

Ameren Missouri

**Renewable Energy Standard
Compliance Plan
2025-2027**

Prepared in Compliance with 4 CSR 240-20.100

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Introduction

The Missouri Renewable Energy Standard (RES) began as a public initiative and was placed on the Missouri ballot during the November 4, 2008 election. Labeled as Proposition C, it required Ameren Missouri to acquire renewable energy resources as a percentage of total retail sales.

As part of the statute and rulemaking, Section (8) (A) required investor-owned utilities to file a report demonstrating how compliance was met in the previous calendar year, and Section (8) (B) requires investor-owned utilities to file a plan that covers their intended compliance measures for the current year plus the following 2 years.

Compliance with RES can be achieved using RECs from qualified renewable generation resources (wind, hydro, biomass, solar etc.) certified by the Missouri Department of Natural Resources (MoDNR). The MoDNR Division of Energy is responsible for providing renewable certification. The RES requires a percentage of RECs come from designated solar resources or (S-RECs).

The RES allows for two methods to achieve compliance. The first is based on providing enough RECs to meet the requirement, and the other is related to the 1% rate cap calculation. A utility will be in compliance with the RES if the cost of compliance is equal to or greater than the 1% rate cap calculation. Thus, a utility could fall short of meeting the RECs requirement, but if the 1% calculation is met, then the utility is in full compliance.

The following table details the renewables percentage requirements of retail electric sales for the non-solar and solar RES:

<u>Time Period</u>	<u>Total Renewable Requirement</u>	<u>Solar*</u>
2011-2013	2%	2%
2014-2017	5%	2%
2018-2020	10%	2%
2021-forward	15%	2%

*Solar percentages are applied to the Total Renewable Requirement RES amounts

As referenced above, the MoDNR is responsible for certifying all eligible renewable resources that can be utilized to meet the RES requirement. MoDNR rule 10 CSR 140-8.010 (2), contains the list of renewable resources eligible to achieve RES compliance.

Ameren Missouri's compliance with the RES, as demonstrated in this report, adheres to the use of only those renewable resources as currently defined by the above referenced rule.

In addition, the RES rules allow for the banking of RECs for up to a three-year time period. This will allow for the use of eligible RECs generated from January 1, 2022 to

the end of 2024 in meeting the RES requirements for calendar year 2024. Any generation and/or RECs from a Missouri renewable resource are entitled to a factor of 1.25 applied to each MWh or REC.

The following information in this report demonstrates the specific means by which Ameren Missouri intends to meet its obligations under both the non-solar and solar RES for the calendar years 2025-2027.

Section (8) (B) 1 A: Planned Actions to Comply

Non-Solar RES

Ameren Missouri currently operates the following eligible non-solar renewable resources:

- Keokuk Hydro-Electric Generation Station
- Maryland Heights Renewable Energy Center (Landfill Gas)
- High Prairie Renewable Energy Center (Wind)
- Atchison County Renewable Energy Center (Wind)¹

The Ameren Missouri Keokuk Hydro-Electric Generation Station is located on the Mississippi River in Keokuk, Iowa. The station consists of 15 separate generators. The individual nameplate ratings range from 7.2 to 8.8 megawatts (MWs). This generation facility is wholly owned by Ameren Missouri and has been operational since 1913. Due to fluctuations in river flows, generation can range from approximately 738,833 to 1,017,277 MWh annually.

On June 16, 2012, the Maryland Heights Renewable Energy Center (MHREC) became commercially operational. This facility burns methane gas produced by the IESI Landfill in Maryland Heights, Missouri in three Solar 4.9 MW Mercury 50 gas turbines to produce electricity. In recent years, the generation has ranged from 53,358 to 67,284 MWh annually. In accordance with RSMo 393.1030, a factor of 1.25 is applied to the in-state generation from this facility such that the expected generation counts as 66,697 to 84,105 MWh towards the compliance requirements.

On December 23, 2020, the 400 MW High Prairie Renewable Energy Center (HPREC) became commercially operational. This wind farm is in Adair and Schuyler counties, Missouri and consists of 175 wind turbines covering about 50,000 acres. The estimated generational output is approximately 945,033 MWh to 1,351,200 MWh annually, weather dependent. In accordance with RSMo 393.1030, a factor of 1.25 is applied to the in-state generation from this facility such that the expected generation counts as 1,181,291 to 1,689,000 MWh towards the compliance requirements.

¹ High Prairie, Atchison and Maryland Heights Renewable Energy Center were constructed for RES compliance.

