An IPP Quandary

Transmission vs. Generation: WHO WORKS FOR WHOM?

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ABSTRACT

Do the owners of transmission lines serve electric power developers—or is it the other way around? Are cogen/dg power producers facing unnecessary interconnection handicaps? Mr. Gottlieb reviews a vexing problem in this challenging article.

With increasing frequency, the management of interconnection agreements is becoming the single most difficult and contentious element of new generation development. While the legal and regulatory changes brought about by the Federal Energy Regulatory Commission's Orders 888 and 2000 were intended to simplify the process and make existing transmission capacity more readily available to new generation, **the reality is that the process has been getting worse, not better**.

With the earlier power supply shortages in California and other parts of the US putting a spotlight on the need for new supply across the country, and a definite building boom in new power plants underway as a result, the question needs to be asked: Between generation plant developers and transmission owners, who serves whom?

EXISTING TRANSMISSION SYSTEM INADEQUATE

Until recently, there was never any question as to what the role of transmission systems was and who these systems were intended to serve. Transmission systems' sole and exclusive purpose was to serve the needs of large central station power plants which were increasingly

built outside of major load centers. Vertically integrated utilities made sure that their transmission divisions understood their role and it was the generation planning department that dictated the development of new transmission lines. The purpose of transmission was to make sure the system was adequate to carry power from a utility's power plants to the distribution system for ultimate delivery to the customers.

Beginning over 20 years ago, as utilities began to exit the generation construction business and competition began to take over the wholesale market, the link between generation and transmission began to break down. No new major transmission systems have been built in the United Sates for over two decades. In the interim, power demand has increased dramatically and competitive power suppliers have taken over the primary responsibility for building new capacity.

Unfortunately, while new generation capacity connected to the grid is growing rapidly, the ability of the transmission system to carry the increased load remains frozen in time at 1970's load levels.

Add to this the explosive growth in wholesale power trading across the country over the past decade, and you have a volatile mix that is pushing the capacity of the existing system to the breaking point. Much of the volatility in the power market today is a direct result of the inability of the existing transmission system to meet the needs of new power generators and wholesale power traders. Bottlenecks will worsen as demand and supply outstrip capacity leading to even greater market volatility than now being experienced.

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As load demand increases and competitive generators scramble to meet the demand, incumbent utilities continue to control the nation's transmission system. Market trends in the mid- to late-90s indicated that incumbent utilities would exit the generation business and sell their power plants.

However, intervening events in California and the mid-west has resulted in utilities halting the sale of their existing generation. Even though approximately 17% of existing utility capacity has been sold in the United States, incumbent utilities continue to control 85% of the nation's generating capacity, either directly or through affiliates, and almost all of the transmission capacity.

While it was hoped that incumbent utilities who had sold their generation would be indifferent to providing the transmission capacity to serve the needs of new generators, market conditions have now resulted in a situation where incumbent utilities' primary concern is to preserve existing capacity to serve the needs of their own retained generation. **The result is a situation in which new generators and incumbent utilities are fighting a war of attrition over interconnection rights and access to the existing system.**

And while it was once clear that transmission was built solely to serve the needs of generation, the current market environment has resulted in a situation where the transmission owner is demanding that generators serve them, through the installation of expensive transmission upgrades that will benefit the transmission owner and his system. The situation has gotten so bad that transmission system upgrade costs has resulted in the cancellation of numerous power projects whose owners determined that they could not afford to make the demanded investment in a transmission owner's system and still develop a power plant.

In some cases, the demanded transmission system upgrade costs are almost as much as the cost of the new power plant.

WHO SERVES WHOM?

In almost every case, where new generators request interconnection to the existing system, the incumbent utilities perform the required interconnection studies, which provide estimates of the cost and technological feasibility of interconnecting a new generation project to the grid. These same utilities, or their affiliates, may also be developing their own power projects for interconnection to the same grid or in the same region.

