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Overheard at Bloomberg New Energy Finance Summit

April 15, 2018

NEW YORK — Hundreds of investors, utility executives and others gathered last week for Bloomberg New Energy Finance's Future of Energy Summit (<https://about.bnef.com/future-energy-summit/new-york-agenda/>), where electric vehicles, energy storage and renewables dominated discussions. Here's some highlights.

Murray Weeps over a Future Without Coal

Robert Murray has been trying for more than a year to persuade President Trump and Energy Secretary Rick Perry to provide subsidies for the utilities that buy Murray Energy's coal. (See *Photos Show Murray's Role in Perry Coal NOPR* (<https://www.rtoinsider.com/rick-perry-murray-energy-nopr-81920/>).

Last week, he took his message — that the grid cannot be resilient without coal generation — to a skeptical audience at the BNEF conference.

"I'm probably the only coal guy in the room. I'm also an American," he said, pausing to gather his composure after tearing up. "The recent polar vortex shows our grid is not as reliable as grid operators would like you to believe."

Murray criticized *FERC* ([/ferc/](http://ferc.gov)) for rejecting Perry's proposal to subsidize coal and nuclear plants with onsite fuel and said Perry should approve FirstEnergy's request for an emergency declaration to protect coal plants. (See related story, *Perry Hints DOE Won't Grant FES 'Emergency' Request* (<https://www.rtoinsider.com/rick-perry-doe-firstenergy-fes-90090/>).



(<https://i0.wp.com/www.rtoinsider.com/wp-content/uploads/Murray-Robert-at-BNEF-Summit-2018-April-RTO-Insider-FI.jpg?ssl=1>)

Murray | © RTO Insider



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Hundreds of investors, utility executives and others gathered last week for Bloomberg New Energy Finance's Future of Energy Summit, where electric vehicles, energy storage and renewables dominated discussions. | © RTO Insider

The declaration "has to be [made] or we're going to have a disaster. ... Will we have to have a system collapse before recognizing that something has to be done about the security, resiliency and reliability of the power grid?" he asked. "Barely one-half of [remaining coal] plants generate enough revenue to cover their expenses. There has to be a capacity payment there."

Lynn Doan, head of power and renewables for Bloomberg News, asked Murray about reports by *NERC* (https://www.nerc.com/pa/rrm/January%202014%20Polar%20Vortex%20Review/Polar_Vortex_Review_29_Sept_2014_Final.pdf) and others that some coal plants were unable to run during recent cold spells because of frozen coal piles. “Did not happen ma’am,” he insisted.

“The poorest 25 million families in this country are putting out 31% of their income for energy — gasoline, oil and electricity,” he continued. “We have an energy poverty problem in this country. We don’t have a global warming problem.

“All of you are building your businesses around climate change. The best thing that could happen is overturning the [EPA’s CO₂] endangerment finding — that artificial thing that has put political correctness ahead of getting the lowest-cost electricity for the people on fixed income, for that single mom, for that manufacturer.”

Power Markets Under Stress

Although most of the conference focused on advances in renewable technologies, there was some discussion of the impact of those resources on organized power markets.

“We know that clean, zero-marginal cost energy does fundamentally change the way the power markets work,” said **Albert Cheung**, BNEF’s head of global analysis. He cited BNEF modeling on the impact of adding 5 GW of solar in Texas. “It creates \$300 million going toward solar. But you also destroy about \$2 billion worth of revenue for other generators, whether it’s gas or coal or wind or nuclear. In California we already see this happening,” he said, with even solar “cannibalizing itself already.”

“Be wary of capacity mechanisms which bake in solutions of the past,” he added.

Former FERC Commissioner **Nora Mead Brownell** said she is confident organized competitive power markets will survive state and federal interventions to protect favored generation resources.



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Brownell (left) and Nason | © RTO Insider

“I think it’s easy to sit in a vertically integrated market where you have elected regulators who pretty much approve what [utilities] wish and say this life is perfect. What we’ve seen in organized markets is a decrease in price, an increase in innovation and an increase in reliability and investment.”

FERC, she said, is acting properly in considering market redesigns to respond to decreased prices resulting from renewables and cheap shale gas. “They’re doing it in a methodical way based on a fact pattern, unlike kind of throwing subsidies at old solutions. They want to keep the market open for this continuing innovation that you will only see if you let the market drive decisions. You don’t see big huge mistakes in organized markets with big huge ratepayer-funded R&D projects. You don’t see that at all. There’s financial discipline, there’s transparency and there is encouragement of new solutions. It’s not happening fast enough ... but I think it’s moving forward now. So, we need to step back and make economic decisions and not political decisions.”

Storage vs. Gas?

David Nason, CEO of GE Financial Services, was asked whether he sees storage as a threat to investments in gas-fired generation.

“I don’t know if storage is a complete competitor to gas yet,” he said. “It’s just one of the variables that we [consider in projecting] a long-term return for these investments. The difficulty with investing in gas without a structured market or without [power purchase agreements] is that these are 30-year, very capital-intensive investments. So, if I can’t get some level of confidence that I’m going to get an adequate return on my cost of capital, I’m just never going to put the money to work there.”

Seeking Deeper Penetration for Electric Vehicles

Reza Shaybani, co-founder and interim CEO of The EV Network, said the EV industry must not be paralyzed by concerns over which charging technologies and business models will survive. “This is going to evolve. This is going to change. What we see today is not necessarily going to be the future business model,” he said. “But it has to start from somewhere.”

