

Exhibit No.:  
Issue(s): Stipulation; Update on  
RES Compliance  
Portfolio  
Witness: Ajay K. Arora  
Type of Exhibit: Surrebuttal Testimony  
Sponsoring Party: Union Electric Company  
File No.: EA-2019-0181  
Date Testimony Prepared: August 13, 2019

**MISSOURI PUBLIC SERVICE COMMISSION**

**FILE NO. EA-2019-0181**

**SURREBUTTAL TESTIMONY**

**OF**

**AJAY K. ARORA**

**ON**

**BEHALF OF**

**UNION ELECTRIC COMPANY**

**d/b/a Ameren Missouri**

**St. Louis, Missouri  
August, 2019**

**\*\*\*Denotes Highly Confidential Information\*\*\***  
**\*\*Denotes Confidential Information\*\***

## **Table of Contents**

I.	The Stipulation.....	1
II.	Update on RES Compliance Portfolio .....	2

## SURREBUTTAL TESTIMONY

**OF**

**AJAY K. ARORA**

**FILE NO. EA-2019-0181**

1      **Q.      Please state your name and business address.**

2           A.       Ajay K. Arora, Union Electric Company d/b/a Ameren Missouri ("Ameren  
3   Missouri" or "Company"), One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri  
4   63103.

5           **Q.     Are you the same Ajay K. Arora that filed direct testimony in this**  
6   **proceeding?**

7 A. Yes, I am.

8           **Q.     What is the purpose of your surrebuttal testimony in this proceeding?**

9           A.       My surrebuttal testimony addresses the Stipulation and Agreement  
10 ("Stipulation") filed on July 31, 2019 which was joined in (or not opposed by) all parties  
11 except Western Missouri & Kansas Laborers District Council ("WMKLDC"). WMKLDC  
12 has since withdrawn from participation in this case. My surrebuttal testimony also  
13 provides an update on developments relating to the Company's Renewable Energy  
14 Standard ("RES") compliance portfolio because of recent events involving the wind project  
15 approved by the Commission in File No. EA-2019-0021.

16 **I. The Stipulation**

17           **Q.     Please address the Stipulation filed on July 31, 2019.**

1           A.     The Company, Staff, Renew Missouri Advocates, the Missouri Division of  
2     Energy and the Missouri Department of Conservation are all parties to the Stipulation. All  
3     other remaining parties have indicated that they do not oppose the Stipulation.

4           The terms of the Stipulation are extremely similar to the terms approved by the  
5     Commission in File No. EA-2019-0021 (the Brickyard Hills wind project), except that  
6     there are no provisions relating to property taxation since Governor Parson signed H.B.  
7     220 which resolves concerns raised by the counties in the Brickyard Hills case because of  
8     the state central (not local) assessment that applied to wind farms prior to the Governor's  
9     signing of that bill. Essentially, the Stipulation reflects all the conditions Staff  
10    recommended in its rebuttal testimony (with a few modifications acceptable to Staff and  
11    ultimately the other signatories) and reflects very similar conservation-related conditions  
12    to those agreed on with the Missouri Department of Conservation ("MDC") in the  
13    Brickyard Hills case.

## 14                               II.     Update on RES Compliance Portfolio

15           **Q.     You noted that one purpose of your testimony was to provide an update**  
16    **on the Company's RES compliance portfolio. How is that relevant to this case?**

17           A.     The Staff Report discusses the Company's current preferred resource plan  
18    which calls for at least 700 megawatts ("MW") of wind capacity to comply with the RES  
19    and notes that the combination of this project and the other two projects that have been  
20    approved, if they were built to their maximum capacities, would total 857 MW. Office of  
21    the Public Counsel ("OPC") witness Dr. Geoff Marke's rebuttal testimony also contains a  
22    significant discussion of the total capacity of all three projects.

1           **Q.     Have there been developments that are relevant to the 700 MW versus**  
2           **857 MW discussion?**

3           A.     Yes. Let me first say that I do not agree with any suggestion that an electric  
4           utility cannot prudently build or acquire some level of capacity for RES compliance above  
5           the bare minimum prior to conducting analyses these parties suggest is needed for RES  
6           compliance, as I discussed at pages 29 to 30 of my direct testimony. However, any question  
7           regarding having RES compliance capacity above 700 MW has become moot because the  
8           Company's agreement to acquire the Brickyard Hills project company was terminated by  
9           the project developer on July 25, 2019.

10          **Q.     Why did the developer terminate the agreement?**

11          A.     Under the Build Transfer Agreement ("BTA") for the 157 MW Brickyard  
12          Hills project, if the transmission network upgrade costs exceed a certain level specified in  
13          the BTA, the project developer has a right to terminate the agreement. Network upgrade  
14          studies issued by the Midcontinent Independent System Operator, Inc. ("MISO") on July  
15          19, 2019 indicated that the transmission network upgrade costs for Brickyard Hills would  
16          be approximately \$400 million--several multiples of the level specified in the BTA and,  
17          consequently, the developer chose to terminate the BTA.

