GE Energy
Digital Energy

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Docket No. 0909100442-1012-03 (RFI extension for comment)

"Effectiveness of Federal Agency Participation in Standardization in Select Technology Sectors for National Science and Technology Council's Sub-Committee on Standardization"

Background

As one of the world's leading suppliers of power generation and energy delivery technologies, GE Energy welcomes the opportunity to provide feedback about Federal Agency participation in standards setting for the smart grid. The smart grid is essential to addressing the energy demand, security and environmental challenges we face. System architecture and technical standards are crucial to the transformation of our grid into a more automated, interactive and intuitive power delivery system. They are the foundation for bringing together the electrical and communications infrastructure and for evolving technology to meet many and disparate needs. System architecture and technical standards that foster interoperability provide a framework for development, a roadmap for progress and a catalyst for continued industry investment. GE Energy strongly believes that technical standards can accelerate innovation and investment in emerging technologies, provided those standards are developed and adopted in an open, consensus-based fashion.

GE Energy recognizes that the Federal Government has a long history of working alongside the private sector in developing and adopting technical standards. In 1995, federal policies were promulgated in the Office of Management and Budget (OMB) Circular A-119 to provide guidance for Agency participation in voluntary consensus standards bodies. According to these policies, Agency representatives should participate on an equal basis with other members. Moreover, the explicit purpose of Agency participation should be to eliminate the need for government-unique standards and further national goals and objectives.

More recently, the creation of a Smart Grid Interoperability Panel (SGIP) signals a renewed commitment by the Federal Government to engage the private sector in development and adoption of technical standards. Established in response to the Energy Independence and Security Act (EISA) of 2007, which assigned the National Institute of Standards and Technology (NIST) responsibility for coordinating development of smart grid interoperability standards, the SGIP provides an open forum for stakeholder participation in the NIST process. GE Energy is proud to be a part of the SGIP, and I personally am excited about moving into my second year of chairing the SGIP Governing Board. The testimony I provided on July 1, 2010, to the House Committee on Science and Technology, Sub-Committee on Technology and Innovation assessed coordination and progress made on smart grid system architecture and technical standards. This work continues in earnest today.

Guiding Principles

In June 2010, GE Energy shared the following principles with the American National Standards Institute (ANSI) with respect to the creation of a National Science and Technology Council (NSTC) Sub-Committee on Standardization. These principles still offer the guidance necessary for Federal Agency participation in private-sector standards setting:

1. Encourage consensus-based adoption of technical standards
2. Balance federal leadership with private-sector innovation
3. Promote development of international standards
4. Utilize federal R&D to support standards development
5. Educate stakeholders to accelerate deployment of standards

1. Encourage consensus-based adoption of technical standards. While the Federal Government can – and should – participate in the development of technical standards, the Government should make every effort to avoid choosing "winners" among competing technologies. Rather, federal agencies should encourage the consensus-based adoption of technical standards by working alongside the various stakeholders in standards development organizations (SDOs), recognizing that a consensus-based approach promotes competition as the primary means for determining a "winner" among competing technologies. The prospect of competition, in turn, can inspire investment and innovation within the market. On the other hand, a consensus-based approach deliberately avoids

the perception of government intervention in competitive markets. GE is concerned that any government effort – real or perceived – to select technical standards might be construed as a measure to protect domestic manufacturers from international competition, and could therefore inspire other governments to respond in kind by adopting standards that favor national champions.

2. Balance federal leadership with private-sector innovation. The Federal Government should complement the efforts of consensus standards bodies by providing leadership in the debate over open versus proprietary standards. Open technical standards are essential to achieving national priorities, including the build-out of the smart grid, as they encourage investment among both vendors and customers. For example open standards can support vendors' efforts to develop new and innovative functionalities for existing smart grid platforms, and can reduce the likelihood of "vendor lock-in" among utilities that are just now laying the groundwork for the smart grid. To encourage the adoption of open standards for the smart grid, the Federal Government should identify those critical points along the electric grid – such as the utility-customer interface – where open standards are required. However, the Government should not go so far as to mandate or endorse a particular open standard; rather, that decision should remain with the appropriate consensus standards bodies. For other points along the grid, the government should encourage consensus standards bodies to determine the best technology from all competing options.

