U.S. Department of Energy
Releases the
National Electric Transmission Congestion Study

Remarks by Kevin Kolevar
Director
Office of Electric Delivery and Energy Reliability
At
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Introduction

I speak for everyone at DOE in saying that we are very pleased to have you all here today as we announce the results of the *National Electric Transmission Congestion Study (congestion study)*. The Energy Policy Act of 2005 was passed on August 8, 2005 -- just one year ago. Since that time, the Department of Energy has taken a leadership role in implementing the Act by conducting many reports, including the one which we are focusing on with you here today.

This is a propitious moment for us to announce the results of the *National Electric Transmission Congestion Study* as part of the Department's efforts to strengthen the nation's electric power grid. In the Energy Policy Act, Congress set broad goals and specific mandates in nearly every sector of energy generation and delivery. In addition to the *congestion study*, DOE is also releasing many reports and taking other actions today as required by the Act.

DOE's efforts, and those by other federal agencies, to implement the Energy Policy Act will go far to facilitate collaboration among government agencies and industry to modernize the nation's electric power grid, a broad goal emphasized by the President and Congress. The *congestion study* and the other studies being released today will be available on DOE's website after this briefing.

Background

The *National Electric Transmission Congestion Study* identifies and highlights major trouble spots on the U.S. power grid where key bottlenecks need to be removed to strengthen the entire transmission system. DOE's long-term goal is to make certain that the

nation's electric power delivery infrastructure is strong enough to move low-cost electricity reliably from power plants to the areas where consumers need it.

While the immediate causes of the huge blackout that hit the Northeast, the Midwest and Canada so hard three years ago involved operator errors, as opposed to hardware inadequacies, the blackout was nonetheless a forceful demonstration of the problems this nation will face if we fail to make timely investments in the system to modernize it to meet increasing demand and increase electricity production and delivery capabilities. The congestion study is nonetheless, a critical first step and moves us closer to defining the system of the future.

The Energy Policy Act authorized the Secretary of Energy to select and designate geographic areas as "National Interest Electric Transmission Corridors" in order to facilitate the construction of new transmission capacity to relieve transmission congestion problems. The Act instructed the Secretary to make such designations on the basis of the findings of DOE's *congestion study*, comments on the study, and consultations with stakeholders. Designation of a "National Corridor" will enable the Federal Energy Regulatory Commission, under certain conditions, to approve the siting of proposed transmission facilities in the corridor.

I want to emphasize that Congress did NOT authorize the Department to prescribe solutions for specific congestion problems, and I recognize that new generation capacity, energy efficiency/demand response, and new transmission facilities are all potentially relevant. DOE's role is to) identify the areas where transmission inadequacies are most acute, or appear to be growing; 2) work with the States, local governments, regional organizations, the Federal Energy Regulatory Commission, the industry, and others to ensure that the full menu of possible solutions is being considered and that regionally sound solutions are identified; and 3) designate National Corridors where appropriate. DOE wants to be sure that the designation process is a transparent one in which all points of view are considered. A great deal of collaborative effort and analysis will be needed, but we will all need to keep an eye on the calendar – building these new facilities takes years of lead-time, and the penalties for falling behind would be severe.

Designation of Transmission Congestion Areas

The *congestion study* DOE is releasing today identifies three types of transmission congestion areas: Critical Congestion Areas, Congestion Areas of Concern, and Conditional Congestion Areas.

"Critical Congestion Areas" are of most urgent concern. Two such areas are identified in the *congestion study:* Southern California and the Atlantic coastal area from the New York City metropolitan area southward through northern Virginia. Both areas are large, densely populated, economically vital to the nation, and adversely affected by transmission congestion that increases electricity prices and threatens reliability.

The "Congestion Areas of Concern," are areas that bear close monitoring and further study to determine the magnitude of their congestion problems. The *Congestion Study* identified four such areas: New England, the Phoenix-Tucson area, the Seattle-Portland area, and the San Francisco Bay area.

The third type of congestion area, "Conditional Congestion Areas," consist of areas where congestion is not acute at present, but will become so if large amounts of new electric generation are built without associated transmission capacity – and substantial amounts of new generation WILL be needed. The c*ongestion study* identified several of these areas: Montana-Wyoming (wind and coal); Dakotas-Minnesota (wind); Kansas-Oklahoma (wind); Illinois, Indiana, and Upper Appalachia (coal); and the Southeast (nuclear). DOE believes that affirmative government and industry decisions need to be made in the next few years if timely development of needed new resources in these areas is to occur.

In the *National Electric Transmission Congestion Study* we are releasing today, the Department of Energy did NOT designate National Corridors. However, DOE is considering possible designation of National Corridors to facilitate relief of congestion in several areas. We invite interested parties to respond to questions about the issues identified in the *congestion study*.

The *congestion study* was completed with an enormous amount of cooperation, input, and support from regional transmission entities, regional reliability councils, state regulators, transmission owners, power producers, and others. We are greatly appreciative for the data and related information that made our job easier and the *congestion study* better.

Congestion Study Methodology

Let me take a few minutes to discuss the methodology that was used in the *congestion study*. First, DOE reviewed a very large number of existing regional studies of transmission constraints and congestion, done primarily by RTOs, ISOs, and regional reliability councils. That literature review provided us solid data indicating where significant constraints and congestion problems had been identified by other analyses. DOE then performed interconnection-wide simulation modeling for both the Eastern and Western Interconnections to determine where congestion is most likely to occur in future years. This DOE analysis was unique in that such modeling has never been attempted before. The results of the modeling and the conclusions reached by the regional analyses were then compared and we found that they matched well. Finally, DOE evaluated the most affected areas in terms of the scale and severity of the reliability, economic, and social impacts of the congestion. We then categorized the areas into the three categories described earlier.

Next Steps

Looking ahead, DOE welcomes comments on the *congestion study* and we have opened a formal comment period through October 10, 2006. We also hope that the *congestion study* will help to stimulate regional-scale discussions of congestion problems and options. The Department is required by the Energy Policy Act to update the congestion study every three years. In the interim, we plan to issue the first Congestion Area Progress Report on August

8, 2007 and annually thereafter detailing progress made in the geographic areas of particular interest identified in the *National Electric Transmission Congestion Study*.

The challenge of modernizing and expanding the capacity of the nation's transmission networks reminds me of the challenge President Eisenhower persuaded the nation to take on in the 1950s, when he prodded Congress to invest in the interstate highway system, which was then the largest public works project the nation had ever undertaken. This past June was the 50th anniversary of the enactment of the legislation creating the interstate highway network. Today, it is very difficult to imagine how our economy and our society would function without the interstate highway system. Now, it is time to create the transmission equivalent of the interstate highway network. Regional electric power delivery systems must be upgraded and woven together just as our networks of state and local roads needed to be upgraded fifty years ago.

The *congestion study* we are releasing today is a good first step toward identifying the areas where congestion must be eliminated to ensure that our nation's electric power delivery system can continue to deliver reliable power to our nation's consumers at reasonable costs. DOE is committed to continuing its work with all interested parties and welcomes your input. By working together, we CAN solve the nation's electric power delivery problems in a timely manner. DOE is proud to issue the *National Electric Transmission Study* today. Thank you.

Introduction of Fellow SpeakersI
Now I have the privilege of introducing some other speakers from the three areas of the country that DOE has identified as Critical Congestion Areas.

Phil Harris is the President of PJM Interconnection and Garry Brown is the Senior Vice President of Strategic Planning of the New York ISO. We appreciate you all coming today.