

Exhibit No.: _____
Issue(s): High Prairie Wind Farm/
Plant-In-Service-Accounting/Cryptocurrency
Mining/Keeping Current/Late Fees
Witness/Type of Exhibit: Marke/Direct
Sponsoring Party: Public Counsel
Case No.: ER-2021-0240

DIRECT TESTIMONY

OF

GEOFF MARKE

Submitted on Behalf of the Office of the Public Counsel

**UNION ELECTRIC COMPANY
D/B/A AMEREN MISSOURI**

FILE NO. ER-2021-0240

September 3, 2021

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

In the Matter of the Union Electric)
Company d/b/a Ameren Missouri's)
Tariffs to Increase its Revenues for)
Electric Service) Case No. ER-2021-0240
)
)

AFFIDAVIT OF GEOFF MARKE

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Geoff Marke, of lawful age and being first duly sworn, deposes and states:

- 1. My name is Geoff Marke. I am a Chief Economist for the Office of the Public Counsel.
- 2. Attached hereto and made a part hereof for all purposes is my direct testimony.
- 3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.




Geoff Marke
Chief Economist

Subscribed and sworn to me this 3rd day of September 2021.



TIFFANY HILDEBRAND
My Commission Expires
August 8, 2023
Cole County
Commission #15637121



Tiffany Hildebrand
Notary Public

My Commission expires August 8, 2023.

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DIRECT TESTIMONY
OF
GEOFF MARKE
UNION ELECTRIC COMPANY
D/B/A AMEREN MISSOURI
CASE NO. ER-2021-0240

1 **I. Introduction**

2 **Q. Please state your name, title and business address.**

3 A. Geoff Marke, PhD, Chief Economist, Office of the Public Counsel (OPC or Public Counsel),
4 P.O. Box 2230, Jefferson City, Missouri 65102.

5 **Q. What are your qualifications and experience?**

6 A. I have been in my present position with OPC since 2014 where I am responsible for economic
7 analysis and policy research in electric, gas, water, and sewer utility operations.

8 **Q. Have you testified previously before the Missouri Public Service Commission?**

9 A. Yes. A listing of the Commission cases in which I have previously filed testimony and/or
10 comments is attached in Schedule GM-1.

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

12 The purpose of my testimony is to provide support for my recommendation to disallow costs
13 associated with Ameren Missouri's recovery of costs related to the High Prairie Wind Farm,
14 Plant-In-Service Accounting ("PISA") capital projects, Cryptocurrency Mining, Keeping
15 Current (and other related income-eligible policy), and Late Fees.

16 **II. Wind Curtailment from Excessive Take of Protected and Endangered**
17 **Species**

18 **Q. How large is Ameren Missouri's High Prairie Wind Farm?**

19 A. High Prairie is an approximately 400 MW wind generation facility consisting of 175 wind
20 turbines in Schuyler and Adair Counties spanning more than 60,000 acres. It is my
21 understanding that it is the largest wind generation facility in Missouri.

1 **Q. Is the High Prairie Wind Farm operating full-time (i.e., when it is windy)?**

2 A. No.

3 **Q. Why not?**

4 A. Because the High Prairie Wind Farm has killed large numbers of threatened and endangered
5 species in a short period putting into jeopardy the continued operation of the facility.

6 **Q. Can you provide some background?**

7 A. According to the “Project Description and History” section of the Stantec 2021 *Spring Post-*
8 *Construction Bat Mortality Monitoring Report of High Prairie Renewable Energy Center*
9 submitted on June 15, 2021:

10 Due to the potential risk of take^[1] of the federally-endangered Indiana bat (*Myotis*
11 *sodalis*) and federally-threatened northern long-eared bat (*Myotis septentrionalis*)
12 during operations, Ameren applied for an Incidental Take Permit (ITP)^[2] for these
13 species, as well as for the little brown bat (*Myotis lucifugus*). In the interim, the Project

¹ A **take** is a technical term, which here means: “the unintentional death of a threatened or endangered species due to the operation of a wind farm or accompanying transmission or distribution lines.”

From Section 3(18) of the Federal Endangered Species Act: “The term ‘**take**’ means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

Threatened species is defined as “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range - - as defined in the Endangered Species Act.”

Endangered species is defined as “The classification provided to an animal or plant in danger of extinction within the foreseeable future throughout all or a significant portion of its range.” US Fish & Wildlife Service (2021) Midwest Region Endangered Species Glossary.

<https://www.fws.gov/midwest/endangered/glossary/index.html>

² An **incidental take permit** is a permit issued under Section 10 of the United States Endangered Species Act (ESA) to private, non-federal entities undertaking otherwise lawful projects that might result in the take of an endangered or threatened species. Application for an incidental take permit is subject to certain requirements, including preparation by the permit applicant of a conservation plan. A **habitat conservation plan** (HCP) must accompany an application for an incidental take permit. The purpose of the habitat conservation planning process associated with the permit is to ensure there is adequate minimizing and mitigating of the effects of the authorized incidental take. The purpose of the incidental take permit is to authorize the incidental take of a listed species, not to authorize the activities that result in take.

1 operated under a Technical Assistance Letter (TAL)^[3] from the U.S. Fish and Wildlife
2 Service (USFWS).

3 To avoid potential effects to the Indiana bat and northern long-eared bat, the TAL
4 required feathering^[4] of all turbines below 6.9 meters-per-second (m/s) for 0.5 hour
5 before sunset to 0.5 hour after sunrise when air temperatures were above 50°F from
6 March 15 through October 31 based on the 10-minute rolling average at each individual
7 turbine. Due to the fatality of a male Indiana bat at the Project in September 2020,
8 Ameren voluntarily increased the avoidance measures to involve no operation of the
9 turbines when temperatures were above 50°F starting on March 15, 2021. Another
10 fatality was discovered on April 15, 2021; Ameren voluntarily stopped all night time
11 operations starting on April 19, 2021, but continued post-construction monitoring
12 under the TAL until the ITP was issued on May 14, 2021.⁵

13 To be clear, the High Prairie Wind Farm has been curtailed from before dusk to after dawn
14 since April 19, 2021.

15 **Q. That excerpt only covers up to mid-June. Is High Prairie still not operating at night?**

16 A. High Prairie is still not operating at night.

17 **Q. Did the report provide information on the amount and type of “takes” taken to date?**

18 A. No. Only over a nine-week period (15 March – 14 May). During that period, four bat carcasses
19 (including the endangered Indiana bat) and 52 birds were identified (including the federally

³ A **technical assistance letter** is an informal consultation with US Fish and Wildlife Services (USFWS) in which information of a project is shared with the USFW and allows USFW to provide information on the presence and of protected species. The applicant/agency must then determine whether a project may affect identified species.

⁴ **Feathering** is the force stoppage of the rotor and can be done at high or low speeds for different reasons (e.g., feathering at high speeds because it exceeds maximum rate speed; and feathering at low speeds because the probability of bats being “taken” is more likely).

⁵ See GM-2.

1 protected bald eagle and a Virginia rail, a species of concern for the Missouri Department of
2 Conservation).^{6,7}

3 **Q. Will there be future reports to provide insight and status on the project?**

4 A. I would think so. Alternatively, I hope to provide the Commission with a better and more
5 accurate overview through discovery in future testimony. The operational status of the wind
6 farm is clearly an evolving issue.

7 **Q. Do we have any sense of how many takes have occurred since mid-May?**

8 A. Based on conversations with Ameren Missouri, the number of taken endangered Indiana bats
9 has increased to the point where the USFWS has ratcheted up mitigation measures directly
10 affecting the operation of the High Prairie wind farm. As a result, and out of an abundance of
11 caution, Ameren Missouri has continued to curtail High Prairie at night (before dusk to after
12 dawn) until at least Oct. 31.

13 A recent USFWS posting of documented Indiana bat fatalities at wind energy facilities is
14 provided in Table 1 with a map of the location of all documented Indiana bat fatalities in Figure
15 1. According to this information, Ameren Missouri's High Prairie Wind Farm is responsible
16 for 32% of all recorded wind farm related Indiana bat fatalities to date in the United States and
17 it has only been in operation approximately one year with at least 25% of that time (at night)
18 in full curtailment.⁸

⁶ Bat carcasses include an Eastern Red Bat, Silver-haired Bat, Indiana Bat and an Unknown (Big Brown bat or Hoary bat).

