Exhibit No.: _____
Issues: Resource Adequacy, Transmission Expense, MPPM, Asbury Retirement Date
Witness: Aaron J. Doll
Type of Exhibit: Rebuttal Testimony
Sponsoring Party: The Empire District Electric Company
Case No.: ER-2021-0312
Date Testimony Prepared: December 2021

Before the Public Service Commission of the State of Missouri

Rebuttal Testimony

of

Aaron J. Doll

on behalf of

The Empire District Electric Company

December 2021

Liberty™

TABLE OF CONTENTS
FOR THE REBUTTAL TESTIMONY OF AARON J. DOLL
THE EMPIRE DISTRICT ELECTRIC COMPANY
BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. ER-2021-0312

SUBJECT **PAGE**

REBUTTAL TESTIMONY OF AARON J DOLL
THE EMPIRE DISTRICT ELECTRIC COMPANY
BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. ER-2021-0312

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Aaron J. Doll. My business address is 602 South Joplin Avenue, Joplin, Missouri.

Q. Are you the same Aaron J. Doll who provided Direct Testimony in this matter on behalf of The Empire District Electric Company ("Empire" or the "Company")?

A. Yes.

Q. What is the purpose of your Rebuttal Testimony in this proceeding before the Missouri Public Service Commission ("Commission")?

A. I will be addressing certain Direct Testimony statements which were made by Office of the Public Counsel ("OPC") witnesses Dr. Geoff Marke, Lena Mantle and John Riley surrounding (a) the Company's new wind facilities and the Asbury plant, including operation in the Southwest Power Pool ("SPP"), resource adequacy, and the eligibility of items to flow through the Fuel and Purchase Power Adjustment ("FAC"). In addition, I address the retirement date of Asbury and Commission Staff ("Staff") Direct Testimony regarding the allowable percentage of transmission expenses that should be eligible to flow through the Company's FAC.

II. RESPONSE TO OPC WITNESS DR. GEOFF MARKE

Q. Do you agree with Dr. Marke's assessment of Empire investing in wind farms in a market that does not support it?

A. No. Dr. Marke cites the Southwest Power Pool ("SPP") Market Monitoring Unit ("MMU") Annual State of the Market ("ASOM") report, in particular *Section 4.4 Long-Run Price Signals For Investment* stating that the "**MMU does not expect SPP market prices to support new entry of generation investments**." The ASOM goes on to state that "while the market on its own offers low incentives for new generation, some reasons for new generation investments include expansion of corporate renewable goals, SPP market protocol requirements, federal and/or state incentives, state regulated investments, emerging technologies, and emission reduction plans." Dr. Marke highlights the passage that, in isolation, supports his conclusion that Asbury is a "perfectly usable mid-life coal plant.[1]" However, in the same section of the 2020 ASOM, the MMU states that "**Since 2015**, prices have supported the ongoing maintenance cost of combined-cycle and combustion turbine units, though **they have not supported the ongoing maintenance costs of coal units**". The ASOM goes on to state an expectation that **the market will signal the retirement of some coal generation** while pointing to new generation investment signals that may be reliant on the factors provided by the MMU and listed in my testimony above. In essence, the 2020 ASOM that is referenced by Dr. Marke is a simplified version of Empire's decision of greening the fleet: the retirement of Asbury due to progressively declining economics and required environmental upgrades led to the investment in wind. The new wind farms position the Company well for renewable compliance (both current targets and future scenarios) with the future retirements of Elk River Wind Farm (3 years) and Meridian Way Wind Farm (7 years), while maximizing production tax credits ("PTC") at 100% and thereby lowering the capital costs for customers. Finally,

[1] Direct Testimony of Geoff Marke. File No. ER-2021-0312. p. 26, line 8.

Dr. Marke does not acknowledge that the Company is providing protections to its customers in the form of the Market Price Protection Mechanism ("MPPM"), which mitigates both production and price risk.

Q. Dr. Marke suggests it is the wind investments that have made Asbury uneconomical. Would you agree with that suggestion?

A. No. As explained in my direct testimony, Asbury's Net Capacity Factor ("NCF") dropped from a mid-70% range in 2010-2013 to below 50% in 2018 and 2019. Again, the 2020 ASOM referenced in Dr. Marke's testimony, as well as the 2015 ASOM, 2016 ASOM, 2017 ASOM, 2018 ASOM, and 2019 ASOM, all reach the same conclusion: market prices have not supported the ongoing maintenance costs of coal units. Our new wind farms were not operational during those times.

