Exhibit No.:
Issue: Class Cost of Service Study
Witness: Craig E Brown
Type of Exhibit: Rebuttal Testimony
Sponsoring Party: Evergy Missouri West
Case No.: ER-2024-0189
Date Testimony Prepared: August 6, 2024

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2024-0189

REBUTTAL TESTIMONY

OF

CRAIG E. BROWN

ON BEHALF OF

EVERGY MISSOURI WEST

Kansas City, Missouri
August 2024

REBUTTAL TESTIMONY

OF

CRAIG E. BROWN

Case No. ER-2024-0189

Q: Please state your name and business address.

A: My name is Craig E. Brown. My business address is 9400 Ward Parkway, Kansas City, Missouri 64114.

Q: By whom and in what capacity are you employed?

A: I am employed by 1898 & Co., a division of Burns & McDonnell Engineering Company, Inc. (hereinafter called "1898 & Co."), as a Senior Project Manager in the Utility Finance Advisory business line. 1898 & Co. is a global business, technology and security consultancy serving critical infrastructure industries, including the electric power industry. As a member of the Utility Finance Advisory business line, I provide professional consulting services primarily to electric utilities, including investor-owned utilities, electric cooperatives, municipal utilities, and other industries, regarding issues on electric ratemaking. The services I provide include revenue requirements, cost of service, rate design, developing DER policies, evaluation of demand-side management programs, financial and load forecasting, bond financing support, depreciation, valuation, and indirect capital overhead cost allocation.

Q: What is your educational and professional background?

A: For the past 20 years, I have worked as a consultant, project manager, witness, and analyst on utility financial, ratemaking, and regulatory projects. Since joining Burns & McDonnell in 2019, I have focused primarily on cost of service, ratemaking, and regulatory consulting

for electric utilities. Prior to joining Burns & McDonnell, I worked for 15 years in the Rate and Regulatory practice at Black & Veatch Management Consulting, where I was a Principal Consultant and Rate and Regulatory Team Lead, consulting on projects for electric, gas, water, and wastewater utilities. Prior to joining Black & Veatch in 2004, I was employed as an accountant and small business consultant at independent firms in Overland Park, Kansas and Phoenix, Arizona. I graduated from the University of Missouri – Columbia in 1997, with a Bachelor of Science degree in Hotel and Restaurant Management. In 2004, I received a Master of Business Administration degree with an emphasis in Finance from Rockhurst University.

As a Project Manager for the Financial Analysis and Rate Design department of 1898 & Co., I lead consulting projects for investor-owned, municipal, and cooperative utilities across the country. In addition to ratemaking issues, I lead projects in the areas of depreciation and valuation, financial and load forecasting, and cost-benefit business case analysis.

Q: Have you previously testified in a proceeding at the Missouri Public Service Commission ("MPSC" or "Commission") or before any other utility regulatory agency?

A: Yes, I previously testified before the Missouri Public Service Commission on behalf of Evergy, Inc. in its rate proceedings for its Missouri jurisdictions (ER-2022-0129 and ER-2022-0130) and on behalf of Union Electric Company, d/b/a Ameren Missouri (ER-2022-0337). In addition, I have previously filed testimony and/or appeared as a witness before the Federal Energy Regulatory Commission (FERC), the Kansas Corporation Commission, the Public Service Commission of Maryland, the Public Utilities Commission of

Minnesota, and the Kansas City Board of Public Utilities. The majority of my experience leading electric cost of service and rate-related studies has been for electric cooperatives and municipal utilities that have not required testimony or appearing as a witness. I have made numerous presentations and supported cost of service, rate design, and other regulatory studies to Utility Boards and Commissions and/or City Councils in Delaware, Florida, Kansas, Kentucky, Louisiana, Maryland, Missouri, Nebraska, Nevada, New Mexico, New York, North Carolina, Texas, Virginia, and Washington.

Q: On whose behalf are you testifying?

A: I am testifying on behalf of Evergy Missouri West, Inc. d/b/a Evergy Missouri West ("Evergy Missouri West" or, the "Company").

