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MECG – Exhibit 402
Greg R. Meyer
Rebuttal Testimony
File No. ER-2022-0337

Exhibit No.:
Issues: Revenue Requirement
Witness: Greg R. Meyer
Type of Exhibit: Rebuttal Testimony
Sponsoring Party: Midwest Energy Consumers Group
Case No.: ER-2022-0337
Date Testimony Prepared: February 15, 2023

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

_____)
In the Matter of Union Electric Company)
d/b/a Ameren Missouri's Tariffs to Adjust) **Case No. ER-2022-0337**
its Revenues for Electric Service)
_____)

Rebuttal Testimony of
Greg R. Meyer

On behalf of
Midwest Energy Consumers Group

REDACTED VERSION

February 15, 2023



1 discuss the direct testimony of the Commission Staff (“Staff”) and Office of Public
2 Counsel (“OPC”) as it relates to this issue.

3 **Q PLEASE DESCRIBE HIGH PRAIRIE AND WHEN IT BEGAN COMMERCIAL**
4 **OPERATION.**

5 A High Prairie is a wind farm located in Adair and Schuyler counties in Missouri. High
6 Prairie consists of 175 turbines with a 400 MW nameplate capacity. High Prairie went
7 into commercial operation in December 2020.

8 **Q PLEASE DESCRIBE ANY OPERATING DIFFICULTIES THAT HIGH PRAIRIE HAS**
9 **ENCOUNTERED THAT RELATES TO YOUR ASSESSMENT OF**
10 **UNDERPERFORMANCE.**

11 A High Prairie encountered a significant number of bat and bird deaths that were traced
12 back to the operation of the wind farm. As a result of those deaths, on April 19, 2021,¹
13 Ameren Missouri voluntarily stopped all nighttime operations of the wind farm. The
14 nighttime restriction lasted until October 31, 2021. As a result of further bird and bat
15 deaths, High Prairie was restricted in nighttime operations in 2022, starting March 21.²

16 **Q WHY ARE HIGH PRAIRIE’S NIGHTTIME OPERATIONS RESTRICTED?**

17 A The nighttime restriction coincides with the season of high bat activity (“bat season”)
18 (April 1 - October 31). During this period of time, bats are prevalent in this area at
19 nighttime. By restricting High Prairie’s operations during the night in bat season, it is
20 anticipated that these bird and bat deaths will be reduced.

¹2021 Spring Post-Construction Bid Mortality Monitoring Report.

²See the Direct Testimony of Ameren Missouri witness Andrew Meyer, page 36.

1 **Q DOES THE LIMITED OPERATIONS OF HIGH PRAIRIE CREATE ANY CONCERNS**
2 **FROM A RATEMAKING PERSPECTIVE?**

3 A Yes. Ameren Missouri is requesting a full return on the High Prairie investment, yet
4 that investment is being curtailed from operations for a significant amount of time.

5 **Q DID YOU FILE TESTIMONY IN AMEREN MISSOURI'S LAST RATE CASE, CASE**
6 **NO. ER-2021-0240, ADDRESSING THE HIGH PRAIRIE ISSUE?**

7 A Yes. In that case, I filed direct, rebuttal and surrebuttal testimonies addressing the High
8 Prairie underperformance issue.

9 **Q HOW MANY HOURS IS HIGH PRAIRIE BEING RESTRICTED?**

10 A I have calculated that High Prairie is being restricted approximately 29% of the hours
11 in a year.

12 **Q DO YOU HAVE THE HISTORICAL GENERATION THAT HIGH PRAIRIE HAS**
13 **PRODUCED?**

14 A Yes. Table 1 shows the historical generation of High Prairie.

TABLE 1			
<u>High Prairie Generation</u>			
Year	Month	Generation (MWh)	Capacity Factor
2020	December	60,083	20.19%
2021	January	84,941	28.54%
	February	80,914	30.10%
	March	128,216	43.08%
	April	75,902	26.35%
	May	63,977	21.50%
	June	38,199	13.26%
	July	17,916	6.02%
	August	25,629	8.61%
	September	27,442	9.53%
	October	29,566	9.93%
	November	89,494	31.07%
	December	139,048	46.72%
2022	January	137,401	46.17%
	February	131,383	48.88%
	March	113,302	38.07%
	April	61,302	21.29%
	May	58,021	19.50%
	June	37,357	12.97%
	July	24,663	8.29%
	August	21,406	7.19%
	September	27,679	9.61%
	October	44,040	14.80%
	November	148,975	51.73%
		2021 Total	801,244
	12 Months to Date - November 2022	944,577	26.96%

Source: EIA-923. Capacity factor calculated assuming a base of 400 MW.