Q. On page 50 of his direct testimony, Dr. Marke states that Empire could have sold Asbury to offset the financial penalty. Do you agree?

A. No. Referencing the Direct Testimony of Empire witness Drew Landoll, the Fair Market Valuation Report found the facility had a negative $134 million valuation, meaning the Company would have to pay someone $134 million to purchase the facility in its state at the time and assume all the associated liabilities.[2]

Q. What is your reaction to page 51 of Dr. Marke's testimony stating that Empire could have operated Asbury seasonally, similar to what Xcel Energy has proposed in Minnesota?

A. I reviewed Xcel's petition for approval to offer the Allen S. King Generating Station ("King Plant") and Sherburne County Generating Station Unit 2 ("Sherco 2") on a seasonal basis, as well as the Minnesota Public Utility Commission's ("Minnesota

[2] Direct Testimony of Drew Landoll. File No. ER-2021-0312. p. 8, line 21.

PUC") Order approving the plan. A summary of what I found in the filings is detailed below:

- Xcel plans to early retire its existing coal fleet by 2030.
- The King Plant is planned for retirement in 2028, which is 9 years earlier than anticipated.
- Sherco 2 is scheduled to retire in 2023, which is 7 years earlier than indicated in Xcel's 2015 IRP Preferred Plan.
- Sherco 2 has staff on-site from Sherco 3 and Sherco 1 which are both due to be retired after Sherco 2. Asbury has no sister units to share costs with during seasonal operations.
- The early retirement of Xcel's coal facilities will pave the way for substantial investments in renewable energy culminating in a system that is approaching 60% renewable in 2034.
- Sherco 2 and King Plant operate in MISO. MISO is different from the Southwest Power Pool ("SPP") in that SPP does not have a capacity market which determines which units are considered must-offer. SPP only excludes units from must offer requirement if they are on outage or qualify for a Reserve Shutdown.
- Xcel's own analysis shows that while these units have traditionally been self-committed in the MISO market, a production cost model run resulted in "little impact on total fuel costs" when offering these units seasonally as "economic" offers or year-round as "economic" offers. For reference, an "economic" offer is tantamount to a "market" offer in SPP and Asbury was offered exclusively as "market" since October 2016 with the exception of discrete testing periods.

Therefore, the studies supporting seasonal operation with "economic" offers don't show any significant benefit from annual "economic" offers which is akin to how Asbury is offered and therefore would not support offering Asbury any differently than how it has been offered for its last three and a half years in the market.

- There is not a plan for additional capital spend of substance at Sherco 2. Asbury would have been required to complete environmental upgrades to continue operations.

In summary, Xcel is taking action to decarbonize its generating fleet by early retiring its entire coal fleet to achieve a coal-free fleet by 2030. Xcel summarizes their fleet transformation as a reduction and ultimate elimination of coal, continued reliance on their existing non-coal thermal generation, additional cost-effective renewable resources, and commitment to demand response and energy efficiency as a customer savings. Xcel's seasonal operation of Sherco 2 and King Plant before early retirement is not dissimilar from the Company's operation of Asbury leading up to its retirement.

Q. Do you have any thoughts regarding Dr. Marke's suggestion to mothball Asbury at shareholder expense until a solution presents itself?

A. I am not sure there are enough specifics provided by Dr. Marke to make a comment. However, incurring O&M costs (maintain employees, delivery of coal, plant maintenance, etc.) and continued capital expenditures for environmental compliance for a wait-and-see solution at shareholder expense does not appear to be a viable option from a planning perspective.

Q. What are your thoughts regarding Dr. Marke's Figure 10 of the Real-Time (RT) negative prices at SPP from 2018-2020?

A. As noted in the 2020 ASOM, nearly 100% of load and most generation is offered into and cleared in the Day-Ahead ("DA") market at SPP. Empire offers all available resources into the DA market, including the new wind farms, and thus prefers to clear as much generation as possible to mitigate the risk of Real-Time ("RT") price exposure. Therefore, negative RT prices, which are noted as an issue by the SPP MMU largely caused by entities under-scheduling wind in the DA and generating their position in the RT, are not as critical a metric as DA pricing. The 2020 ASOM states that in 2020 the DA market had negative prices during approximately 4.5% of the intervals as compared to 11% of the RT intervals. Further, Empire is supportive of the MMU's efforts to reduce the number of self-commitments in the DA market, which causes negative prices as renewable generation is backed down in order for traditional resources to meet their committed generation.

