Exhibit # 1

In the Matter of a Proposed Rulemaking to Implement the Consumer Clean Energy Act, Section 386.887, RSMo Supp. 2002
May 19, 2003 Public Hearing

Case No. EX-2003-0230

Proposed Rule and Contract Comments & Missouri Public Service Commission Staff Responses

By Warren T. Wood, PE
Energy Department Manager
Missouri Public Service Commission Staff

1) Bill Roush - President, Heartland Solar Energy Industries Association
Solar Electric Systems/KC, Inc., 13700 W. 108th St., Lenexa, Kansas 66215
(913) 338-1939

This rule should be quite effective in stopping all solar, wind and fuel cell interconnections to the grid by legitimate contractors for homeowners and small business people in Missouri. Hopefully it will not encourage people to 'jackleg' unknown 'guerrilla' interconnections as has happened in other states with laws that discourage safe, but inexpensive interconnections.

The law basically blocks the legitimate solar, wind and fuel cell industries, which are growing at 20%+ annual rates, from doing business in Missouri. It also says to these industries, put your manufacturing plants, distribution centers, trained dealers and marketing efforts elsewhere, we don't want you in Missouri. Missouri has achieved a reputation in these growing industries as having the worst business climate for their growth.

Staff Response:
Mr. Roush was contacted after having provided the comments above and it was confirmed that his comments were focused at the statute, not the draft rule and contract. Other parties expressed some of these same concerns during the technical conferences but all parties understood that these technical conferences were directed at drafting a rule and contract, not changing the statute.

2) Mike Rump, Senior Attorney, Kansas City Power & Light Company, Law Department, 1201 Walnut, Kansas City, Missouri 64106-2124, (816) 556-2483

a) *KCPL is concerned whether the proposed rules are sufficient to ensure the safety of the customer-generator, the public in general, and KCPL's employees. Specifically, Section (8) Customer Generator Testing Requirements of the proposed rules and Section D.8) Testing Requirements of the "Interconnection Application/Agreement For Net Metering Systems With Capacity of 100kW Or Less" both provide for annual testing "... to confirm that the net metering unit automatically ceases to energize the output (interconnection equipment output voltage goes to zero) within two (2) seconds of being disconnected from the retail electric supplier's electric system." It is critical that the customer generator not feed energy into the retail electric supplier's system under emergency conditions on the retail electric supplier's system. Energy fed into the retail electric supplier's system under such conditions may endanger the general public and the retail electric supplier's employees. The Company recommends that the provision under the proposed rules specify that personnel qualified to do such tests perform these tests.*

Staff Response:

This issue was discussed at length during the technical conferences and Staff was of the opinion that the parties had accepted this language as a reasonable settlement of differing opinions. Nonetheless, Staff absolutely agrees that it is important that these systems do not feed power back into the grid during outages and at times the grid is not operating normally. This was the basis for Staff's support for IEEE and UL requirements related to non-islanding equipment. Non-islanding equipment is specifically designed, tested and certified to not provide power back to a de-energized line. This was also one of the reasons for requiring a utility accessible visible disconnect switch that the utility can operate to disconnect the customer-generator if they believe that the system is not operating appropriately. In addition to these requirements, current safety standards for working on power lines state that (NESC Part 4, Rules for the Operation of Electric Lines):

> Employees shall consider electric supply equipment and lines to be energized, unless they are positively known to be de-energized. Before starting work, employees shall perform preliminary inspections or tests to determine existing conditions. Operating voltages of equipment and lines should be known before working on or in the vicinity of energized parts.

Furthermore, this concern was the basis for contract provision D.1 that states that "The Customer-Generator shall permit [Utility Name]'s employees and inspectors reasonable access to inspect, test, and examine the Customer-Generator's System." The current provisions in the rule and contract related to testing are similar to those required in New Jersey and Vermont.

