

New England Electricity Restructuring Roundtable
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Perspectives on aligning capacity markets with policy and planning objectives

With apologies to the Grand Inquisitor in Dostoyevsky's Brothers Karamazov, this is the transmission planner's lament:

Did we forget that people prefer stability, and x-inefficiencies, to freedom of choice and uncertainty in the knowledge of sufficiency and scarcity? Nothing is more seductive for people than freedom of markets, but nothing is a greater cause of suffering. And behold, instead of giving a firm foundation for setting the future reliability of the system forever, we have embarked on a path that is exceptional, vague and enigmatic. Have we given ourselves a task beyond our strength, by being unable to present ourselves with a clear and certain vision of the future, thus burdening the electric kingdom of humankind with the sufferings of uncertainty and doubt forever?

Well, maybe.

This isn't the first time, and won't be the last time, that many of us gather to try to sort out the fundamental conundrums of introducing competition into the provision of a commodity whose nearly absolute reliability is a social and political necessity, and whose production, transmission and distribution tend to be marked by long-lived capital intensive assets.

The dialectical elements of the problem are well known and have not changed much if at all over the past 10 years:

- Generation, transmission, and load reduction continue to be substitutes (though imperfect substitutes) for one another in terms of their impact on the system; and
- Generation, transmission, and load reduction continue to have dramatically different investment and construction time horizons, leading to dramatically different degrees of predictive certainty for each type of resource.

The regulatory decisional criteria also have not changed much over that period:

- As a political matter, we have not shown a high tolerance for systems that depend on a high degree of price volatility;
- We prefer comprehensive egalitarianism with respect to the economic rewards and punishments for actions that have similar price and reliability impacts on the system; and
- We prefer low prices, but at the very least we like to be able to explain the link between what people pay and what they get.

The current efforts by ISO, the states and others interested in this market reflect, I think, our recognition that we have some distance to go before we can conclude that we have sufficiently harmonized these elements. In particular,

- A forward capacity commitment three years in the future that lasts a year is difficult to compare with a transmission line that must be planned as much as 7 or 10 years in advance and that will continue in operation with little independent investment and largely independent of load levels and energy costs for decades.
- The consideration of alternative solutions to perceived system needs – whether those needs are characterized as supply adequacy or transmission reliability – is largely ad hoc and does not follow a consistent set of rules.

I do think that there are three current avenues that show promise of getting closer.

- Forward Capacity Market reform is, I think, vital. The current system does not look far enough ahead, does not commit resources for long enough, is insufficiently granular either in terms of operational characteristics or geography, inadequately rewards virtue and is too forgiving of sin, risks substituting capacity price volatility for the energy volatility it was designed to correct, and cannot show that it has made any difference to the investment levels in New England while transferring fairly substantial sums from one set of pockets to another. [Other than that, it's working fine.] For the purpose of this discussion, the basic problem with the FCM is that it does not provide sufficient useful information about the future generation fleet to allow rational decisions about transmission needs.
 - I think the ISO is looking in the right direction when it explores greater granularity and mechanisms to dampen volatility.
 - A more granular system, however, will raise some difficult questions about offer and price mitigation. Market power is obviously problematic, but I'm not sure that even in the current market the ISO market monitors have found the right balance between addressing genuine market power threats and impeding economically rational price formation.
- The MRA discussions could also lead in some interesting and useful directions. These are an explicit attempt to price, from the short-horizon resources, functionally identical or sufficiently similar alternatives to transmission. While FCM reform can increase the information about future behavior, both through direct commitments and through the emergence of a more predictable market, the MRA effort could further raise the level of certainty concerning the non-transmission alternative solution and thus give greater (and perhaps sufficient) comfort to the ISO planners that they have fulfilled their NERC planning requirements. The proverbial elephant in the corner in these discussions is whether, as should be the case if we are to honor the economic egalitarian principle, the costs of MRAs should be shared among participants in the region in the same manner as the transmission solutions for which they substitute.
- Finally, the states are flexing their siting muscles and moving toward a more structured requirement, analogous but not identical to the MRA effort, for an

examination of alternatives to transmission. The difference between the MRA and NTA efforts is not at this point entirely clear, but I think there may be differences in the kinds of resources that are considered and cost treatment, and also in the process by which they are considered. Obviously it will serve everyone if the efforts are complementary and not conflicting or duplicative.

In closing, I'm beginning to see the fundamental regulatory and institutional issue as one of our collective degree of tolerance for imperfect information. Put another way, at what point are we willing to conclude that we have enough information about the short horizon investments (generation, load reduction), that we are:

- willing to invest large sums of other people's money on the long-horizon investments, i.e. transmission; or,
- on the other hand, refrain from spending that money and rely on others to come forward and invest in the generation or load response necessary to ensure long term reliability.