⁷ Bird carcasses include (but are not limited to): 10 Red-Tailed Hawks; 7 European Starlings, 6 Turkey Vultures, 3 Golden-crowned Kinglets, 3 Rough Legged Hawks, 3 Horned Larks, 2 Ruby-Crowned Kinglets, and a Killdeer. Four additional carcasses could not be identified at the species level.

⁸ Pruitt, L & M. Reed (2021) Indiana Bat fatalities at wind energy facilities. US Fish & Wildlife Service. Midwest Region. <https://www.fws.gov/midwest/wind/wildlifeimpacts/inbafatalities.html>

1 Table 1: Documented Indiana bat fatalities at wind energy facilities to date (High Prairie highlighted)⁹

State	Estimated Date of Death	Sex	Age	Habitat Description
Indiana	September 8-9, 2009	Female	Adult	93% agricultural land use; less than 1% forest
Indiana	September 17, 2010	Female	Adult	93% agricultural land use; less than 1% forest
Pennsylvania	September 25, 2011	Female	Young of Year	Primarily forested area
West Virginia	July 7, 2012	Male	Adult	Forested Ridgeline with a few wetland resources (small streams and wetlands along the ridgeline)
Ohio	October 2-3, 2012	Female	Adult	Crop land and developed land are 98% of project area
Ohio	October 7-9, 2013	unknown	Adult	Crop land and developed land are 98% of project area
Ohio	April 13-14, 2014	Female	Adult	Crop land and developed land are 98% of project area
Indiana	August 23, 2015	unknown	unknown	88% agricultural land use; 6% forest
Iowa	July 13, 2016	unknown	unknown	89% agricultural land use; 5% forest
Illinois	September 23, 2016	unknown	unknown	Crop land and developed land are 92% of project area
Indiana	July 2017*	unknown	unknown	88% agricultural land use; 6% forest
Indiana	May 1, 2018	unknown	unknown	87.5% agricultural land use; 6.5% forest; 5% developed
Indiana	September 17, 2018	male	unknown	87.5% agricultural land use; 6.5% forest; 5% developed
Indiana	September 18, 2019	unknown	unknown	88% agricultural land use; 6% forest
Iowa	September 1, 2020	Male	Adult	corn/soybean agriculture
Iowa	September 10, 2020	unknown	unknown	corn/soybean agriculture
Missouri	October 2, 2020	Male	unknown	79% agricultural/pasture land use; 21% forest
Indiana	October 9, 2020	unknown	unknown	88% agricultural land use; 6% forest
Ohio	October 13, 2020	unknown	unknown	Crop land and developed land are 98% of project area
Missouri	April 15, 2021	Female	Adult	79% agricultural/pasture; 21% forest
Missouri	May 28-June 2, 2021	Female	Adult	79% agricultural/pasture; 21% forest
Missouri	May 28-June 3, 2021	Male	Adult	79% agricultural/pasture; 21% forest
Missouri	May 28-June 2, 2021	Female	Adult	79% agricultural/pasture; 21% forest
Missouri	June 4-June 8, 2021	Female	Adult	79% agricultural/pasture; 21% forest
Missouri	June 10-June 14, 2021	Male	Adult	79% agricultural/pasture; 21% forest
Missouri	June 10-June 14, 2021	Male	Adult	79% agricultural/pasture; 21% forest
Missouri	June 17-June 21	unknown	Adult	79% agricultural/pasture; 21% forest
Indiana	August 3, 2021	unknown	unknown	88% agricultural land use, 6% forest
Indiana	August 23, 2021	unknown	unknown	82% agricultural land use; 8% forest; 5% developed
Indiana	August 25, 2021	Male	unknown	88% agricultural land use; 7% forest

**High Prairie
Wind Farm**

**High Prairie
Wind Farm**

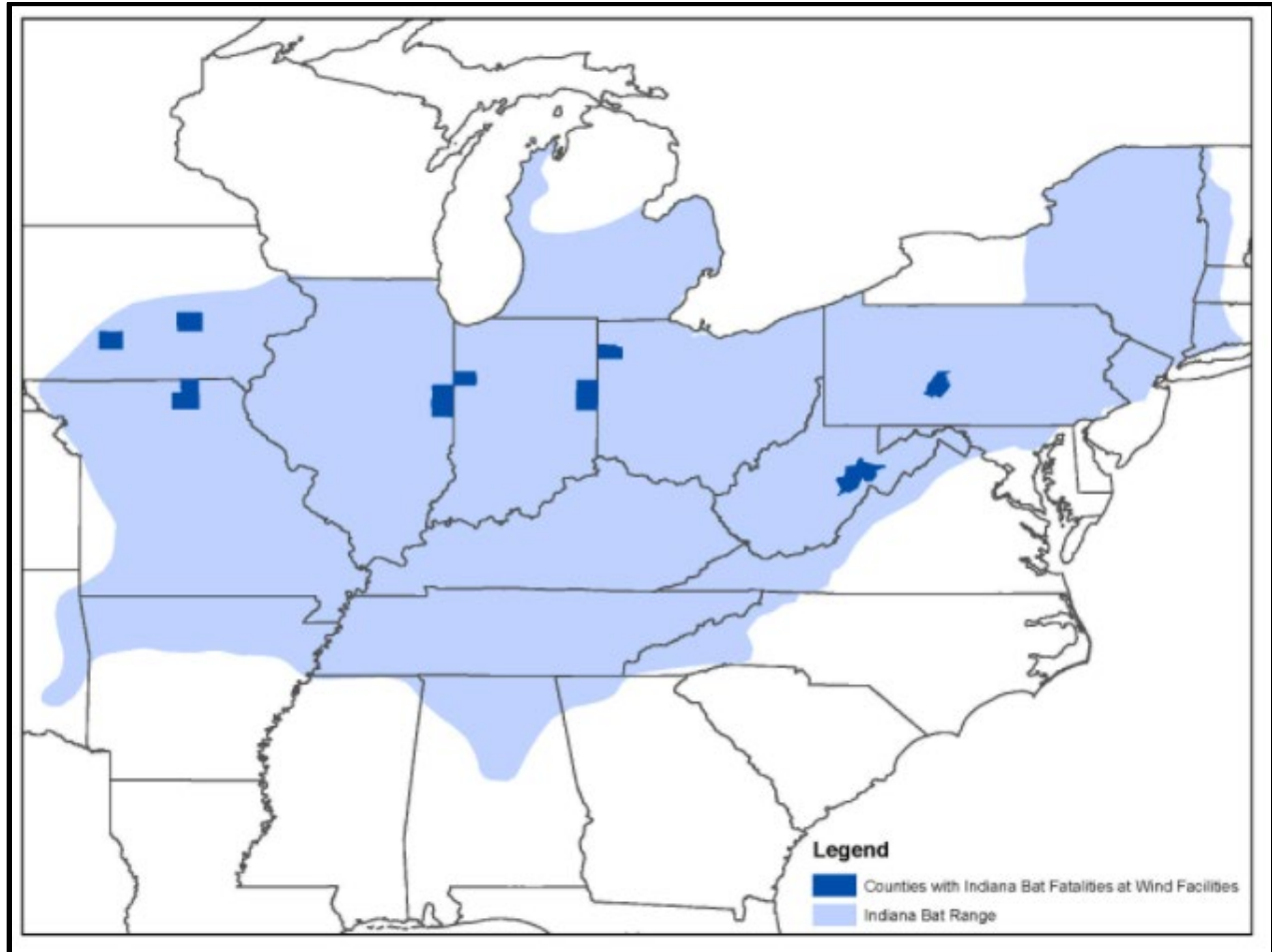
2

3

*high uncertainty in estimated date of death; advanced decomposition of carcass when found on August 10

⁹ Ibid.