Staff believes that customer-generators will be capable of performing the test outlined in the rule and that this requirement is reasonable for them to be required to perform. Many

of the customer-generators having these systems constructed will be spending over $10,000 for even relatively small facilities and will have worked with the manufacturers of their equipment, engineers, contractors and local inspectors to bring these systems into operation. It is expected that these customers will be capable of turning off a disconnect switch and watching the display on the inverter to confirm that it has operated in the expected manner following such an interruption in grid connectivity. In Staff's opinion, bringing in another "qualified" individual for annual test at the expense of the customer-generator is an unnecessary additional cost for these customers.

b) *Under the proposed rule, construction, inspection, and operation requirements only relate to the electrical interconnection. The retail electric supplier should not be required to connect to or provide service to the customer-generator until the customer generator demonstrates compliance with all requirements of other rulemaking and governing bodies, e.g., applicable regulations for boilers and pressurized vessels, structural integrity (windmill towers), FAA flight path restrictions (windmill towers), environmental regulations, building and construction permits, occupancy permits, local zoning, etc. The Company recommends that a sentence be added that states that the utility not be required to connect the service until the requirements and specifications of all applicable federal, state and local laws, rule and regulations have been met.*

Staff Response:

This issue was not addressed during the technical conferences beyond compliance with the statutory requirement related to certification from a qualified electrician or engineer that the installed facilities meet the requirements outlined in the statute, which are reflected in the rule and contract. The statute was clear in what information was required from the customer-generator in order for the retail electric supplier to approve of the facility and permit interconnection. The proposed additional language is not necessary and in Staff's opinion, goes beyond the intent of the statute. Staff does not believe that the retail electric supplier should be the party determining if all other "federal, state and local laws, rule and regulations have been met" in making their decision regarding interconnection of the customer-generator's equipment. Furthermore, the customer-generator is already required to identify the "Person or Agency Who Will Inspect/Certify Installation" under Section C of the contract and Section E of the contract requires a Licensed Engineer or Licensed Electrician to certify that the customer-generator's system satisfies all requirements of Section C of the contract. If the Commission wishes to implement a requirement in response to this concern, Staff recommends that an additional provision be added to Section D of the contract specifying that the Customer-Generator is responsible for assuring that the installation is in compliance with all other applicable federal, state and local laws. Staff prefers this approach to one where the customer is required to provide certifications of compliance with all federal, state and local laws before a retail electric supplier will commit to permit interconnection with their system. Staff believes that the provisions already included in the draft rule and contract adequately address the safety and power quality concerns of the connecting retail electric supplier.

c) *The customer-generator liability insurance cap of $100,000 [Section 10 of the proposed rule] is inadequate. One key indicator of the level of risk would be the cost of insurance above and beyond $100,000. If additional insurance is costly, then one could reasonably conclude that the associated risk is high. Conversely, if the cost of additional insurance is minimal, then one could reasonably conclude that the risk is relatively low. In any event, a potential customer-generator should factor the hidden cost of risk into the decision making process. The Company would recommend that the Commission change the wording in the rules to not include a specified level of insurance coverage, but require that the customer be required to carry "adequate" insurance coverage.*

Staff Response:

This issue was discussed at length during the technical conferences and Staff was of the opinion that the parties had accepted the current liability insurance language as a reasonable settlement of differing opinions. Nonetheless, the draft rule and contract does not prevent customer-generators from purchasing additional insurance if they believe it is warranted. The draft rule does however hold the customer-generator to a minimum level of insurance that they must purchase. The technical conferees' position reflected in the draft rule and contract on this issue was influenced by several factors:

1) The lack of occurrences of failures of this equipment. Tens of thousands of these systems have been installed and no evidence of even one failure that energized a de-energized line has been noted. NEC, IEEE and UL have stringent requirements for qualification of this equipment and prevention of backfeeding power into a de-energized line.
2) The likely outcome scenarios of a failure of this equipment. Current safety standards for working on power lines state that (NESC Part 4, Rules for the Operation of Electric Lines):

> Employees shall consider electric supply equipment and lines to be energized, unless they are positively known to be de-energized. Before starting work, employees shall perform preliminary inspections or tests to determine existing conditions. Operating voltages of equipment and lines should be known before working on or in the vicinity of energized parts.

