STEAB
STATE ENERGY ADVISORY BOARD

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Karen,

One topic addressed by the Quadrennial Energy Review Team in DOE's Office of Energy Policy and Systems Analysis (EPSA) this year will be energy "vulnerabilities." The State Energy Advisory Board (STEAB) has provided herein a response to the Office of Energy Policy and Systems Analysis by providing a state-level perspective on the topic of "vulnerabilities" in relation to the Quadrennial Energy Review (QER).

The QER Team asked for STEAB's help in identifying key state and local concerns that should not be overlooked in development of the QER. STEAB discussed these questions during our recent March 2014 Board meeting and in subsequent follow–up conversations of the newly formed QER Task Force. On behalf of the Board we offer the following comments and recommendations:

I. Key Recommendations:

A. To ensure that the QER is "actionable," EPSA should develop (and staff) a QER Implementation Action Plan that, at a minimum, identifies the lead agency/entity responsible for follow up, time table and process for transparency and accountability.

Efforts similar to the QER have been initiated by the White House in the past, yet the real world impact is often unclear. Government officials and corporate CEO's, for example, may not pay heed to the commitments made after the report is issued and the conversation shifts to focus on the next topic.

We should strive for the QER to break this mold. When the QER is published—identifying solutions that could be implemented by Congress, federal agencies, and states—a process should be developed that lays out how DOE will track and seek to implement the report's recommendations, assess actions, and communicate progress. This may take the form of an Implementation Plan that tracks actions. This would be one way to make the QER actionable and increase confidence that some recommendations may be implemented. If DOE cannot require—understandably—reporting of Congress, the Administration, or other Agencies, and if the White House does not require it, DOE could still lead by example by tracking and reporting on topics where its action is identified as imperative to our energy future.

B. EPSA should address state-level gaps in capacity and knowledge.

Emerging issues related to transmission, storage, and distribution are complex on technical, regulatory, and political levels. While the issues are largely state and regional in nature—states and

regions don't always have the capacity to deal with them. Regulatory commissions are typically quasi-judicial which make it difficult for them to pro-actively problem solve, and commissions sometimes lack the depth of expertise needed for action. Similarly, Governors' offices and state energy offices often lack the staff and capacity to address these issues. Such circumstances leave a gap in capacity, ownership, and action at the state and regional level.

STEAB proposes that, as the QER process highlights roles that states could and should play, a feasibility study or gap analysis should be conducted to assess where states have the skill sets, organizational capacity, and financial resources to fulfill the required functions—and where they do not. To get a head start on understanding this, STEAB suggests that DOE consider issuing a survey to Governors, via State Energy Offices, asking them to identify where gaps and weaknesses currently lie. Once the gaps are identified, DOE should help determine how the necessary—but unaddressed—functions could be accomplished. This might be entail DOE- or NASEO-led education of states on technical topics, new allocation or reallocation of DOE funds to assist in state-level capacity-building (e.g., states' hiring of experts or consultants), or other mechanisms.

C. Actively involve state and local perspectives in QER sessions.

It is important for DOE to hear the state perspective as the QER is developed. The agenda for the first QER session seemed like primarily interest groups with little to no state representation. STEAB will happily recommend to DOE people who could be included in future sessions, as Marion Gold did for the Providence, Rhode Island session. For upcoming sessions, we recommend that the director of the State Energy Office in the respective host state be contacted as a good starting point. STEAB can also be consulted or polled ad hoc through Julie.

II. Specific Responses to EPSA Questions

A. It is assumed that the future of the grid will include more widespread use of distributed generation; what issues are arising and need to be on the radar based on your early experiences? What can be done to further develop a 21st Century grid while protecting against these vulnerabilities?

There are increasing concerns about reliability, cyber-security, energy affordability, infrastructure adequacy and integrity, and adequacy and availability of storage for physical fuel such as propane. These issues are definitely on the minds of states, but being addressed to varying degrees of depth by different parties. Federal guidance in those areas would be useful. The breadth of topics, coupled with the limited staffing and funding of some state energy offices, makes it difficult to comprehensively and strategically address them.