On March 2, 2021, the Atchison County Renewable Energy Center (AREC) became operational at a reduced capacity of 120.0 MW and by December 22, 2021 reached its full operational capacity of 298.6 MW. This wind farm is located in Atchison County Missouri and consists of 91 turbines covering about 30,000 acres. The estimated generational output is approximately 866,400 MWh to 1,099,600 MWh annually, weather dependent. In accordance with RSMo 393.1030, a factor of 1.25 is applied to the in-state generation from this facility such that the expected generation counts as 1,083,000 to 1,374,500 MWh towards the compliance requirements.

Solar RES

In late 2010, Ameren Missouri completed the installation of approximately 100 kilowatts (kW) of solar generation capacity at its headquarters facility located in St. Louis. Generation from this facility will be utilized to help meet the solar requirements of the RES.²

In addition, on August 28, 2013, due to the passage of HB 142, the RES law was amended. That amendment provided that if a customer accepts a solar rebate from the utility, the S-RECs transfer to the utility.

In 2018, Senate Bill 564 (SB 564) became law. One of the provisions of this law is that up to \$28 million in solar rebates be made available to customers that install solar generation on their property between 2019-2023. Ameren Missouri expects to receive the S-RECs from these customer-owned resources pursuant to the provisions of SB 564.

Ameren Missouri estimates that in 2025-2027 approximately 100,000 S-RECs per year will be acquired from customer generators under the terms of the two solar rebate programs for systems that become operational in 2023 and earlier. In accordance with RSMo 393.1030, a factor of 1.25 is applied to the in-state generation from these facilities such that the expected generation counts as 125,000 S-RECs annually towards the compliance requirements.

In addition to solar rebate payments, SB 564 requires Ameren Missouri to invest at least \$14 million in additional utility-owned solar generation. The \$14 million has been utilized to support community-based projects through Ameren Missouri's Neighborhood Solar Program. On July 21, 2021 the South St. Louis Renewable Energy Center (REC) became commercially operational – the first solar facility supported by the Neighborhood Solar Program. On July 20, 2022, the Cape Girardeau Renewable Energy Center (REC) became commercially operational. On July April 18, 2023 the Fee Fee Renewable Energy Center (REC) became commercially operational. On April 28, 2023, the North Metro Renewable Energy Center (REC) became commercially operational. On July 28, 2023, the Delmar Renewable Energy Center (REC) became commercially operational. On September 7, 2023, the House Springs Renewable Energy Center (REC) became commercially operational – the final solar facility supported by the Neighborhood Solar Program. The estimated combined generational output is approximately 3,984 kWh

² Constructed for RES compliance.

annually, weather dependent. In accordance with RSMo 393.1030, a factor of 1.25 is applied to the in-state generation from these facilities such that the expected generation counts as 4,980 MWh towards the compliance requirements.

Ameren Missouri completed construction on its first utility-scale solar generation project, the O'Fallon Renewable Energy Center (OREC) in November 2014.³ This 5.7 MW (DC) facility is located at the site of the Ameren Missouri O'Fallon substation in O'Fallon, Missouri. The expected annual output for 2025-2027 is approximately 4,824 MWh based on the last five years of historical performance data. In accordance with RSMo 393.1030, a factor of 1.25 is applied to the in-state generation from this facility such that the generation counts as 6,030 MWh towards the compliance requirements.

On September 16, 2019, the BJC Solar Facility became commercially operational. This facility is 1.8 MW (DC) PV project located on the top of an existing parking garage at Barnes Jewish Hospital in St. Louis, MO. The total generational output of this facility during CY 2024 was 846 MWh and is assumed to remain at a similar level for years 2025-2027. In accordance with RSMo 393.1030, a factor of 1.25 is applied to the in-state generation from this facility such that the expected generation counts as 1,057 MWh towards the compliance requirements.

On December 13, 2024, the Huck Finn Solar Facility became commercially operational. This facility is 200 MW (DC) PV project located in Audrain & Ralls County MO. The estimated generational output is approximately 411,979 MWh to 466,207 MWh annually, weather dependent. In accordance with RSMo 393.1030, a factor of 1.25 is applied to the in-state generation from this facility such that the expected generation counts as 514,974 to 582,759 MWh towards the compliance requirements.

Planned Actions

For the 2025-2027 compliance years, Ameren Missouri will continue to utilize the generational output from the Keokuk, MHREC, HPREC, and AREC facilities to meet non-solar RES compliance. Ameren Missouri will continue to place RECs associated with the actual generation from these facilities into the North American Renewable Registry (NAR) account.