1 Figure 1: Location of documented Indiana bat fatalities at wind facilities¹⁰



2
3 I cannot speak to any other bird or bat species take numbers to date, but will update accordingly
4 in future testimony.

5 **Q. Are you confident that these numbers accurately represent all of the bird and bat species**
6 **deaths the High Prairie wind farm has caused?**

7 **A.** No. Nor would one reasonably expect to collect all of the carcasses generated from a 400 MW
8 wind farm that stretches across 60,000 acres of land. My understanding is that statistical
9 samples of set plots and times are conducted to provide a probability score, which is then

¹⁰ Ibid.

1 translated into an assumed take rate at a later date by the USFWS. If Ameren Missouri exceeds
2 that, further mitigation efforts could be enforced.

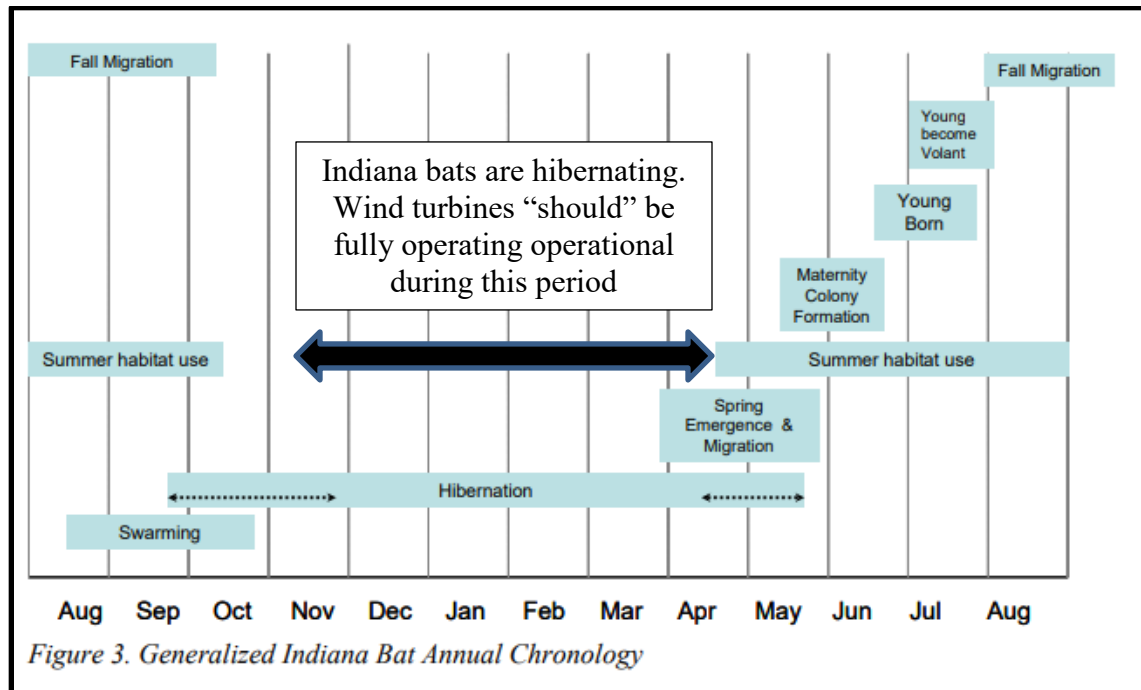
3 **Q. Is it unusual to only operate a wind farm during part of the year?**

4 A. Yes. Properly sited wind farms should not have forced curtailments that are in effect for
5 prolonged periods of time. I am aware of no wind farm either operated by an investor owned-
6 utility in Missouri or through a power purchase agreement that has produced this sort of fatal
7 impact on endangered and threatened species nor been subject to such strong mitigation action.

8 **Q. Do we have a sense of the Indiana bat’s migration, habitat and hibernation patterns on
9 an annual basis?**

10 A. Yes. Figure 2 provides a generalized Indiana Bat annual cycle. Additional emphasis has been
11 placed when High Prairie would not be curtailing at night (i.e., during bat hibernation).

12 Figure 2: Generalized timing of Indiana of Indiana bat cycle¹¹



13 ¹¹ Herrington, K. (2021) Biological Opinion and Conference Opinion on the U.S. Fish and Wildlife Service’s approval of a Habitat Conservation Plan and the issuance of an associated Endangered Species Act Section 10(a)(1)(B) Permit (High Prairie Wind Energy Center, Adair and Schuyler Counties, MO, TAILS No. 03E14000-2016-TA-1577). US Dept. of Interior https://ecos.fws.gov/docs/plan_documents/bobs/bobs_3351.pdf

1 **Q. Are there recommendations on siting wind farms to mitigate the impact on endangered**
2 **bats?**

3 A. Yes. The 2021 Nature Conservancy’s report, “Site Wind Right: Accelerating Clean, Low-
4 Impact Wind Energy in the Central United States” cites to a 2016 USFWS report that
5 recommends to avoid wind development within 32 km of Indiana bats priority 1 hibernacula,
6 16 km of priority 2 hibernacula, and 8 km of other current and historical sites including bat
7 roosts.¹² Known bat roosts have been plotted by the Nature Conservancy on Figure 3 for US-
8 specific bat roosts:

9 Figure 3: US-specific bat roosts¹³



10

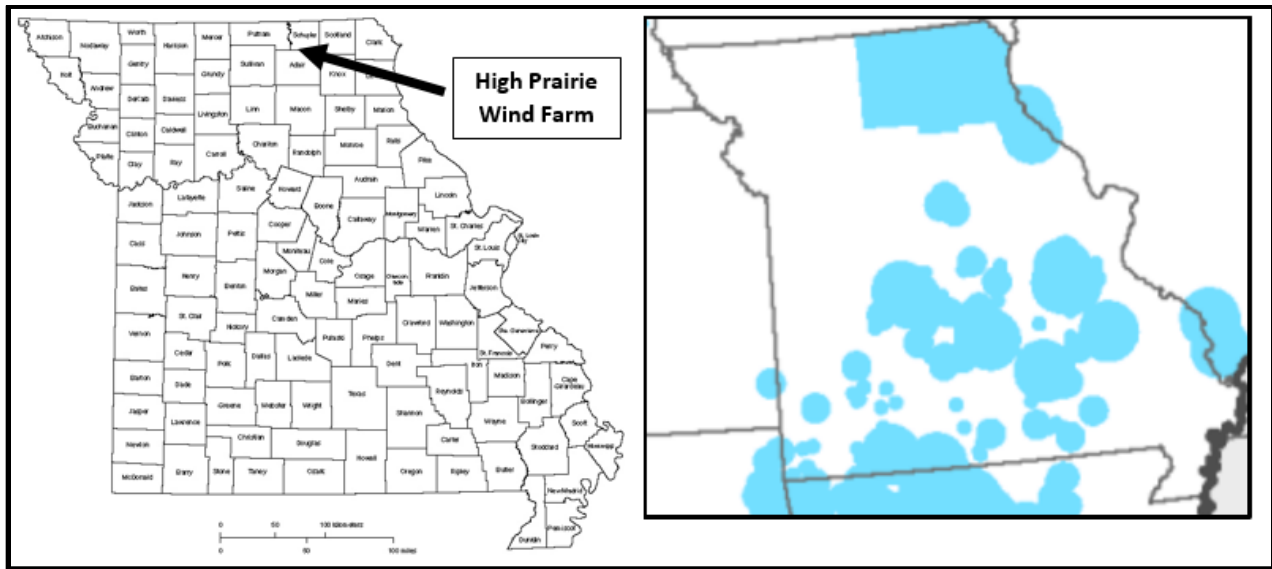
¹² Fuhr, M. et al. (2021) Site Wind Right: Accelerating Clean, Low-Impact Wind Energy in the Central United States: Bat roosts https://www.nature.org/content/dam/tnc/nature/en/documents/SWR_Methods_20190703.pdf

¹³ Ibid.

1 **Q. Are Schuyler and Adair counties (where High Prairie Wind Farm is located) in known**
2 **bat roosts areas?**

3 A. Yes. Figure 4 enhances the Nature Conservancy's report to focus on Missouri and additional
4 emphasis has been added to indicate the locations of Schuyler and Audrain counties.

