BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Proposed Rule	)	
4 CSR 240-20.100, Electric Utility Renewable	)	Case No. EX-2010-0169
Energy Standards Requirements	)	

COMMENTS OF
THE MISSOURI INDUSTRIAL ENERGY CONSUMERS

The Missouri Industrial Energy Consumers (MIEC) submits these comments on the Commission's proposed rule 4 CSR 240-20.100, Electric Utility Renewable Energy Standards Requirements (Proposed Regulation).

MIEC member companies are among the largest employers in the state of Missouri, and contribute significantly to the economic base of the state. Because the MIEC companies operate in competitive markets, they are keenly concerned about controlling all aspects of their costs. For this reason, the MIEC has actively participated in all proceedings leading to publication of the Proposed Regulation. The MIEC commends the Commission and its staff, particularly Michael Taylor, for soliciting and considering the comments of all of the stakeholders, in multiple forums, and for keeping all of the stakeholders apprised of each development of the Proposed Regulation.

Legislative History

The Proposed Regulation derives in part from the passage of Proposition C during the November 2008 general election. The official ballot title provided:

> Shall Missouri law be amended to require investor-owned electric utilities to generate or purchase electricity from renewable energy sources such as solar, wind, biomass and hydropower with the renewable energy sources equaling at least 2% of retail sales by 2011 increasing incrementally to at least 15% by 2021, including at least 2% from solar energy; **and restricting to no more than 1% any rate increase to consumers for this renewable energy**? (emphasis added)

Sections 393.1025 (Definitions) and 393.1030 (Renewable Energy Requirements) were the statutes adopted under proposition C and became effective on November 4, 2008, upon the passage of proposition C. Section 393.1030.2 provides that the Commission is to promulgate whatever rules are necessary to enforce the renewable energy standard and, among other things, provides that "[s]uch rules shall include:"

> (1) **[a] maximum average retail rate increase of one percent determined** by estimating and comparing the electric utility's cost of compliance with least-cost renewable generation and the cost of continuing to generate or purchase electricity from entirely nonrenewable sources, taking into proper account future environmental regulatory risk including the risk of greenhouse gas regulation[.] (emphasis added)

Prior to the passage of proposition C, the general assembly enacted sections 393.1035, 393.1040, 393.1045 and 393.1050, all of which also relate to the renewable energy standards. Section 393.1045 provides that:

> [a]ny renewable mandate required by law shall not raise the retail rates charged to the customers of retail electric suppliers **by an average of more than one percent in any year**, and all the costs associated with any such renewable mandate shall be recoverable in the retail rates charged by the electric supplier. (emphasis added)

Section 393.1045 does not literally conflict with either the ballot title of proposition C or the language of section 393.1030.2. An example, although factually unlikely, demonstrates the point. If the cost of electricity decreased by one percent in year one because of the renewable mandate, but increased by two percent from year one to year two because of the mandate, the overall rate increase would be one percent at the end of year two. At no time would rates be more than one percent higher because of the renewable mandate. Thus, the increase in year two would comply with the ballot title and section 393.1030.2(1). However, a two percent increase from year one to year two would be barred by section 393.1045. Accordingly, at no time can

rates be more than one percent higher than they would have been without the mandate and rates cannot increase because of the mandate by more than one percent in any year.

General Concern Regarding the Proposed Regulation

Compliance with the renewable energy standards will, certainly in the short term, increase costs and it is this cost increase that must be carefully defined and limited. The fiscal note to the Proposed Regulation shows that the expected cost of the Proposed Regulation to the four investor-owned electric utilities in 2011 is over $45M, increasing to over $51M in 2012. Because section 393.1045 provides that those utilities shall recover those costs from consumers, consumers should expect to incur these increased costs through increased rates. Moreover, the bulk of the renewable energy requirements will not even become effective until 2018 (10%) and 2021 (15%). Therefore, this Commission must carefully balance its implementation of the renewable standards with the law's 1% limitation of the fiscal impact of that implementation on customers. In particular, the Commission should not force electric corporations to build or buy more renewable energy generating capacity than can at any time limit, to 1% or less, the actual impact to consumers. The MIEC is particularly troubled by the Proposed Regulation's assumption that utilities should incur cost increases of more than 1% and defer recovery of the cost above 1% on the assumption that at some time in the future those costs can be recovered because renewable energy sources will be less costly than their non-renewable substitutes. It is likely that once the renewable capacity is built or purchased, utilities will want consumers to bear all of the increased cost at some point, whether or not these assumptions hold true.

Specific Concerns Regarding the Proposed Regulation

1. The Consideration of Increased Costs on an Incremental Average Basis and the Resulting Rate Impact

Section (5) of the Proposed Regulation, "Retail Rate Impact," sets forth the computation of the rate impact of the increased cost of the required renewable energy sources. It calls for a comparison of costs on an "incremental basis ... averaged over a ten (10) year period[.]" It is unclear what this means, but from spreadsheets provided by proponents of this approach, it appears that this approach considers only the annual "incremental" increase in costs from using renewable energy sources. For instance, if because of the mandate, costs increase 2% in year one and increase another 1% in year two, the Proposed Regulation would consider only the 1% incremental increase in year two even though consumers are actually paying 3% more for their energy at the end of year two. And the ten year average of the annual increases means that consumers at various times during the ten year period are likely to pay far more than 1% more for their electricity because of the renewable mandate. Both concepts, the incremental increase and the ten year averaging, frustrate proposition C's clear directive that consumers pay no more than an extra 1% as a result of the renewable mandate. It is of little consolation to a business customer that has been forced to close its doors in 2015, because of large electric rate increases, that customers in year 2020 may avoid increases because renewable energy sources are in place (should that assumed saving ever materialize). More specifically, Section (5)(A) provides as follows:

> (5) Retail Rate Impact.
>
> (A) The retail rate impact, as calculated in subsection (5)(B), may not exceed one percent (1%) for prudent costs of renewable energy resources directly attributable to RES compliance. The rate impact shall be calculated on an incremental basis for each addition of renewable generation through procurement or development of renewable energy resources, averaged over a ten (10) year

period, and shall exclude renewable energy resources under contract prior to the effective date of this rule and renewable energy resources previously determined not to exceed the one percent (1%) threshold.