For the 2025-2027 compliance years, Ameren Missouri will continue to use the generational output from OREC, BJC Solar, Huck Finn, Neighborhood Solar facilities, and the S-RECs received from Ameren Missouri customer generators to meet solar RES compliance. Ameren Missouri will continue to place RECs associated with the actual generation from these facilities into the NAR account.

In addition, Ameren Missouri was issued certificate of convenience and necessity March 21, 2024 to construct and own the Vandalia Solar, Bowling Green Solar, and Split Rail Solar Projects and under the plan, RECs from each will be utilized to support RES compliance requirements.

³ Constructed for RES compliance.

The Vandalia Solar Project is a 50 MW solar resource located in Vandalia, MO. The Vandalia Solar Project could be utilized to meet RES compliance upon completion of construction and is certified as a qualified renewable energy resource by the MoDNR, which is expected in 2025. The estimated generational output for the Vandalia Solar is approximately 114,209 MWh to 120,627 MWh annually, weather dependent. In accordance with RSMo 393.1030, a factor of 1.25 is applied to the in-state generation from this facility such that the expected generation counts as 142,761 to 150,784 MWh towards the compliance requirements.

The Bowling Green Solar Project is a 50 MW solar resource located in Bowling Green, MO. The Bowling Green Solar Project could be utilized to meet RES compliance upon completion of construction and the facility is certified as a qualified renewable energy resource by the MoDNR, which is expected in 2026. The estimated generational output for the Bowling Green Solar is approximately 113,943 MWh to 120,410 MWh annually, weather dependent. In accordance with RSMo 393.1030, a factor of 1.25 is applied to the in-state generation from this facility such that the expected generation counts as 142,429 to 150,513 MWh towards the compliance requirements.

The Split Rail Solar Project is a 300 MW solar resource located in Warren County, MO. The Split Rail Solar Project could be utilized to meet RES compliance upon completion of construction and is certified as a qualified renewable energy resource by the MoDNR, which is expected in 2027. The estimated generational output for the Split Rail Solar is approximately 620,400 MWh to 658,400 MWh annually, weather dependent. In accordance with RSMo 393.1030, a factor of 1.25 is applied to the in-state generation from this facility such that the expected generation counts as 775,500 to 823,000 MWh towards the compliance requirements.

While beyond the three-year period directly covered by this Plan, Ameren Missouri will seek approval for, and expects to begin construction in 2026 and 2027 on, an additional 450 MW of solar resources, which are being constructed in order to meet its post-2027 RES compliance requirements.

Existing and future solar resources are expected to be sufficient to fulfill the solar RES requirement in each year from 2025-2027. Excess S-RECs can then be utilized to meet non-solar compliance in each period. However, even after the addition of Huck Finn Solar, Vandalia Solar, and Bowling Green Solar a shortfall in non-solar compliance is expected in 2025 and 2026 and will continue to utilize spot market REC purchases in the short term (2025-2027) to meet compliance. As noted above, the annual renewable generation for solar, wind, and hydroelectric resources is subject to significant year over year variation based on weather. To account for this variation, Ameren Missouri assesses multiple production levels for RES compliance facilities by modeling expected renewable generation output at higher probability of exceedance levels, to ensure compliance will be

met on an annual basis⁴. To that end, Tables 2, 3, and 4 reflect estimated generational output at approximately a P-90 production level for Ameren Missouri's largest compliance assets: High Prairie REC, Atchison REC, Keokuk, and Huck Finn Solar.

Actual retail load can also fluctuate annually, potentially causing a higher or lower required compliance level than forecasted. Ameren Missouri will continue to utilize spot market REC purchases in the short term (2025-2027) to meet compliance.

Table 1. Compliance Requirements

	<u>2025</u>	<u>2026</u>	<u>2027</u>
Projected Retail Electric Load (MWh)	30,589,394	33,103,354	34,933,625
Renewable Requirement (%)	15%	15%	15%
Non-Solar	14.7%	14.7%	14.7%
Solar	0.3%	0.3%	0.3%
RES Requirement (MWh)	4,588,409	4,965,503	5,240,044
Non-Solar	4,496,641	4,866,193	5,135,243
Solar	91,768	99,310	104,801

Table 2. Non-Solar Compliance Resources

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Table 3. Solar Compliance Resources

