

**UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION**

State Policies and Wholesale Markets Operated by ISO)
New England Inc., New York Independent System)
Operator, Inc., and PJM Interconnection, L.L.C.)

Docket No. AD17-11-000

**PREPARED COMMENTS OF ALEKSANDAR MITRESKI,
SENIOR DIRECTOR, REGULATORY AFFAIRS, BROOKFIELD RENEWABLE
PANEL 2: STAKEHOLDER'S PERSPECTIVE IN ISO-NE**

Introduction

Good morning and thank you for allowing us to participate in this important forum. My name is Aleksandar Mitreski and I am the Senior Director for Regulatory Affairs at Brookfield Renewable. Brookfield Renewable is one of the largest renewable power companies in the world. Our portfolio is primarily hydroelectric, comprising 88 % of our generation, and the remaining generation coming from wind and solar. Our resources provide clean, renewable and reliable power to the grid. In the United States we own and operate nearly 140 hydropower facilities and 7 wind farms across 13 states.

Proponent of well-designed wholesale markets

Brookfield Renewable is a strong supporter of well-functioning wholesale markets that transparently and comprehensively value energy, capacity, and ancillary services, as well as attributes from non-emitting generation. Properly designed wholesale markets that avoid discrimination on technology, size and vintage motivate cost-effective resource investments at Brookfield Renewable

the right times and in the right locations, as well as resource sustainment, delivering capacity, energy and ancillary services while ensuring system reliability. The current centralized markets in the northeast do an excellent job of meeting their two primary objectives: least cost dispatch and system reliability.

At the same time, as a renewable company, Brookfield Renewable is a staunch supporter of public policy goals by the states to meet their environmental mandates. Our view is that meeting these public policy goals will be most efficiently and cost-effectively achieved if they are pursued on a technology and vintage neutral basis. The increasing use of public policy to meet state carbon reduction and renewable portfolio standard goals outside of the wholesale market is slowly creating market inefficiencies and increasing consumer cost. This is partly because the policy objectives are generally not integrated with the FERC-regulated wholesale markets, and in part because these objectives are often pursued with discrimination on technology and vintage. Brookfield Renewable believes that the time is ripe for public policy objectives to be incorporated into the wholesale markets, which will allow for better overall outcome based on the efficiencies that such markets provide. This integration can produce long term savings to consumers because the ISOs have a unique ability to comprehensively look at the system needs and efficiently procure resources needed to operate on a least-cost dispatch basis, maintain system reliability, and at the same time meet the state public policy mandates.

Role of Hydropower

Hydro resources play a very important part in meeting these three objectives. Hydro resources provide valuable reliability benefits to the ISO while also functioning as a critical, baseload

carbon-free resource that helps meet states' policy objectives and consumers' needs. However, hydro resources are often overlooked by policymakers because they are viewed as a static resource that operates self-sufficiently over decades, if not centuries. Yes, hydro resources are long-life resources, but unlike many other renewable resources, they require continuous reinvestment to ensure reliable, efficient and safe operation. Repowering, runner and safety upgrades, automation of equipment and other costs all amount to sizable capital outlays. For example, in the state of Maine where we operate 39 small scale facilities, we spent nearly \$16 million dollars last year on regular maintenance and facility investments. At the same time, every 30 to 40 years, hydro resources undergo a FERC license renewal process where additional environmental requirements are often imposed on our assets, such as fish passages, water management, and long-term recreational use among other things. The relicensing process not only results in significant capital expenditures, it also affects our operational efficiency; for example, local communities often seek to increase recreational activities, such as rafting, which results in reduced generation output and other operational constraints. These new constraints frequently contribute to an erosion of revenue to the hydro owner but create greater societal and environmental benefit. With both, the relicensing process and continuous refurbishments, we believe hydro facilities are a true long-life renewable resource that is uniquely positioned to support the integration of public policy goals with a reliable, cost-effective wholesale market. Importantly, hydro resources are not immune from the negative impacts of persistently low energy prices. As a result, Brookfield Renewable is concerned that if a sizable amount of subsidized resources come into the market in order to satisfy public policy goals, without proper mitigation, there will be a further erosion in the revenues from the capacity and energy

markets. This scenario -- new subsidized non-emitting resources entering the market and undermining existing non-emitting resources -- is not only counterintuitive, but contrary to the very intent of the states' carbon emission reduction and renewable energy policies. To prevent this slow motion devolution of the markets, a comprehensive solution must be devised that will compensate both new and existing non-emitting resources on a non-discriminatory basis toward the goal of meeting public policy goals.

While such recognition of the existing non-emitting resources through the power markets would almost certainly result in more efficient outcomes and the lowest long-term costs for consumers, too often the public policy objectives that are pursued outside of the market incorporate a much shorter-term focus and narrow definitions of eligibility. This approach unfortunately only encourages a cycle of non-emitting resource retirement or economic arbitrage (such as export to other markets), that results in higher overall costs to consumers. The hidden long-term cost impact is beginning to be explicitly raised by some existing non-emitting resources such as nuclear generation, but has similar effect to hydropower resources. Therefore, it is vital to have a non-discriminatory market-based solution that enables least-cost pursuit of not only power market objectives like reliability, but also state policy objectives in parallel – one which is implicitly technology-agnostic and vintage-agnostic.

