

**CHAIRMAN LAFLEUR
NATIONAL PRESS CLUB SPEECH
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JOHN HUGHES: Good afternoon, and welcome. My name is John Hughes. I'm an editor for Bloomberg First Word, that's the breaking news desk here in Washington for Bloomberg. I'm also President of the National Press Club. The Club is the world's leading professional organization for journalists. We're committed to our profession through programs just like this, and we work for a free press worldwide. For more information, visit our website press.org. And to donate, check out our Journalism Institute website, that's www.press.org/institute.

On behalf of members worldwide, I'd like to welcome our speaker here today and those of you attending the event. Our head table guests of the speaker as well as working journalists who are Club members. Members of the public attend our lunches, so any applause you hear today is not necessarily a lack of journalistic objectivity.

I'd also like to welcome our C-SPAN and Public Radio audiences, and you can follow the action on Twitter. Use the hashtag NPCLunch. After our guest's speech concludes, we'll have a question and answer period. I will ask as many questions as time permits.

Now it's time to introduce our head table guests. I'd ask each of our head table guests to stand briefly as your name is announced. From your right, Chris Newkumet, editor in chief of Platts; Claire Pickard-Cambridge, bureau chief for Argus Media here in D.C.; Julia Pyper, senior writer for Green Tech Media; Kurt Longo, co-Chief of Staff to Cheryl LaFleur and a guest of our speaker; Marilyn Geewax, senior business editor for NPR and member of the NPC Board of Governors; Bill Kuncik, the husband of our speaker and a guest of our speaker; Jerry Zremski, Washington bureau chief of the Buffalo News. Jerry's the chair of the Speakers Committee and he's a former National Press Club president.

Skipping over our speaker for a moment, Rod Kuckro, reporter with Energy Wire, E&E Publishing and the Speakers Committee member who organized today's event. Thank you very much, Rod. Jette Gebhart, co-Chief of Staff to Cheryl LaFleur and a guest of our speaker; Ed Boshart, editor in chief of the Foster Natural Gas Oil Report; Esther Whieldon, a senior report with SNL Financial; and Frank Maisano, senior principal at Bracewell Giuliani.

So the presence of so many people here in this room today says volumes about how the Federal Energy Regulatory Commission, or FERC as many of us call it, has emerged from the bureaucratic shadows. The Commission's job is to regulate interstate natural gas pipelines and electric transmission lines. FERC plays a central role in the debate over how these industries should evolve in the 21st century. There are questions, for instance, about what if any role FERC should play in EPA's plan to curb greenhouse gases. Should FERC insure that the EPA plan doesn't harm the reliability of the grid? Questions such as that show why the Commission's profile has never been higher.

In the center of the spotlight, of course, is our guest speaker today, Cheryl LaFleur. She was nominated to the Commission by President Obama in 2010. She has been acting Chairman and then Chairman since November of 2013. She joined FERC after a career as a senior utility industry leader in the Northeast. She retired in 2007 as acting CEO of National Grid USA, which delivers electricity to 3.4 million customers.

The first person in her family to go to college, she holds an undergraduate degree from Princeton and a law degree from Harvard. According to our National Press Club archivist, she is the first Chairman of FERC to speak at a National Press Club luncheon. Please join me in giving a warm National Press Club

welcome to Cheryl LaFleur, Chairman of the Federal Energy Regulatory Commission.

CHAIRMAN LAFLEUR: Well, thank you so much, John, for that very generous introduction and hello to – you've already introduced all the folks at the head table and I'm so happy to see so many familiar faces and new friends here in the audience. I am deeply honored by the opportunity to be the first FERC Chairman or Commissioner to speak at the National Press Club. I see at least one former Commissioner in the audience who we should probably get up, book her for next month, and I really would like to thank Rod Kuckro for organizing this.

When I was nominated to FERC five years ago, I definitely learned, if I didn't already know, that it wasn't exactly a household world because I spent most of my time explaining to people what was this acronym to which I had been named. And so even though John did a bit of it, I thought I would just take a minute for those who might not be familiar and say a bit of what our responsibilities are. We are responsible for – because the energy world is very complicated in terms of the number of people who have responsibilities for different elements of it.

And our duties are to the interstate transmission and natural gas pipelines, we do both rates and permitting of pipelines, as well as liquefied natural gas facilities. And we also are responsible for wholesale rates, both gas and electric, and wholesale markets as well as the licensing of hydro facilities across the United States, and the pricing of oil pipelines and the reliability and security standards that govern the security of the bulk electric system. So a bit of an eclectic mix, but all mostly about interstate or wholesale work in the energy space.