There are two serious problems with these provisions. The first is the use of a ten-year average to determine whether the 1% rate differential threshold is violated. As noted earlier in these comments, rates with the renewable portfolio may not exceed what the rates would have been without the renewable portfolio by more than 1% at any time. Use of a ten-year average clearly would result in a violation of this requirement and should be rejected because the rate limitation is not 1% per year, or an average of 1% per year, but rather is 1%.

The second problem with this language is the last part of the sentence that would allow the exclusion of renewable energy resources previously determined not to exceed the 1% threshold when calculating the impacts in subsequent years. This clearly would be a violation of the language adopted by virtue of the passage of Proposition C because it would allow the 1% rate differential test to be made project by project, without regard to the overall cumulative impact of all projects. Clearly, Proposition C did not provide that the rate differential would be not more than 1% "per project." It clearly calls for a maximum rate differential of 1% for the entire portfolio under consideration.

As written, the potential amount of rate increase is unbounded because any number of small projects, each falling below the 1% threshold, could be cascaded together in order to evade the overall 1% rate differential limitation.

2. The Subtraction for Greenhouse Gas Regulation Results in Double Counting

Section (5)(B) provides that one is to subtract from the total RES-compliant revenue requirement "the cost of greenhouse gas emissions reductions, assuming that such reductions are made at the then-current cost per ton of greenhouse tax emissions allowances or the cost of

greenhouse gas emission reduction technology, whichever is lower." First, what does the quoted language mean? Do "greenhouse gas emissions" include only gases that are currently regulated in Missouri or would that also include carbon dioxide? Second, where does one find then-current costs? Third, would these savings already be captured when comparing the total RES-compliant revenue requirement to the non-renewable revenue requirement? If so, there should be no subtraction.

Likewise, section (5)(B) provides that "[a]ny variables utilized in the modeling shall be consistent with values established in prior rate proceedings or RES compliance plans, unless specific justification is provided for deviations." It is unclear what is to be modeled and where in the Proposed Regulation that is required.

Under no circumstances should the comparison of revenue requirements be skewed. At a minimum, this revenue requirement comparison should be clearly defined and should fairly reflect the actual net costs under the two energy portfolio options.

3. The Proposed Regulation Double Counts the Cost of Fuels for Non-Renewable Energy

Section (5) of the Proposed Regulation skews the comparison of renewable and non-renewable energy costs in favor of renewable sources by double counting the cost of fuels. First, the Proposed Regulation requires a determination of the total retail revenue requirement using nonrenewable energy sources. That determination includes the cost of fuel. The Proposed Regulation then requires a determination of the total retail revenue requirement using renewable energy sources but subtracts from that total the cost for fuel that would have been purchased, but was not purchased, because of the use of renewable energy sources. But the value of that fuel savings would already be reflected in the comparison of the two total revenue requirements

without the later subtraction. As a result, the proposed rule would double count the reduction in fossil fuel costs.

4. The Proposed Regulation's Formula for Calculating the Rate Impact is Ambiguous

Section (5)(A) of the Proposed Regulation describes the rate impact as a percentage that may not exceed one percent and is to be determined in accordance with section (5)(B). Yet section (5)(B) appears to calculate a dollar amount rather than a percentage. The Proposed Regulation should clearly state what the numerator is and how it is determined and what the denominator is and how it is determined, so that it is clear whether the 1% rate increase limit will be surpassed.

5. The Proposed Regulation's Cost Recovery Mechanism Should Not Allow Recovery of Cost Increases That Exceed the One Percent Limit

Section (6) of the Proposed Regulation governs the recovery of increased costs on account of the renewable mandate. Section (6)(B) addresses cost increases of less than 2%, while section (6)(C) addresses cost increases of more than 2%. Each subsection assumes that only a 1% increase can be passed on to consumers, and that any additional increase in costs must be carried forward for recovery in the event that renewable energy sources result in realized savings. As indicated above, electric utilities should not be required or encouraged by the Proposed Regulation to build or acquire renewable energy sources that will cause their costs at any time to be more than 1% higher than they would have been with wholly non-renewable energy sources. Moreover, section (6)(A)3 provides that "[t]hese carried forward costs [above the 1% threshold] plus additional annual costs remain subject to the one percent (1%) limit for any subsequent years." Again, that provision appears to embrace the notion that the 1% cap on

increased rates is an annual cap. For the reasons explained above, we respectfully suggest that the 1% cap on rate increases is a cumulative, not annual, cap.

6. The Proposed Regulation Inappropriately Restricts the Use of Renewable Resources Not Located in Missouri

Section (2) (A) would allow the use of renewable resources not located in the state of Missouri only if it can be shown that "...the renewable energy resource is sold to Missouri electric energy retail customers." There is no basis in the legislation for this discriminatory treatment. Requiring out of state renewable resources, that may be less expensive than the competing in-state renewable resources, to prove they are "sold to Missouri electric retail customers" most likely will result in Missouri customers facing higher costs for compliance than otherwise would be the case. As written, the Proposed Regulation would seem to preclude the purchase of wind RECs from the state of Texas (in ERCOT) and solar resources from the state of Arizona (in the Western Interconnect). But, these may indeed be the most cost-effective renewable resources and there is no reason why Missouri customers should be burdened with higher cost renewable resources. It is even questionable whether, under the Proposed Regulation, companies in MISO would be eligible to purchase RECs from the SPP region, which contains substantial wind resources. Moreover, the Proposed Regulation does not provide any guidance as to how a utility would prove that the electric energy was sold to Missouri energy retail customers. The need for renewable energy is not a "Missouri" phenomenon, and the Commission should not put the economic interests of in-state developers ahead of the economic interests of electric customers and the goal of complying with the RES portfolio standards in the most cost-effective manner.

