January 25, 2012

The Honorable Steven Chu
Secretary of Energy
U.S. Department of Energy
Forrestal Building
1000 Independence Avenue, SW
Washington, DC 20585

Re: Distribution Transformer Energy Efficiency Standard Rulemaking

Dear Secretary Chu:

On behalf of the Edison Electric Institute, the National Rural Electric Cooperative Association and the American Public Power Association, we write to you to offer our thoughts about the above referenced transformer rulemaking. Members of our three organizations purchase virtually 100% of the potentially affected liquid filled transformers, as well as a percentage of medium-voltage dry type transformers sold in the United States and, as such, are materially affected parties.

During the course of negotiations described in more detail below, we made a proposal that would have increased overall transformer stringency to the maximum amount possible while still being economically justified, technically feasible, and preserving competition and domestic jobs. Notwithstanding the inability of the negotiating group to reach consensus, we are willing to extend our offer of support for more stringent transformer efficiency standards subject to the constraints expressed herein.

As you are undoubtedly aware, in December 2007 the Sierra Club *et. al* filed suit against the Department challenging a Final Rule issued by the Department (October 2007) that established new and significantly higher efficiency levels for liquid-filled and medium-voltage dry-type distribution transformers. Before the reviewing court rendered a decision on the merits, the Department voluntarily entered into a settlement agreement with the plaintiffs in which it agreed, *interalia*, to "conduct a review of the standards for liquid-immersed and medium-voltage dry-type distribution transformers and publish in the Federal Register, no later than October 1, 2011, either a determination pursuant to EPCA, that standards for these products do not need to be amended or a notice of proposed rulemaking including any new proposed standards for these products."

Notwithstanding the settlement agreement, the Department prescribed new efficiency standards in a Final Rule published on October 12, 2007. These standards went into effect in 2010. These new standards represented an aggressive increase in stringency over previous efficiency levels. EEI and APPA, working alongside energy efficiency advocates such as the Alliance to Save Energy, the American Council for an Energy-Efficient Economy, and the Natural Resources Defense Council, supported the Department's2007 transformer efficiency standards. In fact, the new standards represented efficiency levels for many transformers that were *higher* than utilities and advocates had agreed were justified to take effect in 2013.

As part of its effort to comply with the above referenced settlement agreement, in August 2011 the Department initiated a Negotiated Rulemaking under the guidance of its Efficiency and Renewables Advisory Committee. The signatories to this letter and a number of our members actively participated in these negotiations. In addition to electric utilities (customers that purchase transformers), the negotiations also included transformer manufacturers, steel manufacturers, and efficiency advocates. In the end, utilities, transformer manufacturers, and steel suppliers coalesced around a significant increase to Efficiency Level 1 (with certain exceptions) from the newly enacted standard levels (in place only since 2010), but without support of efficiency advocates the group failed to meet consensus. As noted above, we continue to be willing to support our offer of higher efficiency standards. Furthermore, we understand that our manufacturing colleagues have written to you with a similar offer to support an increase, as well as raising some of the same concerns that we note below.

Thus, the Department must either 1) make a determination that no new standard is needed or 2) notice a new proposed rule containing new, more stringent efficiency levels. Because of statements made during the negotiations by Department employees, we are under the impression that the Department intends to issue a NOPR for new standards, although it is unclear at what efficiency level.

The purpose of this letter is to share with you our concerns in advance of the Department's NOPR on this matter.

Concerns

At the outset of our substantive comments, we would like to commend the Department and its employees for their efforts in attempting to facilitate a negotiated agreement.

That said, we have three major concerns about the potential efficiency standards beyond those we agree to support; costs, materials, and space. The paragraphs below briefly describe these concerns in greater detail.

Costs

During the negotiations, the Department provided several estimates of first cost and long term savings that could be expected with the various proposed new standard levels. The consensus utility position was that the estimated savings from new, higher standard levels were significantly overstated based on a well-established methodology used regularly by utilities and their regulatory Commissions.