And I forgot to say that although we've already had the head table introduced, we have a whole passel of folks both from my office and senior staff from FERC, back in the back of the room. And I would like to acknowledge them as well.

Now, since I was in the industry for more than 20 years, I know in those days, I did not read very many FERC orders, maybe 888 or some of the real biggies. So, where did I get my information on what FERC did? From the people in the front of the room. What Energy Daily or Platts or E&E said FERC did was what they did as far as I knew. And so that's why press clips were the first thing I read when I get in the morning, because I figure that is the record of what happened, or SNL or any of our wonderful people who cover us.

Now, I'm not a Washington lifer. I've been here a relatively short time compared to most of the people in the room, a little less than five years. But I am more or less an energylifer, because I've been in the energy world for more than 30 years, mostly in the Northeast. And in that role, I was able to be part of the major transformations that have happened in energy over the last few decades.

I cut my teeth on the battles to get nuclear licensed in the 1980s, and to build the first generation of utility conservation programs when we called them conservation instead of energy efficiency. I was very much in the midst of industry restructuring in the 1990s including the advent of open transmission access, generation divestiture and merchant generation, and competitive markets. And I've been closely involved in adapting to several generations of environmental changes at both the federal and state level.

At FERC for the past five years, I get to respond to today's energy issues, especially the growth of domestic natural gas and its increased use to generate electricity; the introduction of new technologies across the whole spectrum: generation, transmission, storage and end use technologies; new threats to grid reliability and security from cyber and physical security to natural threats like geomagnetic disturbances; and the growing awareness of the impact of energy on our climate leading to what I think is the most challenging environmental issue we've yet faced together.

Now, what I've learned from everything I've looked at in the last 30 years is that all energy issues really come down to the same thing, and that's balancing three values: reliability, cost and the environment. No matter what the issue, they're usually buried somewhere in the discourse. And inevitably there are tradeoffs between the values, and because different people value different elements differently it's hard to get agreement on how to strike the balance.

Perspectives vary based on a number of factors – ideology, certainly, but also economic interest in commercial position and geography. As my homey, the late great Tip O'Neill said, all politics is local, and that's definitely true in everything we're facing at FERC.

So weighing these factors and trying to make decisions on each issue is complicated by the fact that our nation has a very fragmented and somewhat disaggregated system of decisionmakers, which can make even finding a forum a challenge. There are lawmakers and regulators in 50 state capitals, numerous federal agencies. I know FERC is not the whole federal government, not even close. Everyone we regulate is regulated by myriad other agencies as well and divided branches of government that work on the same issues.

So there's a cacophony of different voices and it often seems like they're not even having the same conversation. But making progress, particularly on balancing reliability in the environment, requires real conversation about tradeoffs, about the real cost and consequences of our choices, and about the effort that it'll take to get us to where we need to be. And for better or for worse, I feel like little old FERC has been thrust into the position of being a forum for these discussions, and for the discussion of many other pressing energy issues that our generation is facing. Whether they're in our jurisdiction a little bit or a lot, they're at our doorstep.

One of the most polarizing energy issues we're facing today is how our electric sector will respond to the EPA's Clean Power Plan under section 111(d) of the Clean Air Act. And I'm going to devote the rest of my remarks to talking a little bit about FERC's role in that response and hopefully they won't be too geeky so you'll invite FERC people back.

Over the past several months at FERC, we've had a steady stream of visitors to our door from groups across all segments and all regions who have a wide range of views on the Clean Power Plan, from those who say that the lights will go out to those who think the EPA did not go nearly far enough, and pretty much everyone in between. Now I'm honored to lead an agency that's bipartisan and independent by design, and that's built up credibility due to all the people that came before us over decades.

Because of that independence and credibility, people both for and against the Clean Power Plan are looking to us to publicly validate their views. I've taken a pretty firm line that I don't think that's FERC's role. FERC is not an environmental regulator; blessedly we're not tasked with writing the final rule this summer. EPA is reviewing their millions of comments and they will put out the final rule. But make no mistake, I think FERC will have an essential role to play as the clean power plan and our response to climate is implemented.

I believe that we as a nation can achieve real environmental progress, including on climate change, but only if we're willing to build the infrastructure, both gas and electric, and build the energy markets to make that possible. Both infrastructure and market changes will be necessary if the values of reliability and cost are sustained as we make progress on the environment. And that's where FERC comes in.

I think we will have responsibilities across three areas: infrastructure, markets and to be an honest broker for the discussion.

