

Denny Hoskins

Secretary of State / Administrative Rules

RULE TRANSMITTAL

1016

Administrative Rules Stamp

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By Administrative Rules at 11:29 am, Sep 21, 2026

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By JCAR at 11:20 am, Sep 21, 2026

Rule number **20 CSR 4240-21.030**

Use a SEPARATE rule transmittal sheet for EACH individual rulemaking.

Name of person(s) Administrative Rules can contact with questions about this rule:

Content Nancy Dippell Phone 573-751-8518 Fax 573-526-6010

Email address Nancy.Dippell@psc.mo.gov

Data Entry Kayla Kliethermes Phone 573-751-4256 Fax 573-526-6010

Email address Kayla.Kliethermes@psc.mo.gov

Interagency mailing address Public Service Commission, 9th Floor Gov. Office Bldg, JC, MO

TYPE OF RULEMAKING ACTION TO BE TAKEN

☐ Emergency rulemaking > ☐ Rule ☐ Amendment ☐ Rescission ☐ Termination

Effective date for the emergency _____

☒ Proposed rulemaking > ☒ Rule ☐ Amendment ☐ Rescission

☐ Rule Action Notice

☐ In Addition

☐ Rule Under Consideration

☐ Request for Non-Substantive Change

☐ Statement of Actual Cost

☐ Order of Rulemaking > ☐ Withdrawal ☐ Adoption ☐ Amendment ☐ Rescission

Effective date for the order _____

☐ Statutory 30 days OR ☐ Specific date _____

Does the Order of Rulemaking contain changes to the rule text? ☐ NO

☐ YES—LIST THE SECTIONS/SUBSECTIONS WITH CHANGES:



Missouri Public Service Commission

MAIDA J. COLEMAN
Commissioner

KAYLA HAHN
Chair

JOHN P. MITCHELL
Commissioner

GLEN KOLKMEYER
Commissioner

POST OFFICE BOX 360
JEFFERSON CITY, MISSOURI 65102
573-751-3234
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<http://psc.mo.gov>

VACANT
Commissioner

September 18, 2026

Sarah Schappe
Director
Joint Committee on Administration Rules
State Capitol, Room B8A
Jefferson City, Missouri 65101

Re: 20 CSR 4240-21.030 Load Forecasting Requirements

Dear Director Schappe,

CERTIFICATION OF ADMINISTRATIVE RULE

I do hereby certify that the attached is an accurate and complete copy of the proposed rule lawfully submitted by the Missouri Public Service Commission.

The Public Service Commission further certifies it has conducted an analysis of whether or not there has been a taking of real property pursuant to section 536.017, RSMo, that the proposed rule does not constitute a taking of real property under relevant state and federal law.

The Public Service Commission has determined and hereby also certifies that if the proposed rule does affect small business pursuant to sections 536.300 to 536.310, RSMo, a small business impact statement has been filed as required by those sections. If no small business impact statement has been filed the proposed rule either does not affect small business or the small business requirements do not apply pursuant to section 536.300.4, RSMo.

Statutory Authority: *sections 386.040, 386.250, 386.610, 393.140, RSMo 2016, and section 393.1900, RSMo Supp. 2025.*

If there are any questions regarding the content of this proposed rule, please contact:



Nancy Dippell
Secretary/Chief Regulatory Law Judge
Missouri Public Service Commission
200 Madison Street
P.O. Box 360
Jefferson City, MO 65102
(573) 751-8518
Nancy.Dippell@psc.mo.gov

Nancy Dippell

Nancy Dippell
Secretary

Enclosures



Missouri Public Service Commission

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September 18, 2026

Denny Hoskins
Secretary of State
Administrative Rules Division
600 West Main Street
Jefferson City, Missouri 65101

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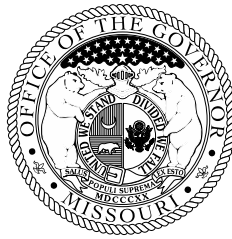
Nancy Dippell
Secretary/Chief Regulatory Law Judge
Missouri Public Service Commission
200 Madison Street
P.O. Box 360
Jefferson City, MO 65102
(573) 751-8518
Nancy.Dippell@psc.mo.gov

A handwritten signature in black ink that reads "Nancy Dippell".