III. <u>RESPONSE TO OPC WITNESS LENA MANTLE</u>

Q. On page 5 of her Direct Testimony, OPC witness Lena Mantle suggests that retiring Asbury has affected Empire's resource adequacy ("RA") and that on a stand-alone basis Empire does not have the resources that can meet the needs of its customers every hour. Instead, she suggests that because Empire belongs to SPP, it has relied on other utilities' resources. Do you agree with this assessment?

A. I do not. In the Resource Adequacy Primer For State Regulators issued by the National Association of Regulatory Utility Commissioners ("NARUC") and referenced in Ms. Mantle's testimony on pages 3 and 4, it is stated that in SPP, Load Responsible Entities (LRE) "are responsible for ensuring they have access to enough generating capacity to meet their load obligations, They must also satisfy planning reserve margin (PRM) obligations to ensure available capacity is sufficient to serve load at times of peak demand. They must demonstrate compliance with these requirements by identifying their owned resources in a submission as required by SPP's tariff or by procuring capacity through bilateral contracts."[3] Empire is a LRE as defined by the SPP OATT and cannot meet its capacity obligations by relying on other utilities' resources without firm transmission and bilateral contracting designating that capacity solely to Empire's load. Empire does not have any such bilateral deals to purchase capacity, and has met its capacity obligations and PRM per the requirements of SPP.

Q. On page 6 of Ms. Mantle's Direct Testimony, she states that given the recent winter weather event in February 2021, dispatchable resources with on-site fuel were better hedges because they were available more hours. Do you agree with this assessment?

A. Not necessarily. Resources with on-site fuel were able to mitigate fuel delivery risk but were still exposed to extreme cold operating temperatures. In the *FERC-NERC Regional Entity Staff Report: The February 2021 Cold Weather outages in Texas and South Central United States* issued in November 2021, it is stated, "The extent to which the Event was caused by failures of all types of generating units to prepare for extreme cold weather or associated freezing participation, cannot be overstated."

Q. On page 7 of Ms. Mantle's Direct Testimony, she states that SPP only accredits Empire 30 MW for its 600 MW of wind and this reflects the RA of wind. Do you agree with this statement?

A. I do not believe that is an accurate assessment of Empire's RA rating for its wind resources. The 30 MW mentioned reflects Empire electing to use the conservative 5% accreditation allowed for in Section 7.1.2 of the SPP Planning Criteria. Had Empire

[3] Resource Adequacy Primer for State Regulators, July 2021, p. 47.

elected to use the calculated methodology prescribed in 10(d)(ii) of Section 7.1.2, the RA rating would have been higher. In fact, the Effective Load Carrying Capability ("ELCC") methodology that SPP will be transitioning to in the Summer of 2023 for RA accreditation of wind, produces annual calculations of wind RA for LREs as a dry run leading up to the transition period. The 2020 calculation produced by SPP resulted in a RA accreditation for the new wind farms of 141.78 MW/Summer and 134.33 MW/Winter.

Q. In Ms. Mantle's testimony, multiple claims are made that no study has been produced to ensure that Empire could reliably serve its customers and that purchases enabled Empire to meet its RA obligation. Do you agree with this assessment?

A. No. Ms. Mantle is confusing energy and capacity. Going back to the RA Primer cited in Ms. Mantle's testimony and quoted above, SPP's RA requirement is a requirement to have enough capacity to serve its load and PRM. Whether the Company makes economic sales or purchases to the market is irrelevant to capacity. If Empire was relying on others to fulfill its capacity obligation, SPP would require firm transmission and a documented bilateral transaction for the rights to the capacity otherwise the RTO would find Empire in violation of its RA obligations per Attachment AA of the SPP OATT. Empire has no such bilateral capacity purchases from other entities and has been able to meet the capacity obligations of its load and PRM per the requirement of the SPP.

Q. Ms. Mantle claims that Empire's current wind PPAs are uneconomic and are costing customers millions of dollars a month. What is your reaction to that assessment?

A. It is unfair to evaluate Empire's existing PPA wind farms by contrasting their value solely with market margin. Empire's existing wind farms are PPAs with an all-in energy price, similar to what is represented as a fuel cost of a thermal unit, except this covers 100% of the costs of the facility. If those same wind farms were owned and their capital and O&M costs were a component of non-fuel base rates, the market margin would flip to show that they are extremely favorable to the Company and its customers. Revenue from the SPP IM is designed to cover short-run marginal costs, not necessarily an all-in cost. In fact, this points to a unique aspect of the new wind farms. Empire has agreed to a protection mechanism (MPPM) for its customers stating that revenues will be sufficient to cover their all-in cost and if not, the Company's shareholders will split the under-recovered portion with customers. There is no protection mechanism for any other generating unit in Empire's fleet.

