RÁBAGO ENERGY LLC

2025 EAST 24TH AVENUE
DENVER, COLORADO 80205
KARL@RABAGOENERGY.COM
512.968.7543

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of a Working Case to Draft a Rule to Modify Commission Rules Regarding Renewable Renewable Energy Standard Requirements and Net Metering Standards	))))	**File No. EW-2014-0092**

COMMENTS OF KARL R. RÁBAGO ON BEHALF OF MISSOURI SOLAR ENERGY INDUSTRIES ASSOCIATION

Introduction

The Missouri Solar Energy Industries Association (MOSEIA) appreciates this opportunity to comment on a rule to modify Renewable Energy Standard Requirements and Net Metering Standards.

The Missouri Solar Energy Industries Association represents solar industry stakeholders supporting policy issues focused on solar job creation and sustainable economic growth in Missouri. MOSEIA also provides professional development opportunities throughout the year that aim to raise industry standards. MOSEIA is the official affiliated chapter of the Solar Energy Industries Association (SEIA).

MOSEIA believes that the Commission should be guided by a few key principles in developing this rule. The principles are:

1. The Commission should be guided by the plain language of the statute wherever possible.

2. The Commission rule should support the increased, orderly, efficient, and least cost development of solar energy resources in Missouri, for the benefit of ratepayers, utilities, and the public.

3. The Commission rule should include a structure that is flexible and adaptive to a rapidly evolving solar marketplace.

4. The Commission rule should support complementary development of both utility scale and distributed, customer-owned solar energy.

5. The Commission rule should strongly encourage utility efficiency in solar investments, program administration, and compliance.

Overview of Comments

HB 142, as codified in Missouri Revised Statutes Chapter 393, Section 393.1030, establishes and amends the Renewable Energy Standard, and therefore, compels amendments to the Electric Utility Renewable Energy Standard Requirements (4 CSR 240-20.100, the "RES rule"). As amended, the law is designed to ensure that utilities implement a rebate program that, in cumulative spending net of utility investments in solar, equals a 1% increase in average retail rates. In so doing, the law establishes a strong multiyear commitment of rebate funds around which distributed solar markets may organize and become self-sustaining.

An added and important feature of the law is that it creates a symmetrical relationship between utility investments in solar energy and the development of distributed solar energy markets.

The law includes additional important features that require utilities to pursue a least-cost renewable energy compliance strategy, and include in the retail rate increase calculation only least-cost, direct costs associated with compliance, net of the full costs associated with a non-renewable resource scenario. The non-renewable resource scenario must also be increased by the potential costs associated with the risk of environmental regulation.

The requirement in HB 142 to address the full net cost of a non-renewable resource scenario also compels the amendment of the Net Metering rule (4 CSR 240.20.065 – the "NEM rule") to eliminate the incorrect equating of "avoided fuel cost" with "avoided cost" in the definitions section. The law also created a requirement for the transfer of renewable energy certificates (RECs) as a condition of a customer receiving a rebate for installing a solar system. These RECs reduce the utility RES compliance cost and should be deducted in the calculation of the maximum average retail rate increase.

Finally, the revisiting of the RES rule and the NEM rule creates additional opportunities to revise and improve those rules in order to achieve the goals described above, and to improve the rules.

These comments address these issues in the following order:

- The Rebate Program
- The Net Metering Rule
- Other Compliance and Administration Issues

References are included to the applicable sections of HB 142 (Agreed and Passed Version), and Stakeholder Review Documents, January 30, 2014 for 4 CSR 240-20.100, and Undated Proposed Amendment for 4 CSR 240-20.065.

The Rebate Program and RES Requirements, 4 CSR 240-20.100

The most important changes made to the RES requirements for utilities in HB 142 relate to the rebate program for distributed customer-owned solar generation. Staff's proposed amendment to the RES rule fails to accurately capture these changes and should be corrected accordingly. Because of the importance of these changes, they are explained in detail here. MOSEIA will be pleased to work with staff to craft RES rule language that comports with the discussion below.