Nancy Dippell
Secretary

Enclosures

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201 W. CAPITOL AVENUE, ROOM 216
JEFFERSON CITY, MISSOURI 65101



(573) 751-3222
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Mike Kehoe

GOVERNOR
STATE OF MISSOURI

September 16, 2026

Kayla Hahn, Chair
Missouri Public Service Commission
P O Box 360
Jefferson City MO 65102

Dear Ms. Hahn:

Our office has received the Proposed New rulemakings for the following regulations:

- **20 CSR 4240-21.030** Load Forecasting Requirements
- **20 CSR 4240-21.035** Supply-Side Resource Analysis Requirements
- **20 CSR 4240-21.040** Transmission and Distribution Analysis Requirements
- **20 CSR 4240-21.050** Demand-Side Resource Analysis Requirements

Executive Order 25-13 requires this office's approval before state agencies release proposed regulations for notice and comment, amend existing regulations, or adopt new regulations. After our review, we approve submission of the rule and the regulatory impact report (if required) to JCAR and the Secretary of State.

Sincerely,

A handwritten signature in blue ink that reads "Lowell Pearson".

Lowell Pearson
General Counsel

AFFIDAVIT

PUBLIC COST

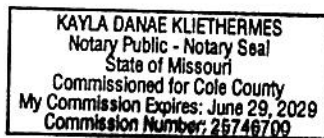
STATE OF MISSOURI)
)
COUNTY OF COLE)

I, Rodney Massman, General Counsel of the Public Service Commission, do declare that it is my opinion that the cost of proposed rule 20 CSR 4240-21.030 is less than five hundred dollars in the aggregate to this agency, any other agency of state government or any political subdivision thereof.

Rodney Martin

Rodney Massman
General Counsel
Public Service Commission

Subscribed and sworn to before me this 9th day of September, 2020, I am commissioned as a notary public within the County of Cole, State of Missouri, and my commission expires on June 29, 2029.




Notary Public

Title 20 - DEPARTMENT OF COMMERCE AND INSURANCE
Division 4240 - Public Service Commission
Chapter 21 - Resource Planning for Electric Utilities

PROPOSED RULE

20 CSR 4240-21.030 Load Forecasting Requirements

PURPOSE: This rule establishes minimum standards for collecting, maintaining, and updating historical data, documenting the inputs, assumptions, and methodologies used in load forecasting, and supplements the requirements found in section 393.1900, RSMo.

(1) Load forecasting inputs and assumptions.

(A) The electric utility shall develop load forecasts using the best available, transparent, and verifiable data. Where reliable data is not available, the electric utility may use estimates for variables, provided that the electric utility fully justifies and clearly documents the estimates.

(B) The electric utility shall maintain and update a comprehensive database of historical energy usage and demand across its service territory covering a minimum of the most recent five (5) years for hourly data and twenty (20) years for monthly data preceding the IRP filing year. The electric utility shall include in the database all customer classes and capture hourly and monthly energy consumption, monthly customer counts, monthly peak demand levels (coincident and non-coincident peaks by customer class), and annual peak demand (reported separately for summer and winter for both coincident and non-coincident peaks by customer class). The electric utility shall provide access to these inputs to the stakeholders pursuant to 20 CSR 4240-21.025(6).

(C) The electric utility shall weather normalize all weather-sensitive historical load data using statistical methods, and clearly describe the methodology employed, including the treatment of temperature, degree days, or other relevant weather variables. The electric utility shall explain and document the statistical fit and significance for all variables.

(D) The electric utility shall use historical load and weather data to determine the relationship between load and weather variables, including temperature or degree-days. The electric utility shall weather normalize forecasted loads to reflect normal weather conditions derived from these relationships. The electric utility shall explain and document the methodology, data sources, and statistical results of each variable.

(E) Where employing end-use forecasting, the electric utility shall use the most current available data on measure saturation, efficiency trends, and customer adoption of new technologies, including distributed energy resources (DER) and demand-side measures.

(F) The electric utility shall include data for population, households, employment, income, economic growth, and other economic or demographic drivers that materially influence load.

(G) The electric utility shall identify applicable federal, state, and local laws, regulations, and policies that affect energy consumption, including energy efficiency standards,

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electrification initiatives, and decarbonization requirements and describe how they are reflected in the load forecast assumptions.

(H) The electric utility shall include data and assumptions regarding DER that materially affect system load. The electric utility shall document current penetration rates, forecasted adoption, and the resulting impact on load shapes and net demand as further defined in 20 CSR 4240-21.055.

(I) The electric utility shall ensure the forecast is generally aligned with baseline conditions such as new housing and commercial building starts, measure saturations, employment growth, federal standards, building codes, naturally occurring energy efficiency as produced in the most recent potential study, and program offerings currently approved.

(J) The electric utility shall document data on anticipated adoption of electric vehicles and other electrification technologies, and provide documentation of expected penetration rates, charging or usage profiles, seasonal impacts, and the resulting effects on system load and system non-coincident peak.