Proposed solutions to address state policies

Carbon pricing in the energy market

State public policy goals are typically focused on a reduction in carbon emissions or meeting a certain percentage of load with renewable resources. Changes to the capacity markets can

prevent associated price suppression effects, but to date no solution that proposes modifications to the capacity market is capable of fully satisfying the states' public policy objectives. Instead, a solution must be primarily devised in the energy market and measured in MWh of non-emitting generation delivered. One comparatively simple and implementable solution to meet state policy goals is the incorporation of carbon pricing into the energy market. This approach creates the proper dispatch incentives by prioritizing and compensating less-emitting resources without regard to vintage or resource type. While there are potential political challenges to determining an appropriate and acceptable price of carbon, this challenge is not insurmountable. The ISO can work with the states to develop the desired emission goals, and can then calibrate the price of carbon based on the achieved targets. In a simple stroke, this solution would address the current revenue shortfall that nuclear, hydro and other existing non-emitting resources are experiencing. Initially, existing non-emitting resources that are receiving Power Purchase Agreements ("PPA") would not be eligible for the carbon pricing while remaining under contract. As the PPAs roll off, the existing non-emitting resources would become eligible for the carbon pricing in the energy markets, which would ensure that these resources remain operational and continue to contribute toward meeting the public policy objectives.

Uniform procurement of attributes

A second best solution, but certainly better than no solution, would be a uniform procurement of attributes from non-emitting resources. Under this scenario, states or local utilities participate via demand bids in a forward clean energy market auction that procures the needed

quantity of non-emitting MWh to meet public policy goals. Performing this type of procurement on a resource neutral basis would yield the lowest cost to consumers. However, we do recognize that states continue to assert the need for additional flexibility to pursue new technology preferences for other policy reasons, such as a targeted pursuit of off-shore wind. It is important to recognize that these targeted policies could still be accommodated through this auction, though most likely with higher costs to consumers.

No matter whether a carbon price or forward clean energy market solution is implemented, it is imperative that existing and new non-emitting resources are treated and compensated without discrimination. Paying the same uniform clearing price for new and existing non-emitting resources on a technology neutral basis will always yield the lowest cost for consumers in the long run. We can see that this approach works in the capacity market, and should be similarly adopted in either of the proposed market solutions. In the past, when major changes to the market have been implemented, it has been a practice to implement a two to three year transition period. This type of an approach can be implemented here as well, which would ensure measured adoption of the new policies by the ISOs, consumers, and participants.

Ultimately, a comprehensive solution among all regions in the Northeast will yield the least cost outcome for consumers. This approach may be challenging to accomplish due to various jurisdictional preferences or cost allocation concerns. However, if the solutions become fragmented across the northeast ISOs -- where hypothetically we could see a carbon price implemented in New York but a capacity market solution in New England -- then there could be issues of price convergence at the seams, as well as leakage of existing non-emitting resources

into neighboring regions. Under this scenario, non-emitting resources would be incentivized to export their power from PJM and New England into New York, given the higher valuation of energy from non-emitting resources. In turn, this would raise consumer costs in New England and PJM because the exporting in-region non-emitting energy would need to be replaced with new indigenous non-emitting resources.

Concerns about effectively implementing solutions

Furthermore, there seem to be certain concerns among some states how each of these solutions would work when the cost allocation principles are explored. The ISOs can work with the states to develop cost allocation mechanisms that adhere to the states mandates while meeting the cost causation and beneficiary pays principles that the Federal Energy Regulatory Commission would adopt. Cost allocation can be designed in mind to not allocate any of the incremental costs to states that do not have public policy goals, or have already met their goals. Tracking mechanisms can be employed by the ISOs to account for the existing contracted non-emitting resources and credit that non-emitting power toward the state's goals. This approach will ensure that cost allocation is done on a fair and appropriate basis encompassing each states' mandates.

Conclusion

There has been an extended period in which state policies and wholesale markets have operated as a standalone processes. While they have learned to co-exist, they may not work in the same directions at all times. This tension, if not addressed, can create sizable long term cost impact to the consumers. Integrating public policies into the wholesale markets would be a

sizable shift from the current status quo, but step in the right direction. While under this new paradigm the ISO would take the lead to develop solutions to meet the states' public policy goals, this approach should not be seen as a way of relinquishing power, but rather, a partnership where the states would benefit from ISO's vast tools and experience in designing market based solutions. The states will still maintain their rights to develop legislations and dictate their public policy objectives that ISO would work to implement. In the long run, this new venture would allow the wholesale markets to continue operating reliably and provide the lowest cost to the consumers AND meet the public policy environmental goals in each state. Synchronizing the public policy and wholesale markets is needed, and seems to be the intuitive next step in the evolution of the wholesale markets.