Breaking the Log-Jam: Sensible Solutions to Regional Transmission Barriers

The United States needs to change the way it produces, transports and consumes energy. The driving forces behind this needed change are energy independence, energy sustainability, environmental stewardship, economic security and national security. Without such a change, we as a nation will continue down the path of dependence on non-friendly countries for our energy, shortages in supply and inefficient use of our current limited resources.

At the center of all these issues is the need for a robust regional electric transmission system. While regulators, legislators and industry leaders have recognized and called for increased investment in the grid in reaction to the Blackout of 2003 and with rising attention to energy policy matters, little tangible progress has been made.

The impediments to investing in transmission are not unique to one business model over another, but rather a symptom of a lack of a national energy policy, and the inherent system of laws, rules and structures that have developed over the past century. Issues such as parochialism of incumbent utilities and states, lack of regional planning and cost allocation present a significant challenge to building regional transmission. Siting, while a difficult hurdle, is not the impediment to transmission that it is often made out to be.

The current system and structure served this country well in its endeavor to electrify this nation in the early 1900s. Just as Dwight D. Eisenhower had a vision for the national highway system that created the needed transportation system to grow our economy, 50 years later we are in need of the same vision for our electric transmission system. A national "energy highway system" is needed, but the current system will never allow us to prepare for this future.

NOT ONE INCH OF REGIONAL TRANSMISSION

In 1996 the Federal Energy Regulatory Commission (FERC) issued the landmark Order 888 that sought to create generation competition and required transmission owners to allow non-discriminatory access to the grid. In 1999 FERC issued Order 2000 which required utilities to submit a proposal for how they would participate in a regional transmission organization (RTO). These two orders would ultimately lead to the creation of ITC Holdings Corp and went a long way toward establishing a non-discriminatory market; however, they stopped short of being fully effective.

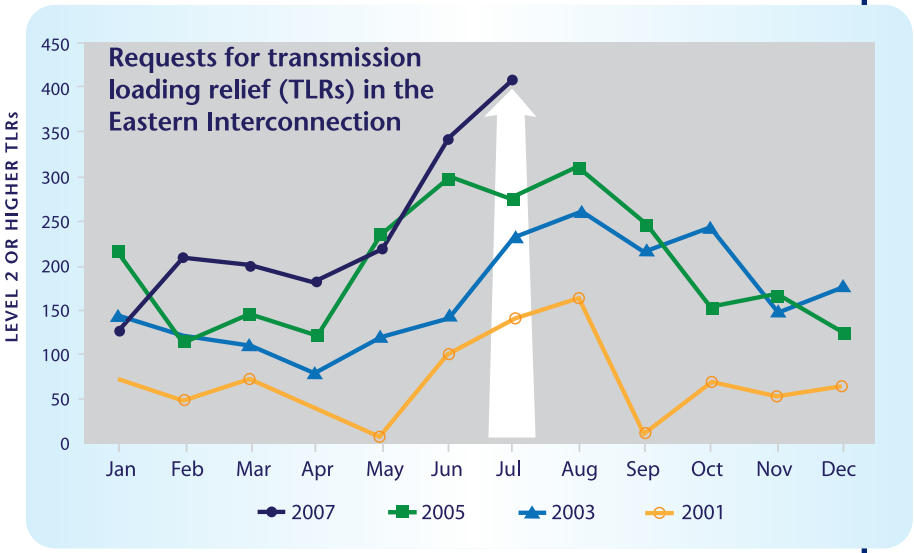
How can it be said that there is no independent regional transmission planning given all the attention that the Commission has devoted to the creation and governance of RTOs? Despite their name, RTOs are primarily focused on developing and running the market. Since their creation RTOs have built not one inch of what could be considered regional transmission. Rather, all of the transmission built to date has been to serve local needs.

The primary reason for the failure to build regional transmission is because RTOs are not genuinely independent of market participants. Because membership is voluntary and because market participants continue to play critical roles in RTO decision-making, RTOs cannot plan transmission from a truly independent perspective. RTO membership is voluntary. If the regional/public interest and the interest of an individual member diverge, an RTO would run the risk of losing that member by imposing the solution that is in the regional interest. No RTO wants this, and as such, over time RTOs have relinquished the role envisioned by the FERC and has been relegated to serving as a facilitator seemingly refusing to take positions on regional planning matters.

Market participants in non-RTO regions are even less likely to plan appropriate regional transmission. It typically is not in their best interests because it opens their market to increased competitive pressures

IMPACT OF MARKET PARTICIPANTS IN RTO PROCESSES

Through the existing governance structures and stakeholder processes currently being utilized by RTOs, various rules have been created that not only remove the incentive to build new transmission but goes a step further and has the unintended consequence of creating a financial incentive to not invest in the transmission system. A clear example of this is that by charging RTOs with both planning transmission and running an energy market, RTOs can rely on redispatch solutions instead of planning and directing the building of needed transmission.



