

Office of electricity

FEDERAL INFLUENCE WILL FACILITATE THE DEVELOPMENT OF TRANSMISSION AND PIPING INFRASTRUCTURE IN THE U.S.

It's good they changed the name to Electricity Delivery & Energy Reliability (EDER) — U.S. Department of Energy's (DOE's) program office for grid security and reliability. "Office of Electricity" sounded a bit too Orwellian and the acronym was an unpronounceable O(o)E.

Whatever the name, this is a good idea.

It is clear that the U.S. will have to move toward a heavily coal-based energy supply to achieve its goal of energy independence and secure its continued economic vitality. It is also clear that the oil shale resources in the western states and the Canadian tar sands resources will be developed . . . at some point.

It is also clear that in the anticipated "carbon constrained economy," many of these power plants will be designed for CO₂ capture and sited as close as possible to their associated coal mines. The CO₂ generated will be used to support CO₂-flood Enhanced Oil Recovery in nearby producing oil fields, or directed to local geological formations suitable for long-term CO₂ storage.

Almost by definition, there are not going to be a lot of people living in these areas and just as obviously, there is not going to be an appreciable local demand. In addition, many of these areas are simultaneously a high wind resource potential, but also lacking in local demand. There will still be some policy issues on wind generation but this renewable contribution is both apparent and welcome.

Managing through policy

The National Electric Transmission Congestion Study is now out for comment and available for viewing at http://www.oe.energy.gov/energy_policy/epa_sec1221.htm#National_Electric_Transmission_Congestion_Study. Figure 2 indicates the projected flow of electricity and its fuel source for the Western region. Graphics are available for other regions and in considerable detail.

The other interesting aspect of this report and potential policy is the use of federal lands (Figure 1) for the development of "Energy Corridors." My first reaction is: "Wow! there is a lot of land under federal control," but my professional reaction is that this is the right step

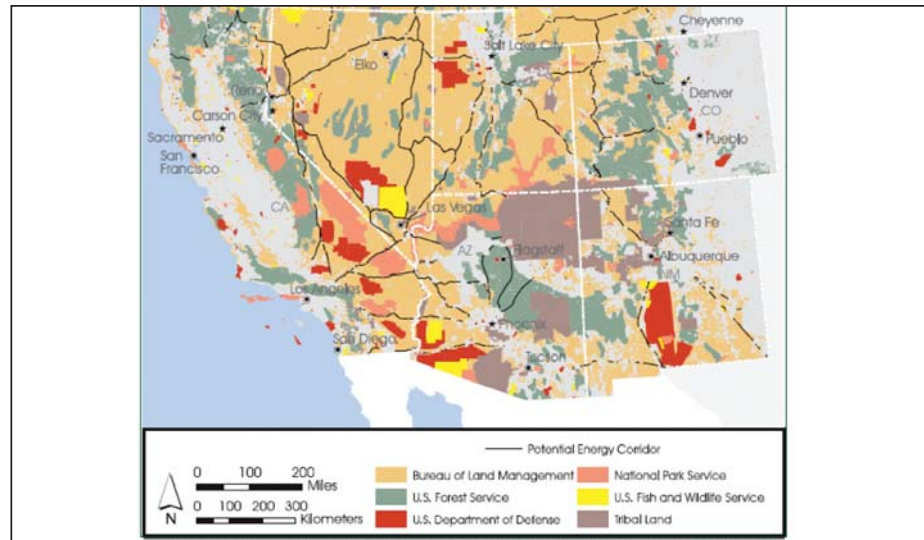


Figure 1: Mapping federal lands as energy corridors would help in the pipeline and transmission line permitting process

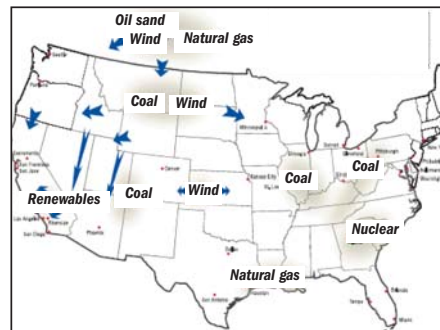


Figure 2: Blue arrow indicates the direction of the flow of electricity from resources to loads

toward the pipeline and transmission line permitting process. It is also a step toward federal ownership and control of the grid.

The mandate for doing this is part of the Energy Policy Act of 2005 and seems to be the result of some thoughtful analysis of the transmission infrastructure itself at a significant level of detail, in combination with the CO₂ source and sink mapping by the DOE Regional Partnerships. The study also attempts to address the process of siting both natural gas and electric transmission lines by limiting the amount of time the state Public Utility Commissions (PUC) can dither about.

The PUCs are given one year to deal with the permitting, after which EDER has the authority to step in. This will not

make the process immune from political tinkering. For instance, a New York State Senator is already posturing to oppose a 200 mile high-voltage transmission line from Utica to New York City. These energy corridors will also have to pass through several sovereign tribal nations in the west, which should create some interesting negotiations.

But the management of the permitting falls under EDER, along with the management of infrastructure security, the management of energy efficiency and renewables, and cross-border permitting. Cross-border permitting is interesting because it offers the promise of a coordinated effort to optimize the development of the Canadian tar sands resource in conjunction with a viable and sustainable market demand.

I have advocated for real energy policy initiatives and believe this to be a good one. ■

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