Starting with infrastructure. I think additions to both the gas and electric infrastructure will be needed to carry out the Clean Power Plan. And in the case of gas pipelines and gas compressor stations, FERC is the one who does the environmental review, permits them and decides the rates. Building block two of the Clean Power Plan, which is likely to account for the largest amount of carbon reduction, calls for substantially increasing the utilization of the natural gas plants that exist all around the country. That's existing plants. Now, I believe based on everyone I've talked to, that meeting the goals of the Clean Power Plan will also lead to the construction of a lot of new gas generation because most of the people I've talked to said that can be the most cost effective way to meet some of the goals and EPA has given people the flexibility to meet each state goal in the most cost effective way.

We're very fortunate to have abundant and relatively affordable domestic natural gas. If we didn't, if we were where we thought we were 20 years ago, the gas was in the ground, but we didn't know it was abundant and affordable when we thought we were running out of it in the '90s. If we were there, our climate goals and our climate aspirations would be much more difficult, if not impossible to achieve, with today's technology.

But utilizing that gas to meet climate goals require the expansion and construction of gas infrastructure, both pipelines and compressor stations, to get it to where it needs to be to keep the lights on. But while gas is critically important to our climate goals and other environmental goals, it has issues of its own. Pipelines are facing unprecedented opposition from local and national groups including environmental activists. These groups are active in every FERC docket, as they should be, as well as in my email inbox seven days a week, in my Twitter feed, at our open meetings demanding to be heard, and literally at our door closing down First Street so FERC won't be able to work.

We have a situation here.

We take the views of all stakeholders seriously and try as hard as we can to thoroughly consider issues that are relevant to the decisions we're required to make. But FERC's responsibility under the Natural Gas Act, because we're a creature of Congress, is to consider and act on pipeline applications after insuring that they can be built safely and with limited environmental impact.

Under FERC's regulations and policy, its market demand and specifically contractual commitments for pipeline capacity that determine what pipeline infrastructure is needed, the days when FERC went in and said, "Here's a certificate of need. We need it from here to there," ended with Order 636 30 years ago. We evaluate the need for the project based on market demand. Do they have people signing up for the gas? And then we go in and look at the environmental and safety aspects in detail of the proposed project. We're blessed to have a wide range of engineers and scientists and we look at a wide range of environmental issues: water, soil, geology, fish and wildlife, and others. And we also look at air quality including greenhouse gas emissions.

But our review is project specific and confined to the information in the docket. Speculating about unquantifiable impacts is not part of that process. I think that our nation is going to have to grapple with our acceptance of gas generation and gas pipelines if we expect to achieve our climate and environmental goals.

As far as FERC, I think our work on permitting gas infrastructure is going to be essential to the successful implementation of the Clean Power Plan. And I'm dedicated to ensuring that the process is fair, clear, timely and transparent. Because the worst place we want to be is closing down the old stuff and not being able to build the new stuff because we're not willing to do the work to get it there.

We're also going to have a role to play on electric transmission that's built to support compliance with the Clean Power Plan. Now, here we're not responsible for siting, that's done at the state level, but

we're responsible for planning and funding of interstate transmission. Changes in generation require changes in transmission, duh. The grid was built to support what's out there now, mostly you'd put a coal or nuclear plant an hour or two from the city, build a line to connect them, maybe an extension cord to your neighbors, you were done. That's the old world.

That's not where we are anymore. Building block three of the Clean Power Plan is the increased reliance on renewable generation like the wind that's on my cookie, and I thought I saw solar somewhere, too, and renewable generation is highly transmission dependent. You just don't put it convenient to a population center. Wind and central station solar is best sited where the resources are most plentiful, often far from cities. The lines that they require are usually long, require a lot of coordination between a lot of different people to get planned and built, and they're expensive. Although they benefit the grid, help reliability, facilitate meeting environmental goals, they don't always benefit everyone they go by or the people who live right next to where the resource is.

Because of all those factors, transmission is very controversial. Not only does it face landowner and environmental opposition, the same as gas pipelines, but sometimes ratepayer opposition as well. One of the core responsibilities of FERC, we are working hard to help the transmission that the nation needs get built under our landmark Order 1000. We're requiring broad, transparent, competitive transmission planning process, not locally company by company, but across big regions so they can determine what the regions need and what's the most cost effective transmission to be built. And we're explicitly requiring them to take public policy requirements into account like the state plans under the Clean Power Plan when they decide what transmission they need.

Now, we're only a short way toward fully achieving that, but we're also asking regions to sit and coordinate with each other because there are needs for transmission that aren't even within a specific region.

In addition to the planning, we are responsible for the transmission rates and we're trying to ensure that there is enough of an investment incentive for the investors, as well as enough protection for the consumers to make sure they're just and reasonable and that we strike that balance right.

And while we're on it, and I'm on this infrastructure bully pulpit here, I just want to add that power plants are not the only thing that need infrastructure. The fourth building block of the clean power plan is energy efficiency, what we used to call conservation/load management. And also, distributed generation like rooftop solar that's becoming so pervasive, is part of building block three.