(K) The electric utility shall ensure the forecast considers the effects of the real price of electricity, the real price of competitive energy sources, and rate design on customer usage. The electric utility shall include the impacts of approved rate structures, such as time-of-use rates, demand charges, and dynamic pricing mechanisms.

(L) The electric utility shall document descriptive statistics for key data inputs.

(2) Forecasting methodology.

(A) The electric utility shall —

1. Develop its load forecast using transparent, reproducible, and well-documented methods;

2. Describe the forecasting models, the methodology, key assumptions, input variables, data sources, and outputs; and

3. Justify the chosen approach.

(B) The electric utility shall, at minimum:

1. Develop customer class level load forecasts using an econometric methodology as the primary framework; and

2. Where end-use determinants are employed, the electric utility shall demonstrate that measure saturation, efficiency trends, technology adoption, electrification, and customer behavior are explicitly represented in the model.

(C) The electric utility may employ a non-econometric approach such as engineering-based models, machine learning models, or other statistical methods, provided that the approach:

1. Is clearly distinguished from econometric methodologies; and

2. Demonstrates the ability to capture key load drivers, including economic conditions, weather, technology adoption, and policy impacts.

(D) If the electric utility employs an alternative approach, the electric utility shall:

1. Describe the model structure and functional form and document the data inputs and sources;

2. Explain how the methodology differs from an econometric methodology;

3. Justify how the resulting forecast achieves a level of rigor, transparency, and detail that is comparable to an econometric load forecast; and

4. Describe the advantages, tradeoffs, and limitations of the selected methodology.

(E) The electric utility shall provide a comprehensive list of all independent variables used in the model. For each variable the electric utility shall:

1. Provide the definition, unit of measure, data source, historical period covered, forecast values, and forecast method; and

2. Explain the relevance of each variable to load growth and describe how each variable was incorporated into the forecast.

(F) The electric utility shall describe and document the equations, algorithms, or statistical methods used to relate independent variables to load. The electric utility shall document any transformations, such as logarithmic, polynomial, or interaction terms.

(G) The electric utility shall:

1. Describe the estimation techniques used to determine model parameters, including regression methods, statistical procedures, or simulation techniques;

2. Describe any calibration methods used to align model results with historical load data, and describe the diagnostic tests to demonstrate model validity; and

3. Document parameter estimates with standard errors, significance levels, and statistical goodness-of-fit measures.

(H) The electric utility shall describe and document how the model incorporates weather variables and captures the sensitivity of load to key weather variables such as temperature, and degree-days.

(I) The electric utility shall justify all adjustments made outside of model results to:

1. Explain the basis, methodology, and quantitative effect on forecast outcomes; and

2. Document adjustments alongside the unadjusted model results for comparison.

(J) The electric utility shall:

1. Validate the forecast results through benchmarking against historical load patterns and, where applicable, publicly available independent load forecasts published by regional transmission organizations and government agencies to assess the reasonableness of forecast assumptions and results;

2. Describe and document a retrospective analysis of past forecasts, evaluate forecast accuracy, identify sources of significant error or bias, and explain how the electric utility used these findings to improve the current forecast;

3. Document a forecast of net system load profiles for each year of the planning horizon consistent with the electric utility's forecasts of monthly energy and peak demands at the time of summer and winter system peaks for each customer class; and

4. Ensure the forecast:

A. Accounts for the impacts of existing and reasonably anticipated DER, including customer-owned renewable generation, energy efficiency, demand response, beneficial electrification, and energy storage resources; and

B. Evaluates how these resources may reduce, shift, or otherwise modify system peak demand and energy requirements over the planning horizon.

(3) Forecast period.

(A) The electric utility shall prepare forecasts of system peak load and energy consumption under reasonable scenarios.

(B) The electric utility shall express forecasts on an hourly, monthly, and annual basis, and shall report these forecasts separately for each customer class, as well as for the total system.

(C) The electric utility shall extend the forecasts a minimum of sixteen (16) years beyond the electric utility's IRP filing year and shall document the annual energy consumption and system non-coincident peak demand.

(4) Base-case load forecast.

(A) The electric utility shall prepare and file a base-case load forecast. The base-case load forecast shall:

1. Assume normal weather conditions for all components;
2. Incorporate the load impacts of implemented demand-side programs that are in effect at the time of the IRP filing; and
3. Exclude the load impacts of proposed demand-side programs and separately present this data in the demand response forecast.

(B) The electric utility shall develop the base-case load forecast using the data inputs in section (1) and forecasting methodology required under section (2). The electric utility shall use the base-case load forecast as the reference case for all scenario and sensitivity analysis.