Shaybani's company, which is developing the charging infrastructure in the U.K., conducted a survey of EV buyers in the country and found that 90% were "middle-age men, well educated, very affluent and living in the Southeast and they have at least two or three other cars in their household. That's ... not going to take this revolution forward."

The revolution will need cheaper vehicles and much more charging stations so that the drive from London to Manchester takes only three hours. "That should not take 18 hours if you are going to stop every 150 miles to charge," he said.

Bryan Urban, executive vice president of Leclanche North America, said there is already a compelling business case for EVs and fast-charging infrastructure for mass transit and fleet vehicles. His company is conducting a pilot project in India for its plan to separate city buses from the batteries to make the capital expenditure model similar to that for diesel vehicles.

The company's plan — which he dubbed, "taking the sun and putting it on the run" — replaces buses' depleted batteries for charged ones three or four times daily, a swap which he says takes about three minutes each.

Mary Nichols, chair of the California Air Resources Board, said EVs need more marketing. "Even in California, where we pride ourselves that half of all EVs have been sold in the U.S., we ... have done polls that show most people who are in the market for a new car aren't even aware that there might be an electric car that could serve their needs," she said. "So, we have a long way to go to really penetrate the thinking of customers."



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Nichols | © RTO Insider



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McKerracher | © RTO Insider

Nichols talked of Nissan's hope to lease the batteries for its Leaf when it launched the first widely available all-electric car in Los Angeles. The plan was to include a mileage guarantee on the batteries, like the miles-per-gallon ratings for gasoline vehicles. "The only way they could do that at a level price was if they could negotiate with the electric utilities a product that would cut across state lines and local lines," she said. "And after a period of time, they gave up on that idea. There was no practical way to do it."

"And that's in a relatively vertically integrated market, as most of the Western U.S. is," added **Colin McKerracher**, the head of BNEF's advanced transportation coverage. "It's ... even harder if you were to be in an unbundled market."

Utilities are "unfortunately a very fragmented industry in the United States," acknowledged **Pedro Pizzaro**, CEO of Edison International. "I think as an industry, we realize that and we're trying to come to terms with that to help solve that issue. ... We get your point, that from an automaker perspective or from a charger manufacturer perspective, they're looking for as cohesive a national market as possible."

LNG: No Glut Worries

Speakers at a panel on U.S. LNG exports expressed little concern over a potential glut in supply.



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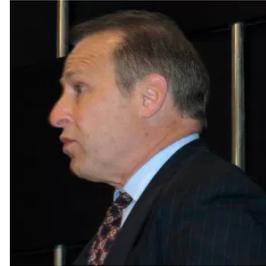
Meg Gentle, CEO of LNG exporter Tellurian, said she expects strong demand from China, which is converting coal furnaces to gas and adding natural gas-powered autos. Gas only represents 6% of total primary energy in the country, she said. Boosting that share to 10% would represent a nearly 70% increase in Chinese demand for the fuel.

She predicted Henry Hub benchmark prices will stay at \$3/MMBtu or less for the foreseeable future, noting that it can now be produced for less than \$1.



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Shaybani | © RTO Insider



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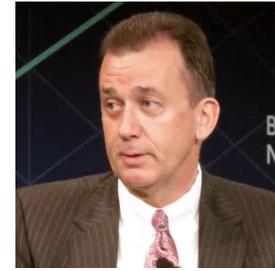
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Gentle | © RTO Insider

Greg Vesey, CEO of LNG Limited, which provides liquefaction for LNG export terminals, said he expects demand for gas to continue despite the growth of energy storage.

“Obviously the trend toward renewables and the need for storage with those is something to keep watching. ... But in all cases, natural gas is going to provide that backup,” he said. “It’s been called the bridge fuel. I think we’re going to see that for a long time.”



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Vesey | © RTO Insider

Peak Oil Demand by 2035?

Even if EVs supplant internal combustion vehicles, BP Chief Financial Officer **Brian Gilvary** said, oil will remain a “baseload” fuel.

“When I first joined the industry 32 years ago, people talked about peak oil supply. We now talk about peak oil demand,” he said. BP projects that peak to hit between 2035 and 2040.

“But we don’t think of it as a peak; we think of it as a plateau,” he added. Even under a scenario in which all internal combustion engines are banned by 2040, “we can see oil demand plateauing at round about 100 million barrels, which is what it is today.”



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Gilvary | © RTO Insider

Corporate Purchasing of Renewables

Rob Threlkeld, global manager for renewable energy General Motors, said he’s been encouraged by the increasing number of utilities offering “green” tariffs to corporate buyers who want to purchase renewables. “I want price stability. I want to be able to understand what my costs are today and tomorrow. That allows me to be able to then [make] long-term commitments.”

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Threlkeld (left) and McKenna | © RTO Insider

“For a while, there was this huge tension between the renewable energy market and the regulated utilities. There was a significant pushback for years and years,” said **Conor McKenna**, managing director at investment bank CohnReznick Capital. “It was like when you were going into the regulated markets, you just had to put your mouthpiece in because it would be a battle. Now it feels like a lot of the guys that are coming to us [to deploy renewables] are regulated utilities [asking], ‘How can we incorporate a greater allocation of these resources into our portfolio?’”

— Rich Heidorn Jr.



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ISO-NE Suspends Pacific Summit Energy

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ISO-NE suspended Sumitomo subsidiary Pacific Summit Energy for an undisclosed period of time, the RTO told FERC last week.