Those distributed resources need infrastructure of a different sort. They need delivery. It took us a long time in New England to build up the industry to deliver the conservation programs that have won national awards. They need delivery, they need aggregation technology, and they need supportive rates and market rules.

As someone who ran efficiency programs for a long time, I can tell you they might be very, very cost effective, but they're not free and they're not self-executing. A lot of the work to make that happen is being done at those 50 statehouses, but FERC has a role and we have to work to facilitate participation of those new resources in the markets that we have jurisdiction over.

And speaking of the markets, that's our second big challenge. Two-thirds of the nation's population is served by competitive regional electric markets. I've tried to keep acronyms out of this speech, but they are RTOs, regional transmission operators, and ISOs, independent system operators. And I see representatives of some of them in the room.

These are bodies that work over usually a multi-state region to plan and operate the transmission grid

independent of the owners and dispatch the power. They run regional capacity markets that incentivize investment needed for the future, and real-time and day-ahead energy markets that dispatch the power. Basically, they look out every five minutes and dispatch what's cheapest at that time. They dispatch by merit order according to cost. That's how it's been done since before there were regional organizations when each company did it.

Those markets that they operate are regulated by FERC. And we have worked hard and those markets have made some adaptations to support state environmental initiatives, like renewable portfolio standards to try to adjust the markets to the environmental issues. Hasn't been easy, but we've made some progress.

The Clean Power Plan is a whole different ball game. Now we're going to have 49 states coming up with individual implementation plans that by their very nature under the building blocks will say what resource a state wants to use – more of this, less of this, little bit of that, do that, because that's how a state will build up its plan. That may not just automatically be compatible with the way the power is planned and dispatched now, the existing least-cost model. So we'll have to change the formulas. If the markets are to survive, and they've done a good job for customers, we'll have to change the way they work to support the state plans to reconcile these two objectives.

I think it's going to be a lot more than tinkering around the edges. So if you look at PJM, which is the largest market operator in the country, they have all or some of 13 states. And if each of those 13 states have a different plan, then you can imagine as they're trying to make sure they dispatch the power so each of the state's plans is met, it could require significant changes in the way we run our markets.

Now, of course, then your mind goes to the obvious solution, why don't they all get together and agree what they want to do? Then you don't have to run state by state. And the EPA plan did give extra credit for regional cooperation. That was one of the comments we had made. And regional cooperation will help regional markets make adaptations to the Clean Power Plan. But that itself will require considerable change and compromise.

We've seen some success with regional carbon markets like the Regional Greenhouse Gas Initiative up in the Northeast, and CARB, the California market. But putting those together, and I was there when RGGI was negotiated, required voluntary agreement by states to come together and decide on the goals, who gets what allowances, who puts what in, who gets what out. And the issue that we have is the way the markets are, if you take a map now and draw your markets, they put together states with substantially different portfolios, and substantially different EPA targets that might not just naturally agree. That will require a little bit of negotiation to get there, as well as we have states like Texas and Indiana, and several others, that are served by multiple RTOs so that if you're trying to achieve the plan, you have two different dispatchers who have to make sure it's done right.

Also, the markets themselves are going through a lot of transition as the generation mix in the country changes, and FERC is doing a lot of work that it needs to continue to make sure that the market rules and the market designs are written to support the investment and resources that are needed for reliability. We put out a fuel assurance order earlier this year. That's one example of that effort. Also have been doing a lot on the capacity markets.

Working all this out so we can meet climate goals while keeping these big regional markets won't be easy and it's going to require exactly the kind of open dialogue that I spoke of earlier in the speech.

Fortunately, this is the kind of hard, boring, unsexy, technical, dirt-under-the-fingernails work that FERC does. When I go interview summer interns, they always say, "Do you work on green energy?" And I say,

“We work on the unsexy underbelly of every energy issue,” and this is where our work is going to be here, I think, in really making those markets work. Because if we don’t, we’ll either lose the markets and take a giant step back in how we run our grid, or we won’t make our climate goals, which is unacceptable in a different way.

If despite all our work we still have reliability problems, letting the lights go out is not going to be an option. So then reliability will have to be maintained by mechanisms like reliability must-run contracts or extensions or keeping things on longer than they’re supposed to stay on, that can be expensive or unpopular or usually both. So that’s not Plan A. Plan A is to get it right up top.

Our final job, I think, is to serve as an honest broker, as the work on the climate plan is finalized and implemented. I believe we did this effectively with respect to the mercury and air toxic rule over the last few years. Now admittedly, that’s a much more straightforward rule, but I think FERC did a good job helping to bring together the states and the federal agencies, the state regulators, to help assure that reliability was considered and protected.