Suggested Changes to the Proposed Regulation

The MIEC respectfully submits, and incorporates herein, a red-line copy of the Proposed Regulation in which the MIEC has suggested changes that will conform the Proposed Regulation consistent with the comments made herein and consistent with the ballot title and the statutes.

Respectfully submitted,

BRYAN CAVE, LLP

/s/ Edward F. Downey

Edward F. Downey, #28866
221 Bolivar St., Ste. 101
Jefferson City, Missouri 65101
Telephone: (573) 556-6622
Facsimile: (573) 5556-6630
E-mail: efdowney@bryancave.com

Diana M. Vuylsteke, #42419
211 N. Broadway, Suite 3600
St. Louis, Missouri 63102
Telephone: (314) 259-2543
Facsimile: (314) 259-2020
E-mail: dmvuylsteke@bryancave.com

Attorneys for the Missouri Industrial Energy Consumers

Title 4—DEPARTMENT OF ECONOMIC DEVELOPMENT
Division 240—Public Service Commission
Chapter 3—Filing and Reporting Requirements
PROPOSED RULE
4 CSR 240-3.156 Electric Utility Renewable Energy Standard Filing Requirements
PURPOSE: This rule provides a reference to the commission's electric utilities rule regarding this subject.
(1) The requirements for filings regarding the electric utility renewable energy standard are contained in commission rule 4 CSR 240-20.100.
AUTHORITY: section 393.1030, RSMo Supp. 2009 and sections 386.040 and 386.250, RSMo 2000. Original rule filed Jan. 8, 2010.
PUBLIC COST: This proposed rule will not cost affected state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.
PRIVATE COST: This proposed rule will not cost affected private entities more than five hundred dollars ($500) 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, Steven C. Reed, Secretary of the Commission, PO Box 360, Jefferson City, MO 65102. To be considered, comments must be received at the commission's offices on or before April 5, 2010, and should include a reference to Commission Case No. EX-2010-0169. Comments may also be submitted via a filing using the commission's electronic filing and information system at http://www.psc.mo.gov/case-filinginformation.
A public hearing regarding this proposed rule is scheduled for April 6, 2010, at 9:00 a.m. in Room 310 of the commission's offices in the Governor Office Building, 200 Madison Street,
Jefferson City, Missouri. 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.
SPECIAL NEEDS: 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 (voice) or Relay Missouri at 711.

Title 4—DEPARTMENT OF ECONOMIC DEVELOPMENT
Division 240—Public Service Commission
Chapter 20—Electric Utilities
PROPOSED RULE
4 CSR 240-20.100 Electric Utility Renewable Energy Standard Requirements
PURPOSE: This rule sets the definitions, structure, operation, and procedures relevant to compliance with the Renewable Energy Standard.
(1) Definitions. For the purpose of this rule—
(A) Co-fire means simultaneously using multiple fuels in a single generating unit to produce electricity;
(B) Commission means the Public Service Commission of the state of Missouri;

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(C) Calendar year means a period of three hundred sixty-five (365) days (or three hundred sixty-six (366) days for leap years) that includes January 1 of the year and all subsequent days through and including December 31 of the same year;
(D) Customer-generator means the owner or operator of an electric energy generation unit that meets all of the following criteria:
1. Is powered by a renewable energy resource;
2. Is located on premises that are owned, operated, leased, or otherwise controlled by the party as retail account holder and which corresponds to the service address for the retail account;
3. Is interconnected and operates in parallel phase and synchronization with an electric utility and has been approved for interconnection by said electric utility;
4. Meets all applicable safety, performance, interconnection, and reliability standards established by the National Electrical Code, the National Electrical Safety Code, the Institute of Electrical and Electronic Engineers, Underwriters Laboratories, the Federal Energy
Regulatory Commission, and any local governing authorities; and
5. Contains a mechanism that automatically disables the unit and interrupts the flow of electricity onto the electric utility's electrical system whenever the flow of electricity from the electric utility to the customer-generator is interrupted;
(E) Department means the Department of Natural Resources;
(F) Electric utility means an electrical corporation as defined in section 386.020, RSMo;
(G) General rate proceeding means a general rate increase proceeding or complaint proceeding before the commission in which all relevant factors that may affect the costs or rates and charges of the electric utility are considered by the commission;
(H) Green pricing program means a voluntary program that provides an electric utility's retail customers an opportunity to purchase renewable energy or renewable energy credits (RECs);
(I) Rate class means a customer class defined in an electric utility's tariff. Generally, rate classes include Residential, Small General Service, Large General Service, and Large Power Service, but may include additional rate classes. Each rate class includes all customers served under all variations of the rate schedules available to that class;
(J) REC, Renewable Energy Credit, or Renewable Energy Certificate means a tradable certificate, that is either certified by an entity approved as an acceptable authority by the commission or as validated through a generator's attestation. Regardless of whether RECs have been certified, RECs must be validated through an attestation signed by an authorized individual of the company owning the renewable energy resource. Such attestation shall contain the name and address of the generator, the type of renewable energy resource technology, and the time and date of the generation. An REC represents that one (1) megawatt-hour of electricity has been generated from renewable energy resources. RECs include, but are not limited to, solar renewable energy credits. An REC expires three (3) years from the date the electricity associated with that REC was generated;
(K) Renewable energy resource(s) means electric energy produced from the following:
1. Wind;
2. Solar, including solar thermal sources utilized to generate electricity, photovoltaic cells, or panels;