One trend at the state-level is the development of distributed generation (DG) for the purpose of backup generation to be used in times of outage or disaster. Some of this distributed generation could come from renewable sources, whereas diesel generators are also common. Such installations could have grid impacts, especially in the event that their deployment extends beyond emergency generation.

At present, there is not full coordination of all parties in planning of DG projects; they can begin as one-off projects, often initiated by a Governor's leadership. Current DG projects seem to be

largely in "pilot" phases—but they have the possibility to expand and affect multiple regions. The mindset of the states is currently short-term oriented, while the long-term strategy gets less attention and is more "to be determined". However, it is widely acknowledged that these initiatives will have long-term impact. Federal government may be able to play a role in highlighting long-term issues and suggesting ways that states can plan for long-term success during pilot design.

Utilities seem to be struggling to identify what their role is in new distributed generation projects (i.e., what role do utilities play when states perform installations directly on the grid?). There is likely a role for the regulators as well, and they could be incorporated into the discussion and planning phases. At this point, there is a lack of clarity on specific parties' roles. Federally-convened sessions may be helpful in bringing parties together, to see how the various pieces form one whole.

There are also unforeseen infrastructure challenges, at the sites for planned DG. For example, the Governor of Maryland established an effort to use schools as shelters, where the public will gather and receive services in times of electricity outages or disasters. The idea was to connect the schools to generators to provide the needed back-up power. However, it was discovered that the schools were not designed in a way that made implementation technically feasible; they were not wired to accept the generators. Those technical issues were not anticipated. Other states could learn from this lesson, and DOE could play a role in disseminating best practices for other states to follow—similar to what Department of Energy and FEMA are doing as follow-on work to Superstorm Sandy.

In terms of determining where the DG is sited, some states are identifying areas that will be hardest hit and most severely affected in severe weather events—prioritizing and addressing those first. While this is a sensible approach, it raises equity issues that the federal government could help address. If the country is moving towards a network of small independent grids that are connected, yet beneficially self-sufficient, who decides who gets them first? How do we guarantee universal coverage? Perhaps federal government has a role to play here. HUD is thought to be doing work on this issue already, and DOE should coordinate with it.

B. Your state energy office is likely very involved in helping your state's energy system plan and recover from energy emergencies. What vulnerabilities, concerns, or other problems do you see coming – for both the short term and long term – for the transmission, storage and distribution of all forms of energy?

Education of the public would be helpful to improve their understanding of what entities are responsible when power interruptions and outages occur. There is a misperception, for example, that the Governor can restore power. In addition to simply rectifying a misperception, it would improve the public's ability to obtain better information and updates, by going to the correct sources to find it.

DOE should review instances where industry has successfully responded to energy disasters, and attempt to take away lessons learned and best practices. It is also important, however, that we acknowledge that industry is not always capable of solving specific energy crises (e.g., Deepwater Horizon).

DOE should review what expertise, resources, authority, activities, and capabilities are borne

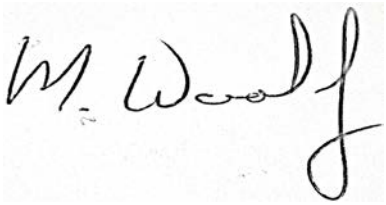
by: members of private industry, utilities, ISOs, federal agencies, and state agencies (i.e., "which agencies do what"). This analysis could be used to help inform which entities could most effectively perform function/s during disasters or in reaction to identified vulnerabilities. By identifying gaps in sufficient capabilities, resources, or ownership, a more robust organizational "system" can be built whereby entities can be held accountable (to the extent there is authority to do as such), efficiencies can be achieved by assigning the most appropriate agency/entity to perform specific role/s, and capabilities can be built where there are current deficiencies.

With increasing distributed generation, the analysis described above may need to be periodically reconsidered, as system needs change and parties' roles evolve.

We thank you for your continued engagement with STEAB and for your openness to the ideas we put forth. We look forward to discussing with you, the Office of Energy Policy and Systems Analysis, and other stakeholders, our recommendations as well as any additional ideas that the Department may have.

Best regards,

Francis J. Murray Jr.
STEAB Chair



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