5 Figure 4: Missouri-specific bat roosts



6
7 **Q. Did anyone bring up the future liability of Ameren Missouri taking ownership of a farm**
8 **on a location associated with endangered species?**

9 A. Yes. I filed rebuttal and surrebuttal testimony in Case No: EA-2019-0202 along with Dr.
10 Kathryn Womack (Bat expert), Dr. Janet Haslerig (Eagle expert) and Missouri Department of
11 Conservation Policy Coordinator Jennifer Campbell advising the Company against the siting
12 of High Prairie and liability inherent of that specific location in relation to both the Indiana bat
13 and bald eagles.

14 **Q. You mentioned that High Prairie has also taken a bald eagle. Is Ameren pursuing an ITC**
15 **for bald eagles as well?**

16 A. Yes and golden eagles. If High Prairie were to somehow take an excessive amount of those
17 federally protected species it may run the risk of curtailment during the day as well.

1 **Q. Did the USFWS advise against operating a wind farm at the High Prairie location?**

2 A. It is not clear to me what USFWS position was on Ameren Missouri operating a wind farm at
3 this location. I will update that as I obtain further information. I do know that USFWS cannot
4 prevent a wind farm from being built. It can only enforce punitive action if said farm is in
5 violation of the law.

6 **Q. What other concerns do you have regarding High Prairie?**

7 A. I am concerned that the Company may not meet its Renewable Energy Standard (“RES”)
8 requirement due to the excessive take of protected species. As such, I do not believe ratepayers
9 should be responsible for any costs related to Ameren’s poor managerial decisions in electing
10 to site its wind farm where it did. I do not know whether or not this specific facet will be
11 germane to this proceeding or a future RESRAM filing; however, I would like to bring it to
12 the Commission’s attention nonetheless.

13 **Q. What is your recommendation to the Commission?**

14 A. At this point, I feel like any recommendation is premature as I am still collecting and analyzing
15 data and records. As it stands, I would recommend that 25% of the costs related to the High
16 Prairie Wind Farm be removed from the revenue requirement to account for the fact that High
17 Prairie is only operational 75% of the year. However, I reserve the right to amend this based
18 on new information, discovery, and further analysis.

19 **III. Plant in Service Accounting (“PISA”)**

20 **Accountability**

21 **Q. Did you express concerns regarding accountability of PISA investments in Ameren**
22 **Missouri’s last rate case?**

23 A. I did. In my rebuttal testimony in Case No: ER-2019-0335 I testified as follows:

24 **Q. What is your response to Mr. Wood highlighting future grid upgrades as a**
25 **customer driven focus within Ameren Missouri’s Smart Energy Plan?**

1 A. What are the quantified benefits? Where are the cost-benefit ratios and analysis?
2 What are the performance measures? Where is the risk-informed distribution
3 project evaluation or prioritization?

4 To date, there has not been a single performance measure offered. No reliability
5 metrics, no O&M savings, no demand response savings, nothing. Instead, the
6 Commission was given a filing that contained a list of projects and a seven-page
7 “report” without any historic or accountable metrics.

8 I have not seen one cost-benefit analysis on any of the projects. I would, for
9 example, be very interested in how Ameren Missouri has determined it is cost-
10 effective to underground over 300 miles of its distribution system after its most
11 recent IRP said:

12 22% of the [distribution system] lines are underground which provide a
13 more aesthetically pleasing experience and are less susceptible to weather
14 **but cost significantly more and take longer to fix.**¹⁴ (Emphasis added).

15 Or how 4kV substation replacement programs will deliver positive benefit-cost
16 ratios or why the Plan omits any Conservation Voltage Reduction when Ameren
17 Illinois estimated a 1.5% drop in energy use from their investment.¹⁵

18 **Q. Could you provide some illustrative examples of metrics you would like to**
19 **see?**

20 A. Literally anything would be a good start.

21 Beyond what I referenced already, one illustrative example could be Ameren
22 Missouri’s historic and projected (2013 to 2023) distribution rate base dollar per
23 customer amount against the Company’s historic and projected energy sales and
24 system peak and how those numbers compare with US IOU averages. These

¹⁴ EO-2018-0038 Chapter 7 Transmission and Distribution pp. 17-19.

¹⁵ See GM-3.

1 metrics could be cross referenced with SAIDI, SAIFI, and CAIDI scores to
2 show whether previous distribution investments produced meaningful results.

3 In short, I would want to see some (or any) justification that ratepayers \$5
4 billion + spend on “customer-driven focus” distribution investments will result
5 in customer benefits and not just gold plating a utility’s distribution system.
6 Certainly, PISA accounting treatment can produce benefits beyond paperless
7 billing.

8 The lack of transparent, robust quantitative data is especially disconcerting
9 given the uncertainty surrounding Ameren Missouri’s baseload coal plants,
10 which, separate and aside from PISA, may induce billions of dollars in
11 additional investments. Unfortunately, I have little assurance on that issue as
12 well as the Company never modeled such a scenario in its IRP.¹⁶

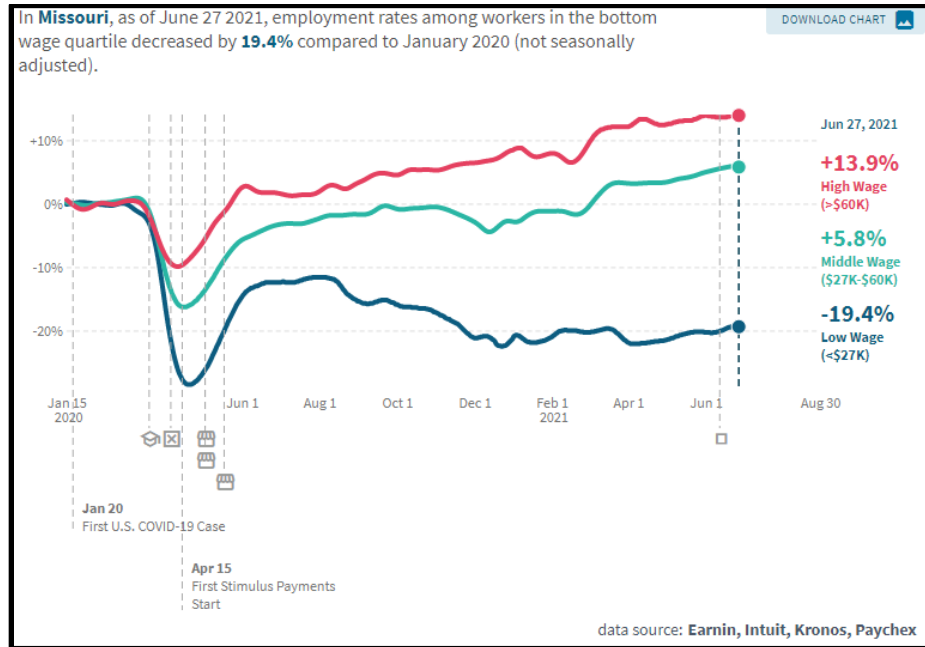
13 **Q. Has anything changed since Ameren Missouri’s last rate case?**

14 A. No, not as far as any meaningful actions on Ameren Missouri’s part to provide accountability
15 or transparency regarding its PISA investments. I am aware of zero cost-benefit studies that
16 support Ameren Missouri’s PISA investments, nor have I seen a single proposed metric to
17 support performance accountability or managerial prudence.

18 The lack of cost-benefit studies and performance accountability metrics aside, a global
19 pandemic and economic recession both occurred since Ameren Missouri’s last rate case. The
20 impact and subsequent recovery has been uneven across its service territory. This is illustrated
21 in Figures 5 and 6, which shows how employment and consumer spending have changed from
22 pre-COVID-19 onset through this summer for Missouri.

¹⁶ ER-2019-0335 Rebuttal Testimony of Geoff Marke p. 5, 12-23 to p. 6.