(C) The electric utility shall document forecasts of the hourly load profile for each of the electric utility's customer classes, and for the system as a whole, based on a minimum of the most recent five (5) historical years and covering the first five (5) years of the forecast period. These forecasts must reflect daily load patterns, seasonal variability, and separately identify the influence of DER, electrification, and currently approved electric utility sponsored programs for energy efficiency and demand response.

(D) For the system and each customer class, for each year of the planning horizon, the electric utility shall document forecasts of:

1. Monthly and annual energy consumption;
2. Customer counts; and
3. Monthly peak demand, including both coincident and non-coincident peak demand.

(E) The electric utility shall disaggregate the forecasts in subsection (4)(D) by jurisdictional components, or the electric utility shall justify why disaggregation is not applicable.

(F) The electric utility shall explain how the base-case load forecast incorporates the effects of economic and demographic drivers, including, but not limited to, electricity prices, real price of competitive energy sources, income, population, and employment. The electric utility shall specify how the methodology explicitly models these factors, or explain how these effects were otherwise accounted for.

(G) The electric utility shall explain how the base-case load forecast incorporates the impacts of applicable legal mandates, regulatory requirements, and policy-driven incentives and mandates that influence the adoption of alternative technologies, electrification of end-uses, and energy efficiency measures. The model shall include

inputs such as anticipated customer behavior, technology adoption, and evolving load shapes consistent with legal mandates.

(H) The electric utility shall document the monthly cooling, heating, and non-weather-sensitive components of weather-normalized load by class for the base year of the forecast.

(I) The electric utility shall justify any subjective adjustments applied to statistical or model outputs, including the factors considered, rationale, and their quantitative effect.

(J) The electric utility shall provide graphical plots of the following:

1. Class-level monthly energy consumption and coincident peak demand for the historical period and forecast period;
2. Actual and weather normalized coincident peak demand for the historical period; and
3. Net system load profiles for the summer and winter peak day for the base year as well as for forecast years four (4), eight (8), and sixteen (16), at a minimum.

(K) The electric utility shall document the net system load profiles in paragraph (4)(J)3 for the summer and winter peak for each year of the planning horizon in supporting workpapers.

(L) The electric utility shall explain how the base-case load forecast is consistent with historical consumption patterns, end-uses, and efficiency trends identified in the electric utility's prior commission filings. If the electric utility's base-case load forecast differs from recent previous forecasts submitted to the commission, the electric utility shall explain the differences.

(M) The electric utility shall explain how the base-case load forecast incorporates the large load forecast and disaggregates it by categories of maturity, as described in section (6).

(5) Large load database.

(A) The electric utility shall maintain and update a large load database consisting of:

1. Anonymized project identifier;
2. Large load project's industry type;
3. Large load project's anticipated service address;
4. Large load metrics defined in 20 CSR 4240-21.015(54) and any pertinent metrics information required by the appropriate Regional Transmission Operator/Independent System Operator (RTO/ISO) for the project; and
5. Large load project's status, including whether the project is no longer viable.

(B) The electric utility shall categorize the maturity of large load projects by the following phases:

1. Study phase - Large load projects in this phase have submitted any required information, preliminary agreements, and deposits in compliance with the electric utility's approved tariffs and business practices and have been submitted to the appropriate RTO/ISO for initial or additional study;
2. Construction agreement phase - Large load projects in this phase have executed relevant construction agreements and made any required payments, but have not yet executed an electric service agreement;

3. Execution phase - Large load projects in this phase have executed an electric service agreement, posted any required security or deposits, and have obtained site control;

4. Initial project energization - Large load projects in this phase receive retail electric service but have not reached full forecast peak load; and

5. Load ramping complete - Large load projects in this phase have reached full forecast peak load.

(6) Large load forecast.

(A) The electric utility shall describe and document distinct forecasts, as a separate additive component, representing large load scenarios that are reasonably anticipated to materially affect the system load shape or resource needs for the planning horizon.

(B) The electric utility shall describe how large load forecasts are not double counted in the base-case load forecast.