First, HB 142 preserves the methodology for calculating the maximum average retail rate increase. (393.1030.2.(1)) The law states that this number is calculated by subtracting the cost of an entirely non-renewable resource portfolio from the estimated utility cost of compliance with least-cost renewable generation. Specifically, to be consistent with the statute, these two numbers should be calculated and estimated as:

Compliance Cost

- Direct costs to comply, no joint or common costs
- No costs greater than least cost
- Net of value received for assigned RECs, which avoid compliance costs

Non-Renewable Scenario Cost

- Total cost if NO renewable energy, including all costs associated with serving non-renewable generation to loads (e.g. transmission, distribution, etc.)
- Estimated costs of environmental regulatory risk

Second, in order to effectuate the purposes of HB 142, it is also necessary to review MRS section 393.1045, which effectively provides a definition for the maximum average retail rate increase and states that:

> Any renewable mandate required by law shall not raise the retail rates charged to the customers of electric retail 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. Solar rebates shall be included in the one percent rate cap provided for in this section.

The compliance cost cap tests whether the RES mandate raises rates charged, and, therefore, ensures that RES compliance and rebates do not cause rates in any year to exceed 101% of rates without such costs. It is important to note the statute does not limit the total amount of rebates to 1% or less. Nor should the Commission RES rule.

In fact, HB 142 includes a specific provision requiring additional rebates, until June 30, 2020, that may, exceed 1%, depending on proper calculation of the maximum average

retail rate increase, as set out above, and on the calculation performed under section 393.1030.2.(1).

Third, the amount of additional rebates must be calculated. Additional rebates are rebates not included in the utility cost of compliance with the RES. The calculation for additional rebates that "shall be paid and included in rates" starts with a test, of whether the maximum average retail rate increase exceeds 1% when the value of utility investments in solar-related projects is ignored. If this number does not exceed 1%, additional rebates are required by the law.

The amount of these additional rebates is also clearly set forth in the law. The law states that additional rebates shall be paid up to the amount that results from subtracting the percentage impact of utility solar-related investments from 1%. HB 142 also specifically contemplates that this calculation could produce a maximum average retail rate increase of greater than 1% when utility solar-related investments are included.

The following table with hypothetical values sets out the operation of the additional rebates provision in HB 142. The table uses, as an example, five different rate increase values, ranging from a minus .5% (because average rates could go down in any given year, especially as more renewable energy is added to the utility mix) up to 1.5%, and then considers four different scenarios of utility solar-related investment. As shown in the table, as the utility increases its solar-related investment, the requirement for rebates grows. For the utility that has zero average retail rate increase and does not invest in renewable energy, total rebates are 1%, incompliance with the cap in section 393.1045.

Additional Rebates under HB 142

R = Maximum Average Retail Rate Increase, Including Utility Investment	I = Utility Solar Investment	R - I = Maximum Average Retail Rate Increase Ignoring Utility Solar Investment	If R - I </= 1.00, Additional Rebates Shall Be Paid - "YES" or "NO"	Amount of Additional Rebates = 1% - (R - I)
-0.50%	0%	-0.5%	YES	1.5%
0%	0%	0.0%	YES	1.0%
0.50%	0%	0.5%	YES	0.5%
1.00%	0%	1.0%	YES	0.0%
1.50%	0%	1.5%	NO	N/A

R = Maximum Average Retail Rate Increase, Including Utility Investment	I = Utility Solar Investment	R - I = Maximum Average Retail Rate Increase Ignoring Utility Solar Investment	If R - I </= 1.00, Additional Rebates Shall Be Paid - "YES" or "NO"	Amount of Additional Rebates = 1% - (R - I)
-0.50%	0.5%	-1.0%	YES	2.0%
0%	0.5%	-0.5%	YES	1.5%
0.50%	0.5%	0.0%	YES	1.0%
1.00%	0.5%	0.5%	YES	0.5%
1.50%	0.5%	1.0%	YES	0.0%

