Overcoming Obstacles to Transmission

GETTING THE JOB DONE

BY JOSE DELGADO

YOU DON'T HAVE TO LOOK FAR TO see how concerns about climate change can affect the electric industry. On the supply side, growth in wind generation and new nuclear plants, and a reconsideration of whether to use new coal plants or shut down existing ones, could significantly alter the profile of the generation fleet that serves the nation. On the demand side, there is a new interest in relying on smart grid technology to allow greater consumer control over consumption in response to high-price periods as well as distributed solar, wind or biomass generation. Meanwhile, load growth is expected to continue even with increased emphasis on energy efficiency.

All of these factors create an imperative for transmission grid investment. Today's grid, however, which is adequate and reliable for the purposes it was originally built to serve, cannot handle long-distance power flows since wind tends to be located far from load centers, nor can it accommodate the uncertainties of which generation plants will be supplying energy to a regional electricity market. As a result, utilities and state regulators face significant challenges in building new interstate transmission lines. Besides the traditional public concerns about siting, bolstering the nation's grid faces the thornier issues posed by asking these central questions: Which projects? Who decides? Who pays? Who builds and owns?


José Delgado

As more states require utilities to meet part of their power supply with renewable generation, it is difficult for individual transmission owners to know where the new and increasingly renewable generation will be located. Planning and evaluating which projects are viable must involve the right group of stakeholders and decision makers.

Because transmission line projects that are not perceived as providing a local benefit may be strongly opposed by those who must bear the costs, the physical presence or both, individual transmission projects must meet multiple purposes to be viable. In other words, to garner local acceptance and regulatory support, major new transmission facilities must demonstrably meet a variety of needs such as local and regional system support, connection of new renewable generation, and an improvement in both reliability and market access. To paraphrase an old political line, all transmission is local.

Transmission owners – either individually or jointly – must ultimately decide which projects to propose, permit and construct. In spite of continuous efforts to federalize the permitting and siting of electric transmission lines, these functions remain mainly under the authority of state regulators. Permitting processes can vary widely across state lines, and regulators in adjacent states must work together with transmission owners to develop regional transmission projects, facilitate the planning and permitting processes, and guide the cost sharing between benefiting state jurisdictions.

The issue of who pays remains one of the greatest obstacles to the development of an adequate regional transmission system. Traditional cost-allocation policies encourage the development of transmission for local use rather than as a regional backbone, in part because state regulators are often required to evaluate benefits only within their jurisdiction, not the broader benefits to the region. In addition, the beneficiaries of a new transmission line may reside in a different state from its physical location, and states cannot assign costs of a local part of a regional project to other states.

A feasible approach must allocate costs among the state jurisdictions in some ratio to the benefits received by the customers in each state affected by the project. Also, rather than seeking a common,

An American Transmission Co. service area of wind farms and a transmission line.

PHOTOS COURTESY OF AMERICAN TRANSMISSION CO.

broad regional or even nationwide approach to cost sharing, it would be more feasible for small groups of contiguous states to develop tailored subregional approaches to cost allocation. This approach is more likely to lead to consensus and result in necessary transmission being built more quickly.

In fact, the recent announcement of the Upper Midwest Transmission Development Initiative is a prime example of a subregional planning effort. Its intention to jointly study locations, costs and plans for new renewable energy projects and related transmission lines makes it well-positioned to begin addressing these issues.

Another confounding factor in getting regional transmission built is that many utilities – both for-profit and not-for-profit – have, as part of their business plan, an effort to build and own new transmission lines. We are already seeing competition between utilities in Texas and Kansas to build new regional transmission, and this trend could slow down the ability to get facilities built. To get around this problem, the local transmission owner should be given the right of first refusal to build and own needed facilities. In addition, if regional project costs from other transmission owners are going to be assigned to a utility's customers, that utility should have a right to own a similar percentage of that facility.

Solving these challenges is urgent because a regional grid that is subjected to new generation at different locations, and a changing demand pattern that it wasn't built to accommodate, poses risks and higher costs for everyone in the form of higher congestion costs, reduced reliability, greater geographic disparity in electricity prices and difficulty meeting renewable energy mandates. A strengthened regional transmission grid offers numerous benefits, including:

- Lower-cost power dispatch
- Operational flexibility
- Transmission efficiency through reduced losses and congestion costs
- Generation efficiency by making better use of regional reserves
- Renewable energy interconnection capability
- Demand-side management support

Electric system reliability is not optional; and affordability, efficiency and environmental objectives must also be achieved. Today's utilities, regulators and stakeholders must make working together to achieve these benefits a high priority so that the lights stay on.

Jose Delgado is president and CEO of American Transmission Co.