Overheard at the 2019 NECBC Energy Conference

Permitting Seen as Main Obstacle to Developing Large Projects

BOSTON — State and federal regulators last week joined industry leaders — and even a handful of protesters — at the New England-Canada Business Council’s (NECBC) 27th annual energy conference, where discussion of energy policy to reduce climate change took center stage.

Protesters outside the hotel held up signs denouncing Enbridge’s proposed natural gas compressor station in Weymouth, Mass. At one point, a demonstrator could be heard shouting as a police officer prevented him from entering the ballroom, interrupting the session coincidentally just as Avangrid CEO James P. Torgerson was saying that the main obstacle to getting big projects off the ground is the difficulty of permitting.

Following is some more of what we heard at the meeting.

NERC and Society

NERC CEO Jim Robb recalled being in Connecticut on Oct. 28, 2011, for an unexpectedly heavy snowstorm that caused “a massive amount of damage to the electric system,” leading to a nearly two-week restoration effort.

“Most importantly, what I learned from that was how the relationship between society and electricity has so fundamentally changed,” Robb said.

“I remember as a kid when the power was out, it was kind of fun. ... We’d play Monopoly by candlelight, but you can’t do that anymore because kids only know how to play games that are on the internet, which doesn’t work without electricity. You can’t communicate, because most people don’t have landlines anymore, and you can’t get money from the ATMs. You can’t get gas in your car.”

Society unravels without electric power, Robb said, and that 2011 experience “developed in me a real commitment to this notion of reliable electricity, because it really is foundational to our society.”

The “incredibly complicated” electric system calls for a lot of cooperation and collaboration between NERC and other agencies, both domestically and internationally, he said.

“The industry is transforming from the isolated systems of Grid 1.0 — and the Grid 2.0 of integrated systems built around large, central station generation — to 3.0, which is going to be highly decarbonized, with variable generation, available when it’s available and not when it’s not,” Robb said.

“Just having capacity to generate energy is no longer sufficient,” he said.

The new grid will also feature increasing amounts of generation on the distribution system or behind the meter from the utilities’ perspective; and be highly digitized, with a strong focus on digital controls at the [uninterruptible power supply] level, and an increasing penetration of Internet of Things devices at the load side,” he said.

Robb said that cybersecurity is the one thing they “lose sleep over” at NERC and that “you should stop using the term ‘Internet of Things’ — the real term should be the ‘Internet of Threats,’ because every one of those devices creates an access point and a cyber vulnerability for the system.”

Political Ideas

Highlighting the value of energy exchanges between the U.S. and Canada, NECBC President Jon Sorenson, of JFS Energy Advisors, said energy trade makes up nearly 20% of bilateral trade between the countries, or $130 billion out of $759 billion.

David Alward, consul general of Canada to New England, summarized political developments since Prime Minister Justin Trudeau’s Liberal Party won a narrow re-election victory in October to form a minority government.

Alward called the recent selection of Jonathan Wilkinson as Canada’s environment minister a “really positive move” with respect to advancing climate change policy, noting Wilkinson’s experience as a clean energy technology executive and as fisheries and ocean minister.

The country’s new deputy prime minister, Chrystia Freeland, was the foreign minister and will keep responsibility for free-trade negotiations and U.S. relations, “which for all you in the energy sector is a message of stability.”

Energy policy is a significant part of political elections in Ontario, said Leonard Kula, COO and vice president for planning, acquisition and operations at Ontario’s Independent Electricity System Operator.

“One could argue that our last two changes in government were based on how well that government handled electrical energy,” Kula said.

“The jury is still out on the ability of those hybrid resources” — wind plus storage, solar plus storage — to do “the heavy lifting” now assigned to nuclear and hydropower, he added.

On the U.S. side, former FERC Chair Joseph T. Kelliher, now executive vice president for federal regulatory affairs at NextEra Energy, said that “to the extent there’s a crisis in the industry, it’s a crisis of low energy prices.”

Fifteen years ago, the least efficient coal unit could generate electricity cheaper than the most efficient gas unit, and now even the most efficient coal unit cannot survive economically, mainly because of the drop in natural gas prices,” he said.

Kelliher said he hates to see people talking about FERC in the elections, and also about energy policy, especially when they don’t know what they’re talking about.

“The idea of stopping all fracking of natural gas now is terrible,” he said. “Do they think the price will stay the same?”

Seal of Approval

Avangrid expects “in the not too distant future” to get the final permits on its New England Clean Energy Connect project to bring 1,200 MW of Canadian hydropower to Massachusetts, Torgerson said. It will likely begin construction in the second quarter next year to become operational by 2022.

NECEC has been plagued by delays, controversy and opposition since it received the state contract following the failure of Northern Pass, a competing project by Eversource Energy, to win regulatory approval in New Hampshire.

The company’s offshore wind joint venture, Vineyard Wind, has also seen trouble this year, as the Bureau of Ocean Energy Management in August delayed issuing a final permit in order to expand environmental impacts analysis for all such offshore projects. (See Renewable Backers Decry Vineyard Wind Delay.)

