



FERC Podcast Transcript
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Commissioner Chatterjee Talks Electricity Storage

Mary O'Driscoll: Welcome to Open Access, I'm Mary O'Driscoll and today's guest is Chairman Neil Chatterjee. He's here to talk about the important issue of electricity storage. Welcome back to the podcast, Chairman.

Chairman Neil Chatterjee: Thanks, Mary, It's good to be here again, especially to talk about such an important issue which really has been a priority of mine since I joined the Commission.

Mary O'Driscoll: Well thanks, Chairman. Now there's been a lot of discussion, particularly during the House oversight hearing with FERC last month, on the issue of electricity storage. So, let's start at the beginning, and go through just what it is, and why it's significant. So first: What is energy storage?

Chairman Neil Chatterjee: Well, over the last couple of decades, we've seen a lot of changes in the energy industries that FERC regulates, both in the electricity and the natural gas sectors. And, storage on the electricity side, is where we've seen some really noteworthy transformations. Electricity itself can't be stored, but it can be converted to other forms of energy and then later reconverted to electricity when you need it. Electricity storage systems can include anything ranging from batteries, to flywheels, compressed air and pumped hydropower storage.

So depending upon how they're designed, these electricity storage systems can be tapped to quickly release electricity into the grid when it's needed, or to absorb excess electricity generated by other sources when it isn't.

Mary O'Driscoll: So that's really interesting. It sounds really good. So what are some of the other benefits of that?

Chairman Neil Chatterjee: Great question, Mary. Among other potential benefits, the electricity stored in these systems can be used during times of peak demand. For instance, when you have a really hot day, much like those we're experiencing now and

everyone is using their AC, we need more electricity. Storage can help provide that needed electricity during the hours when load is the greatest. Storage also has the capability to respond quickly to changes in frequency caused by sudden changes in load or generation.

So overall, storage helps make our power supplies smoother, more predictable, and better able to follow changes in load.

Mary O'Driscoll: OK. So I guess everyone can get behind that. I guess that's why it's so important.

Chairman Neil Chatterjee: Look, I say it all the time, but I'll say it again now: storage really has the potential to be a game changer.

Mary O'Driscoll: Why did I know you were going to say that?

Chairman Neil Chatterjee: The technologies behind electricity storage are improving all the time, and as I said, these improvements offer several benefits for consumers, such as enhancing the reliability of our grid, making it more resistant to disruptions, and reducing carbon dioxide emissions by increasing the use of cleaner sources of electricity. And the electric storage sector is growing fast. According to the International Energy Agency, global electric storage deployment reached a record level of 8 gigawatt hours in 2018 – 8 gigawatt hours – almost doubling the amount of deployment in 2017. Last year, the U.S. was one of the leading countries for storage deployment, along with Korea, China, and Germany.

Mary O'Driscoll: Well that's really huge. So, what's FERC's role in all of this?

Chairman Neil Chatterjee: Well, for FERC, it is essential for us to keep up with all of these changes. We're committed to responding to them in ways that enhance competition in electricity markets and support the resilience of the bulk power system—all while lowering costs for the American people. We're already seeing large investments being made in storage in the U.S. For instance, last fall Duke Energy announced it would be spending nearly \$500 million on electric storage projects in the Carolinas over the next 15 years. We've also seen changes toward more co-location of resources; for instance, ISO-New England recently accepted a 20 megawatt capacity market bid for aggregated solar, plus storage, to be provided by SunRun.

Mary O'Driscoll: Wow. That's really, that's really getting into the market there. So I want to drill down on one piece of what you just said. I wanted you to talk a little more about what you mean by enhancing competition in electric markets?

Chairman Neil Chatterjee: It's so important – so, so important – that these sources of electricity storage are able to participate on an even playing field in the wholesale power markets that we at the Commission regulate. I firmly believe that one of the best things we can do is create a regulatory environment that allows us to unleash competition in the markets. By doing so, we'll see an increase in the deployment of storage resources, which should result in greater reliability on our grid and lower prices for consumers. That's where FERC comes in, and it's an ever-present goal in my mind as a regulator playing a role in this pivotal moment in our energy landscape.

Mary O'Driscoll: OK, OK, so then what is it that FERC is doing, exactly?

Chairman Neil Chatterjee: Well, traditionally, a variety of factors have created challenges to the ability of storage resources to participate in the wholesale electric markets.

When I first came to the Commission, doing something about this was high on my priority list. And I'm so proud that last year, the Commission issued Order No. 841. This rule removes barriers to the participation of electric storage resources in the capacity, energy, and ancillary services markets operated by the regional organized power markets that FERC oversees. It does so by requiring the regional power market operators to establish a new model for participation in their markets which recognizes the physical and operational characteristics of electricity storage resources.

After issuing the rule, the market operators came back to us in December of 2018 with their plans on how to implement it. That's where things stand right now. My colleagues and I are evaluating their plans and looking to continue to move the ball forward on this critical issue.

Mary O'Driscoll: OK, so is there anything more that FERC is doing?

Chairman Neil Chatterjee: Well, implementing Order No. 841 is just one example of how FERC is proactively addressing shifts in the energy industries we regulate and

ensuring that emerging technologies can serve an integral role in wholesale electric markets.

It's also worth pointing out that storage has the potential to change the way we think about transmission planning. For example, you could have utilities defer investment in transmission facilities. It's my understanding that certain regions have been exploring the role of storage as transmission and we may see more activity on this front in time.

Finally, we're also currently assessing barriers to the participation of distributed energy resource aggregations in the regional wholesale power markets, which could include qualified electric storage resources that would like to participate in an aggregation.

Mary O'Driscoll: That's a really interesting point about transmission. But I wanted to ask you, what is distributed energy resource aggregation?

Chairman Neil Chatterjee: As a general matter, distributed energy resources, or DERs, are resources that are located on the distribution system and may include, but are not limited to, electric storage resources, distributed generation, thermal storage, and electric vehicles and their supply equipment. Entities called aggregators will combine individual DERs into a grid resource that can compete against traditional resources in regional wholesale capacity, energy and ancillary service markets.

As I mentioned earlier, I think competition is key, and using competition to bring benefits to consumers has long been one of FERC's guiding principles. Finding ways for non-traditional resources like these distributed energy resource aggregations, which may include electric storage resources, and the storage resources we discussed earlier under Order No. 841, to effectively compete with traditional resources is right in line with those principles.

Last year, FERC staff held a technical conference to gather more information regarding the participation of distributed energy resource aggregations in wholesale electricity markets – and more broadly, to discuss the potential effects of distributed energy resources on the bulk-power system.

We're currently considering the record as we determine how to move forward.

Mary O'Driscoll: Well thank you so much for that little tutorial there on electricity storage, we appreciate it. We appreciate your time and the opportunity to discuss this issue.

Chairman Neil Chatterjee: Thank you for having me in to discuss what I will stress, again, is a real game-changer.

Mary O'Driscoll: OK. Thank you!

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