3. Dedicated crops grown for energy production;
4. Cellulosic agricultural residues;
5. Plant residues;
6. Methane from landfills or wastewater treatment;
7. Clean and untreated wood, such as pallets;
8. Hydropower (not including pumped storage) that does not require a new diversion or impoundment of water and that has generator nameplate ratings of ten (10) megawatts or less;
9. Fuel cells using hydrogen produced by one (1) of the renewable energy technologies in paragraphs 1. through 8. of this subsection; and
10. Other sources of energy not including nuclear that become available after November 4, 2008, and are certified as renewable by rule by the department;
(L) RES or Renewable Energy Standard means sections 393.1025 and 393.1030, RSMo;
(M) RESRAM or Renewable Energy Standard Rate Adjustment
Mechanism means a mechanism that allows periodic rate adjustments to recover prudently incurred RES compliance costs and passthrough to customers the benefits of any savings achieved in meeting the requirements of the Renewable Energy Standard;
(N) RES compliance costs means prudently incurred costs, both capital and expense, directly related to compliance with the Renewable Energy Standard. Prudently incurred costs do not include any increased costs resulting from negligent or wrongful acts or omissions by the electric utility;
(O) RES requirements mean the numeric values and other requirements established by section 393.1030.1, RSMo, and subsections (2)(C) and (2)(D) of this rule;
(P) The RES revenue requirement means the following:
1. All expensed RES compliance costs (other than taxes and depreciation associated with capital projects) that are included in the electric utility's revenue requirement in the proceeding in which the RESRAM is established; and
2. The costs (i.e., the return, taxes, and depreciation) of any capital projects whose primary purpose is to permit the electric utility to comply with any RES requirement. The costs of such capital projects shall be those identified on the electric utility's books and records as of the last day of the test year, as updated, utilized in the proceeding in which the RESRAM is established;
(Q) Solar renewable energy credit or S-REC means an REC created by generation of electric energy from solar thermal sources, photovoltaic cells, and panels;
(R) Staff means the staff of the commission;
(S) Standard Test Conditions means solar incidence of one (1) kilowatt (kW) per square meter and a cell or panel temperature of twenty-five degrees centigrade (25 °C) as related to measuring the capability of solar electrical generating equipment;
(T) Total retail electric sales, or total retail electric energy usage, means the megawatt-hours of electricity delivered in a specified time period by an electric utility to its Missouri retail customers as reflected in the retail customers' monthly billing statements; and
(U) Utility renewable energy resources mean those renewable energy resources that are owned, controlled, or purchased by the electric utility.

(2) Requirements.

Pursuant to the provisions of this rule and sections 393.1025 and 393.1030, RSMo, all electric utilities must generate or purchase RECs and S-RECs associated with electricity from renewable energy resources in sufficient quantity to meet both the RES requirements and RES solar energy requirements respectively on a calendar year basis. Utility renewable energy resources utilized for compliance with this rule must include the RECs or S-RECs associated with the generation. The RES requirements and the RES solar energy requirements are based on total retail electric sales of the electric utility.

Compliance may be achieved through the prudent purchase and retirement of RECs and S-RECs that are not associated with electrical energy delivered to the utility's Missouri retail customers.

(B) The amount of renewable energy resources or RECs associated with renewable energy resources that can be counted towards meeting the RES requirements are as follows:

1. If the facility generating the renewable energy resources is located in Missouri, the allowed amount is the amount of megawatthours generated by the applicable generating facility, further subject to the additional twenty-five hundredths (0.25) credit pursuant to subsection (3)(H) of this rule; and
2. If the facility generating the renewable energy resources is located outside Missouri, the allowed amount is the amount of megawatt-hours generated by the applicable generating facility. For the purposes of subsections (A) and (B) of this section, Missouri electric energy retail customers shall include retail customers of regulated Missouri utilities as well as customers of Missouri municipal utilities and Missouri rural electric cooperatives.

(C) The RES requirements are—

1. No less than two percent (2%) in each calendar year 2011 through 2013;
2. No less than five percent (5%) in each calendar year 2014 through 2017;
3. No less than ten percent (10%) in each calendar year 2018 through 2020; and
4. No less than fifteen percent (15%) in each calendar year beginning in 2021.

(D) At least two percent (2%) of each RES requirement listed in subsection (C) of this section shall be derived from solar energy.

The RES solar energy requirements are—

1. No less than four-hundredths percent (0.04%) in each calendar year 2011 through 2013;
2. No less than one-tenth percent (0.1%) in each calendar year 2014 through 2017;
3. No less than two-tenths percent (0.2%) in each calendar year 2018 through 2020; and
4. No less than three-tenths percent (0.3%) in each calendar year beginning in 2021.

(E) If compliance with the above RES and RES solar energy requirements would cause retail rates to increase on average in excess of one percent (1%) as calculated per section (5) of this rule, the above requirements shall be limited to providing renewable energy in amounts that would cause retail rates to increase on average one percent (1%) as calculated per section (5) of this rule.

(F) If an electric utility is not required to meet the RES requirements of subsection (C) of this section in a calendar year, because doing so would cause retail rates to increase on average in excess of one percent (1%) as calculated per section (5) of this rule, then the RES solar energy requirement specified in subsection (2)(D) shall be two percent (2%) of

Deleted: (A) Electric energy or RECs associated with electric energy are eligible to be counted towards the RES requirements only if the generation facility for the renewable energy resource is either located in Missouri or, if located outside of Missouri, the renewable energy resource is sold to Missouri electric energy retail customers. For renewable energy resources generated at facilities located outside Missouri, an electric utility shall provide proof that the electric energy was sold to Missouri customers.

