Ari Peskoe's Remarks at NEPOOL Participants Committee Meeting

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For historical reasons, environmental regulation is often considered separately from the legal frameworks that specifically govern the electricity industry. But that sort of line drawing has been out-of-date for some time, particularly in New England. In an alternate universe, I'm here today talking about implementing the Clean Power Plan, which was criticized for going too far in acknowledging the blurred lines between environmental and power sector regulation.

New England states have long been leaders on this front. No coal plant has opened in the region since November 1989, when a 214 MW plant in New London opened. Before that, I can't find any coal plants opening since 1968.

Last week, the Rhode Island site board rejected an application filed by Invenergy to construct a new combined cycle plant. Opposition to natural gas infrastructure is not new, as pipeline developers understand. I wonder if the region's last large-scale natural gas plant has already been sited. For that matter, will the region site any new fossil fuel infrastructure? The fuel security debate reflects that the ISO has apparently accepted this reality and is attempting to work around the constraint.

As far as I have seen, the ISO has not yet fully embraced the fact that the states are only interested in entry of zero emission or storage resources. In the near-term, new entry mandated by states is incompatible with the market paradigm – as we all know, over the next ten years, gigawatts of offshore and onshore wind and new hydro from Canada will likely come online. By the time the ISO-run energy market turns 30, about half of the region's electric energy will be generated by resources that entered the market through state-mandated long-term contracts.

The issue that I'd like to address today, is the future of markets after this round of utility procurements. The states want a low-carbon power system, and they're going to get one. I can't overemphasize that point. I think most people here understand that point, but the reality is that that the market design does not reflect it. The question is whether the ISO-administered markets will be the vehicle for building our 21st century low-carbon power system.

This carbon challenge will be the third major task that this group has taken on. Regionalization was the first challenge. Restructuring was the second. In the 2020s, NEPOOL has an opportunity to lead on a regional carbon solution. To continue the with R-words, I'll call this third task – Reduction, and I'm open to suggestions.

Before I speculate on the future, I'll start at the beginning.

I dusted off the September 21, 1972 FPC order approving the NEPOOL agreement. In that order, the Federal Power Commission summarized:

The stated goals of NEPOOL are to attain for New England the maximum practical economy consistent with proper standards of reliability, in the generation and transmission of bulk power through joint planning, central dispatching, coordinated operation and maintenance of the generation and transmission facilities. These goals also include equitable sharing of resulting benefits and costs. NEPOOL Power Pool Agreement, 1972, 48 FPC 538

Joint planning, central dispatch, coordinated operation and maintenance to achieve maximum practical economy and reliability, all with equitable sharing of costs and benefits.

Kudos to your predecessors for crafting a set of goals that has endured. Regional coordination in order to achieve maximum *practical* economy and reliability, while equitably sharing costs and benefits among utilities.

To show you how well these 1971 goals have endured, consider the current NEPOOL mission statement. The organization's website has a lengthy articulation of the mission for the market and transmission arrangements, but I prefer the succinct Mission Statement at the back of the Annual Report.

It says: "NEPool's mission is to create and sustain open, non-discriminatory, competitive, unbundled markets for energy, capacity, and ancillary services that are balanced between buyers and sellers."

Unbundled markets are now the vehicle for regional coordination to attain maximum practical economy. And equitable sharing of costs and benefits evolved into balance between buyers and sellers, to reflect the transition from vertically integrated utilities to today's market.

On this last point – The New England region is the only regional market that has so extensively achieved that balance by separating buyers from sellers. MISO and SPP are both dominated by vertically integrated utilities, and about half of generation in PJM is owned by utility holding companies with distribution utilities in the footprint or vertically integrated utilities. Regional power markets are good, and they're even better when buyers don't like high prices. Even without real-time retail prices, New England states could do more to incentivize utilities to reduce their wholesale purchasing costs. Then we'd have a market of rational buyers and sellers.