Q: What is the purpose of your rebuttal testimony?

A: The purpose of my rebuttal testimony is to respond to topics related to the Company's Class Cost of Service ("CCOS") study and issues raised by MECG witness Maini.

Q: Please summarize the issues raised by MECG witness Maini that you will address in your rebuttal testimony.

A: I will address Ms. Maini's use of production and transmission demand allocators based on Average and Excess Demand – Four Non-coincident Peak ("AED 4NCP") and not the Company's allocator of Average and Excess Demand – Four Coincident Peak ("AED 4CP"). I will also address Ms. Maini's suggestion to further break out distribution assets and costs by single-phase and three-phase. Lastly, I will address Ms. Maini's suggestion to break out fuel costs hourly as opposed to the monthly fuel cost allocator the Company currently uses.

Q: Please describe the Company's AED 4CP allocator and the rationale for its use in this proceeding.

A: Both MECG and the Company agree that the AED method is the most appropriate method for allocating production and transmission demand-classified plant, so I will focus on the 4CP versus 4NCP decision that is used as the system load factor to determine the system excess portion of the allocator. The primary consideration is related to cost causation for production and transmission plant. It is established that the company is a summer peaking utility, and its production and transmission investment decisions are primarily driven by the need to provide peak capacity in the four summer months (June – September). The appropriate sizing of this investment is based on the coincident peak demands of the customer classes. If Evergy sized its generation fleet based on the non-coincident peak needs of each customer class, it would oversize its generation fleet and transmission facilities. Basing investment decisions on the class CP results in more efficient use of capital and lower overall costs for the Company's customers. As such, I apply the same rationale for the excess portion of the AED allocator as the Company uses in its investment decisions and recommend 4CP as a basis for the excess portion of Evergy's AED allocation factor.

Q: What is Ms. Maini's rationale for using AED 4NCP?

A: While she acknowledges that the results using either method are generally consistent, she states that "the method prescribed in the NARUC manual for the A&E method, however, appears to encourage the use of non-coincident peak demands (NCP) and is also a more common approach used by other Missouri utilities." She also notes that AED 4NCP is consistent with Section 393.1620.1 of the Missouri Statutes.

Q: Is the AED 4NCP allocation method as proposed by Ms. Maini included in the 1992 NARUC Cost Allocation Manual?

A: No, not explicitly. The manual's example uses 1NCP; 4NCP is not mentioned.

Q: Does this reduce the validity of Ms. Maini's proposed allocation method for production and transmission capacity?

A: No, it does not. Both the Company and Ms. Maini have proposed a hybrid of the guidelines presented in the Manual. Both methods could be acceptable allocation approaches. The question is which version is more appropriate for the Evergy production and transmission systems.

Q: What does the NARUC manual state as the rationale that NCP is preferential to CP when calculating Average and Excess Demand allocations?

A: It states on page 50 that using a CP allocation factor with AED will result in allocation factors that are identical to those derived with a direct CP allocation. As seen in the comparison in Table 1 below, while similar, the allocation factors using AED 4CP and the 4CP allocations are different.

Table 1: Comparison of Production Allocation Factors

Allocation	Res	SGS	LGS	LPS	EV	Lighting
A&E 4CP	57.81%	14.17%	11.89%	15.88%	0.00%	0.25%
A&E 4NCP Maini	57.09%	14.49%	12.02%	15.87%	0.02%	0.51%
4CP	57.46%	14.26%	12.03%	16.22%	0.00%	0.03%

Q: What conclusions can you draw from Table 1?

A: First, this demonstrates that use of a CP method for the excess portion with AED does not produce a result that is identical to the direct CP method. Therefore, the rationale against its use that is purported in the NARUC manual is flawed. Second, it is notable that both of

the AED allocations presented are quite similar to the 4CP allocation. In fact, for some classes, the AED 4NCP method is closer to the 4CP allocation than the AED 4CP method.

Q: Are there any other differences between the AED allocators used by the Company and Ms. Maini?