1 As can be seen from Table 1, during the months of April through October, High
2 Prairie significantly underperforms. In 2022, High Prairie improved in its overall wind

1 generation from those levels reported in 2021. However, Ameren Missouri's ratepayers
2 should not be held responsible for the underperformance that has occurred in 2022.

3 **Q IS AMEREN MISSOURI AWARE OF THIS UNDERPERFORMANCE PROBLEM**
4 **AND, IF SO, WHAT IS IT DOING TO CORRECT THE SITUATION?**

5 A Ameren Missouri has implemented three distinct mitigation projects to decrease the bat
6 deaths at High Prairie. Specifically, Ameren Missouri has implemented: (1) a Detection
7 and Active Response Curtailment ("DARC") system; (2) a Bat Deterrent System; and
8 (3) a Modeled Curtailment study.³

9 **Q PLEASE DESCRIBE EACH OF THE THREE MITIGATION PROJECTS.**

10 A The DARC system listens for bat echolocation calls. If bat calls are detected by the
11 DARC system, a pause command is delivered to the wind turbines to pitch the blades
12 or rotate the blades so they no longer catch the wind. The wind turbines are curtailed
13 for 10 minutes assuming no new bat calls are recorded in the area.⁴

14 The Bat Deterrent system uses constant ultrasonic noise to deter bats from
15 flying around the turbine blades. The noise makes it difficult for the bat to forage and
16 orient itself, therefore requiring the bat to choose airspace that is devoid of noise.⁵

17 The Modeled Curtailment system entails curtailing wind turbines based on real
18 time weather conditions when bats are known to be active.⁶

³See Direct Testimony of Ameren Missouri witness Andrew Meyer, page 36.

⁴Ibid., pages 36-37.

⁵Ibid., page 38.

⁶Ibid., page 39.

1 **Q DID EITHER THE STAFF OR OPC ADDRESS THIS ISSUE IN DIRECT TESTIMONY?**

2 A Yes. Staff witness Claire Eubanks and OPC witness Geoff Marke both filed direct
3 testimony in this rate case addressing High Prairie.

4 **Q COULD YOU PLEASE SUMMARIZE BOTH PARTIES' POSITIONS REGARDING**
5 **HIGH PRAIRIE?**

6 A Both the Staff and OPC recognize that High Prairie underperformed during 2022 as
7 supported in Table 1. The Staff recommended imputing three revenue streams to
8 capture the underperformance. Those three revenue streams are energy revenues,
9 Production Tax Credit ("PTC") revenues and Renewable Energy Credit ("REC")
10 revenues. The OPC recommended an investment disallowance corresponding to the
11 number of hours in a year High Prairie cannot generate electricity due to operational
12 curtailments.

13 **Q PLEASE PROVIDE YOUR POSITION REGARDING THE UNDERPERFORMANCE**
14 **OF HIGH PRAIRIE.**

15 A Let me begin by saying I found both positions proposed by the Staff and OPC as
16 reasonable approaches to address the underperformance of High Prairie. In Ameren
17 Missouri's last rate case, I supported an adjustment similar in nature to what the OPC
18 has proposed. In this case, I am proposing to follow the parameters that Staff witness
19 Eubanks has proposed. Specifically, I would propose that the shortfall in generation
20 from High Prairie be valued from an energy revenue stream, a PTC revenue stream
21 and an REC revenue stream similar to what witness Eubanks has proposed.

1 **Q HOW DO YOU PROPOSE TO ACCOUNT FOR THESE NEW REVENUE STREAMS?**

2 A I support the Staff's position that the Fuel Adjustment Clause ("FAC") could be used to
3 capture the energy revenue stream and the PTC revenue stream. The REC revenue
4 stream can be accounted for in the RESRAM filing.

5 **Q WHAT ANNUAL CAPACITY FACTOR DID AMEREN MISSOURI PROJECT FOR**
6 **HIGH PRAIRIE WHEN IT FILED FOR A CERTIFICATE OF PUBLIC CONVENIENCE**
7 **AND NECESSITY ("CCN")?**

8 A Ameren Missouri projected a high annual capacity factor of ***** and a low annual
9 capacity factor of *****⁷ These annual capacity factors are much higher than
10 what has actually occurred at High Prairie since it began operations.