LMP markets have not served as a means to remove system congestion, but rather it has only helped to identify where system congestion can be found. The ability to receive financial transmission rights (FTR) keeps a generator whole when sending power across a congested system. In the case of a vertically integrated utility, an inefficient generator does not have any incentive to remove the congestion from its system, and further, the utility prefers not to build the needed transmission because it can continue to hold its customers hostage to high prices and avoid market competition. See the following page for a traffic analogy for FTRs.

The consequences of doing business this way are evident and are showing themselves as reliability issues and inefficiencies. For example, transmission loading relief orders (TLRs) in the Eastern Interconnection have grown dramatically, and transmission and distribution losses nearly doubled between 1970 and 2001 (from 5% to 9.5% in 2000) due to heavier utilization and congestion. This is but one example of many of the impact of the failure to separate market participants from the regional planning process.

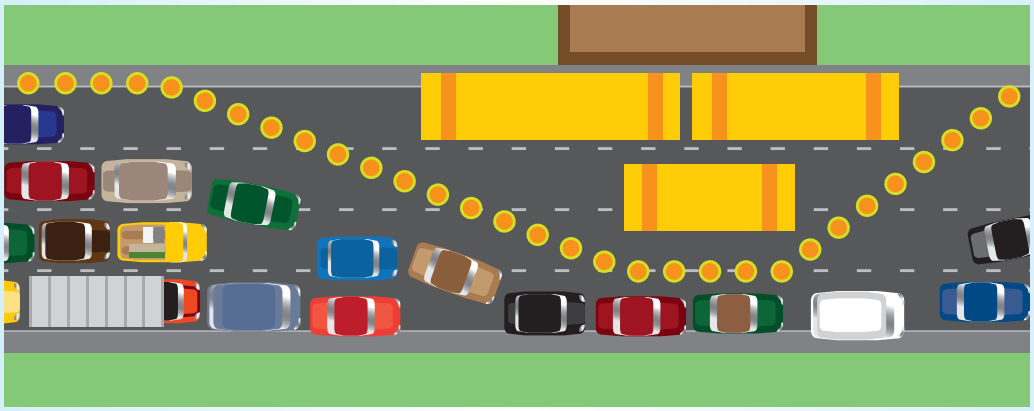
INDEPENDENT PLANNING AUTHORITY

A significant first step toward breaking the logjam that currently exists would be to separate the regional planning function to form a truly independent regional planning authority. Unlike the current system, membership would not be optional, and involvement in this authority would not be able to be bypassed.

The independent planning authority would be an independent agency, similar in nature to the North American Electric Reliability Corporation (NERC) in that it would ultimately report to the FERC. It would be responsible for regional planning across the whole of the United States, but it could be subdivided into four or more sub-units that would serve an appropriate region with sufficient scope and configuration. Membership in a particular sub-unit would be determined by geography and not the individual utilities.

GRID CONGESTION: ANALOGOUS TO HIGHWAY TRAFFIC

To better understand the impact of congestion on the electric transmission system, let us consider an analogy to the highway system.



Consider a truck that on a highway that gets caught up in traffic. Because of the congestion:

(1) The truck burns extra fuel and produces extra emissions, and

(2) The truck driver wastes time that could otherwise be put to transporting cargo.

Assume the truck driver gets a free congestion coupon from the highway operator (similar to an FTR) that reimburses the driver for the extra gas burned and the wasted time. The truck driver has no economic incentive to pay any additional fees to fix the congestion because the truck driver is economically whole. Consequently, the highway congestion is not addressed.

However, because of the traffic congestion, the trucks burn more fuel, produce more emissions and waste time. Also, the congestion may have the perverse effect of keeping uncompetitive trucks on the road and create resistance to fix the congestion.

This is not very different from the current challenge in the transmission grid. While LMPs may highlight the existence of system congestion, it does little to resolve the issue.

INDEPENDENT PLANNING AUTHORITY [CONT.]

Market and other functions would continue to remain with the RTOs. This newly-created agency would be responsible for developing plans for 345 kilovolt (kV) and extra high voltage (EHV) facilities and any underlying facilities required to integrate into the existing system. During the planning process, market participants and other stakeholders would have the opportunity to provide comments and to keep informed of plans; however, they will not be given the opportunity to influence the planning process in a way that would allow market manipulation.

These plans would then be turned over to either the local utility or an independent transmission company for any other needed regulatory approvals and for construction. In the case that the project is planned in the service territory of a vertically integrated utility, this utility should have the rights of first refusal (ROFR), but any decision whether to take responsibility for the construction of the project should be time-limited. The current system allows for the right of first refusal within different RTOs in varying degrees. In the Southwest Power Pool (SPP), for example, the responsibility and authority to construct transmission projects are only sent to the incumbent Transmission Owners with no commitment required from the incumbent to actually build the project. Vertically integrated Transmission Owners exercising their SPP-given rights of first refusal can delay if not prohibit transmission infrastructure.

INDEPENDENT PLANNING AUTHORITY [CONT.]