(C) For each large load scenario, the electric utility shall—

1. Utilize the large load database in section (5);

2. Justify the methodology, data sources, and assumptions used to forecast load to show that assumptions are reasonable, transparent, and based on the best available information;

3. For the first five (5) years of the planning horizon, develop large load scenarios based upon the assigned project maturity phases outlined in subsection (5)(B), including at minimum—

A. A high probability scenario that reflects only those projects that meet the criteria stated in paragraphs (5)(B)3., (5)(B)4., and (5)(B)5;

B. A medium probability scenario that reflects only those projects that meet the criteria stated in paragraphs (5)(B)2., (5)(B)3., (5)(B)4., and (5)(B)5.;

C. A low probability scenario that reflects only those projects that meet the criteria stated in paragraphs (5)(B)1., (5)(B)2., (5)(B)3., (5)(B)4., and (5)(B)5.; and

D. Any scenarios determined to be significant from the electric utility perspective, or as ordered by the commission.

4. Develop large load forecasts to forecast growth for years beyond the first five (5) years of the planning horizon through the remainder of the planning horizon;

5. Explain how large loads will participate in demand response, load management, or flexibility programs, including technical capabilities, contractual commitments, and expected contributions to coincident peak reduction; and

6. Describe and document how the forecast incorporates weather variables and other variables that impact load, including normal conditions, extreme events, and the sensitivity of load to key weather variables such as temperature or degree-days.

(7) Analysis of load-building programs.

(A) If the electric utility intends to continue existing load-building programs or implement new ones, the electric utility shall analyze these programs in the context of one (1) or more of the alternative resource plans developed pursuant to 20 CSR 4240-21.060(2), including the preferred resource plan selected pursuant to 20 CSR 4240-21.060(5) as part of its risk and uncertainty analysis pursuant to 20 CSR 4240-21.060(4).

(B) In the analysis, the electric utility shall use the same modeling procedure and assumptions required in 20 CSR 4240-21.060(4). The electric utility shall describe and document its analysis of load-building programs, including the following elements:

1. An estimation of the impact of load-building programs on the electric utility's seasonal non-coincident peak, as defined by the appropriate RTO/ISO and energy usage;
2. A comparison of annual revenue requirement for the resource plan(s) with and without the load-building program;
3. A comparison of the probable environmental compliance costs of the resource plan(s) in each year of the planning horizon with and without the proposed load-building program;
4. A calculation of the performance measures and risk by year; and
5. An assessment of any other aspects of the proposed load-building programs that affect the public interest.

(8) Sensitivity analysis and scenario development.

(A) The electric utility shall submit a comprehensive set of load forecasts that reflect sensitivity analysis and scenario development. The electric utility's analyses shall demonstrate the robustness of resource planning under uncertainty and ensure that system resources are adequate across a wide range of plausible futures. At a minimum the electric utility shall —

1. Describe and document the sensitivity of the dependent variables of the base case load forecast to variations in the independent variables identified in subsection 20 CSR 4240-21.030(2)(E);
2. Evaluate the sensitivity of system peak load forecasts to extreme weather conditions, such as sustained heat waves or prolonged cold snaps, and shall quantify the incremental peak load attributable to these stress conditions, including, but not limited to, a scenario that includes a minimum of ninety percent (90%) probability of load under those extreme conditions; and
3. Develop, in addition to the base-case load forecast, a minimum of two bounding scenarios under normal weather assumptions—
 - A. High-growth scenario that reflects accelerated economic expansion, rapid electrification, or large load additions; and
 - B. Low-growth scenario that reflects slower economic conditions, delayed technology adoption, or higher-than-expected energy efficiency penetration.

AUTHORITY: sections 386.040, 386.250, 386.610, 393.140, RSMo 2016, and section 393.1900, RSMo Supp. 2025. Original rule filed _____, 2026.

PUBLIC COST: This proposed rule will not cost state agencies or political subdivisions more than five hundred dollars (\$500.00) in the aggregate.

PRIVATE COST: This proposed rule will not cost private entities more than five hundred dollars (\$500.00) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file comments in support of or in opposition to this proposed rule with the Missouri Public Service Commission, Nancy Dippell, Secretary of the Commission, P.O. Box 360, Jefferson City, MO 65102. To be considered, comments must be received at the commission's offices on or before December 2, 2026, and should include a reference to Commission Case No. EX-2027-0085. Comments may also be submitted via a filing using the commission's electronic filing and information system at https://psc.mo.gov/General/Submit_Comments. A public hearing regarding this proposed rule is scheduled for December 15, 2026, at 10:00 a.m., in Room 310 of the Governor Office Building, 200 Madison St., Jefferson City, MO. Interested persons may appear at this hearing to submit additional comments and/or testimony in support of or in opposition to this proposed rule and may be asked to respond to commission questions. Any persons with special needs as addressed by the Americans with Disabilities Act should contact the Missouri Public Service Commission at least ten (10) days prior to the hearing at one (1) of the following numbers: Consumer Services Hotline 1-800-392-4211 or TDD Hotline 1-800-829-7541.