

House Energy and Commerce Committee

Energy Subcommittee

Additional Questions for the Record

The Honorable Fred Upton

1. Are Non-Transmission Alternatives such as energy storage, DER, and smart technologies receiving adequate consideration from transmission-owning utilities? Do incentives exist that would otherwise discourage utilities from adopting cheaper alternatives that would reduce costs for customers?

The incentives of transmission owners regulated under cost-of-service regulation with formula rates is to put more capital into the rate base and collect the return. This can be beneficial in cases where new transmission lines are needed and where there are not viable alternatives. That tends to be the case with accessing major remote renewable energy areas or to address persistent large regional or inter-regional congestion, where more transmission is generally needed. In some cases such as with MISO's Multi-Value Projects, each of these multiple types of value were considered together, yielding \$12 billion to \$53 billion in net benefits, or between \$250 and \$1,000 for each person currently served by MISO, as I explained in my written testimony.

However there are many other situations where new transmission is not needed, or there are viable alternatives that are cheaper. Normally with cost-of-service regulation, such as that performed by state public utility regulatory commissions, there is an assessment of need and consideration of alternatives prior to granting the utility the right to construct the facility and charge customers. FERC does not do that with transmission. Instead, utilities build transmission and file informational filings to FERC. There is not a process to consider alternatives. There are many situations where even technologies that are clearly part of the transmission system, that attach to the wires or help manage flows on the wires more efficiently, are being overlooked. Dynamic Line Ratings, power flow control, network topology optimization, and some applications of energy storage fit in this category as technologies clearly serving only a transmission function and should be considered as alternative transmission options.

There are also claims by many parties that distributed resources such as those at the end-users' locations behind the meter should be incorporated as non-wires alternatives and incorporated into transmission rates. FERC has the difficult job of determining whether those resources should be treated differently than generation, since both are serving other functions though they can reduce congestion or serve as an alternative to transmission to manage a contingency. To some extent, there is an incentive in energy markets for some of these options because locational prices signal to generation, DERs, and demand response to respond, both in the short and long run, when congestion causes high prices in an area. FERC will need to draw a line between what qualifies as transmission facilities and what does not.

2. There's been some concern that utilities have an incentive to undertake large-scale transmission projects that aren't necessary for reliability, or to forgo lower cost alternatives that would avoid building new lines. What changes could be made to reduce this incentive so we can avoid making large investments in transmission when cheaper alternatives are available?

I recommend three changes that FERC and its Congressional oversight committees can promote:

- 1) Change the incentive:
 - a. Entertain utility filings under section 205 of the Federal Power Act to modify rate design to provide the transmission owner with an incentive to reduce congestion. Other countries have promising models that could be used. FERC has not yet expressed any openness to entertaining such proposals, though I am optimistic that the current set of Commissioners are interested in promoting innovation, especially in areas such as this one that can increase system reliability and resilience.
 - b. Review incentive policy generally. As I explained in my written testimony, addressing incentives (other than return on equity for new lines) was never implemented by FERC after the Energy Policy Act of 2005, and is an important piece of unfinished business.
- 2) Improve planning. FERC should provide planning guidance to regional transmission planners about the use of advanced technologies to solve transmission needs. For example, RTOs and ISOs have planning protocols for market efficiency, yet none of them have a clear means for advanced grid utilization technologies to be considered.
- 3) Informally promote the consideration of all options and share best practices. Many of these options are new, and new technologies in regulated sectors generally have a hard time breaking in unless the regulator expresses interest in supporting them. This need not require “picking winners,” only allowing new entrants into the contest and clarifying how rules and standards apply to them.

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Additional Questions for the Record

The Honorable Richard Hudson

1. On April 19, FERC issued a new rule (Order No. 845) concerning revisions to the interconnection process for large generators which are over 20 MWs. The intent of this rule is to reduce the backlog of interconnection queue requests... Do you believe that this new interconnection rule will alleviate these backlogs?

I believe FERC Order 845 will significantly improve generator interconnection queue problems. As FERC concluded, “the reforms adopted in this Final Rule will help improve the efficiency of processing interconnection requests for both transmission providers and interconnection customers, maintain reliability, balance the needs of interconnection customers and transmission owners, and remove barriers to resource development.”

However, by itself, no interconnection policy can really solve the problem. There must also be a change to transmission planning to sufficiently incorporate future growth in and locations of new location-constrained generation. For example, there is solid information on where renewable resource areas are, and sufficient certainty based on relative economics (even ignoring clean energy or climate policies), that certain resource areas will be developed. Yet transmission planning operates in a vacuum, separate and independent from generation development and interconnection queues. Queue challenges have been avoided where transmission planning explicitly incorporated likely locations of new generation development. California and Texas have done this better than other regions, and MISO’s Multi-Value Projects are a good example of such a process. When transmission planning fails to account for the amount and locations of future generation development, then large “network upgrade costs” get assigned to individual generators which are like charging the next car on a highway the cost of a lane expansion, or the next home in a subdivision the cost of the new road. Placing that burden on the next generator will inevitably cause that generator to drop out of the queue or change its plans, causing frustration for the transmission provider and generators alike.

2. How would modifications made by interconnection customers affect the interconnection studies of later-queued requests?

When there is a large network upgrade cost assignment at stake, which is the case when transmission planning fails to account for the amount and locations of new generation development, then each generator faced with such a charge will have a strong incentive to modify their plans in various ways to avoid or reduce the charge. FERC’s Order No. 845 accepted some but not all of the recommendations by generators to improve the process. Yet the problem will not be fully solved until transmission planning and generation interconnection processes are better coordinated.