With respect to the Clean Power Plan, we’re getting started on that next month with four days of technical conferences in February and March, two here in D.C., two in other regions of the country. We’ll be hearing from our state government partners, our federal government partners like the EPA, people from industry and environmental groups, to help address the issues that FERC is going to have to tackle as this goes forward.

Our objective is to hear from a wide range of entities about how compliance with the rule might impact them and really start to dig into the things that FERC will have to do. Now, based on how many people have asked to speak, I think we could have a lot more than four days, and we do have other things to do, but I think that’s going to be just the beginning of the dialogue.

We have to continue our engagement with agencies, especially the EPA but also the state regulators to share information, lend expertise and help develop constructive suggestions. And we have to continue to be an independent and honest broker living within the bounds of our statutory authority but keeping alert to trends and where possible get out in front of emerging issues.

And we can’t be afraid to say unpopular things. With some people saying we need more gas pipelines is unpopular, saying we need more electric transmission is unpopular, saying that the markets won’t automatically change. But we have to say the hard things, confront the hard issues, and make the difficult policy choices that won’t please everyone all the time. Sometimes, I’d be happy to please anyone any of the time, but I strongly believe this is why this work has been assigned to an independent, appointed commission of technical experts.

I’m honored to have the opportunity to be part of FERC’s work. I’m only going to be Chairman for three more months, but I expect to be a Commissioner for five more years, working to balance and maximize reliability, cost and the environment. I’m pretty sure that if I were here five years from now, the issues I worked on, probably some of them I wouldn’t even know now. But I’m sure there’ll be five years of change, challenge and progress on the nation’s energy and environmental aspirations. Thank you and I’ll take your questions.

MR. HUGHES: Thank you, Chairman. Starting with some questions related to the EPA. EPA appears to have held only a handful of meetings with FERC staff about the Clean Power Plan or 111(d) rule. Given EPA’s extraordinary outreach effort when it was developing the rule and the huge changes it will require to the grid, were you disappointed to have not had more input?

CHAIRMAN LAFLEUR: Well, recently in a letter that I sent to the Hill on December 3rd, I really listed all

of the meetings we had, which I think are more than a handful. I was not disappointed. I think we actually had quite a lot of opportunity for input. I actually wish we'd seen the rule a lot earlier, but that would have required that they had written it a lot earlier. But now, we're in a whole different scene where we have a whole year or more before they finalize it, so we're still having input.

MR. HUGHES: Do you think that aggressively implementing the Clean Power Plan on EPA's proposed timeline might cause difficulties for reliability?

CHAIRMAN LAFLEUR: Well, as I said, I think that we need to build the infrastructure and adapt the markets to be able to have both the reliability we take for granted and the progress on the climate. The timeline for the EPA goals, particularly the first set of goals in 2020, has really been one of the most controversial things we've been hearing about. What should be the period over which the ultimate 2030 goals kind of are phased in? And I think the EPA has been hearing about that as well because in their notice of data availability, where they asked for more comments last fall, that was one of the main things that we heard about. So I think we'll have to get started early and really put our shoulder to the wheel to get the things done that we need to do.

MR. HUGHES: Some of your colleagues on the commission think FERC should sign off on state plans to comply with EPA's rule. Is that something that you can support?

CHAIRMAN LAFLEUR: I'm not a hundred percent sure that's how they would articulate their views. But putting that aside, I'm looking right at the head of the state commissioner association, and I try to remember that our first name is federal. So I think signoff is a bit strong. I think we should be engaged in the state plans because they all operate as part of, or for the most part, they operate as part of regions. But I think ultimately, the states will have the control. That's why I would love to see more regional solutions, so they can work together.

MR. HUGHES: So as the utility industry moves over time to retire coal plants and substitute in renewables, are higher consumer prices for electricity inevitable?

CHAIRMAN LAFLEUR: I kind of divide prices into two dimensions. The long-run price depends on the long-run cost of these things. Once it's built, nuclear, renewables can be very affordable once the initial investment is made. The long-run price of coal, gas and even oil plants which we use on the margin depends on the long-run cost of those fuels that we don't know. I mean, that's one thing I know in my life, is that I can't predict gas prices since I've seen them go up and down and everywhere in between.

So in the long run, I think that ultimately depends on the mix of costs between those fuels, but it's not at all clear to me that costs will go up. We're seeing gas be very affordable and competitive with coal. Certainly nuclear and hydro and renewables are very competitive once they're built.

The other dimension of cost is transition. Change costs money, no matter how you do it. So I think will it cost to make this change? Yes, it has to. When you're building something new, it costs money. In the long run will it cost more? That depends on the fuel costs.

