**Chris Newkumet**: Hello, I'm Chris Newkumet filling in for Bill Loveless, and welcome to Platts Energy Week.

The vulnerability of the US power grid came into sharp focus earlier this month with news coverage of a confidential government analysis suggesting that destruction of just nine substations could throw the entire country into darkness for 18 months or more. That startling bit of speculation triggered hot debate about grid security, resilience of the system and public access to critical information.

Once again the US Federal Energy Regulatory Commission finds itself in the thick of things. Here to explore this and other issues is acting Chairman Cheryl LaFleur. Madame Chairman, thanks for joining us.

**Chairman LaFleur**: Thank you.

**CN**: Let's jump right into things here. Could attacks on just nine of 55,000 substations bring the entire grid down? I mean, is the sky falling?

**CF**: Well, the sky is not falling. The grid is a very complex machine on which, really, every part of our society depends, and its resilience depends on how it is constructed, how it is designed, how it is operated, how it is maintained and how we learn from what happens. One piece of that resilience is physical security. That is something that has been in the news lately. FERC has done modeling of potential scenarios that could impact the physical security of the grid so that we can learn from that in the way it is operated going forward.

**CN**: Industry representatives responded to that Wall Street Journal [article] by basically saying that it didn't take into account the flexibility of the grid, its ability to react in real time, and in modeling you need to consider that. The grid can essentially bounce back quicker than this story suggests. Do you agree with that assessment?

**CL**: Yes I do. I think that, really to be honest, an outage of the bulk power system of 18 hours would be too much for us, let alone 18 months…

**CN**: That's apocalyptic, right?

**CL**: …that's the stuff of network TV shows. But it certainly highlighted that we have to be careful in the way that we learn from what happened and the way we protect the grid to make certain that it has the resilience that it needs.

**CN**: FERC hasn't exactly been sitting around doing nothing on this; just a week ago you initiated the development of standards for physical security. You do this through the North American Electric Reliability Corporation. Hit a couple highlights of what you'd like to see done there.

**CL**: In general the standards which have been the reliability standards that FERC has had authority over for the last several years set a guideline that then is just kind of a general guideline for everyone in the industry. What we called for, what we required in the physical security area is that all asset owners do a detailed assessment of their facilities to determine the ones that are most critical to the operation of the bulk grid. Secondly, that they determine the specific threats and vulnerabilities in different geographies, different parts of

the grid and, third, that they come up with a plan to address those vulnerabilities. Very simple stuff, but just to make sure everyone is operating on the same level.

We know owners have done a lot of work on critical facilities for the last year and considerably before that. But the whole point of the standards is embedded in the word "standard," it is to bring things up to a standard level.

**CN**: Are we are talking about things like building walls, more cameras, all kinds of things like that?

**CL**: Well those have been very much in the news, but it is also how you configure the grid to have redundancy so that a loss of a particular element can't cascade.

**CN**: Basically, how you react if something does happen, right?

**CL**: Well, how you prepare, because we've focused a lot on physical security but there is also cybersecurity and good old Mother Nature that doesn't sit still. We saw in Hurricane Sandy what the effects on the grid can be. How you react to keep the rest of the grid up.

**CN**: You were highly critical of the Wall Street Journal for publishing that story last week and yet at the same time your former colleague Jon Wellinghoff has gotten himself into a little bit of hot water for publicly discussing some inside information about the attack last April on the PG&E Metcalf substation in California. What's the story here? Don't Americans have a right to know how safe, or not, their grid is? They did pay for it.

**CL**: I think Americans have a right to know what FERC and other government agencies –- DHS, DOE and others –- are doing to keep the grid safe. It is absolutely appropriate to discuss the issue in general terms so people can have confidence in their government. What troubles me is the disclosure of specific information that, quite honestly, could provide a roadmap to people who are trying to do harm.

It's like if you said, "We are putting in new security measures around the girl's dorm and they are going to cost this much," that would be a good thing to put in the paper. To say, "We put cameras behind the back door but we don't have money for the side door yet this year," you can see why you wouldn't want to put that in the paper.

**CN**: Understood. But the Journal, I think, was careful to not identify any of these substations.

**CL**: In the statement that I put out I actually applauded that. I thought that was a responsible decision not to name substations. I thought the scenario of mentioning numbers of substations and so forth did cross the line, however.

**CN**: You and your colleagues were not terribly happy when you learned of Jon Wellinghoff's conversations publicly. In your opinion did he violate any post-employment ethics standards?

**CL**: Well, that is not for me to say on TV. I try to be responsible for my own actions and those of the people I lead. We are trying to learn from what happened, both what did happen, but really in my opinion more importantly, how we improve the information security at the Commission if we need to to make sure that something like this can't happen again.

**CN**: There has been an effort underway on Capitol Hill to develop some legislation that would help protect grid security information. But House member Zoe Lofgren recently chided the Commission, saying it had been dragging its feet on providing some technical guidance for this legislation initiative. Essentially she is suggesting that FERC wasn't doing enough to help itself. Is that a fair criticism?

**CL**: I applaud what Rep. Lofgren is doing because I myself have called for more exemptions from the Freedom of Information Act to make it easier for us to do our job to get the information into the hands of the people who can apply it, and for them to share information with each other and with us. What I think occurred is that a letter had come in from Rep. Lofgren before I was acting chairman, perhaps around the time of the transition, and I didn't know about it until she wrote the second letter saying where's your answer.

You can bet we got on it and have provided what she needed because she is just trying to do her job for the people.

**CN**: Are you confident that federal regulators, working with industry, are making enough progress here? Also, for you personally, what do you worry about with the grid?

**CL**: I think we are making a lot of progress, but the whole reason we voted out the order requiring mandatory standards was to make sure that that progress was sustained and generalized across all the critical facilities of the grid. I worry about the challenges we don't understand. I mean reliability comes a lot from what I call blocking and tackling: trimming the trees, setting the relays, stuff that has been done for decades. Can it go wrong? Yes, the 2003 outage in fact started with a vegetation contact. But some of that is quite well understood and I think we stay on top of it.

What worries me are the threats that we don't fully understand. Cybersecurity. The concept that somebody on the other side of the globe could be on a laptop and interrupt the grid scares me. Space weather is one I've done a lot of work on. The thought that solar flares could cause geomagnetically induced currents and interrupt the grid -- something we've also voted out a standards order on. It's the less well understood evolving challenges that we have to keep our eye on.

**CN**: You don't know what you don't know.

**CL**: Exactly. The generation of people that designed and operate our grid is not the generation that is breaching firewalls, so we need to get help from those who understand it.

**CN**: Indeed, thanks.