering staff conducted a detailed review of all existing
16 inventory at Rush Island, including a detailed review of what items could be utilized at
17 other sites once Rush Island retired. This review encompassed all items valued at \$1,000
18 or more and which could be used at the Labadie and Sioux energy centers. From this
19 review there were 587 items that will be transferred to Labadie at a value of \$3,379,690
20 and 47 items that will be transferred to Sioux at a value of \$216,769. The total inventory
21 to be transferred for the Rush Island inventory will be \$3,596,459. Such items have been
22 or will be transferred to those sites. The remaining items are Rush Island inventory

1 acquired for plant operations that are not usable at other sites. After accounting for these
2 transfers, there will be \$18.3 million of remaining inventory that cannot be used.

3 **Q. Company witness Lansford's Direct Testimony describes transfers of**
4 **inservice assets from Rush Island to other energy centers that will be used at those**
5 **other locations. How were those transfers determined?**

6 A. The Company conducted a detailed review of all existing plant assets at
7 Rush Island, including a detailed review of what items could be utilized at other sites once
8 Rush Island retires. The review identified assets with a net book value of \$27.8 million
9 that could be transferred. The items being transferred from Rush Island to Labadie or Sioux
10 will primarily be utilized as spares, with many of the highest dollar value assets having
11 long lead times. For example, a Generator Step-Up Transformer and one set (unit) of high
12 pressure, intermediate pressure, and low-pressure rotors at Rush Island have lead times of
13 over a year and can be utilized as spares at the Labadie Energy Center. Additionally, there
14 are other assets such as dozers, vehicles, and cranes that are included in this adjustment.

15 **Q. Does this conclude your direct testimony?**

16 A. Yes, it does.

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of the Petition of Union)
Electric Company d/b/a Ameren Missouri)
for a Financing Order Authorizing the Issue) EF-2024-0021
of Securitized Utility Tariff Bonds for)
Energy Transition Costs related to Rush)
Island Energy Center.)

AFFIDAVIT OF JIM WILLIAMS

STATE OF MISSOURI)
) ss
CITY OF ST. LOUIS)

Jim Williams, being first duly sworn on his oath, states:

My name is Jim Williams, and hereby declare on oath that I am of sound mind and lawful age; that I have prepared the foregoing *Direct Testimony*; and further, under the penalty of perjury, that the same is true and correct to the best of my knowledge and belief.

/s/ Jim Williams
Jim Williams

Sworn to me this 16th day of November 2023.

EF-2024-0021

**Schedules JW-D1-
D-2 are
Confidential in their
Entirety**

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