

Electricity Advisory Committee

Potential Study Topics Requested by U.S. Department of Energy As of 2-10-11

Note: DOE invites the EAC to discuss, for each of the topics listed below, whether it should undertake a detailed analysis of the subject, or whether it should limit itself to providing recommendations to DOE about how the topic should be framed and analyzed by the national laboratories or other parties.

- 1. Long-Term Funding for Electric Infrastructure Analytic and Planning Capabilities.** Using funds provided by the 2009 Recovery Act, the U.S. Department of Energy (DOE) has funded the establishment of interconnection-level capabilities to address long-term analytic and planning challenges. DOE also believes that given the likelihood of ongoing fundamental change in the electricity sector, the strategic significance of the electricity infrastructure, and the need for ongoing collaboration among many stakeholder groups, these analytic/planning capabilities will be needed indefinitely. This raises questions about how best to fund such capabilities. Presumably, the industry participants will be able to pay their own way; by comparison, other stakeholder groups, such as state regulators, other state officials, and certain kinds of NGOs will not be able to participate without public support. What forms of public support would the Committee recommend?
- 2. What Broad Public Policy Objectives Should Electric Infrastructure Planners Seek to Achieve or Keep in Balance?** If, as asserted in #1, standing, collaborative electric infrastructure planning capabilities should be sustained with public funds, what direction should be given to the planners about the core policy objectives they should seek to maximize or balance?
- 3. Right-Sizing New Transmission Facilities.** Transmission planners and regulators frequently face the dilemma of whether to oversize a new line to some extent, knowing that increasing the size or capacity of the line at a later date is likely to be difficult or perhaps impossible. This raises at least three issues:

 - If a line is oversized, is there a significant risk of creating stranded transmission costs?
 - If portions of the new capacity will not be used for a period of time, who will, could, or should pay the capital cost for such overcapacity (until the capacity is needed by a market participant)?

- Are there engineering solutions to minimize the upfront costs, such as oversizing the ROWs but not adding the full transmission capacity until needed; or building higher/stronger towers, but not stringing a full complement of wires; or ...?

4. Respecting or Furthering the Interests of “Pass-Through” Areas and

Communities. One of the knottier problems electricity policy makers face is how best to deal fairly with areas and communities that might see few if any direct benefits from a new transmission line, but would still be asked to bear its environmental, aesthetic, or other impacts. What advice or suggestions can the Committee provide to DOE and others on how to deal with this problem?

- 5. ROW Compensation.** Some utilities have bought land for transmission rights of way (ROWs) outright, while others have obtained easements from the affected landowners. Landowners who grant easements to utilities for transmission ROWs are frequently paid for doing so. However, the amounts and bases for such payments vary widely. Some payments are one-time-only, for an in-perpetuity easement, while others are for 20- or 30-year periods, subject to renewal. Some groups have asserted that utility payments to landowners for ROWs should be adjustable, indexed to the economic value of the electricity carried by the line. What would the Committee recommend, as practical and equitable approaches that would facilitate the timely development of needed transmission capacity? Would some of these approaches also be relevant to mitigating adverse impacts on parties other than the ROW landowners?