11 **Q GIVEN THOSE ANNUAL CAPACITY FACTORS, HOW DO YOU PROPOSE TO**
12 **ACCOUNT FOR THE UNDERPERFORMANCE OF HIGH PRAIRIE?**

13 A I propose to capture the MWh that were not produced for the 12 months ended
14 November 30, 2022 compared to the low annual capacity factor estimate identified
15 above. Those MWh differences would represent the lost generation that Ameren
16 Missouri's ratepayers would be forgoing due to the underperformance of High Prairie.
17 Those MWh would be priced according to the average energy market price at the
18 generation node for High Prairie during those times when High Prairie was curtailed.
19 In addition, the MWh would need to be priced for the lost PTCs that would have resulted
20 if High Prairie had performed at the low annual capacity factor. Summing these two
21 revenue streams together produces a total revenue of approximately \$33.7 million to

⁷See Direct Testimony of Ameren Missouri witness Matt Michaels in Case No. EA-2018-0202, Schedule MRM-D1 (confidential version).

1 be included in Ameren Missouri's next FAC filing. In addition, the RESRAM should be
2 credited for the sale of RECs that would produce a revenue stream of approximately
3 \$2 million. In total, the FAC and the RESRAM would capture lost revenues from the
4 underperformance of High Prairie totaling approximately \$35.7 million.

5 **Q DO YOU BELIEVE THE ADJUSTMENT YOU ARE PROPOSING IS**
6 **CONSERVATIVE?**

7 A Yes. I have included generation outside of the bat season (April-October) when the
8 performance of High Prairie has exceeded the capacity factor included in the CCN. If
9 I had only proposed my adjustment on the bat season where the underperformance of
10 High Prairie is viewed in isolation, my adjustment would have been higher. Therefore,
11 I contend my adjustment is conservative.

12 **Q HAS AMEREN MISSOURI REFLECTED THE ACTUAL GENERATION OF HIGH**
13 **PRAIRIE IN ITS COST OF SERVICE OR A MODIFIED LEVEL OF GENERATION TO**
14 **ADDRESS THE UNDERPERFORMANCE OF HIGH PRAIRIE?**

15 A It is my understanding that Ameren Missouri increased the generation at High Prairie
16 above the actual historical levels experienced in its cost of service. However, that
17 modified level of generation is still too low to replace the lost generation from the
18 underperformance of High Prairie. To remedy this situation, I am proposing that
19 Ameren Missouri include in its update filing the actual level of generation at High Prairie
20 through December 31, 2022 (update period) and not additional generation in its cost of
21 service. The adjustments I have proposed then would need to be updated for High
22 Prairie's generation in the month of December 2022. In this way, there will not be an

Greg R. Meyer
Page 8

1 argument that the underperformance of High Prairie is being captured twice in the cost
2 of service.

3 **Q DO YOU WISH TO COMMENT ON THE APPROACH SPONSORED BY OPC**
4 **WITNESS MARKE?**

5 A Yes. If High Prairie would eventually be curtailed on a permanent basis, then I believe
6 a permanent adjustment to the High Prairie investment could be considered. I believe
7 the adjustment I have sponsored in this case supports the increased generation that
8 has been achieved at High Prairie since its commercial operation.

9 **Q EARLIER YOU MENTIONED THE TESTIMONIES OF STAFF WITNESS EUBANKS**
10 **AND OPC WITNESS MARKE, DO YOU HAVE ANY FURTHER COMMENTS**
11 **REGARDING THOSE TESTIMONIES?**

12 A As I stated earlier, I generally agree that both the Staff's and OPC's adjustments
13 regarding the underperformance of High Prairie are reasonable. However, I have one
14 point of disagreement with Staff witness Eubanks. In her testimony on page 7,
15 lines 13-17, Ms. Eubanks indicates that the Staff has included plant associated with
16 certain technologies to limit the possibility of bat deaths at High Prairie. I disagree with
17 the Staff's position to allow those costs in the cost of service until such time as those
18 technologies can be proven to be effective and allow High Prairie to generate without
19 extended curtailment during bat season. Once that has been accomplished, then cost
20 assignment can be addressed with the possible sharing of the technology costs
21 between Ameren Missouri's shareholders and ratepayers. At this point in time, it is too
22 early to require Ameren Missouri's ratepayers to shoulder the full costs.