<i>Resource Output (MWh)</i>	<u>2025</u>	<u>2026</u>	<u>2027</u>
O'Fallon REC*	6,030	6,000	5,970
AMO Headquarters Solar*	103	103	102
BJC Solar*	1,053	1,047	1,042
Neighborhood Solar*	4,680	4,657	4,633
Huck Finn Solar*	592,165	589,204	586,258
Customer-Owned Solar*	127,239	125,867	125,600
Vandalia Solar*		148,041	147,301
Bowling Green Solar*		148,041	147,301
Split Rail Solar*			888,248

⁴ Probability of exceedance levels ("p-levels") refer to the likelihood that the output of the resource will be above a specified level of MWh in any given year. A P-75 value indicates that in 75% of performance years, the output is expected to be above a specified level. Likewise, a P-90 value indicates that in 90% of performance years, resource output will be above the specified value. Therefore, an increase in the exceedance probability decreases the expected output.

Solar REC Bank Rollover*			
TOTAL Solar	731,360	1,022,960	1,906,455

*Includes 1.25 MO adjustment

Table 4. Compliance Position Over/(Under)

	<u>2025</u>	<u>2026</u>	<u>2027</u>
Non-Solar	(725,365)	(1,292,744)	(1,561,794)
Solar	639,592	923,650	1,801,654
Total Compliance Position (P-90 production level)	(85,773)	(369,094)	239,860

Section (8) (B) 1 B: List of Executed Contracts

Table 5. List of Executed Contracts, 2025-2027

Contracting Party	Resource Type	Contract Type	Contract Duration	Time Period	Expected RECs	Contract Term
Various Residential & Commercial Customers ⁵	Solar	S-REC only	10 years	2025	127,239	
				2026	125,867	
				2027	125,600	

Section (8) (B) 1 C: Projected Retail Sales by Year

Please see Table 1 for Ameren Missouri's projected retail sales by year.

Section (8) (B) 1 D: Comparison to Preferred Resource Plan

The RES Compliance Plan detailed in this report is consistent with the Change in Preferred Resource Plan filed with Integrated Resource Plan by Ameren Missouri February 14, 2025.

Section (8) (B) 1 E: RES Compliance Plan Cost

The ability to utilize renewable resources that were not initially constructed for RES compliance and that are currently in rate base places Ameren Missouri and its customers in a unique position regarding compliance cost. As provided in the RES statute and rule, though the megawatt hours from these renewable resources can be utilized to meet the compliance requirements, since the primary purpose of them was not RES compliance when built, they do not contribute to RES compliance costs and do not factor into the rate cap limitation of 1%. The plan contemplates the need to purchase a limited number of RECs to balance the compliance obligations each year, due to variable annual retail sales or variable production of renewable asset.

⁵ All S-RECs procured from customers are entitled to the additional in-state factor of 1.25 and the figures in this table reflect the total including the 1.25 factor.

The cost of the RES Compliance Plan for the 2025-2027 Compliance Plan periods is comprised of the following items:

- Cost to register RECs with the North American Renewable Registry
- Fixed, Fuel and O&M associated with the MHREC
- Fixed and O&M costs associated with the facilities constructed for RES compliance: Ameren Headquarters Solar, Huck Finn Solar, OREC, HPREC, and AREC
- Purchase of RECs

REC Registration Fees

In accordance with 4 CSR 240-20.100 Section (3) (F), utilities are to use a commission designated common central third-party registry for REC accounting of the RES requirements. The North Ameren Renewable Registry (NAR) was selected by the Commission for this purpose. Tracking and registration fees are charged by NAR for all RECs deposited and then retired from the utilities' accounts.

Section (8) (B) 1 F: RES Retail Rate Impact

The *10 Year MO RES Compliance Model 2025_34* (provided to Staff and others as a work paper to this filing) calculates the retail rate impact, as required by 4 CSR 240-20.100(5). The "Report" tab of the model sets forth the size and timing of the new renewable resources that would be needed in the next ten years to fully meet the unconstrained Renewable Energy Standard (RES) requirements along with the size and timing of those renewable resources that can be built while meeting the 1% retail rate impact limitation. The model includes the assumptions needed to develop RES compliance projections, including Ameren Missouri's projected revenue requirements (adjusted for exclusion of costs for existing renewable energy resources), market values for capacity and energy and costs for new wind and solar resources, are also included.

Section (8) (B) 1 G: Compliance with Air, Water or Land Use Requirements

All generating facilities utilized by Ameren Missouri to meet the requirements of the Missouri Renewable Energy Standard have been certified by the Missouri Department of Economic Development in accordance with 393.1030.4, RSMo.