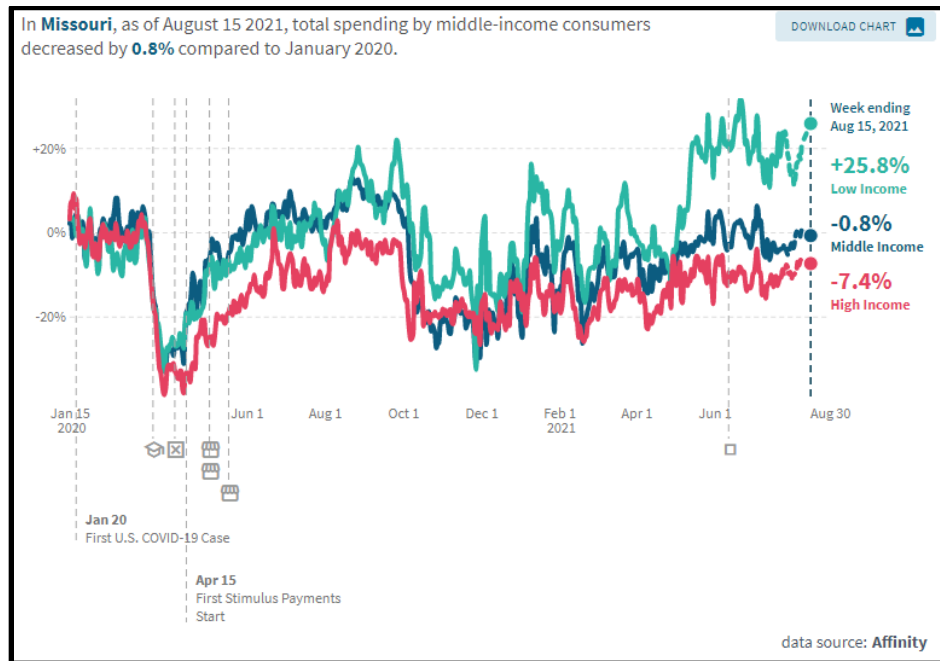
1 Figure 5: Percent Change in Employment as of June 27, 2021¹⁷



June 27, 2021

- +13.9% High Wage (>\$60K)
- +5.8% Middle Wage (\$27K - \$60K)
- 19.4% Low Wage (<\$27K)

2
 3 Figure 6: Missouri Consumer spending by income as of August 15, 2021¹⁸



June 27, 2021

- +25.8% Low Wage (<\$27K)
- 0.8% Middle Wage (\$27K - \$60K)
- 7.5% High Wage (>\$60K)

4
¹⁷ Opportunity Insights: Economic Tracker (2021) Missouri <https://www.tracktherecovery.org/>
¹⁸ Ibid.

1 **Q. What do these tables show?**

2 A. That low-income consumers (<\$27K per year) have seen employment rates decrease 19.4%
3 since January of 2020 and consumer spending increase 25.8%.¹⁹ Clearly, there are various
4 conclusions that can be drawn from this data; but I point out that low wage low employment
5 rate and increased low wage consumer spending cannot be sustained, and imposing a double-
6 digit rate increase on the essential service of electricity now could profoundly impact Ameren
7 Missouri's most vulnerable customers.

8 Not all have suffered from the global pandemic and recession. Ameren Missouri's parent,
9 Ameren, saw its stock valuation drop to a low of \$62.93 in March of 2020, then has rebounded
10 + 41% to \$88.76 through the COVID-19 pandemic as of Sept. 1, 2021 as shown in Figure 7.

11 Figure 7: 5-year Ameren Corp. Market Summary



12 ¹⁹ Franck, T. (2021) July consumer prices jump 5.4% but core inflation rises less than expected. *CNBC*.
<https://www.cnbc.com/2021/08/11/cpi-report-july-2021.html>

1 **Q. What do you recommend regarding Ameren Missouri’s capital expenditures?**

2 A. First, I hope that Ameren Missouri responds to my testimony with both cost-benefit analyses
3 of its PISA capital investments and with reasonable performance metrics to benchmark its
4 success in addressing the problems they are attempting to solve through their billion dollar
5 investments.²⁰ Absent that, I recommend the Commission consider these omissions in light of
6 Ameren Missouri’s case-in-chief when examining the prudence of Ameren Missouri’s
7 investments laid out in Staff’s Cost of Service Report and in setting Ameren Missouri’s return
8 on equity. Furthermore, I encourage the Commission to order Ameren Missouri to provide this
9 information now and in its open PISA docket Case No: EO-2019-0044.

10 It is my understanding that the PISA legislation may be renewed for another five years in the
11 near future. I find it troubling that renewing this legislation would be taken seriously when
12 regulators and advocates cannot convincingly explain what issues the first few years of capital
13 investment solved.

14 **Voltage Optimization Plan**

15 **Q. What is Voltage Optimization?**

16 A. Some utilities overpower homes and businesses with more voltage than is needed. This is a
17 symptom of inefficiencies in the electric system that can negatively impact people’s wallets,
18 health, and the environment. If voltage were “right-sized,” customers would only get the
19 power they need to sufficiently power their appliances and devices, while building a cleaner,
20 more efficient electricity system in the process. Voltage optimization is an electrical energy
21 saving technique to support efficient distribution investments.

22 **Q. Do you support voltage optimization as Ameren Missouri grid investments via PISA?**

23 A. Yes. I also strongly recommend the Company provide rebuttal testimony as to why it has not
24 included a voltage optimization plan similar to that of its affiliate Ameren Illinois in its smart
25 grid investments.²¹ If the Company continues to ignore my arguments, I recommend that the

²⁰ Benchmarks beyond merely increasing CAPEX year-over-year.

²¹ See GM-3.

1 Commission order Ameren Missouri to respond and consider why such “low hanging” and
2 seemingly highly efficient investments (especially if targeted at low and moderate income
3 households) have not been included to date in its PISA investments.

4 At a minimum, I advise the Commission to review GM-4 which includes an actual plan and
5 cost-benefit analysis of the planned capital investment for Ameren Illinois. I strongly
6 encourage Ameren Missouri to review said document as a reasonable template for the sort of
7 analysis that I expect to be undertaken before executing PISA investments. Such an analysis
8 would be considered prudent management. The lack of such an analysis calls into question the
9 prudence of any investment.

10 **IV. Cryptocurrency Mining**

11 **Q. Is Ameren Missouri exploring cryptocurrency for its regulated services?**

12 A. Yes. In Ameren Missouri’s most recent fuel adjustment filing (“FAC”) in Case No: ER-2022-
13 0026 Company witness J. Neil Graser prefiled testimony requesting \$8,042 in cost deferrals
14 and stating the following for support of that request:

15 This small increase arose from electricity consumed for a research and development
16 project being conducted near the Sioux Energy Center. The project is evaluating
17 flexible data centers to determine whether, among other things, they can be operated
18 as a dispatchable resource supporting the network’s stability or delivering other
19 benefits to the grid. These data centers may also provide new revenues (e.g., by
20 **producing digital assets**) that if put into day-to-day operation in providing service
21 could be used to contribute to affordability of service. (Emphasis added).²²

22 **Q. That testimony does not contain any reference to cryptocurrency. How did you learn that 23 cryptocurrency is related to the R&D project?**

24 A. It was revealed through a recent phone conference between OPC, Staff and the Company that
25 “producing digital assets” is a roundabout way to say “mining for Bitcoin.”

²² ER-2022-0026 Direct Testimony of J. Neil Graser p. 5, 13-19.

1 **Q. Please explain.**

2 A. It is my understanding that Ameren Missouri is utilizing a storage center housed with high-
3 powered computers adjacent to the Sioux Energy Center where it is actively mining for Bitcoin.
4 The Company has framed this endeavor as a research and development (“R&D”) study in
5 demand response. That is, the R&D investment—the high-powered computers and storage
6 center housing the computers can be “turned off” on a moment’s notice during peak hours;
7 thus, it is a demand response asset. It is less clear how the cryptocurrency would translate into
8 lower rates for customers or what would happen if the endeavor results in excess costs to
9 customers.