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the renewable energy that can be acquired subject to the one percent (1%) average retail rates limit as calculated per section (5) of this rule.
(G) If an electric utility intends to accept proposals for renewable energy resources to be owned by the electric utility or an affiliate of the electric utility, it shall include a written separation policy and name an independent auditor whom the electric utility proposes to hire to review and report to the commission on the fairness of the competitive acquisition process. The independent auditor shall have at least five (5) years' experience conducting and/or reviewing the conduct of competitive electric utility resource acquisition, including computerized portfolio costing analysis. The independent auditor shall be unaffiliated with the electric utility and shall not, directly or indirectly, have benefited from employment or contracts with the utility in the preceding five (5) years, except as an independent auditor under these rules. The independent auditor shall not participate in, or advise the electric utility with respect to, any decisions in the bid solicitation or bid evaluation process. The independent auditor shall conduct an audit of the electric utility's bid solicitation and evaluation process to determine whether it was conducted fairly. For purposes of such audit, the electric utility shall provide the independent auditor immediate and continuing access to all documents and data reviewed, used, or produced by the electric utility in its bid solicitation and evaluation process. The utility shall make all its personnel, agents, and contractors involved in the bid solicitation and evaluation available for interview by the auditor. The electric utility shall conduct any additional modeling requested by the independent auditor to test the assumptions and results of the bid evaluation analyses.
Within sixty (60) days of the utility's selection of renewable energy resources, the independent auditor shall file a report with the commission containing the auditor's findings on whether the electric utility conducted a fair bid solicitation and bid evaluation process, with any deficiencies specifically reported. After the filing of the independent auditor's report, the electric utility, other bidders in the renewable energy resource acquisition process, and other interested parties shall be given the opportunity to review and comment on the independent auditor's report. For the purposes of this subsection, the role and responsibilities of independent auditor may be fulfilled by staff.

(3) Renewable Energy Credits.
Subject to the requirements of section (2) of this rule, RECs and S-RECs shall be utilized to satisfy the RES requirements of this rule. S-RECs shall be utilized to comply with the RES solar energy requirements. S-RECs may also be utilized to satisfy the non-solar RES requirements.
(A) The REC or S-REC creation is linked to the associated renewable energy resource. For purposes of retaining RECs or S-RECs, the utility, person, or entity responsible for creation of the REC or S-REC must maintain verifiable records including generator attestation that prove the creation date.
(B) An REC may only be used once to comply with this rule. RECs or S-RECs used to comply with this rule may not also be used to satisfy any similar nonfederal renewable energy standard or requirement. Electric utilities may not use RECs or S-RECs retired under a green pricing program to comply with this rule. An REC or S-REC may be used for compliance with the RES or RES solar requirements of this rule for a calendar year in which it expired so long as it was valid during some portion of that year.

(C) RECs or S-RECs associated with customer-generated net-metered renewable energy resources shall be owned by the customer-generator.
All contracts between electric utilities and the owners of net-metered generation sources entered into after the effective date of these rules shall clearly specify the entity or person who shall own the RECs or S-RECs associated with the energy generated by the netmetered generation source. Electric metering associated with net metered sources shall meet the meter accuracy and testing requirements of 4 CSR 240-10.030, Standards of Quality. For solar electric systems utilizing the provisions of subsection (4)(H) of this rule, no meter accuracy or testing requirements are applicable.
(D) RECs that are generated with fuel cell energy using hydrogen derived from a renewable energy resource are eligible for compliance purposes only to the extent that the energy used to generate the hydrogen did not create RECs.
(E) If an electrical generator co-fires an eligible renewable energy fuel source with an ineligible fuel source, only the proportion of the electrical energy output associated with the eligible renewable energy fuel source shall be permitted to count toward compliance with the RES. For co-fired generation of electricity, the renewable energy resources shall be determined by multiplying the electricity output by the direct proportion of the as-fired British thermal unit (BTU) content of the fuel burned that is a source of renewable energy resources as defined in this rule to the as-fired BTU content of the total fuel burned.
(F) Electric utilities shall record REC information in a database. The database shall include, but not be limited to, a list of renewable energy resources the electric utility utilizes for compliance with the RES, including type, location, owner, operator, commencement of operations, and actual REC generation.
(G) All electric utilities shall use a commission designated common central third-party registry or other equivalent electronic tracking mechanism for REC accounting for RES requirements. Use of this tracking mechanism may suffice for compliance with subsection
(F) of this section.
(H) RECs that are created by the generation of electricity by a renewable energy resource physically located in the state of Missouri shall count as one and twenty-five hundredths (1.25) RECs for purposes of compliance with this rule. This additional credit shall not be tracked in the tracking systems specified in subsection (F) or (G) of this section. This additional credit of twenty-five hundredths (0.25) shall be recognized when the electric utility files its annual compliance report in accordance with section (7) of this rule.
(I) RECs that are purchased by an electric utility from a facility that subsequently fails to meet the requirements for renewable energy resources shall continue to be valid through the date of facility decertification.
(J) Electric utilities required to comply with this rule may purchase or sell RECs, either bilaterally or in any open market system, inside or outside the state, without prior commission approval.
(K) For compliance purposes, utilities shall retire RECs in sufficient quantities to meet the requirements of this rule. The REC shall be retired during the calendar year for which compliance is being achieved. Utilities may retire RECs during the month of January, following the calendar year for which compliance is being achieved, and designate those retired RECs as counting towards the requirements of that previous calendar year. Any RECs retired in this manner shall be specifically annotated in the registry designated in

accordance with subsection (G) of this section and the annual compliance report filed in accordance with section (7) of this rule. RECs retired in January, to be counted towards compliance for the previous calendar year in accordance with this subsection, shall not exceed ten percent (10%) of the total RECs necessary to be retired for compliance for that calendar year.
(L) Fractional RECs may be aggregated with other fractional RECs and utilized for compliance purposes.