MR. HUGHES: As we've seen this rapid transformation occur in the nation's energy sector, is it frustrating for you that Congress has refused to consider any meaningful energy legislation or policies in this area?

CHAIRMAN LAFLEUR: I used to have a mug that said something like serenity prayer. God grant me the wisdom to fight the things I can fight and not fight what I can't fight and the wisdom to know the difference – you probably know, whatever it says. I try not to spend too much mental anguish on what Congress does or doesn't do. There's a whole blogosphere out there complaining about Congress. I live by the rules they've given us. If they pass new legislation, we'll live by that. But I think we're doing a

pretty good job hobbling around, hobbling through with what we've got now so that's what we're working on. And if there's new legislation, I think I'll welcome it.

MR. HUGHES: You mentioned the need for additional gas pipelines. Yet, we see so much public frustration and public opposition to these sorts of projects. So how can that need for more pipelines be addressed given the level of opposition that's out there?

CHAIRMAN LAFLEUR: Well, I think – not speaking of any specific pipeline – I would kind of put the opposition into different buckets. There's concern about the environmental impacts of the pipelines themselves, and I think that has to be addressed by making sure that they're constructed, including the extraction and everything is done, using the most current technologies and environmentally correct and environmentally advanced as we can. I mean, everything has a consequence, nothing is free. But I think we have to really as a society make sure we do this right.

The second set of opposition is local opposition where people just don't want it going through their town or county, sometimes for reasons that have to do with specific things about their town and county. I mean, people tend to not want infrastructure going right where they are. I think we need to site these things as carefully as we possibly can and try to make the best decisions. We definitely can't please anyone, but that's what I think we do well, is to consider those issues and try to make sure that environmental risks are mitigated. Very few pipelines come out in the same route that they went in when they first came into FERC.

The third set of opposition are people that don't want pipelines at all, and I think there the policymakers, the state regulators, the state environmental people, FERC, other regulators, have to have the dialogue and really decide because I've said my view, other people have other views, but that's a bigger picture than a specific siting thing.

MR. HUGHES: Fracking is such a significant issue in so many ways. Last year, FERC approved construction of a huge liquefied natural gas facility on the Chesapeake Bay. And some critics have said that the decision encouraged the environmental harm that they say results from fracking. How would you respond to that criticism?

CHAIRMAN LAFLEUR: Well, we don't regulate the extraction, and we don't – the permitting statute, the NEPA statute, the National Environmental Policy Act, that we use, we look at the reasonably foreseeable, what is actually from the facility that we're implementing. So we just try to make sure, if you will, that what we permit is done in the right way, safe and environmentally sound.

Fracking is regulated at the state level and by the EPA. I think it's absolutely essential that it be regulated and regulated closely, but it's not done at FERC.

MR. HUGHES: We were mentioning the level of protests that we've seen. Has the level of protests and activism at all surprised the Commission or Commission members? And this questioner wonders how that plays out as far as going through the filing process, the level of protesting and activism and the effect of that, then, on the filing process?

CHAIRMAN LAFLEUR: Well, the fact that people have things to say does not surprise us. These are important issues. Our secretary's office does a great job handling thousands, millions of documents that come in, and getting them in the files. Some of the things that have surprised me recently are a little bit more of the techniques. Like, when I first got a Twitter account, I mean I really thought I was cool Tweeting out. And then I'd come on and it's like, "Oh, you have eight new entries." I think, "People are writing to me. Awesome." And a lot of them were people Tweeting about pipelines and dockets and so forth. And that's just new, that's just new to the way I think about things.

And a lot of the techniques people have used are new techniques, but the fact that they're in the dockets or at the public meetings does not surprise me.

MR. HUGHES: Here in D.C., a coalition of environmental, political and consumer groups called Power DC has emerged to oppose the Pepco-Exelon merger. The coalition says the merger will result in poor reliability and higher prices for consumers. Are these concerns justified? Why or why not?

CHAIRMAN LAFLEUR: Well, FERC approved the Exelon-Pepco merger, although I knew, and I'm just reminded that it's still pending rehearing. But just looking at what we did, what we do in mergers is we look at, under the Federal Power Act, the effect on rates. Are there protections for the wholesale rates that we regulate? The effect on regulations, can the state regulators still have their power? And the effect on competition using formulas to see how concentrated the market is. And that's what we do in our dockets.

A lot of the other things, retail rate protection, rate freezes, where the headquarters are going to be, how many employees are going to have jobs, what kind of promises they have to make, are done by the state regulators, and I think those are still pending.

MR. HUGHES: So we've talked about wind and solar power, but what about the oldest renewable resource, hydropower? Is there potential to significantly expand hydropower as a source of electricity? And if not, why?