10 **Q. Are any of the capital investments from this “R&D” project in the Company’s case-in-
11 chief?**

12 A. Not to my knowledge.

13 **Q. Then why are you raising this issue?**

14 A. Because Ameren Missouri apparently intends for its customers to pay for the electricity used
15 at these data centers through its fuel adjustment clause. Also out of an abundance of caution to
16 make sure this issue is fully vetted before the Commission should/when these costs appear later
17 in “true-up” I have elected to address this in direct testimony to give Ameren Missouri (and
18 other parties) ample time to respond.

19 **Q. What is your opinion regarding how to treat these cryptocurrency mining costs?**

20 A. I recommend that no cost related to the Company’s cryptocurrency endeavors be included in
21 rate base and/or funded with ratepayer backing, including the electricity consumed. If Ameren
22 Missouri wants to enter into speculative commodities, like virtual currencies, then it should do
23 so as a non-regulated service where ratepayers are unexposed to the economics of them. This
24 endeavor is beyond the scope of intended electric utility regulation, and, if allowed, creates a
25 slippery slope where ratepayers could be asked to put up capital for virtually anything. I
26 believe this is a straightforward enough and obvious argument that I need not expound further,
27 but if the Company (or other parties) feel differently, I will gladly provide more rationale in

1 surrebuttal testimony for why captive Missouri ratepayers should not be funding non-essential
2 gambles on the commodities market. I merely request Ameren Missouri make its case in
3 rebuttal testimony if it believes it *may* include costs related to its R&D project in true-up or
4 confine cryptocurrency mining to its non-regulated services.

5 **V. Keeping Current**

6 **Q. What is Ameren Missouri's Keeping Current program?**

7 A. Introduced in October 2010, the purpose of the Keeping Current Low-Income Pilot Program
8 (Keeping Current) is to provide electric bill payment assistance to customers meeting the
9 eligibility requirements (150% or below federal poverty level) while assessing the delivery
10 methods used in this program and the impacts on Ameren Missouri's revenues and costs.

11 Keeping Current has three (3) categories of participants:

12 A. Participants in the Keeping Current Electric Heating Program category –

13 Limited to electric space heating customers on the Residential Service Rate 1(M) who
14 have an income level at or below 150% of the Federal Poverty Level (“FPL”) enrolled
15 by a program agency designated by the Company.

16 Eligible participants receive \$60 to \$90 monthly bill credit.

17 B. Participants in the Keeping Current Non-Electric Heating Program category –

18 Limited to non-electric space heating customers on the Residential Service Rate 1(M)
19 who have an income level at or below 150% of the FPL enrolled by a program agency
20 designated by the Company.

21 Eligible participants receive \$35 to \$40 bill credit June through August.

22 C. Participants in the Keeping Current Cooling Program category –

23 Limited to electric space cooling customers on the Residential Service Rate 1(M) who
24 are either 1) elderly, 2) disabled, 3) have a documented chronic medical condition, or 4)
25 live in households with one or more children five (5) years of age or younger and the
26 customer in one of these categories has an income that is no more than 150% of the FPL
27 enrolled by an agency designated by the Company.

1 Eligible participants receive a \$25 bill credit June through August.

2 Importantly, the Keeping Current eligibility threshold was modified during COVID-19 to
3 expand from 150% FPL to 200% through December 31, 2021. The Keeping Cool eligibility
4 threshold was modified during COVID-19 to expand to from 150% FPL to 250% through
5 December 31, 2021.²³

6 To date, there have been four process and impact evaluations and one bill payment
7 assistance design study report completed by a third party evaluator, Applied Public Policy
8 Research Institute for Study and Evaluation (“APPRISE”).²⁴

9 **Q. What was the outcome of the Keeping Current program from Ameren Missouri’s last**
10 **rate case?**

11 A. In Case No. ER-2019-0335, parties entered into a non-unanimous stipulation and
12 agreement in which the total budget for Keeping Current was increased from \$1.3 million
13 to \$2 million, with a 50/50 ratepayer/shareholder funding sharing mechanism for the entire
14 budget.²⁵ Additionally, Ameren Missouri agreed to contract out a third-party study of the
15 program consistent with the recommendations made in my testimony in that case.

16 **Q. Have any other significant events occurred since the last rate case that have impacted the**
17 **Keeping Current program?**

18 A. Yes. As a result of the ongoing COVID-19 pandemic and economic recession:

19 1.) There was a moratorium on disconnections (for a brief period);²⁶

20 2.) More than \$7.5 million dollars in shareholder contributions for bill assistance;²⁷

²³ See GM-5 for a breakdown of family size by income eligibility for various benefits programs.

²⁴ See GM-6 for a copy of the APPRISE Bill Payment Assistance Design Study Report

²⁵ It is important to note that Ameren Missouri’s tariff does not reflect the ordered non-unanimous stipulation and agreement and needs to be amended as soon as possible.

²⁶ Ameren Missouri began its disconnection moratorium on March 16, 2020 and resumed disconnections in August 2020. Ameren Missouri also temporarily put in a disconnection moratorium during the holiday season 2020-2021.

²⁷ Approximately \$7 million in “below-the-line” funds as a result of a settlement agreement with OPC and Ameren Missouri were originally intended for Community Action Agencies’ weatherization efforts. Due to the inability to weatherize homes due to possible exposure to the COVID-19 virus it was agreed that these funds would be redirected for Ameren Missouri’s Clean Slate Program. An additional \$500K “below-the-line” funds were made available to current and former T.E.H. Realty tenants prior to the COVID-19 pandemic. It is my understanding that Ameren

1 3.) Additional funding from the federal government made available for low income
2 arrearages;²⁸ and

3 4.) Eligibility modifications to the Keeping Current program to expand the programs reach to
4 households above the 150% FPL threshold as well as funding for a program advocate/director.

5 **Q. Can you provide a summary of the results of the “needs assessment” section of the**
6 **APPRISE study on Ameren Missouri’s service territory?**

7 A. The needs assessment highlighted the following insights as it pertains to Ameren Missouri’s
8 service territory:

- 9 • Most households heat with non-electric service. Electric heating customers were more
10 likely to have income at lower FPL²⁹
- 11 • The mean energy burden ranged from 4% for households between 250 and 300 percent
12 FPL to 19% for households at or below 100 percent of FPL³⁰
- 13 ○ The mean energy burden was consistently higher for electric space heating
14 homes
- 15 • 10% of households (approximately 107,712) in Ameren Missouri’s service territory
16 had income at or below 100% (\$26,500 family of four)
- 17 • 17% of households (approximately 183,110) in Ameren Missouri’s service territory
18 had income at or below 150% (\$39,750 family of four)³¹

Missouri provided additional funds above and beyond what was agreed to from the 2nd non-unanimous stipulation and agreement in Case No: ER-2019-0335.

²⁸ See also the Missouri Housing Development Commission’s (“MHDC”) State Assistance For Housing Relief (“SAFHR”) website: <https://www.mohousingresources.com/safhr> which includes \$323,694,749.30 for rental, mortgage and utility assistance. As of this writing, 8/30/2021, MHDC has awarded \$75.3M. <https://www.mohousingresources.com/> & https://8b7cf04e-2de3-4caf-8acf-bef3e9f9fd73.filesusr.com/ugd/8ff70b_6928d6bc7de3488d9a202631283c6951.pdf

²⁹ Non-electric heating especially prevalent among low-income households in the St. Louis area, northeast Missouri and St. Charles.

³⁰ Energy burden is defined as the percentage of gross household income spent on energy costs. According to DOE’s Low-Income Energy Affordability Data (LEAD) Tool the national average energy burden for low-income households is 8.6%, three times higher than for non-low-income households which is estimated at 3%. In Ameren Missouri’s service territory it is approximately five times higher for non-low-income households. US DOE. (2021) Low-income Community Energy Solutions. <https://www.energy.gov/eere/slsc/low-income-community-energy-solutions>

³¹ Households at or below 150% of poverty levels were more heavily concentrated in southeast Missouri, the city of St. Louis and northeast Missouri

- 1 ○ 36% of these households (65,920) had children under 18
- 2 ○ 31% of these households (56,764) had a member over 62
- 3 ○ 39% of these households (71,423) had a disabled member

- 4 • 1.2% (2,197) of households at or below 150% in Ameren Missouri’s service territory
- 5 participate in Keeping Current³²

6 The Commission should note that these numbers are most likely affected by the economic fall-
7 out and subsequent federal and utility response to the COVID-19 pandemic. I believe the
8 numbers represent a reasonable assurance of the program’s current and potential targeted
9 demographics.