What we have instead is a regional platform for competition among supply-side resources. Since 2003, locational marginal prices have been the mechanism for facilitating open and non-discriminatory competition. LMP has since been supplemented with various products and markets, with more changes on the way.

LMP is a means for aligning operations with incentives to approximate least-cost dispatch. As we think about what the market should be achieving in the late 2020s, we should consider how to do as much as possible within a framework that maintains this underlying connection between economics and energy flows. But fidelity to NEPOOL's mission is, I think, the ultimate benchmark. Each new product, market, or procurement should advance regional coordination that is balanced between buyers and sellers.

Returning to my 2020s hypothetical, imagine that the state procurements enshrined in law today have been realized. In my future, this would mark the end of phase 2 of decarbonizing the regional power system. Phase 1 began when the markets opened – 20 years ago last month. CO2 emissions today are about a third lower than 1999, and that decrease is due in large part to natural gas displacing coal and oil in the wholesale market. For the most part, we've reached the end of the line with these carbon reductions. It may be possible to squeeze limited additional carbon reductions from the current LMP + FCM framework. But absent changes and interventions, this framework would likely increase CO_2 emissions, as retiring nuclear plants would be replaced in part by natural gas.

So states pursued phase 2 – large-scale procurements of resources with high capacity factors – because the market design did not present an alternative for decarbonization. To the extent that phase 2 threatens the regional coordination gains of phase 1, I think it's possible to limit the damage.

Phase 3 – starting after these procurements come online - is where decarbonization gets much more challenging. At some point, states are going to have tackle emissions from other sectors, particularly transportation and heat. That will presumably spill over to the electric sector.

The policy framework for Phase 3 is just starting to take shape. The parameters are set by states' long-term carbon goals. Five New England states have targets that roughly speaking require 80 percent reductions by 2050. Again – this is happening and no one has a plan for it yet.

In 2016, Massachusetts highest court ordered state regulators to promulgate regulations that will actually achieve the state's carbon-reduction target. NEPGA challenged the state's cap-and-trade regulation in state court, arguing in part that the regulation is illegal because the single-state cap-and-trade will lead to higher regional emissions. The court sided with the state, and Massachusetts' cap and trade is in effect.

If market participants and states are unable to agree on a regional mechanism for achieving decarbonization goals, phase 3 might be characterized by a combination of state procurements and escalating RPS or CES requirements – largely a continuation of phase 2 – combined with inconsistent regulation of CO_2 emissions from the region's fossil generators. This hypothetical Phase 3 would threaten the key principles of openness and non-discrimination and mark a major step backward in the decades-long effort to improve regional coordination. Meanwhile, the ISO-NE markets won't drive investment, and RMR agreements may be needed to keep existing assets operational.

To avoid this outcome, the region needs a market-mechanism that will facilitate new entry of low-emission resources. Without an alternative, states will continue down the paths their already on.

In Phase 1, new emission-reducing natural gas plants entered largely through the LMP + FCM framework. Switching from coal and oil steam turbines to natural gas combined cycle plants was consistent with existing physical operations and market dynamics.

In Phase 2, new entry is not based on market expectations but on long-term PPAs that are necessary because LMP + FCM don't provide an entry path for these resources. State-mandated RFPs are, nonetheless, a market mechanism. Like some ISO product markets, an RFP facilitates competition among suppliers while dictating to buyers the products they must to buy. But the RFPs isolate the state from the region, and therefore mark a departure from the decade-long regionalization trend.

States haven't yet mandated long-term contracts in Phase 3, but we know that additional zero or very low emission resources are needed to meet decarbonization and RPS goals.

A regional carbon price was an unattractive option in Phase 2 in part because it doesn't facilitate the new entry that utilities must pay for. I think it's worth reexamining whether a carbon price can play some role in Phase 3.

The purpose of a carbon price would be to improve the market by facilitating entry of resources that utilities must otherwise support, reducing the value of out-of-market energy credits, and enabling cost-effective achievement of state emissions targets, that again market participants must achieve.