CHAIRMAN LAFLEUR: Well, there's definitely the potential to expand hydropower as a source of electricity. There are thousands of dams in the country that are constructed, so the river's already dammed, but don't have an electric generating set attached to them. And if you look on the website of the National Hydro Association they'll give you the exact number. I try not to make up numbers if I don't get it right, but there are many thousands of opportunities.

We have a couple of potential applications in places like Alaska for big new hydro. I will just say based on some of the early commentary – they're not in the filing stage yet – and some of what we hear, putting up things like Grand Coolie Dam or the Hoover Dam would be very difficult to do in 2015. But small hydro, we have tremendous potential. Also hydrokinetic and rivers and tidal hydro, quite a lot of potential to harness that.

MR. HUGHES: Huge topic of discussion nowadays also is the risk of cyber attacks. How concerned are you that a successful cyber attack on a portion of the nation's power grid is inevitable?

CHAIRMAN LAFLEUR: Well, I'm vigilant. There are people who attempt to hack into the bulk electric system every day. In fact, NCCIC, whatever that stands for, National Cyber Communications Control Center, part of the Department of Homeland Security, more than half of the hacking attempts in the whole United States are on the electric grid. So I know that it's an important issue. Part of what we try to do with, first of all, the way all the owners construct the grid, but the way FERC regulates the reliability standards, is to make sure that the grid is constructed to be resilient so that there's redundancy and so that there's cyber protections built in, perimeter security, password security and so forth. So if something happens in one place, it doesn't cascade to another place.

I think the electric grid, as well as the nuclear fleet, are the only two sectors in the country that have mandatory cyber rules, and I think they deserve them. I think if there's anything you want to protect, it's definitely your electric grid. So those rules are designed so that if something happens it doesn't lead to a cascading outage. But should we be vigilant? Absolutely.

MR. HUGHES: Would you say that cyber threats are far and away the foremost challenge, or are physical acts of vandalism, terrorism enough of a threat that they reach the sort of equal level of the

cyber concern? And how does the utility industry protect itself from these sorts of threats?

CHAIRMAN LAFLEUR: Oh, my gosh. This is like when you were kids. It was like, would you rather be boiled in oil or would you rather be drowned? Which would be the better thing to happen? Both sets of threats are important. I tend to worry more about cyber threats because I know I don't understand them. I don't think anyone over 50 does really understand what goes on in a computer. That's probably unfair. I'm sure there are middle-aged techies who are wonderful. But I don't really understand how someone can be in North Korea or someplace on the other side of the globe and do something on a laptop that affects the grid. And something that you can't see and you can't like readily sense and you don't actually understand the mechanism is always more frightening.

Whereas physical security, at least I understand it. It's frightening, but I understand you have to be in the physical proximity of the grid to do something. So I think it's a little better understood threat. But it's a threat as well. And what we did in the last year was for the first time mandate protections for the most important parts of the bulk electric system, when viewed by their ability to lead to a cascading outage, more physical protection so that we want to make sure that while we're worried about the kind of 21st century threats, we don't forget the old-fashioned threats as well.

MR. HUGHES: This questioner just passed up a question that says should fighting climate change be part of FERC's central mission?

CHAIRMAN LAFLEUR: Well, I think I said in response to a couple of questions ago, if Congress changes our responsibilities, they're the boss. But I think that we're well served by having the EPA and all the state environmental regulators whose job is environment, which we now understand to include climate, and FERC whose job is reliability and pricing, because I think that's a sort of healthy division of responsibility.

MR. HUGHES: Industry people say that one of the biggest threats to the electric grid is the wave of baby boom retirements at utilities. And these are now hitting in full force. Are there enough new workers coming into the industry? And if not, why don't young people want to work with electricity?

CHAIRMAN LAFLEUR: Well, I was already a baby boomer and retirement age when I left the utility. They seem to have managed without me. So, no, this is a big issue across many sectors. You read this about – I used to be on a hospital board – about nursing, about teaching, about other sectors. There's like the big population spike of the baby boom and then kind of a valley and then the millennials, our children and their peers. I think it's of concern in the electric sector because it takes a while to train somebody to be a lineman – line person – or control room operator. And so that definitely makes a lot of retirements all at once a concern.

I think a lot of important work is going on with the community colleges and others to really try to develop – there's always plenty of lawyers and all. It's the people who actually work on the electricity that are hard to find – to develop those trades and really get people interested. I think a lot of the companies are working on that.

I also think of – I'll put in a plug – military hiring is just a natural for the utility industry and with so many veterans coming back now, I know a lot of them are a wonderful source of tomorrow's energy people.