A: Yes, we use different averaging periods for the 4CP and 4NCP factors. I used the four summer months from June through September for the Company's AED 4CP allocator, and Ms. Maini used the four highest-demand months: June, July, August, and December, for her AED 4NCP allocator.

Q: Why did you choose the 4 summer months and not the 4 highest-demand months?

A: There is not a pre-defined method for selecting multi-period CP and NCP allocators. It is up to the cost analyst to determine what is appropriate for the system being evaluated. A 2CP allocator could be the average of the two highest months or the average of the summer peak and the winter peak. I choose to use the four summer months to be consistent with my rationale for using 4CP, which is that the Company has made investment decisions based on the need to serve summer peak demands more than any other period.

Q: Why is the proposed AED 4CP method proposed by the Company a superior method in this rate case?

A: The AED 4CP method is superior to AED 4NCP because it is more reflective of how the Company plans its investment in production and transmission plant. That is, the Company bases these decisions on the CP requirements of the system, not the NCP requirements. Further, it is the four summer months from June through September that are the primary factors, and therefore the primary cost causative factors for the Company's production and transmission investments are Average and Excess Demand with a 4CP excess component.

Q: Is there any precedent for using the AED 4CP method?

A: Yes, there is. First and foremost, AED 4CP was used in the company's most recent rate case before the Commission in 2022 (ER-2022-0129 / 0130) and has been used since 2018. AED 4CP has also been used for Evergy's Kansas Central jurisdiction since 2015.

Q: Would you be opposed to the Commission adopting the AED 4NCP allocation for production and transmission costs?

A: While I continue to believe the AED 4CP method is the more appropriate method based on cost causation, I would not be opposed to using the AED 4NCP method to be more consistent with other Missouri regulated utilities.

Distribution System Allocation

Q: Please describe the Company's current method for classifying and allocating distribution assets and costs in accounts 364 - 368.

A: As explained in the direct testimony of Ms. Miller, the Company uses the minimum system method to classify and allocate distribution plant accounts 364 through 368 and determines the appropriate splits between demand and customer-related costs. In the current rate case, the Company made improvements involving the allocation of the demand component in their minimum system study by further splitting demand between primary and secondary voltage based on dollar-weighed line miles. This is an incremental improvement over the prior case and provides additional detail to the cost allocation process, as has been requested of the Company.

Q: Please describe Ms. Maini's position on the Company's current distribution cost allocation process.

A: Ms. Maini explains that the minimum distribution (system) approach is a long-established approach that is widely used and recognized in the NARUC manual. She states: "I support this approach as it recognizes the basic premise that the distribution system exists to serve a dual purpose: 1) being capable of delivering service to customers' residences or businesses (customer costs), and 2) ensuring that the distribution system is large enough to provide reliable service (demand costs)." Ms. Maini goes on to explain that further refinements are needed to the Company's process, specifically, the need to separate out single-phase and three-phase circuit costs.

Q: Do you agree with Ms. Maini's notion that further refinement is appropriate, specifically to separate out single-phase and three-phase costs?

A: Yes, in concept. While the Company took a step forward and split the demand-related costs into primary and secondary voltage, I agree that the Company could explore some additional refinement in the Company's distribution cost allocation process. However, this would necessitate further due diligence to confirm that obtaining this level of detail is achievable in a timely and cost-efficient manner and with a reasonable level of accuracy.

Q: Have you seen this level of detail by phase implemented in distribution cost allocation studies in other utilities?

A: Yes, myself and my colleagues in 1898 & Co. will use data by phase (single-phase vs three-phase) and by voltage class (primary vs secondary) if the data is available and reasonably accurate. I have seen this used in investor-owned, electric cooperative, and municipal utilities. However, having access to these data sets is more the exception than the rule and

is generally dependent on how robust a utility's geographic information system ("GIS") is. A fully mapped GIS system can generally identify circuits by phase and voltage, but not all utilities have their distribution system fully mapped in GIS.

Q: Is this why the single-phase versus three-phase method has not been used by you for the Company study?