(4) Solar Rebate.
Pursuant to section 393.1030, RSMo, and this rule, electric utilities shall include in their tariffs a provision regarding retail account holder rebates for solar electric systems. These rebates shall be available to Missouri electric utility retail account holders who install new or expanded solar electric systems that become operational after December 31, 2009. The minimum amount of the rebate shall be two dollars ($2.00) per installed watt up to a maximum of twenty-five (25) kW per retail account. To qualify for the solar rebate and the Standard Offer Contract of subsection (H) of this section, the customer-owned solar generating equipment shall be interconnected with the electric utility's system and have a rated capacity of greater than or equal to five hundred (500) watts.
(A) The retail account holder must be an active account on the electric utility's system and in good payment standing.
(B) The solar electric system must be permanently installed on the account holder's premises. As installed, the solar electric system shall be situated in a location where a minimum of eighty-five percent (85%) of the solar resource is available to the system.
(C) The installed solar electric system must remain in place on the account holder's premises for the duration of its useful life which shall be deemed to be ten (10) years unless determined otherwise by the commission.
(D) Solar electric systems installed by retail account holders must consist of equipment that is commercially available and factory new when installed on the original account holder's premises and the principal system components (i.e., photovoltaic modules and inverters) shall be covered by a functional warranty from the manufacturer for a minimum period of ten (10) years, with the exception of solar battery components. Rebuilt, used, or refurbished equipment is not eligible to receive the rebate. For any applicable solar electric system, only one (1) rebate shall be paid for the lifetime of the solar electric system. Retail accounts which have been awarded rebates for an aggregate of less than twenty-five (25) kW shall qualify to apply for rebates for system expansions up to an aggregate of twenty-five (25) kW. Systems greater than twenty-five (25) kW but less than one hundred (100) kW in size shall be eligible for a solar rebate up to the twenty-five (25) kW limit of this section.
(E) The solar electric system shall meet all requirements of 4 CSR 240-20.065, Net Metering or tariff approved by the commission for customer-owned generation.
(F) The electric utility may inspect retail account holder owned solar electric systems for which it has paid a solar rebate pursuant to this section, at any reasonable time, with prior notice of at least three (3) business days provided to the retail account holder. Advance notice is not required if there is reason to believe the unit poses a safety risk to the retail account holder, the premises, the utility's electrical system, or the utility's personnel.

(G) For the purpose of determining the amount of solar rebate, the solar electric system wattage rating shall be established as the direct current wattage rating provided by the original manufacturer with respect to standard test conditions.
(H) At the time of the rebate payment or anytime thereafter, the electric utility shall offer a one (1)-time lump sum payment, called a Standard Offer Contract, for the current ten (10)-year fixed price for associated S-RECs. The sale of any S-RECs created by the installed solar electric system shall not be included as a requirement of the utility's interconnection agreement. The Standard Offer Contract shall include a requirement for the retail account holder to provide a certification to the electric utility of continued operation of the solar electric system at least five (5) years and not greater than six (6) years after the acceptance of the Standard Offer Contract. Failure to provide this certification shall result in forfeiture by the retail account holder of the prorated portion of the Standard Offer Contract payment. For purposes of this subsection, the energy that shall be generated by a solar photovoltaic system with a nameplate capacity of ten (10) kW or less shall be estimated using generally accepted analytical tools, unless such smaller systems are equipped with monitoring technology to track actual production. The selection and use of these analytical tools shall be conducted in consultation with the staff of the commission.
(I) Electric utilities that have purchased S-RECs under a one (1)-time lump sum payment in accordance with subsection (H) of this section may continue to account for purchased S-RECs even if the owner of the solar electric system ceases to operate the system or the system is decertified as a renewable energy resource.
(J) Electric utilities that have purchased S-RECs under a one (1)-time lump sum payment shall utilize the associated S-RECs in equal annual amounts over the lifetime of the purchase agreement.
(K) The electric utility shall provide a rebate offer for solar rebates within thirty (30) days of application and shall provide the solar rebate payment to qualified retail account holders within thirty (30) days of verification that the solar electric system is fully operational.
Applicants who are accepted for the solar rebates shall have up to twelve (12) months from the date of receipt of a rebate offer to demonstrate full operation of their proposed solar electric system. Full operation means the purchase and installation on the retail account holder's premises of all major system components of the onsite solar electric system and production of rated electrical generation. If full operation is not achieved within six (6) months of acceptance of the Standard Offer Contract or rebate offer, in order to keep eligibility for the rebate offer and or Standard Offer Contract, the applicant shall file a report demonstrating substantial project progress and indicating continued interest in the rebate. The six (6)-month report shall include proof of purchase of the majority of the solar electric system components, partial system construction, and building permit, if required by the jurisdictional authority. Customers who do not demonstrate substantial progress within six (6) months of receipt of the rebate offer, or achieve full operation within one (1) year of receipt of rebate offer, will be required to reapply for any solar rebate.
(L) If the solar rebate program for an electric utility causes the utility to meet or exceed the retail rate impact limits of section (5) of this rule, the solar rebates shall be paid on a first-come, first-served basis, as determined by the solar system operational date. Any

solar rebate applications that are not honored in a particular calendar year due to the requirements of this subsection shall be the first applications considered in the following calendar year.

(5) Retail Rate Impact.

(A) The retail rate impact, as calculated in 5 (B), may not at any time exceed one percent (1%) for prudent costs directly attributable to RES compliance. The rate impact shall be calculated for each calendar year. The limit of this section is applicable to cost recovery in accordance with Section (6) of this rule or through a general rate case.

(B) The RES retail rate impact shall be determined by subtracting the total retail revenue requirement incorporating a "Non-Renewable" generation and purchased power portfolio from the total retail revenue requirement including a "RES-Compliant" generation and purchased power portfolio. The "non-renewable" generation and purchased power portfolio shall be determined by adding to the utility's existing generation and purchased power resource portfolio additional non-renewable resources sufficient to meet the utility's needs on a least-cost basis. The "RES-Compliant" portfolio shall be determined by adding to the utility's existing generation and purchased power resource portfolio an amount of renewable resources sufficient to achieve the standard set forth in Section (2), and an amount of least-cost non-renewable resources, the combination of which is sufficient to meet the utility's needs with the same reliability as the "non-renewable" portfolio. Rebates made during any calendar year in accordance with Section (4) of this rule shall be included in the cost of generation from renewable energy resources.