R = Maximum Average Retail Rate Increase, Including Utility Investment	I = Utility Solar Investment	R - I = Maximum Average Retail Rate Increase Ignoring Utility Solar Investment	If R - I </= 1.00, Additional Rebates Shall Be Paid - "YES" or "NO"	Amount of Additional Rebates = 1% - (R - I)
-0.50%	1.0%	-1.5%	YES	2.5%
0%	1.0%	-1.0%	YES	2.0%
0.50%	1.0%	-0.5%	YES	1.5%
1.00%	1.0%	0.0%	YES	1.0%
1.50%	1.0%	0.5%	YES	0.5%

R = Maximum Average Retail Rate Increase, Including Utility Investment	I = Utility Solar Investment	R - I = Maximum Average Retail Rate Increase Ignoring Utility Solar Investment	If R - I </= 1.00, Additional Rebates Shall Be Paid - "YES" or "NO"	Amount of Additional Rebates = 1% - (R - I)
-0.50%	1.5%	-2.0%	YES	3.0%
0%	1.5%	-1.5%	YES	2.5%
0.50%	1.5%	-1.0%	YES	2.0%
1.00%	1.5%	-0.5%	YES	1.5%
1.50%	1.5%	0.0%	YES	1.0%

Fourth, other important structural issues must be addressed:

- 20.100(3)(E), (F); (4)(C), (D), (H)(3); (5)(C) – Time periods underlying estimated costs and avoided costs must be realistic. Because the RES requirement anticipates 10-year RECs, it is appropriate to look at the ten-year stream of costs and avoided costs associated with solar energy. However, solar energy systems have a useful life today of some 30 years. Costs and benefits of solar should be amortized over the full 30-year life, even if only a snapshot of the first 10 years is used. Staff should develop or obtain modeling results to allow full analysis of these provisions prior to their adoption.

- 20.100(5)(A), (B) – It is not appropriate to consider historical costs in calculating the maximum average retail rate impact. Historical costs cannot, in the words of section 393.1045, "raise the retail rates charged to the customers of electric retail suppliers by an average of more than one percent in any year." The staff proposal is at odds with the statute in this regard. Current and forward-going operational, maintenance, amortization, and other costs associated with solar energy resources are appropriate for use in the estimation of compliance costs, and a 10-year period of estimation seems appropriate.

- (7)(B)1. – As can be seen in the table above, the statute creates a mechanism by which a utility that seeks to suppress distributed solar energy investment can limit the size of the rebate program to 1% by keeping its utility solar-related investments to a minimum. This creates a special burden on staff and stakeholders to carefully review and fully participate in utility integrated resource planning processes with a view toward full and fair evaluation of least-cost renewable energy resources. MOSEIA believes that the Commission and staff should revisit the integrated resource planning and RESRAM processes with this reality in mind. The RESRAM should include an opportunity to fully explore new information about solar energy benefits and costs not withstanding assumptions previously made in the most recent resource plan. The Commission should consider the use of market tests to validate utility assumptions about the costs of both renewable and non-renewable resources.

- (5)(B) – In addition, the law creates an opportunity for a utility seeking to suppress all renewable energy development to try to deflate the full cost of a non-renewable resource portfolio. The consequences of such manipulation, were it to occur, would be inconsistent with the intent of the statute and a grave disservice to Missouri ratepayers. The RES rule must be designed, particularly, to include the full risk of environmental regulation, not just an estimated carbon compliance cost. To the extent that the staff rule limits the environmental regulatory risk impact to a greenhouse gas compliance cost calculation per ton of emissions, this is inconsistent with the statute and should be amended.

- (5)(B) – Use of an incremental total cost approach in comparing the estimated cost of compliance and the non-renewable scenario is appropriate, but only to the extent that the full costs of the non-renewable scenario are considered. Such costs must include transmission and distribution energy and capacity costs, fuel price volatility risk costs, line loss costs, and others. To the extent that the staff rule limits the non-renewable portfolio cost calculation and avoided cost calculation to the avoided cost of fuel, a change in the proposed rule is required.

- (5)(C) – The cost of compliance should be reduced by the compliance cost reduction associated with the value of RECs required transferred to the utility under the law.

