

FERC Chairman Jon Wellinghoff
Bloomberg Surveillance with Tom Keene and Scarlet Fu
April 24, 2013

Tom Keene: Intelligence official warns cyber attack could shut down electric grid on the East Coast. Out West the worry is about the aging infrastructure and blackouts. Meanwhile, our domestic energy producers press for pipelines and terminals. There has to be a senior vice president whose head aches at the government. Our top federal regulator, who has an important say on each of these essential developments is Jon Wellinghoff, Chairman, of the Federal Energy Regulatory Commission. He is at Bloomberg for our New Energy Finance Conference and we welcome him.

Now, I want to frame the geography of who you are. You come out of Reno, and out of Nevada, with Senator Reid. There's a huge divide in our energy debate going back to the 19th Century, with you Western guys and those crazy people on the East Coast. Does that divide still exist?

Chairman Wellinghoff: Well, that divide exists philosophically but also physically. Actually, the interconnects are divided up into an Eastern interconnect and a Western interconnect and they don't sort of touch each other from the standpoint of the physical interflow of power, so we need to take a look at the United States as a whole, and we're trying to integrate the whole thing as a whole. If we did we could be more reliable and more resilient.

Tom Keene: One thing that's interconnected is this new cyber security issue. How does that fold into my confidence that the lights will go on each and every moment?

Chairman Wellinghoff: Well, cyber security certainly is an issue. We have a team at FERC that's looking at that and working with other agencies – works with the Department of Homeland Security, DOD and DOE – and we are working with the states and with the utilities to harden their systems, to put in place more software and other techniques to help us in that area.

Tom Keene: Maybe have a better password than Associated Press.

Scarlet Fu: Let's hope so. How great is the risk of a cyber attack on the U.S. electric grid now versus, say, five years ago?

Jon Wellinghoff: Well, there are certainly more actors that are continuing to try to make entrée into the system. But I personally believe we are more subject to physical attacks and to financial issues with our utility system than we are cyber. I think physical is much more important.

Scarlet Fu: Who would be responsible for those physical attacks?

Jon Wellinghoff: Well, who would actually do the physical attack? You had a physical attack here in New York, the physical attack was Hurricane Sandy. It took out all of the 13th Street Substation, that you know, and it had a real big impact ...

Tom Keene: So we can blame you for that?

Jon Wellinghoff: No. You can't blame anybody other than ...

Scarlet Fu: God.

Jon Wellinghoff: The weather, the weather. But ultimately, we need to learn how to harden these systems, so that those systems aren't subject to those things. And actually, you could have physical attacks not only by climactic events, but also by actors as well.

Tom Keene: T. Boone Pickens has sat on this set and complained about our electric grid. How bad is it? Is it that ancient?

Jon Wellinghoff: Well, parts of it are ancient, I mean, we have transformers that are over 40-50 years old. We have power plants that are that old as well. So there are aspects of it that are ancient. It is continuing to be upgraded, but I think ultimately what we're seeing is an increase in the upgrade of the distribution system at the local level. And that's where we're going to see more innovation. We're going to see more solar, more local cogeneration and other things where people will be more in control of their power locally. And that's how to help the resiliency of the grid.

Scarlet Fu: What's the latest update in terms of the costs to actually upgrade this, then?

Jon Wellinghoff: Well, the costs to upgrade can be anywhere from \$80 to \$100 billion or more, and that's the large system. The distribution system underneath could be even more.

Tom Keene: Chairman Wellinghoff, let me bring in Sarat Sethi, our guest host this hour with Douglas Lane.

Sarat Sethi: A quick question. When we got the Internet, we had fiber to the home, and that was huge in terms of everybody getting on the Internet. Is there some new technology out there for distribution that would cause, because a lot of it about electricity is how much you lose by the time it gets to your home. Is there something out there that you're putting into place, or we can put into place in the next two to five years that can save a lot of that?

Jon Wellinghoff: Well, there's lots of technologies that are being put into place. There's end-use technologies that are reducing usage, like LED lighting, etc. But there's also end-use distribution generation technologies like solar PVs growing at 40 percent per year, for example. And I'm also seeing new companies, some in Silicon Valley and others, that are starting to put together cogeneration and combined heat and power systems using natural

gas, that would be at the local level, so you put a system next to Wal-Mart, for example, and you operate the Wal-Mart with that rather than having lines coming in. That's going to happen in the future.

Tom Keene: Jon, the stereotype right now is Saudi America, we've got a new energy confidence. What keeps you up at night?

Jon Wellinghoff: What keeps me up at night are physical attacks.

Tom Keene: On our pipelines?

Jon Wellinghoff: On our grid. On our grid system. We have done an analysis, looked at the 10 critical substations in the East, the 10 critical ones in the West, and the ones in Texas. And we've seen it wouldn't take out very many substations to take out the grid entirely in a physical attack, a coordinated physical attack basis.

Scarlet Fu: By whom though? Are we talking about certain countries, for instance? I mean, it's been highlighted by the White House.

Jon Wellinghoff: It could be anyone. It could be someone disgruntled in this country, it could be state actors, it could be terrorist groups. It could be anyone.