(C) If the revenue requirement including the "RES-Compliant" resource mix at any time exceeds the revenue requirement that includes the "Non-Renewable" resource mix by more than 1%, the utility shall adjust downward the proportion of renewable resources so that the revenue requirement differential does not at any time exceed 1%. In making this adjustment, the solar requirement shall be reduced proportionately. Prudently incurred costs to comply with the
RES standard, and passing this rate impact test, may be recovered in accordance with Section (6) of this rule or in a general rate case.

(D) Costs or benefits attributed to compliance with a federal renewable energy standard or portfolio requirement shall be considered as part of compliance with the Missouri RES.

(6) Cost Recovery and Pass-through of Benefits.

Pursuant to this rule and sections 393.1030 and 393.1045, RSMo, an electric utility outside or in a general rate proceeding may file an application and rate schedules with the commission to establish, continue, modify, or discontinue a Renewable Energy Standard Rate Adjustment Mechanism (RESRAM) that shall allow for the adjustment of its rates and charges to provide for recovery of prudently incurred costs or passthrough of benefits received as a result of compliance with RES requirements; provided that the RES compliance retail rate impact on average retail customer rates does not exceed one percent (1%) as determined by section (5) of this rule.

(A) If the actual increase in utility revenue requirements is less than two percent (2%), subsection (B) of this section shall be utilized. If the actual increase in utility revenue

Deleted: (5) Retail Rate Impact.¶
(A) The retail rate impact, as calculated in subsection (5)(B), may not exceed one percent (1%) for prudent costs of renewable energy resources directly attributable to RES compliance. The rate impact shall be calculated on an incremental basis for each addition of renewable generation through procurement or development of renewable energy resources, averaged over a ten (10)-year period, and shall exclude renewable energy resources under contract prior to the effective date of this rule and renewable energy resources previously determined not to exceed the one percent (1%) threshold.¶
(B) The RES retail rate impact shall be determined by subtracting the total retail revenue requirement incorporating an incremental non-renewable generation and purchased power portfolio from the total retail revenue requirement including an incremental RES-compliant generation and purchased power portfolio. The non-renewable generation and purchased power portfolio shall be determined by adding to the utility's existing generation and purchased power resource portfolio additional non-renewable resources sufficient to meet the utility's needs on a least-cost basis. The RES-compliant portfolio shall be determined by adding to the utility's existing generation and purchased power resource portfolio an amount of renewable resources sufficient to achieve the standard set forth in section (2) of this rule and an amount of least-cost non-renewable resources, the combination of which is sufficient to meet the utility's needs. These renewable energy resource additions will utilize the most recent electric utility resource planning analysis. These comparisons will be conducted utilizing projections of the incremental revenue requirement for new renewable energy resources, less the avoided cost of fuel not purchased for non-renewable energy resources due to the addition of renewable energy resources. In addition, the projected impact on revenue requirements by renewable energy resources shall be reduced by the cost of greenhouse gas emissions reductions, assuming that such reductions are made at the then-current cost per ton of greenhouse gas emissions allowances or the cost of greenhouse gas emission reduction technology, whichever is lower. Any variables utilized in the modeling shall be consistent with values established in prior rate proceedings or RES compliance plans, unless specific justification is provided for deviations. The comparison of the rate impact of renewable an... [1]

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requirements is equal to or greater than two percent (2%), subsection (C) of this section shall be utilized. For the initial filing by the electric utility in accordance with this section, subsection (C) of this section shall be utilized.
1. The pass-through of benefits has no single-year cap or limit.
2. Any party in a rate proceeding in which an RESRAM is in effect or proposed may seek to continue as is, modify, or oppose the RESRAM. The commission shall approve, modify, or reject such applications and rate schedules to establish an RESRAM only after providing the opportunity for an evidentiary hearing.
3. If the electric utility incurs costs in complying with the RES requirements that exceed the one percent (1%) limit determined in accordance with section (5) of this rule for any year, those excess costs may be carried forward to future years for cost recovery under this rule. These carried forward costs plus additional annual costs remain subject to the one percent (1%) limit for any subsequent years. In any calendar year that costs from a previous compliance year are carried forward, the carried forward costs will be considered for cost recovery prior to any new costs for the current calendar year.
4. For ownership investments in eligible renewable energy technologies in an RESRAM application, the electric utility shall be entitled to a rate of return equal to the electric utility's most recent authorized rate of return on rate base. Recovery of the rate of return for investment in renewable energy technologies in an RESRAM application is subject to the one percent (1%) limit specified in section (5) of this rule.
5. Upon the filing of proposed rate schedules with the commission seeking to recover costs or pass-through benefits of RES compliance, the commission will provide general notice of the filing.
6. The electric utility shall provide the following notices to its customers, with such notices to be approved by the commission in accordance with paragraph 7. of this subsection before the notices are sent to customers:
A. An initial, one (1)-time notice to all potentially affected customers, such notice being sent to customers no later than when customers will receive their first bill that includes an RESRAM, explaining the utility's RES compliance and identifying the statutory authority under which it is implementing an RESRAM;
B. An annual notice to affected customers each year that an RESRAM is in effect explaining the continuation of its RESRAM and RES compliance; and
C. An RESRAM line item on all customer bills, which informs the customers of the presence and amount of the RESRAM.
7. Along with the electric utility's filing of proposed rate schedules to establish an RESRAM, the utility shall file the following items with the commission for approval or rejection, and the Office of the Public Counsel (OPC) may, within ten (10) days of the utility's filing of this information, submit comments regarding these notices to the commission:
A. An example of the notice required by subparagraph (A)6.A. of this section;
B. An example of the notice required by subparagraph (A)6.B. of this section; and
C. An example customer bill showing how the RESRAM will be described on affected customers' bills in accordance with subparagraph (A)6.C. of this section.
8. An electric utility may effectuate a change in RESRAM no more often than one (1) time during any calendar year, not including changes as a result of paragraph 11. of this subsection.