Greg R. Meyer
Page 9

1 Q ALONG THOSE SAME LINES, ARE YOU IN FAVOR OF AMEREN MISSOURI'S
2 RATEPAYERS PAYING ANY COSTS AT THIS POINT IN TIME FOR THE
3 UNDERPERFORMANCE OF HIGH PRAIRIE?

4 A No. Ameren Missouri's ratepayers should not be required to pay any of the monitoring
5 costs or mitigation system costs for High Prairie. Those costs should be borne by
6 Ameren Missouri's shareholders until such time that High Prairie performs as it was
7 proposed to perform within the CCN filing. Ameren Missouri's ratepayers were
8 promised a certain level of generation from High Prairie and yet have not received those
9 benefits from its operations. Ameren Missouri's ratepayers should not be responsible
10 for additional costs to bring High Prairie in line with those expected results.

11 Q SHOULD THE ADJUSTMENT YOU PROPOSED BE UPDATED ANNUALLY AFTER
12 THIS RATE CASE?

13 A Yes. I recommend that the adjustment I proposed be calculated for calendar year 2023
14 and every year thereafter until High Prairie is no longer facing extended curtailment
15 periods. The FAC and REASRAM mechanisms could accommodate these
16 adjustments, if necessary.

17 Q DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

18 A Yes, it does.

Qualifications of Greg R. Meyer

1 **Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A Greg R. Meyer. My business address is 16690 Swingley Ridge Road, Suite 140,
3 Chesterfield, MO 63017.

4 **Q PLEASE STATE YOUR OCCUPATION.**

5 A I am a consultant in the field of public utility regulation and a Principal with the firm of
6 Brubaker & Associates, Inc. (“BAI”), energy, economic and regulatory consultants.

7 **Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

8 A I graduated from the University of Missouri in 1979 with a Bachelor of Science Degree
9 in Business Administration, with a major in Accounting. Subsequent to graduation I
10 was employed by the Missouri Public Service Commission. I was employed with the
11 Commission from July 1, 1979 until May 31, 2008.

12 I began my employment at the Missouri Public Service Commission as a Junior
13 Auditor. During my employment at the Commission, I was promoted to higher auditing
14 classifications. My final position at the Commission was an Auditor V, which I held for
15 approximately ten years.

16 As an Auditor V, I conducted audits and examinations of the accounts, books,
17 records and reports of jurisdictional utilities. I also aided in the planning of audits and
18 investigations, including staffing decisions, and in the development of staff positions in
19 which the Auditing Department was assigned. I served as Lead Auditor and/or Case
20 Supervisor as assigned. I assisted in the technical training of other auditors, which
21 included the preparation of auditors’ workpapers, oral and written testimony.

1 During my career at the Missouri Public Service Commission, I presented
2 testimony in numerous electric, gas, telephone and water and sewer rate cases. In
3 addition, I was involved in cases regarding service territory transfers. In the context of
4 those cases listed above, I presented testimony on all conventional ratemaking
5 principles related to a utility's revenue requirement. During the last three years of my
6 employment with the Commission, I was involved in developing transmission policy for
7 the Southwest Power Pool as a member of the Cost Allocation Working Group.

8 In June of 2008, I joined the firm of Brubaker & Associates, Inc. as a Consultant.
9 Since joining the firm, I have presented testimony and/or testified in the state
10 jurisdictions of Florida, Idaho, Illinois, Indiana, Iowa, Maryland, Missouri, New Mexico,
11 Utah, Washington, Wisconsin and Wyoming. I have also appeared and presented
12 testimony in Alberta and Nova Scotia, Canada. In addition, I have filed testimony at
13 the Federal Energy Regulatory Commission ("FERC"). These cases involved
14 addressing conventional ratemaking principles focusing on the utility's revenue
15 requirement. The firm Brubaker & Associates, Inc. provides consulting services in the
16 field of energy procurement and public utility regulation to many clients including
17 industrial and institutional customers, some utilities and, on occasion, state regulatory
18 agencies.

19 More specifically, we provide analysis of energy procurement options based on
20 consideration of prices and reliability as related to the needs of the client; prepare rate,
21 feasibility, economic, and cost of service studies relating to energy and utility services;
22 prepare depreciation and feasibility studies relating to utility service; assist in contract
23 negotiations for utility services, and provide technical support to legislative activities.

24 In addition to our main office in St. Louis, the firm also has branch offices in
25 Corpus Christi, Texas; Detroit, Michigan; Louisville, Kentucky and Phoenix, Arizona.