10 **Q. What modification did APPRISE recommend to Keeping Current?**

11 A. Key recommendations for various program design parameters are summarized below by
12 category:

- 13 1. Administration: Ameren Missouri should continue to administer Keeping Current with
14 assistance from the agencies on outreach, intake, and data management.
- 15 2. Outreach: Ameren Missouri should conduct additional outreach for Keeping Current
16 through agencies and their own call center representatives.
- 17 3. Intake: Agencies should continue to encourage customers to visit offices for in-person
18 Keeping Current intake but should also provide flexibility to customers who are unable to
19 visit the office.
- 20 4. Income Eligibility: Ameren Missouri should maintain the current income eligibility level
21 of 150 percent of the FPL. They should base eligibility on one month of income to ensure
22 that customers who recently became unemployed due to COVID-19 are eligible.
- 23 5. Other Eligibility Requirements: Ameren Missouri should continue the following additional
24 eligibility requirements.
 - 25 • Weatherization: Apply for the program.

³² Keeping Current is targeted at those households who agencies feel will be able to make their monthly payments, remain on the program, and receive arrearage forgiveness

- 1 • LIHEAP: Apply for the program (continued) and apply benefits to Ameren
2 Missouri bill if an Ameren Missouri gas or Ameren Missouri electric heating
3 customer (new).
- 4 • Consistent Bill: Enroll in budget billing (in the absence of a new Percentage of
5 Income Program that provides a fixed monthly bill)
- 6 6. Additional Populations: Ameren Missouri should consider enhanced benefits for formerly
7 homeless customers to help them pay off past balances and open a new Ameren Missouri
8 account.
- 9 7. Recertification: Ameren Missouri should continue to require participants to re-certify their
10 eligibility every two years. This will be especially important if they move to a Percentage
11 of Income Payment Program (“PIPP”).
- 12 8. Enrollment Level: Ameren Missouri and its approved agencies should provide additional
13 outreach as discussed above to reach more customers with this program.
- 14 9. Bill Subsidy Determination: Ameren Missouri should consider moving to a PIPP to
15 provide participants with a fixed energy burden at an affordable level.
- 16 10. Target Energy Burden: Ameren Missouri should consider targeting a three percent energy
17 burden for alternative electric heat participants and a six percent energy burden for electric
18 heat participants. If the cost of these energy burden targets is beyond a target program
19 budget, Ameren Missouri should consider a somewhat higher energy burden to reduce
20 costs.
- 21 11. Minimum Payments and Maximum Credits: Ameren Missouri should consider a minimum
22 monthly payment and a maximum annual credit to limit program costs. Customers who
23 reach the maximum annual credit should be targeted for weatherization.
- 24 12. Arrearage Forgiveness: Ameren Missouri should continue the arrearage forgiveness
25 program. We recommend that forgiveness be provided for bills that are made up following
26 the initial bill due date. Participants should receive education so that they understand that
27 this is an important benefit of the program.

1 13. LIHEAP: Ameren Missouri and its approved agencies should provide additional education
2 and outreach to ensure that participants apply for LIHEAP assistance. They should send
3 reminders to participants to re-apply to LIHEAP and emphasize that participants can
4 receive benefits from both LIHEAP and Keeping Current at the same time.

5 14. Energy Efficiency: Ameren Missouri should prioritize high usage Keeping Current
6 participants for weatherization. It should educate landlords about the program and
7 encourage landlords to provide authorization for program measures

8 15. Program Removal: Participants are currently removed from Keeping Current if they are
9 not current within two billing cycles. Apprise recommends that customers remain on
10 Keeping Current as long as they remain customers and are not terminated due to
11 nonpayment. APPRISE also recommends that customers receive monthly bill credits for
12 all made up past due monthly bills.

13 **Q. Do you agree with APPRISE's recommendations?**

14 A. In part. Many of the recommendations are already in place (intake, outreach, recertification,
15 etc...). Other recommendations, including the Bill Subsidy and Target Energy Burden
16 sections, require further consideration before I would endorse them. That being said, I have
17 three specific modifications from the APPRISE study I would like to endorse moving forward.
18 They are:

19 1.) Additional populations: Presently, the Keeping Current/Cool programs focus on income-
20 eligible households and elderly populations. I support the APPRISE Study's suggestion to
21 consider targeting customers who are formerly (or in the process of no longer being) homeless.
22 I will speak more about the design of this proposed pilot later in this testimony.

23 2.) Minimum Payments: I recommend the Keeping Current tariff be modified to allow
24 customers to receive a Keeping Current benefit despite two non-payments and/or up to four
25 payments of a minimum of \$25 for up to four consecutive billing cycles. The current tariff
26 allows for removal only after non-payment of two consecutive billing cycles. The \$25 is
27 slightly more than the average (mean) minimum payment threshold identified in the APPRISE

1 literature review and the four consecutive business billing periods is a reasonable extension of
2 the current two consecutive cycles.

3 3.) Non-Payment: I support the APPRISE recommendation that the tariff be modified to allow
4 Keeping Current participants to remain in the program as long as they are not terminated due
5 to nonpayment. I do not believe this would apply to many customers; however, I could see a
6 compelling case if the customer (for unusual reasons) has not been terminated for non-payment
7 then they should not be removed from the program.

8 **Q. In APPRISE's literature review of best practices, what program model was highlighted**
9 **for Ameren Missouri?**

10 A. APPRISE selected the PIPP framework as most appropriate/effective moving forward for
11 Keeping Current program modification. This selection was made based on an extensive
12 literature review of income eligible programs across utilities in the United States. Importantly,
13 the scope, budget, goals and funding source(s) of these programs varied widely.

14 **Q. What is the PIPP framework?**

15 A. PIPP payments are based on a percentage of household income and are consistent year-round.
16 For example, a PIPP could be set at 6% of your household income for each of your electric
17 bills; the balance would then be subsidized (by the utility/ratepayers/state).

18 **Q. What is your position regarding APPRISE's PIPP recommendations?**

19 A. The PIPP model comes highly recommended, not only by APPRISE, but also in discussions I
20 have had with other regulators/advocates in states that utilize such programs. However,
21 implementation in Missouri could be challenging due to the prohibition on any unreasonable
22 preferences or prejudices under § 393.130.3 RSMo.

1 **Q. What are your specific recommendations regarding your proposed targeted homeless**
2 **pilot program?**

3 A. The APPRISE Study identified three non-profits as viable Keeping Current/Keeping Cool
4 recipients including The St. Patrick Center,³³ The Haven of Grace,³⁴ and Gateway 180.³⁵ I
5 would also extend outreach to local Veterans Assistance (“VA”), the Missouri Veterans
6 Endeavor, and other veteran outreach efforts.

7 In addition to targeting formerly homeless populations, I recommend additional program
8 flexibility to allow these former customers to open new accounts—namely, bad debt
9 forgiveness (but also waiving the deposit fee and possibly bill credits) associated with
10 rehousing. For this specific pilot program, I would recommend an annual budget of \$500K
11 split evenly between ratepayers and shareholders to be funded until Ameren Missouri’s next
12 rate case where it can be examined in greater detail. Any unspent funds can be directed to the
13 Keeping Current or Keeping Cool programs respectively.

14 **Q. Do you have any additional recommendations?**

15 A. I have two more.

³³ **St. Patrick Center** works with individuals transitioning out of shelters and places them into permanent housing. St. Patrick Center provides wraparound services to help these individuals maintain their current homes. While clients are not responsible for rent payments, they are responsible for utility bill payments. St. Patrick partners with Ameren Missouri and Spire Inc. to provide resources to individuals transitioning from a homeless shelter to permanent housing. Ameren Missouri and Spire both allow case managers to log into a portal system to review clients’ bill histories and make pledges to prevent disconnection of services. Clients can complete an application and St. Patrick Center can perform the intake. APPRISE study p. 33.