For many years, utilities have used an analytical tool when purchasing new distribution transformers that compares first cost to expected savings over the life of the transformer. The utility approach is robust and, among other things, compares first cost, the present and future cost of energy, transformer losses at no load (known in the industry as the "A" factor) and transformer losses at full load (known in the industry as the "B" factor). This approach gives utilities the opportunity to view alternative investments in efficiency or new supply on a levelized and consistent basis.

And, more importantly, this approach has been reviewed and accepted by state Commissions for prudency in numerous utility rate filings over the past 30 plus years.

When utility participants to the negotiations applied their conventional "A and B" factor analysis to the Department's proposed higher standard levels, they consistently found that most of the proposed efficiency levels would not pass the traditional utility cost effectiveness test, even though the Department's analysis suggested otherwise.

We also provided the Department with information about rewinding existing transformers instead of purchasing new ones. At current transformer prices many utilities are already finding it cost effective to rewind existing transformers instead of purchasing new ones. Since rewound transformers are not subject to efficiency standards, implementing more expensive standards could have the unintended consequence of driving the transformer market to less efficient rewound transformers.

We believe the Department's economic analysis tends to understate costs, overstate savings and, in the end, would fail to benefit consumers as they would be forced to pay upfront for future savings that we believe would not occur. In addition, forcing utilities to purchase more expensive transformers would, at the margin, tend to decrease their ability to invest in truly cost effective energy efficiency programs.

Materials

During the above mentioned negotiations, the Department also provided various background data on materials. These data reveal that reaching higher levels of efficiency than the increased standard levels that we proposed would require substitution of amorphous steel for more traditional core steel. Moreover, *only* amorphous steel could be used to meet most of the proposed standard levels.

Amorphous steel is much more expensive and it is only manufactured in the United States on a limited basis by one foreign-owned company. Statements by U.S. steel manufacturers made it clear that a new standard would have a deleterious impact on the U.S. steel industry generally and on their individual companies more specifically.

Finally, we are concerned about the life expectancy of amorphous core transformers. Members from our three organizations have experience using amorphous core transformers. From this experience, we provided the Department with anecdotal evidence of a higher failure rate (shorter operating lives) of amorphous steel transformers vis-à-vis traditional core steel transformers. The higher failure rate would seriously undermine the Department's projected savings from these transformers.

We believe that our proposal for increased transformer efficiency would be capable of being manufactured cost-competitively with at least two types of steel, by domestic steel manufacturers, and we urge the Department to use the same approach.

Size and Weight

One class of transformer addressed in the Department's negotiations is used exclusively in utility vaults and as network transformers. These transformers have size and weight constraints and increased efficiency tends to increase both weight and size. If the Department elects to issue a NOPR for new distribution transformer standards it should exclude vault and network transformers from consideration.

In addition, information provided by member companies during the negotiations also highlighted the impact of increased size and weight on pole-mounted transformers. For example, in urban areas where space is constrained and higher weights due to increased efficiency would significantly increase the cost of replacing existing units or installing new units, poles would have to be reinforced to maintain reliability. We believe that the Department substantially understated the costs of upgrading poles to accommodate larger and heavier transformers. And, the Department is also well aware that consumers are increasingly concerned about distribution reliability through storms and other natural events, and that utilities cannot ignore transformer weight and size in assuring reliable distribution networks.

Conclusion

During the recent negotiations, and despite the fact that new highly efficient distribution transformer efficiency requirements only went into effect in 2010, utilities were willing to support an efficiency increase for some product classes. We made that offer in the spirit of compromise – just as we did in 2007 – in an attempt to find mutually acceptable middle ground with all parties. As stated above, notwithstanding the inability of the group to reach consensus, we remain willing to extend that offer subject to our concerns expressed during the negotiations and further articulated herein. We strongly believe, however, that additional efficiency improvements at this time are not cost-justified and unnecessarily threaten domestic suppliers and jobs.

We thank you for your consideration of our concerns and would be happy to provide additional information if that would be helpful.

Sincerely,

Mark Crisson, CEO
American Public Power Association

Thomas R. Kuhn, President
Edison Electric Institute

Glenn English, CEO
National Rural Electric Cooperative Association