18          **Q.     Assuming the CCN for the Outlaw project that is the subject of this**  
19          **case is approved by the Commission, what will be the total maximum capacity for**  
20          **RES compliance projects that are still proceeding for which Ameren Missouri would**  
21          **have approval?**

22          A.     If both the remaining projects (High Prairie, approved in File No. EA-2018-  
23          0202, and this one) are constructed at their maximum possible capacities, the Company

1 would have 699 MW of the at least 700 MW necessary for RES compliance in 2021. As  
2 discussed in my direct testimony in this case, we do not know today if the two remaining  
3 projects will be completed at their maximum capacities. The High Prairie Project could be  
4 completed at 350 MW and Ameren Missouri would still purchase it according to the BTA  
5 terms, and the Outlaw project could be completed at a capacity as low as 175 MW and the  
6 BTA would still require that the Company purchase it at that capacity. It is certainly  
7 possible the entire 699 MW will be completed and at present we believe that this is the  
8 likely result, but until all transmission studies are final on both projects, and until  
9 construction is complete, one cannot say for certain.

10 **Q. Please comment more broadly on the impact of transmission**  
11 **interconnection issues on these RES compliance wind projects.**

12 A. As evidenced by the Brickyard Hills termination, being able to timely and  
13 cost-effectively connect to the transmission system is critical to being able to complete  
14 these kinds of projects. As we were making decisions on these projects, the likelihood of  
15 running into transmission interconnection problems on the High Prairie project (approved  
16 in File No. EA-2018-0202) was obviously much less than it turned out to be for Brickyard  
17 Hills and we believed it was less than it was for Outlaw because the new Mark Twain  
18 transmission line to which High Prairie will connect was specifically developed by MISO  
19 to address transmission constraints in that area. However, we were cognizant of the  
20 potential impact of transmission interconnection cost uncertainty on both Brickyard Hills  
21 and Outlaw when we were deciding which projects to choose and what the terms of the  
22 contracts would be. We were also cognizant of the compliance need (at least 700 MW of

1 Missouri wind) and the risk that a project might not “make it,” as has happened with  
2 Brickyard Hills, or might not be built to its maximum possible capacity.

3 **Q. How does this issue relate to the fact that Outlaw could connect to SPP**  
4 **or could connect to MISO?**

5 A. Outlaw was one of the short-listed projects out of the original 13 projects  
6 identified in the Request for Proposals ("RFP") discussed in my direct testimony because  
7 it was one of the best three projects we identified. It also had a unique advantage in terms  
8 of mitigating transmission interconnection risk because Tradewind (the project developer)  
9 had secured a favorable spot in two different transmission interconnection queues, MISO  
10 and Southwest Power Pool ("SPP"). Having spots in both queues reduced the chance that  
11 transmission interconnection costs would kill the project or delay it such that it could not  
12 be completed in 2020, which would allow it to take advantage of the full Production Tax  
13 Credits ("PTCs") available for 2020 projects. However, just getting in both queues doesn't  
14 keep the option to connect to either SPP or MISO alive because to maintain the spots in  
15 both queues requires the developer to spend substantial sums of money (millions of dollars)  
16 to fund the necessary transmission studies that each regional transmission operator  
17 requires. Tradewind was willing to spend the money necessary to maintain both queue  
18 positions \*\*\*( )\*\*\*, but only if  
19 Tradewind could decide which interconnection option to choose.

20 **Q. Has Tradewind made that choice?**

21 A. Not yet, but as I indicated in my direct testimony it is more likely that  
22 Tradewind will decide to connect to SPP for the reasons I discussed and, in particular, due

to the greater schedule certainty (and thus less risk of not getting the project done in 2020) associated with the SPP option.

**Q. Please discuss the schedule issues further.**

A. First, the Outlaw project is a “sister” project of the recently completed Rock Creek project also developed by Tradewind and which is also located in Atchison County. As explained in my direct testimony, if the project is to connect in SPP it will use gen-tie facilities already in place for Rock Creek which will lower the overall project cost on a per-kilowatt basis as compared to a connection in MISO. Because that gen-tie line is already in place, there is one less significant task on the critical path of getting the project in service, which means the schedule to get an SPP-connected project done is shorter than if a new gen-tie line must be constructed and connected to the substation.

\*\*\*

\*\*\*

Finally, and perhaps more importantly, the risk of timely completion is outside of Tradewind's control for the MISO option, whereas Tradewind controls that risk (and can take steps to eliminate or mitigate it) for the SPP option.



1           **Q.     What about the impact of interconnection costs for each of the options?**

2           A.     The currently-expected interconnection costs for the SPP are \$16.3 million  
3     and for the MISO option \$15.9 million. These levels are close to those assumed in our  
4     economic analyses. I would also note that on a per-kilowatt basis and accounting for all  
5     construction costs, including interconnection costs, gen-tie line, etc., the SPP option is less  
6     expensive than the MISO option.

7           **Q.     Does this conclude your surrebuttal testimony?**

8           A.     Yes, it does.

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

In the Matter of the Application of Union )  
Electric Company d/b/a Ameren Missouri for )  
Permission and Approval and a Certificate of )  
Public Convenience and Necessity Under )  
4 CSR 240-3.105. )

File No. EA-2019-0181

**AFFIDAVIT OF AJAY K. ARORA**

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

Ajay K. Arora, being first duly sworn on his oath, states:

1. My name is Ajay K. Arora. I work in the City of St. Louis, Missouri, and I am employed by Union Electric Company d/b/a Ameren Missouri as Vice President of Power Operations and Energy Management.

2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of Union Electric Company d/b/a Ameren Missouri consisting of 7 pages and Schedule(s) no schedules, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

\_\_\_\_\_  
AJAY K. ARORA

Subscribed and sworn to before me this 12 day of August, 2019.

\_\_\_\_\_  
Notary Public

My commission expires:

GERI A. BEST  
Notary Public - Notary Seal  
State of Missouri  
Commissioned for St. Louis County  
My Commission Expires: February 15, 2022  
Commission Number: 14839811