3. Promote development of international standards. The Federal Government should also encourage collaboration among international and regional SDOs as a means to promote global competition within markets for smart grid and other emerging technologies. To this end, the Government can play the role of advocate or facilitator. In instances where North American SDOs have settled on an open standard for a particular smart grid function or technology, the Federal Government can advocate for that standard to be adopted by other international or regional SDOs. Adoption might entail wholesale endorsement of that standard by an SDO, or it might involve the integration of that standard into existing – and potentially competing – standards already endorsed by other SDOs. Similarly, the Government should actively seek out instances where competing regional standards threaten to fragment the smart grid market. In such cases, the Federal Government can work through existing government and business channels to engage relevant stakeholders on the adoption of one common standard. The end result is the promotion of international standards in lieu of regional standards, which supports broad market access and competition among smart grid vendors.

4. Utilize federal R&D to support standards development. The Federal Government can further strengthen the public/private partnership on technical standards by awarding research grants that support the development, adoption, and certification of standards for critical technologies. With respect to the smart grid, these grants might target those critical points along the grid where open standards are required (see paragraph 2), or at the very least they should target the priority areas designated in the NIST Framework and Roadmap for Smart Grid Interoperability Standards. To make the grants as effective and impactful as possible, the Government should encourage collaboration between academia and the

private sector to fully leverage our nation's resources. In addition, the Government should require that grant awardees be co-sponsored by an international SDO, or otherwise have a formal channel for engaging one or more international SDOs for the purpose of sharing the research findings. Such engagement with international SDOs can advance the Federal Government's efforts to promote common international standards.

5. Educate stakeholders to accelerate deployment of standards. The Federal Government can accelerate deployment of technical standards by educating stakeholders on the applications and benefits of newly adopted standards. As new technical standards are introduced, several factors can impede customer investment; these include: lack of awareness, fear of the unknown, uncertainty around benefits, and concerns over interoperability and conformance testing procedures. For example, in May 2009, NIST published an initial list of 16 technical standards to help ensure interoperability among smart grid components. Yet the adoption rate among utilities has been slower than anticipated, due in large part to the concerns just listed. The Federal Government can help overcome this reluctance by launching a campaign to educate utilities, vendors, and regulators on the merits and applications of NIST-endorsed smart grid standards. More broadly, the Government should include stakeholder education as a critical element of its engagement strategy with consensus standards bodies, particularly in cases where standards are being developed for critical national needs.

<u>Other Considerations</u>

In addition to the guiding principles, GE Energy would like to specifically highlight the following areas for improving the overall effectiveness of Federal Agency participation in standards setting for the smart grid.

- NIST should continue to play a coordinating and facilitating role, rather than a leading role, with actual NIST participants skilled in both process and technology
- NIST's outsourcing of administration and project management should be to neutral companies which are not heavily invested in the smart grid
- The NIST work process should be as inclusive and transparent as possible, welcoming a variety of stakeholders and even encouraging international cooperation and collaboration
- The NIST Roadmap – which establishes standards, priorities and a framework to achieve smart grid interoperability – should allow for intellectual property issues to be addressed and managed as they traditionally have been through the SDOs
- The nature of the respective directives and relationship between NIST and the Federal Energy Regulatory Commission (FERC) needs further clarification

GE Energy also suggests that comments filed in response to FERC's Supplemental Notice dated February 16, 2011, Docket No. RM11-2-000, will provide tremendous insight into the private sector's ongoing assessment of coordination and progress made on smart grid system architecture and technical standards.

Respectfully submitted,

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