“The BOEM delay for cumulative impacts analysis makes sense when you step back, because with seven projects in various stages of development, you want to make sure that you get the shipping lanes right, that you don’t build a patchwork of turbines out there,” Torgerson said.

“All of the developers have agreed to 1 nautical mile of turbine spacing, so we hope the fishermen can do their fishing, and we expect a decision by the secretary of the interior by early January so we can start construction,” he said.

ISO-NE CEO Gordon van Welie, now executive vice president for planning, acquisition and operations at Ontario’s Independent Electricity System Operator.

Kelliher noted that his company partnered with Ørsted to form Bay State Wind, which has leased two offshore wind energy areas, one of which it bought in 2016 for $1 million, and the three that are farther out now, maybe 15 miles beyond that, just went for $130 million each.

“The hedge fund that invested wanted me to flip it immediately and have a good quarter, but we’re not doing that,” Judge said.

After hearing Torgerson note that offshore wind turbines can be expected to have average capacity factors of 47%, Judge said the number “is not uniform” throughout the year.

“In January, you can expect a 65% capacity factor, and in the summer probably something around 30%, which means we are freeing up with offshore wind development the very critical gas resources that come under constraint in the region during the winter months,” Judge said.

Richard Levitan, president of Levitan & Associates, said New England’s “natural gas pipelines are running full throughout the heating season ... and gas prices briefly touched $175/MMBtu during that bomb cyclone of 2017-2018.”

“We have been building new reservoirs and new capacity since 2003 and will through 2021. And we built 5,000 MW of capacity, which is going to give us about 24 TWh,” Hydro-Québec CEO Éric Martel said. “What’s important to know is that the demand in Québec has been flat for the last 10 to 12 years ... so this is available either for export or growth in Québec.”

Algonquin Power & Utilities CEO Ian Robertson said, “We were green before it was hip to be green.” Speaking of the company’s purchase of Bermuda’s electric utility, BELCO, Robertson said: “People might ask what’s the point of a 160-MW utility in the middle of the ocean, but what a great petri dish for understanding the role that renewables can play to influence fossil fuels. Their generation store is almost 100% fossil fuel, meaning fuel oil equipment.”

Market Mechanisms

Danielle Powers, senior vice president at Concentric Energy Advisors, asked how wholesale markets in New England need to evolve in order to maintain reliability.

“All the New England states have expressed that they want to reduce carbon emissions by around 80% by 2050,” ISO-NE CEO Gordon van Welie said.

Although the region has already made significant progress on emissions, “the steep part of the ascent is ahead of us ... from 2030 to 2050,” he said. “We’ve done the easy stuff the first few decades.”

“CASPR, or Competitive Auctions for State-sponsored Resources, was really just a
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mechanism we invented and work around to allow such resources to enter the market without crashing the price in the primary auction capacity market.”

Rudy Wynter, president of National Grid Wholesale Markets, said that “the competitive markets are the most reliable and probably the most effective way” to achieve environmental goals.

“Those markets are probably evolving … and we’re probably going to need some resources in the beyond-2030 time frame that aren’t even in the markets today,” Wynter said.

“It’s also important how we think about transmission, how it’s configured, which also has to evolve,” he said. “We have to make sure that all our energy infrastructure … is enabling or facilitating the decarbonization agenda, and not inhibiting.”

Wynter said that it’s becoming steadily more difficult in the Northeast to site, permit and build infrastructure, “which means we need to start making our investment decisions and infrastructure plans very early. If we wait until they’re needed … it might not be there when we want it.”

Policy and Pressure

“I represent largely carbon, which most people don’t want to even recognize,” said Karen Iampen, vice president of trading and origination at Repsol. “The phase we’re in right now is that gas and LNG are absolutely necessary for reliability.

“Everything is incredibly complex,” Iampen said. “The region should look at carbon pricing because we do have to incorporate all the externalities in the market, but then what do we do with the revenues?”

Elizabeth Henry, president of the Environmental League of Massachusetts, said her constituency is proud of New England’s leadership in developing offshore wind “but sobered by the urgency of the climate crisis.”

She said the region has three main levers to transform its energy picture: offshore wind, the transportation sector and corporate action.

“In six weeks it will be 2020, which is the midpoint between 1990, commonly referred to as the baseline for emissions, and 2050, which is the date that thousands and thousands of climate scientists around the world say that our economy globally needs to be net zero,” Henry said.

Despite great progress, most people would recognize that we are not halfway to net-zero carbon emissions, she said.

“Progress has not been linear, so there is going to be increasing pressure to accelerate that progress,” Henry said. “I say this because getting to net zero for New England represents a massive economic opportunity.”

Patrick Woodcock, undersecretary of the Massachusetts Executive Office of Energy and Environmental Affairs, and interim commissioner of the state’s Department of Energy Resources, said he continues to be optimistic that New England and the eastern Canadian provinces can “meet the energy and climate challenges of our time.”

“Although we have not yet perfected our markets, the key winter ability to hit price signals to attract investment … I think that market model will originate here,” Woodcock said.

— Michael Kuser