Failure to accept the project within a given timeframe or the decision to decline the responsibility would result in the project being constructed by an independent transmission company. This would prevent the current challenge in the existing ROFR process where a project can be tied up in a tug-of-war for years. Given the historical lack of transmission investment and the mounting reliability and congestion concerns under the existing system, serious consideration should be given as to whether the local vertically integrated utility, the market participant, should be given the opportunity to construct the project.

An independent transmission company whose sole focus is on building, maintaining and operating transmission does not have any conflicting incentives that would cause it to delay or avoid building these regional projects. In order to facilitate the construction of the regional projects that the independent planning authority will identify as necessary, FERC-approved independent transmission companies should be considered "national public utilities" for purposes of developing, constructing and operating transmission across the United States thereby eliminating the need to seek a certificate to operate as a utility in each individual state. This requirement would provide consistency on the criteria needed in order to gain independent status and the ultimate outcome of how that company should proceed.

Any new transmission projects built from the independent planning authority's plans would be solely FERC jurisdictional. Any existing lower voltage system underlying any new regional EHV projects would remain regulated and priced as it is. All utilities and electric cooperatives would be required to pay a special assessment in order to fund the independent planning authority; however, because its sole focus would be regional planning of the transmission grid, budget requirements for this office would be minimal.

Improvements to siting should also be considered as a means to streamline the process and prevent unnecessary hold-ups. Time and time again states and local communities have been shown to frustrate the building of new transmission even for projects which have been RTO-endorsed. To address this concern, FERC should be given backstop siting authority when states are unable or unwilling to site projects developed by the independent planning authority within a certain time no more than a year.

COST ALLOCATION

The lack of cost allocation (e.g., participant funding) and the differing cost allocation rules for different types of projects (e.g., reliability, economic, service requests, generator interconnections, etc) in different areas within the same interconnection are blocking rational transmission planning and construction. Different RTOs have sought and received different cost allocation methods for similar projects. In addition, even where RTOs have sought to provide for regional cost recovery for economic projects, because of the fundamental parochialism and self-interest problems discussed above, artificially high hurdles for regional cost recovery are imposed. Examples include the Midwest ISO "RECB II" (Regional Expansion Criteria and Benefits) benefit-to-cost ratio and the SPP "Balanced Portfolio" requirement that every zone be a "winner."

Apart from the difficulties of cost allocation within RTOs, there is no robust cost allocation mechanism for projects that span more than one RTO or that extend from an RTO to a non-RTO region.

The FERC should require that cost allocation methods be harmonized for all transmission investment regardless of primary driver (e.g., reliability or economic). Then, the costs of high voltage projects should be collected from the entire region served by that project via postage stamp rates. The FERC should be willing to establish proper cost allocation for projects spanning more than one RTO, projects spanning an RTO and non-RTO territories and projects with regional benefit which have been denied regional cost recovery by RTO in the past.

SOLVING THE GENERATOR INTERCONNECTION QUEUE ISSUE

While the creation of an independent planning authority will go a long way toward addressing the generator interconnection queue, there is an opportunity improve this process as well. A significant queue backlog for generator interconnections indicates that the transmission system is inadequate and planned in reaction to interconnection requests. Even with significant planning and investment, the transmission system will remain inadequate with this sort of reactive planning. Instead the system should be planned proactively based upon expected demand and location of resources.

A chief stumbling block for independent power producers such as wind developers is the uneven playing field resulting from the allocation of costs for network upgrades as compared to utility-owned generation. The Order 2003 pro-forma interconnection agreement should be changed so that network upgrades are not directly assigned to interconnecting generators, but are instead paid for by the transmission owner.

Generator interconnections should be considered as a relevant input during the regional planning process, especially for renewables, because location is highly predictable. For example, wind developers would optimally site wind farms where this is an abundance of wind, and planning regional transmission to make use of this natural resource would address not only the queue issue but promote a more efficient use of resources.

SUMMARY

The true optimal solution to the issues identified would be to wipe the energy delivery system slate clean and redesign the entire system on a fresh sheet of paper. However, in absence of that as a reasonable option, solutions presented in this paper go a long way toward moving the ball up the court to address regional transmission impediments and issues such as the environment, national security and energy independence.

ABOUT ITC HOLDINGS CORP.

ITC Holdings Corp. (NYSE: ITC) invests in the electricity transmission grid to improve electric reliability, improve access to markets, and lower the overall cost of delivered energy. ITC is the largest independent electricity transmission company in the country. Through its subsidiaries, *ITCTransmission*, Michigan Electric Transmission Company, LLC (METC) and ITC Midwest LLC, ITC operates regulated, high-voltage transmission systems in Michigan's Lower Peninsula and portions of Iowa, Minnesota, Illinois and Missouri serving a combined peak load in excess of 25,000 megawatts. ITC is also focused on new areas where significant transmission system improvements are needed through subsidiaries ITC Grid Development, ITC Great Plains and ITC Panhandle Transmission.

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