MR. HUGHES: Have you heard from any grid operators or state regulators that there will be difficulties in implementing the Clean Power Plan?

CHAIRMAN LAFLEUR: Yes. I have heard from – we've met with almost all the grid operators. They have different levels of concern, but because they're the ones who are trying to keep the lights on, they're

the ones who are working through some of these issues of as the generation fleet evolves, what transmission has to be built, how the markets have to work. And I think they're focused on – I can't speak for them – but some of the things I talked about in my speech.

State regulators, their views vary very much by what's the resource mix now in their state. Some states have a much more challenging goal for various reasons under the Clean Power Plan, so we certainly haven't heard from all 50 state regulators. But some are quite engaged.

MR. HUGHES: Do you envision a broader rule for FERC's enforcement initiatives in the implementation of the CPP? Or will rulemaking be the methodology for addressing it?

CHAIRMAN LAFLEUR: Well, that's an interesting question. To the extent that the Clean Power Plan changes market rules, enforcement is one part of making sure markets are fair. And it's also a part of the – FERC only gets involved in the biggest reliability issues. Most of them are done by NERC, the North American Electric Reliability Corporation, under our oversight. It's a part of making sure reliability is protected.

But I tend to think of the rulemaking, either writing the standards or approving the standards in our case, or approving market rules, as the first phalanx and then enforcement then makes sure they're complied with. I don't really think that's what you lead with when you're changing something. You need to get the rule first and then enforce it.

MR. HUGHES: This questioner says that traditionally politics has not played much of a role at the commission, even though there are appointees from both political parties. This person says, but that seems to be changing with this debate over the FERC role vis-à-vis the EPA. Does this concern you? Is FERC just like so many other parts of Washington becoming more political?

CHAIRMAN LAFLEUR: Well, the vast majority of work that FERC does does not divide along partisan lines. Even when we have dissents or splits between the Commissioners, they're not frequently along party lines. And that, I think, is good, because we're all looking at the law, we're looking at the record. We might have different views, but they're not knee-jerk party views in any sense. And that's how FERC has been for a long time and I think basically still is. I do think when it comes to environmental rules, they tend to be very controversial and so this area of our work has kind of become more ideological than some, and I think that's just the reality of what we see in Washington.

MR. HUGHES: To what extent do you see distributed generation transforming and perhaps disrupting the electricity system?

CHAIRMAN LAFLEUR: Well, I think that distributed generation is a huge trend, particularly the rooftop solar, which seems to have kind of gone over the kind of the barrier of affordability and ubiquity now and is just a big, big piece of the grid. I mean, it seems like I've been hearing, even back in the '80s, they said we're going to have, like, everyone's going to have a combined heat and power in their basement and there's going to be no more power plants. And most of those trends didn't ever manifest themselves the way they were expected.

Rooftop solar is different. It's here, it's crossed the divide to being economic and it's a big part of our grid. I think that, I don't really personally see it as disruptive; it's just a new part of the ecosystem. I think we'll still need the transmission grid, but we'll also have a lot of distributed solar and maybe some of the other technologies will become that economic. But that's the first to get there.

MR. HUGHES: I know that you put your FERC-regulated electricity transmission to good use at FERC headquarters because I'm sure you have many wonderful coffee pots that keep the FERC staff alert and awake. And so therefore, it's my pleasure to present you with the honorary National Press Club coffee

mug, and I hope it's of good use back at headquarters to keep everybody alert and watchful over our power grid.

CHAIRMAN LAFLEUR: Yeah, I'm all about coffee.

MR. HUGHES: One more question before you sit down, and you've been wonderful answering so many questions. We want to wrap up with this one. Everything in the energy sector, this questioner says, seems to be so male dominated. And what do you say to girls to get them to be interested in careers in energy and what can we do to sort of turn that around to make it more of a career for more women?

CHAIRMAN LAFLEUR: Well, that's a great question. I think we are seeing more and more women in energy, and I think that maybe as far as getting more women in some of the blue collar jobs and the engineering jobs, which is where it's lagged the most, a lot of it comes down to STEM education, getting little girls interested early, math and science programs for young girls. I used to be at Girls Inc. in Worcester, Mass., and they had a STEM program and try to get girls interested in that.

And I think those are important efforts to really build up that piece of the workforce. These are good jobs, they're good paying jobs. You can support families and we want more young girls to be interested in them.

At the same time, I'm living proof you don't have to be a – we're the parents of a physics teacher, but I am not a STEM nerd at all. I was a politics major who went to law school and look, I'm in electricity. So, I think there are jobs for people across the spectrum of interest. So it's not all about STEM. So we need people of all the different disciplines.

MR. HUGHES: All right, how about a round of applause for our speaker.