- (6) – The RES rule should be amended to make it clear that the utility bears the burden of production and proof in establishing the reasonableness of its estimates, valuation, and calculations under the rule.

- (5)(B) – The Commission should immediately initiate a proceeding aimed at developing a "Value of Solar" methodology for correctly assessing the actual compliance cost net of solar energy benefits. Such analysis should also inform the full and fair compensation rate for excess energy produced by NEM customers. This analysis would also provide a useful calculation for benchmarking utility solar-related investments, and utility incentives above and beyond required rebates. Attached to these comments are a paper published by the Interstate Renewable Energy Council setting forth guidance on such value of solar analysis and a copy of the Value of Solar Methodology recently issued by the Minnesota Department of Commerce pursuant to Minnesota statute.

- (1)(Q), (2), (2)(B), (C), (D), (E), (F), (3), (3)(B), (E), (F), (J), (5)(A), (B), (D), (E), (8)(C), (D) – The staff proposed RES rule greatly expands use of the term "portfolio" to the RES process. This term is undefined and may create unnecessary confusion. The prior language of "RES requirements," "least-cost renewable generation" or other similar language that adheres to the statutory language should be used.

The Net Metering Rule, 4 CSR 240-20.065

Change to the NEM rule is required in order to implement the REC transfer provision of HB 142. As discussed above, the rule should also be amended to explicitly state that the value of RECs transferred to the utility in consideration of rebate payments should be deducted from the costs of RES compliance.

(1)(A) – Revisiting the NEM rule also creates an opportunity to correct a confusing definitional error in the NEM rule. The Missouri statute establishing net metering requires that compensation for excess generation must be at a level of "at least avoided fuel cost." (MRS 386.890.5.(3). The same statute defines "avoided fuel cost." (MRS 386.890.2.(1) The avoided cost rule (4 CSR 240-20.060 defines "avoided cost" and makes it clear that "avoided fuel costs" are a subset of and not the same as "avoided costs." The NEM rule should be amended to correct this error. Further, MOSEIA believes the Commission should review the value of excess customer-generated solar energy and establish a value at least as great as full avoided cost under current rules. As discussed above, this full avoided cost should be used in calculation of the process of calculating the maximum average retail rate increase.

Other Compliance and Administration Issues

- HB 142 contains other provisions that should be reviewed in assessing their potential impact on RES implementation. For example, the law exempts solar

systems not held for resale from taxation. (MRS 137.100.(10)) Utility compliance costs should be reduced by the benefit of this tax break. In addition, regulatory costs are reduced to the extent the utility supports customer-owned distributed solar generation. (MRS 386.370) The value of these savings should be captured in the compliance cost calculation as well. Finally, customer-generators bear the costs of insurance for their solar generation systems and, for some systems, risk of damage to the utility. This coverage reduces utility insurance costs, which should also be reflected as a value that reduces compliance costs. (4 CSR 240.20.065(5))

- The Commission staff should consider the system impacts of distributed solar from a DSM perspective as well. At least up to the point of exporting energy, customer-owned solar behaves exactly like energy efficiency measures, and receive credit for these savings in calculating compliance costs. (MRS 393.1075.2.(4))

- It is premature to make any determination about costs or benefits associated with a hypothetical federal renewable energy standard, and RES rule provisions to that effect should be deleted. (4 CSR 240.20.100 (5)(E))

- Penalties associated with failure to comply with the RES should not be counted as a cost of compliance, and the RES rule should explicitly state this. (4 CSR 240.20.100 (8)(E))

- Numerous aspects of the rebate and net metering application process could be improved in order to track with best practices in solar program administration. For example, while Missouri law provides for a year between approval of an interconnection application and the date a solar system must be operational, there is great benefit to speeding up the average project completion time for solar projects. Various incentives could be designed to encourage the most timely possible project completion. Other provisions, like the requirement for applications 6 months in advance should be harmonized throughout the rule.

- Numerous other comments and suggestions have been previously submitted or supported by MOSEIA in the January 14, 2014 workshop. These comments are adopted here by reference.