9. Submission of Surveillance Monitoring Reports. Each electric utility with an approved RESRAM shall submit to staff, OPC, and parties approved by the commission a Surveillance Monitoring Report. The form of the Surveillance Monitoring Report is included herein.

A. The Surveillance Monitoring Report shall be submitted within fifteen (15) days of the electric utility's next scheduled United States Securities and Exchange Commission (SEC) 10-Q or 10-K filing with the initial submission within fifteen (15) days of the electric utility's next scheduled SEC 10-Q or 10-K filing following the effective date of the commission order establishing the RESRAM.

B. If the electric utility also has an approved fuel rate adjustment mechanism or environmental cost recovery mechanism (ECRM), the electric utility shall submit a single Surveillance Monitoring Report for the RESRAM, ECRM, the fuel rate adjustment mechanism, or any combination of the three (3). The electric utility shall designate on the single Surveillance Monitoring Report whether the submission is for RESRAM, ECRM, fuel rate adjustment mechanism, or any combination of the three (3).

C. Upon a finding that a utility has knowingly or recklessly provided materially false or inaccurate information to the commission regarding the surveillance data prescribed in this paragraph, after notice and an opportunity for a hearing, the commission may suspend an RESRAM or order other appropriate remedies as provided by law.

10. The RESRAM will be calculated as a percentage of the customer's energy charge for the applicable billing period.

11. Commission approval of proposed rate schedules, to establish or modify an RESRAM, shall in no way be binding upon the commission in determining the ratemaking treatment to be applied to RES compliance costs during a subsequent general rate proceeding when the commission may undertake to review the prudence of such costs. In the event the commission disallows, during a subsequent general rate proceeding, recovery of RES compliance costs previously in an RESRAM, or pass-through of benefits previously in an
RESRAM, the electric utility shall offset its RESRAM in the future as necessary to recognize and account for any such costs or benefits. The offset amount shall include a calculation of interest at the electric utility's short-term borrowing rate as calculated in subparagraph
(A)28.A. of this section. The RESRAM offset will be designed to reconcile such disallowed costs or benefits within the six (6)-month period immediately subsequent to any commission order regarding such disallowance.

12. At the end of each twelve (12)-month period that an RESRAM is in effect, the electric utility shall reconcile the differences between the revenues resulting from the RESRAM and the pretax revenues as found by the commission for that period and shall submit the reconciliation to the commission with its next sequential proposed rate schedules for RESRAM continuation or modification.

13. An electric utility that has implemented an RESRAM shall file revised RESRAM rate schedules to reset the RESRAM to zero (0) when new base rates and charges become effective following a commission report and order establishing customer rates in a general rate proceeding that incorporates RES compliance costs or benefits previously reflected in an RESRAM in the utility's base rates. If an over- or under-recovery of RESRAM revenues or over- or underpass- through of RESRAM benefits exists after the

RESRAM has been reset to zero (0), that amount of over- or under-recovery, or over- or under-pass-through, shall be tracked in an account and considered in the next RESRAM filing of the electric utility.

14. Upon the inclusion of RES compliance cost or benefit passthrough previously reflected in an RESRAM into an electric utility's base rates, the utility shall immediately thereafter reconcile any previously unreconciled RESRAM revenues or RESRAM benefits and track them as necessary to ensure that revenues or pass-through benefits resulting from the RESRAM match, as closely as possible, the appropriate pretax revenues or pass-through benefits as found by the commission for that period.

15. In addition to the information required by subsection (B) or (C) of this section, the electric utility shall also provide the following information when it files proposed rate schedules with the commission seeking to establish, modify, or reconcile an RESRAM:

A. A description of all information posted on the utility's website regarding the RESRAM; and

B. A description of all instructions provided to personnel at the utility's call center regarding how those personnel should respond to calls pertaining to the RESRAM.

16. RES compliance costs shall only be recovered through a RESRAM and shall not be considered for cost recovery through an environmental cost recovery mechanism or fuel adjustment clause or interim energy charge.

17. Pre-Existing Adjustment Mechanisms, Tariffs, and Regulatory Plans. The provisions of this rule shall not affect—

A. Any adjustment mechanism, rate schedule, tariff, incentive plan, or other ratemaking mechanism that was approved by the commission and in effect prior to the effective date of this rule; and

B. Any experimental regulatory plan that was approved by the commission and in effect prior to the effective date of this rule.

18. Each electric utility with an RESRAM shall submit, with an affidavit attesting to the veracity of the information, the following information on a monthly basis to the manager of the auditing department of the commission and the OPC. The information may be submitted to the manager of the auditing department through the electronic filing and information system (EFIS). The following information shall be aggregated by month and supplied no later than sixty (60) days after the end of each month when the RESRAM is in effect. The first submission shall be made within sixty (60) days after the end of the first complete month after the RESRAM goes into effect. It shall contain, at a minimum—

A. The revenues billed pursuant to the RESRAM by rate class and voltage level, as applicable;

B. The revenues billed through the electric utility's base rate allowance by rate class and voltage level;

C. All significant factors that have affected the level of RESRAM revenues along with workpapers documenting these significant factors;

D. The difference, by rate class and voltage level, as applicable, between the total billed RESRAM revenues and the projected RESRAM revenues;

E. Any additional information ordered by the commission to be provided; and

F. To the extent any of the requested information outlined above is provided in response to another section, the information only needs to be provided once.