   This provides for a very low likelihood of a backfeeding injury due to a customer-generator's equipment failing to isolate.
3) The liability provisions of other states were also considered. Several states do not require any additional liability insurance (Oklahoma, Arkansas, California, New York, Maryland, Nevada, Hawaii). At least two other states recommend that customers obtain liability insurance but do not require it. A quick review of a number of other states showed a liability insurance range of $100,000 to $500,000 (Washington - $200,000, Florida - $100,000, Virginia - $100,000 < 10kW and $300,000 > 10kW, Wisconsin - $100,000, Massachusetts – None < 10kW and $500,000 > 10kW).

Staff notes that at the technical conferences the representative for the Association of Missouri Electric Cooperatives was one of the more outspoken advocates of liability

insurance levels and indemnification. The association has stated that they are in support of the proposed rule and have not proposed changes to it.
In summary, concerns related to safe operation of this equipment are absolutely warranted but operating experience has demonstrated that existing safety and power quality standards are adequate and liability insurance provisions should reflect this. Staff considers the current provisions for $100,000 of liability insurance to be sufficient.

d) *Section G. Utility Application Approval (completed by [Utility Name]) [Utility Name] of the "INTERCONNECTION APPLICATION/AGREEMENT FOR NET METERING SYSTEMS WITH CAPACITY OF 100 kW OR LESS" provides that the utility does not assume responsibility or liability for the customer-generator's system or the customer-generators negligence by approval of the Application/Agreement. KCPL believes that substituting the word "acceptance" for the word "approval" wherever it occurs can enhance the intent. This change would highlight the fact that the utility is acting pursuant to a Rule of the Commission, and the utility may not "approve" of the application of the Rule to a particular set of factual circumstances.*

Staff Response:
This issue was discussed briefly during the technical conferences and Staff was of the opinion that the parties had accepted this language as a reasonable settlement of differing opinions. Nonetheless, the Staff is satisfied with the intent and application of the word "approval" in the draft rule and contract. The use of the word "approved" was chosen since the statute uses this word in 386.887.9 in the last sentence: "If the application for interconnection is **approved** by the retail electric supplier, the retail electric supplier shall complete the interconnection within 15 days if electric service already exists to the premises, unless a later date is mutually agreeable to both the customer-generator and the retail electric supplier" (emphasis added).

3) Mike Palmer, Vice-President, Commercial Operations, The Empire District Electric Company & Bill Eichman, Senior Engineer, The Empire District Electric Company
(417) 625-5116

Submittal of Comments Regarding Proposed "Net Metering" Rule
(Missouri PSC Case No. EX-2003-0230)
Submitted by The Empire District Electric Company

On behalf of The Empire District Electric Company, I submit the following comments regarding the Proposed "Net Metering" Rule (Case No. EX-2003-0230) as published in the April 15th, 2003, Missouri Register (Volume 28, No. 8):

Although the rule as proposed may not be "perfect" from any of the affected parties' perspectives, it is the result of joint collaboration and consensus of the parties involved in the technical meetings and discussions held over the past 9 months. These parties included representatives from the Public Service

Commission Staff, the Department of Natural Resources, the Office of Public Counsel, the Missouri Clean Air Coalition, the Missouri Investor-Owned Utilities, the Missouri Rural Electric Cooperatives, the Missouri Municipal Utilities, and at least one member of the Missouri Legislature. I understand that the proposed rule also resolves the legal and clerical issues identified by the Missouri Attorney General's office.

We believe this proposed rule meets all of the requirements set forth in Section 386.887, RSMo Supp. 2002; as well as all of the existing federal rules mandated by PURPA. This proposed rule is a good "first step" in establishing a consistent statewide "standard" for the interconnection of customer-owned clean energy generators to the electricity grid in Missouri. However, as with any rule, it will likely need to be reviewed and updated periodically as Missouri's utilities and customers gain experience with existing forms of clean energy technology and/or as new clean energy technologies evolve.

Based on the comments above, I hereby submit Empire District Electric Company's endorsement of the proposed net metering rule as published.

Respectfully submitted this 15th day of May, 2003.

Staff Response:
Staff agrees with these comments.