A: Yes. Uncertainty around the GIS system accuracy has kept us from exploring this method further.

Q: What is your response to Ms. Maini's assertion that single-phase primary costs should be allocated to only secondary voltage customers since single-phase circuits are only used to provide service to secondary customers and not used to provide service to primary voltage customers?

A: In theory, this makes logical sense. In reality, I would like to see this proven out for the Evergy Missouri West system before confirming this is appropriate. However, based on the Company's response to MECG data request 2.4, it appears that single-phase circuits are not utilized to provide service to primary customers.

Fuel Cost Allocation

Q: What is your response to Ms. Maini stating that the Company's fuel cost allocation can more closely follow cause causation by recognizing class loads and hourly fuel costs?

A: The Company's current fuel allocator weights class loads and fuel costs on a monthly basis. In Ms. Maini's direct testimony, she states that the Company should explain if it has the class data necessary to calculate fuel costs and class loads on an hourly basis, creating an 8760 fuel allocator. In general, I agree that the Company should review data capabilities

and assess costs related to compiling fuel costs on an hourly basis. In terms of cost causation, I am hesitant to agree with the assertion that hourly fuel cost and class load data will incrementally improve the current fuel allocator, which already reflects seasonal changes in fuel costs relative to class loads on a monthly basis.

Q: Do utilities typically track actual fuel costs on an hourly basis and use this information for class cost of service studies?

A: Not that I am aware of. Many utilities will track the hourly *marginal* cost of *energy* (also known as system lambda), but that is different from the total embedded hourly fuel costs for the system. System lambda is the cost of the next kilowatt-hour that can be produced by a utility's generating units (i.e., the marginal cost of the marginal generator).

Q: What is the purpose of the Company's current fuel cost-weighted energy allocation factor (ENERGYFUEL)?

A: The purpose of the ENERGYFUEL factor is to capture seasonal differences in the monthly cost of fuel and allocate them to classes based on each class's kWh sales in the month. This results in classes that use more energy in higher-cost periods being allocated an incrementally larger portion of the Company's fuel costs, which generally follows cost causation principles.

Q: Do you believe the Company's current monthly fuel allocator is sufficient for the purposes of the CCOS study?

A: Yes, I do. As mentioned above, the current monthly fuel allocator used in this case captures the intent of allocating the Company's generation fuel cost based on cost causation principles. The intent of the allocator is to reasonably align fuel costs and class loads on a

monthly basis to reflect changing costs by season. The current ENERGYFUEL allocator accomplishes this goal.

Q: Do you believe that incorporating hourly fuel costs will add additional value to the Company's fuel allocation?

A: No, the purpose of the Company's fuel-weighted energy allocator is to reasonably allocate the monthly fuel costs relative to monthly class loads. The monthly allocator currently in place serves this purpose. Further expanding to hourly fuel costs could pose a very complex challenge for the Company from a cost and data-gathering perspective.

Q: Does that conclude your testimony?

A: Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Request for Authority to Implement A General Rate Increase for Electric Service	))))	Case No. ER-2024-0189

AFFIDAVIT OF CRAIG E. BROWN

STATE OF MISSOURI)
) ss
COUNTY OF JACKSON)

Craig E. Brown, being first duly sworn on his oath, states:

1. My name is Craig E. Brown. I work in Kansas City, Missouri, and I am employed by 1898 & Co., a division of Burns & McDonnell Engineering Company, Inc. as Senior Project Manager in Utility Finance Advisory.

2. Attached hereto and made a part hereof for all purposes is my Rebuttal Testimony on behalf of Evergy Missouri West consisting of eleven (11) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

Craig E. Brown

Subscribed and sworn before me this 6th day of August 2024.

Notary Public

My commission expires: 4/26/2025

ANTHONY R. WESTENKIRCHNER
NOTARY PUBLIC - NOTARY SEAL
STATE OF MISSOURI
MY COMMISSION EXPIRES APRIL 26, 2025
PLATTE COUNTY
COMMISSION #17279962