³⁴ **The Haven of Grace** refers individuals to the St. Patrick Center’s rapid rehousing program that provides support for individuals to quickly exit homelessness. However, they felt it would also be helpful to partner with Ameren because some of the women who have come through The Haven of Grace have had past due utility bills and would benefit from energy assistance. The Haven of Grace is potentially interested in working with Ameren to provide energy assistance to formerly homeless individuals. They reported that while clients do not reside at the shelter for very long, they remain connected through the childcare service. They felt that Ameren could increase outreach for the Keeping Current/Keeping Cooling programs among homeless shelters. APPRISE study p. 33.

³⁵ **Gateway180** connects homeless individuals to resources and programs that reduce housing barriers. Their rapid rehousing case manager prioritizes helping individuals to secure housing and connects these individuals to utility assistance programs. Gateway180 has spoken with Ameren but currently does not have a formal partnership. They are interested in such a partnership with their rapid rehousing program. Currently they refer clients to St. Patrick Center and the Urban League for enrollment in Keeping Current. APPRISE study p. 33-34.

1 I recommend that Ameren Missouri’s Customer Service Reps (“CSRs”) who receive calls from
2 customers struggling to pay bills ask for consent from that customer to forward their contact
3 information to the relevant Community Action Agency (“CAA”) so that a representative from
4 a CAA may contact them about weatherizing their home free of charge and other assistance if
5 eligible.

6 I also recommend that Ameren Missouri conduct a three-year pilot program (up to \$500K
7 annually split evenly between ratepayers and shareholders) consistent with the framework
8 Critical Needs Program agreed to in the non-unanimous stipulation and agreement in the most
9 recent Spire rate case, Case No: GR-2021-0108.

10 **Q. What is the Critical Needs Program?**

11 A. In Case No. GR-2021-0108, Legal Services of Eastern Missouri recommended the funding and
12 adoption of a pilot program modeled after Baltimore Gas & Electric’s (“BG&E”) Critical
13 Needs Program (“CNP”). The BG&E program recognized that there are vulnerable customers
14 who may not have the capacity to research and apply for assistance, negotiate reasonable
15 payment plans, or properly navigate the application process. Yet their circumstances make
16 them particularly vulnerable to harm if they become disconnected. In response, the CNP
17 streamlines and expedites the processes to help customers stay connected. The pilot’s initial
18 goal was to implement immediate access to existing resource assistance (bill payment, repair,
19 consumer protections, etc.) to customers that seek assistance in nontraditional utility CSR
20 venues (e.g., hospitals, public and private assistance agencies, shelters, etc.). The CNP is a
21 voluntary program that trains customer “navigators,” who work in nontraditional utility CSR
22 venues. The navigators utilize a simple form under a “fast-track” protocol that provides an
23 expedited process that should:

- 24 • Maintain or restore utility services
- 25 • Avoid negative impacts on residents with serious medical conditions
- 26 • Address build-up of utility bill arrears
- 27 • Provide a streamlined process to complementary services

1 **Q. Is this still a pilot program for BG&E?**

2 A. No. The program's success lead it to becoming a statutory requirement for utilities in
3 Maryland, and the service is now largely administered by the State's Social Service
4 Department with additional funding through Maryland's Fuel Fund program.

5 **Q. Wouldn't those elements (Department of Social Service and an independent funding
6 stream) be beyond the scope of the Commission's power in this case?**

7 A. They would; however, I am not suggesting anything more than what parties in Spire's recent
8 rate case agreed, which was to model the initial pilot program that BG&E produced, other than
9 for Ameren Missouri to partner with Spire and contribute an equivalent amount in funding this
10 endeavor to maximize program efficiency.

11 **Q. Do you have any additional information to share on this topic of critical needs
12 customers?**

13 A. I have spoken with BG&E representatives, and they have expressed a willingness to help
14 Ameren Missouri and interested stakeholders with the mechanics behind such a program. I
15 have also included attachments GM-7A through GM-7D, which provide more detail about the
16 Maryland program as well as sample customer consent forms (both paper and internet). I
17 recommend program financing of up to \$500K annually (split 50/50 between
18 ratepayers/shareholders) for the three-year pilot program, with regular meetings from
19 interested stakeholders in the Keeping Current collaborative to see if equivalent success can be
20 achieved for Ameren Missouri's customers as the BG&E pilot produced. Ameren Missouri's
21 outreach and community engagement is already one of the best in the state. Given the existing
22 resources, utilizing the BG&E model framework, and partnering with Spire, I believe this
23 could produce excellent results.

24 **Q. Can you summarize your recommendations as it pertains to low-income programs?**

25 A. Yes. I support the following positions:

- 26 • Keeping Current/Cool minimum payment: Modify tariff to allow customers to receive
27 a Keeping Current benefit despite two non-payments and/or up to four payments of a

1 minimum of \$25 for up to four consecutive billing cycles (e.g., non-payment, non-
2 payment, \$25, \$25; or \$25, non-payment, \$25, \$25.; or \$25, \$25, \$25, \$25, etc...);

- 3 • Keeping Current/Cool Non-Payment: I support the APPRISE recommendation that the
4 tariff be modified to allow Keeping Current participants to remain in the program as
5 long as they are not terminated due to nonpayment;
- 6 • CSR Weatherization Referral: Direct Ameren Missouri’s CSR’s who receive calls from
7 customers struggling to pay bills to ask for consent from that customer to forward their
8 contact information to the relevant Community Action Agency (“CAA”) so that a
9 representative from a CAA may contact them about weatherizing their home free of
10 charge and other assistance if eligible;
- 11 • Re-Housing & Returning Customer Pilot Program: Conduct a three-year pilot program
12 (\$500K 50/50 ratepayer/shareholder) that coordinates with non-profit shelters and VA
13 and VA non-profit supporting agencies in clearing bad debt for former homeless
14 customers re-housing in Ameren Missouri’s service territory.
- 15 • Critical Needs Pilot Program: Conduct a three-year pilot program (\$500K 50/50
16 ratepayers/shareholders) consistent with the framework originally designed by BG&E
17 (known currently as the Maryland Critical Needs Program) and adopted in the non-
18 unanimous stipulation and agreement in Spire’s most recent rate case;

19 VI. LATE FEES

20 Q. What are the purported benefits associated with late fees?

21 A. The two arguments supporting the continued use of late fees include: 1.) greater revenue
22 assurance (late fees offset the revenue requirement assuming the Company is not over-
23 earning); and 2.) late fees should (theoretically) encourage timely payments.

24 Q. Do you support late payment fees?

25 A. No. I have not seen any evidence to support that late payment fees are an appropriate deterrent
26 to non-payment, and I believe that any additional fee added to an already financially struggling
27 customer will increase the likelihood of disconnection. I believe the threat of disconnection is

1 the primary deterrent to incentivize timely payments, and that Ameren Missouri should be
2 doing everything in its power to provide an affordable service, which should include
3 minimizing punitive charges that make it more likely for already struggling customers to fall
4 off.

5 **Q. Do you know of any Commissions that recently ordered elimination of late fees?**

6 A. Yes. The Kentucky Public Service Commission ruled against their continued use in Case No:
7 2020-00141.³⁶ I am also aware that many state commissions ordered suspending late fees
8 throughout the COVID-19 pandemic.

9 **Q. What is Ameren Missouri's late payment fee?**

10 A. 1.5% is added onto a customer's bill, if their bill is unpaid at the delinquent date.

11 **Q. Do you have any recommendations to modify this amount?**

12 A. I recommend that Ameren Missouri's late fees be lowered to match the short term debt
13 recommendations made by OPC witness David Murray, which is 0.25% annually. Such an
14 amount would more accurately reflect the cost of service, minimize the punitive pressure on
15 struggling customers and still incentivize timely payments by having the "threat" of late
16 payment.

17 **Q. Does this conclude your testimony?**

18 A. Yes.

³⁶ See GM-8