4) Victor S. Scott, Attorney for Association of Missouri Electric Cooperative, 700 East Capitol, PO Box 1438, Jefferson City, MO 65102 (573) 634-3422

Comments of Association of Missouri Electric Cooperatives

The Association of Missouri Electric Cooperatives actively participated in the Net metering Working Group and supports proposed rule 4 CSR 240-20.65.
Proposed rule 4 CSR 240-20.65 accurately reflexes the language and intent of Section 386.887 RSMo. Supp 2002.
The electric cooperatives will be modeling their application after the application contained in the proposed rule, as it contains all the significant information required by a utility to evaluate, analyze and assist a customer-generator in the interconnection of a net metering device.
The Association of Missouri Electric Cooperatives appreciates the opportunity to participate with the Working Group that prepared a draft language for the Commission review, prior to promulgation of proposed rule 4 CSR 240-20.65.

Staff Response:
Staff agrees with these comments.

5) David B. Hennen, Associate General Counsel, Ameren Services Company One Ameren Plaza, 1901 Chouteau Avenue, PO Box 66149 (MC 1310), St. Louis, MO, 63166-6149 (314) 554-4673

However, one concern that we do have with the proposed rule is that the $100,000 customer-generator liability insurance obligation has been set too low. We would suggest that a minimum of $250,000 of liability insurance be provided for coverage of all risk of liability for personal injuries (including death) and damage to property.

Staff Response:
This comment is very similar to that one provided by KCPL under 2 c) above (page 4). Staff's response to this comment is the same as the response to KCPL's comment.

6) Anita Randolph, Department of Natural Resources

a) 4) (A) Customer Generator Liability Insurance Obligation --
A customer-generator should not be required to carry additional liability insurance in excess of a normal homeowner's policy. Section (4)(A), as currently proposed, would allow for requirements of liability insurance at amounts that would stifle development of indigenous renewable energy resources and the use of net metering and utility interconnection. We request that the language be revised as follows: "The customer-generator shall be required to carry one hundred thousand dollars ($100,000) of liability insurance ....."
Many states prohibit additional liability insurance requirements because they have established that minimal or no additional risk of property damage or personal injury results from the operation of small customer-owned, grid-connected renewable energy systems that are installed in compliance with applicable national standards. The proposed Missouri Interconnection Application/Agreement would require that installations meet these applicable national standards. Thus, additional liability insurance is unnecessary in Missouri. Some states that prohibit or restruct liability insurance to amounts no greater than normal homeowners' policies include New York, Arkansas, Hawaii, Georgia, New Jersey, California, Maryland, Nevada, Oklahoma, Oregon, Washington, Idaho and Virginia.

Staff Response:
As previously noted, this issue was discussed during the technical conferences. During the technical conferences Staff did attempt to weigh this issue in light of the perceived level of risk and the burden that purchasing this additional level of liability insurance represents. Staff did not believe that this level of insurance was inappropriate or represented an unreasonable burden at the time this language was agreed to by the parties and has not changed its position on this topic. Staff does not believe that the rule or contract language should be changed.

b) Interconnection Application/Agreement Item (3)-- Interconnection Costs
The application instructs a customer to complete sections A, B, C and D and submit the Application/Agreement to the utility. The second paragraph of the Interconnection Application/Agreement states that if the application is signed by the Utility it shall become a binding contract. At the time the customer completes the application, she/he would not yet have been informed of the fees and other charges the utility will charge for interconnection. The application/agreement currently requires that the utility provide only a non-binding estimate of interconnection costs. We request that the application/agreement be revised to require the utility to provide a binding, "not to exceed" cost for interconnection based upon the plans and specifications provided by the customer-generator.

General Comments
While the Energy Center does not believe the proposed rule provides incentives for consumers to generate clean energy for their use, we understand that the governing statute is restrictive in this regard. We commend the Commission staff for its efforts.

Staff Response:
This issue was not specifically discussed in the technical conferences. Staff has considered this comment and believes this to be an appropriate change to the contract language in Section D.3) Interconnection Costs in the last sentence. This would provide the customer-generator with a clearer understanding of their maximum cost to install the facility before they are held to a binding contract. The proposed revised last sentence would read as follows "Upon request, [Utility Name] shall provide the Customer-Generator with a **not to exceed costs for interconnection with** ~~non-binding estimate of~~ [Utility Name]~~'s Interconnection Costs~~ based upon the plans and specifications provided by the Customer-Generator to [Utility Name]."