In many cases, the estimated cost for the interconnection is so high as to make an independent developer's project too costly to pursue. In other cases, the estimates have been wildly inaccurate, making it extremely difficult to properly plan a budget for development and financing of a project. In one such case, for example, the actual interconnection cost claimed by the incumbent utility **exceeded the original cost estimate by 750%** over less than two years in a market heavily shaped by affiliate generation projects ostensibly favored by the FERC approved ISO.

Not only do incumbent utilities control the interconnection study process, but they are also largely responsible for carrying out the construction of the physical interconnection facilities, such as generator leads and transformers. In fact, most utilities insist, invoking reliability grounds, that they must construct and own all interconnection facilities.

Once wrapped in the safety and reliability blanket, many utilities have effectively sought to gold plate their transmission systems with improvements that benefit their entire system, but none of which solely benefit interconnecting generators who are billed for these improvements without any real operating justification. Moreover, many utilities overcharge for legitimate interconnection facilities that they themselves provide, in many cases charging an automatic markup for incumbent utility-provided equipment and services. For non-incumbent utility provided equipment and services, the incumbent utilities often forgo competitive bidding resulting in dramatically higher costs for construction and installation.

Some utilities have even attempted to charge exorbitant ongoing operating and maintenance fees for services that are either not actually provided or do not result from the interconnection of the new generator. Lastly, because the incumbent utilities directly control the interconnection study and construction process, the interconnection of new generation has become extremely time-consuming, as utilities often delay projects on spurious grounds. The interconnection process for many new generation projects has now become more difficult, expensive and time consuming than the overall environmental and site permitting process for the same project.

Clearly, something needs to give.

WHAT NEEDS TO CHANGE?

To meet the needs of growing demand for more power and the current boom in new power plant construction, the difficulties and problems associated with the interconnection process need to be addressed. While FERC believes it has managed the problem effectively, clearly they have not, as evidenced by the unusually large number of interconnection agreements being filed with FERC unexecuted.

Being unable to reach agreement, transmission owners and generators are opting to file their agreements with FERC unexecuted, and

subject themselves to the FERC process to resolve their disagreements. All of this despite the fact that FERC has determined that interconnection is an essential element of transmission service. FERC needs to recognize that despite its good intention, its recent orders have failed to develop a system that works in the real world and that encourages the development AND interconnection of new generation.

It has been estimated that in the typical interconnection agreement, 80-90% of the binding obligations are binding obligations imposed solely on the generator. Conversely, most of the non-binding obligations in such agreements favor the transmission owner. These agreements are developed by the transmission owners and evidence a clear intent to impose the maximum burden on the generator while ensuring the maximum benefit for the transmission owner. Rather than seeking a reciprocal, equitable and non-discriminatory solutions which will benefit both parties, transmission owners and their lawyers appear unwilling or unable to find the creative solutions and approaches needed.

Clearly, this needs to change.

Lastly, because many transmission owners do not have a model interconnection agreement, each interconnection agreement is different, raising concerns over disparate treatment of generators by the incumbent utility. Some transmission owners have used interconnection policies to effectively close down their service territory to competition from new generation, while they freely market power from their own generation and avail themselves of more responsive policies governing interconnection of their affiliates' generation in other regional markets.

While several large utilities and power pools, such as Entergy, the Southern Company, Commonwealth Edison, Duke Energy and the Southwest Power Pool, have developed interconnection procedures as amendments to their *pro forma* tariff, these efforts are not uniform and are evaluated and approved on a case-by-case basis at the FERC. Even within ISOs, interconnection policy uncertainty has caused severe problems for generators seeking to interconnect with the ISO-controlled grid.

For example, in one such case, a generating project being developed by an independent developer was assigned an advantageous interconnection position only to see it later taken away by the ISO because an incumbent utility sought interconnection for one of its own projects at the same area on the grid.

A clear national interconnection policy and an industry standard form of interconnection agreement is needed to address the disparities

that have developed and to remove the clearly discriminatory practices being followed by some incumbent transmission owners, and endorsed or facilitated by current ISOs.

ABOUT THE AUTHOR

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