Q. OPC witness Mantle proposes changes to the MPPM. Do you agree with her recommendations??

A. No. While I personally was not part of the discussions during the EA-2019-0010 CCN docket, my understanding is that the MPPM, as it is currently designed, was a result of negotiations between multiple parties to reach a protection mechanism that was reasonable to all involved and ultimately ordered by the Commission. The Company believes that the construct ought to stay exactly as it was approved by the Commission. However, the components do need to accurately reflect the actual costs and benefits of Empire's customers. For example, Ms. Mantle states that the wind revenue requirement ought to not be formulaic, decreasing every single year, if Empire's customers are not paying a progressively reducing rate for the wind farms. The Company does not disagree with this position and requests that the parties work in good faith to accurately capture customers' benefits and costs as a result of the wind investment. However, Empire is firmly opposed to renegotiating major elements of the MPPM or redesigning the construct as suggested in Ms. Mantle's Direct Testimony.

IV. RESPONSE TO OPC WITNESSES CONCERNING EMPIRE'S NEW WIND PROJECTS AND FAC ELIGIBILITY

Q. In the Direct Testimony of OPC witnesses Ms. Mantle and Mr. Riley, concern was raised about whether some wind-related revenues and costs were eligible to flow through the FAC. Mr. Riley recommended establishing a separate tracker for wind-related costs and revenues. Do you agree with Mr. Riley's recommendation?

A. Potentially. As communicated in my Direct Testimony, the Company is open to ideas from all parties to ensure that the Commission's directives in EA-2019-0010 related to wind revenues and costs are adhered to. That could include consideration of a tracker.

V. RESPONSE TO VARIOUS STAKEHOLDERS ON THE RETIREMENT DATE OF ASBURY

Q. Staff Witness Amanda C. McMellen (Staff Report pg. 139), Midwest Energy Consumers Group ("MECG") witness Greg R. Meyer (Direct Testimony pg. 2), OPC witness John S. Riley (Direct Testimony pg. 11 and 12) takes a position that the Accounting Authority Order (AAO) ordered by the Commission in regard to the closing of Asbury should have started January 1, 2020. In the Company's rebuttal testimony, witness Tisha Sanderson states that the AAO liability should only go back to March 2020 because that was the date of Asbury's retirement. Do you concur with that date?

A. Yes. Asbury was not de-designated from the SPP market until March 1, 2020. This date reflected the 6-month window required by SPP to perform studies relating to reliability. Up until March 2020, the unit was still registered in the market and staffed for possible production. Empire continued to monitor market conditions, forward market prices and evaluate economical fuel procurement options. If market conditions and forward market prices created an opportunity for Empire to procure fuel at a price allowing Asbury to operate economically, fuel would have been purchased and the unit would have been offered as available to the markets once fuel was received. In order to properly manage costs, Empire did not want to procure additional fuel if the unit was not going to be able to economically make use of it.

Q. Since Asbury was placed on outage while economic coal was being sought, should the retirement date change?

A. No. The unit was on outage for the last 79 days of its operation, but it wasn't retired until March 1, 2020. Other units in the Company's fleet have been placed on outage for similar durations or longer. In 2017, Plum Point was on outage for approximately 83 days following a major steam turbine outage. In 2017-2018, State Line Unit 1 was on outage for 238 consecutive days after an equipment malfunction. The outage for the last 79 days of Asbury's operation was a circumstance of fuel supply and market economics and should have no impact on the generating unit's actual retirement date.

VI. RESPONSE TO STAFF REGARDING TRANSMISSION EXPENSE AND THE APPROPRIATE ELIGIBILE FAC PERCENTAGE

Q. Do you agree with Staff's Direct Testimony position (Staff CCOS Report, p. 3) that SPP transmission expense should be reduced to approximately 19.39% of eligible items?

A. No. Empire believes that 100% of its transmission costs should be eligible for recovery as the benefits provided by a robust transmission system are not withheld from customers in between cases and neither should the costs. To the extent the parties cannot agree to 100% sharing for SPP and MISO transmission expense, Empire would again recommend establishing a base amount of transmission expense in this case and then developing a tracker for over/under recovery of transmission expense.

A. Does this conclude your Rebuttal Testimony?

A. Yes.

VERIFICATION

I, Aaron J. Doll, under penalty of perjury, on this 20th day of December, 2021, declare that the foregoing is true and correct to the best of my knowledge and belief.

/s/ Aaron J. Doll