Because a carbon fee should be rooted in market improvement and not environmental protection, the amount of the adder should be tied to the goals that the market is trying to achieve. For example, if the fee is aimed at facilitating compliance with 80% by 2050 targets, then the amount should be aimed at achieving that result. There is no reason to tether a regional carbon fee to the social cost of carbon.

Opponents of a carbon adder will undoubtedly argue that it's illegal, beyond FERC's authority to approve. Without getting deep into the legal weeds, I think that carbon price opponents leave the ISO and FERC in an awkward position.

It would be a very odd result if FERC is prohibited in its market oversight from accounting for one of the major drivers of power-sector investment in the region, and if FERC's only move, as a matter of law, is to erect barriers to market participation in order to protect resources that buyers don't want. FERC's mandate under federal law to ensure that wholesale rates are just and reasonable is a delegation of authority that by its nature conveys broad discretion to the Commission to regulate transactions under its jurisdiction. It would be a perverse outcome if FERC's discretion was constrained by labelling a regulation "environmental," and thereby prohibiting FERC from incorporating it into a just and reasonable rate.

A carbon price would open opportunities for interregional collaboration. Quebec has an economy wide cap and trade that is linked to California's program. New York enacted major carbon reduction legislation last week. Of course, New York and New England already collaborate through RGGI, which could obviate an ISO-administered carbon fee if the cap were significantly ratcheted down.

If a fee on carbon emissions is not politically viable, perhaps payments for reducing carbon emissions may be more attractive. Conservation Law Foundation and others introduced a proposal during IMAPP that would do just that. The proposal would pay resources for emissions reductions, which is exactly what the region needs.

If carbon-based prices or payments are not possible, a sub-optimal solution that might not fit neatly within the LMP framework is better than the alternative of more utility-mandates and inconsistent state CO2 emission regulations. At the end of the day, NEPOOL's guiding principles should govern -- regional coordination is the ultimate goal. If there is no regional alternative, states will continue down the path they are on with more utility mandates. To repeat myself – the regional power sector is going to decarbonize. The question is what role will the regional market play in enabling that transition.

If the market design issue is intractable and you're resigned to state-specific procurements forever, then the markets can be explicit about that outcome. The region must also retain resources needed for reliability. The regional capacity construct was ostensibly intended to meet this goal, but it is now disconnected from resource adequacy and reliability. The region doesn't need a capacity construct that is designed to procure fungible megawatts.

What sort of financing mechanisms can withstand volatile energy prices that might accompany a region with high penetrations of low marginal cost resources? Will those financing mechanisms be overseen by the ISO, or will market participants and financial institutions develop them without any new FERC-regulated products?

I also wonder if there is a regional solution to long-duration storage. As offshore wind comes online, there will be excess renewable energy generation in the spring and fall. Perhaps investors can develop a business models for storing that energy – but will any investor be willing to shoulder the risk of investments premised on seasonal arbitrage?

One more thing in the 1972 FPC order that I think is relevant -

"The participants to the Agreement have subordinated some of their own self-interest objectives in order to achieve a workable pooling arrangement for their own benefit and for the benefit of the whole geographical area involved."

Will states be satisfied with a regional solution, if a credible proposal is presented, or will they continue to want to pick their resources? Can they subordinate some of their own self-interest? RPS laws and RGGI, both of which preceded the current procurements, were regional solutions, so there's reason to be optimistic.

But what about the companies represented here? I think leadership needs to come from the long-term market participants – the ones who intend on being here and will be here 10, 20, 30 years from now.

We're at a moment of opportunity that will slip away quickly if states pass additional procurement mandates. The easy option is to blame the politicians, who hold all of the cards and can dissolve this 50-year experiment in regionalization. New England has a unique cohesiveness that other markets lack, that might allow it to overcome inertia and provide a path forward for a regional, low-carbon power system.