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BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION AND  
THE U.S. NUCLEAR REGULATORY COMMISSION

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IN THE MATTER OF: : Docket No. :  
JOINT MEETING OF THE U.S. NUCLEAR : AD06-6-000  
REGULATORY COMMISSION AND THE FEDERAL :  
ENERGY REGULATORY COMMISSION :  
- - - - - x

Commission Meeting Room  
Federal Energy Regulatory  
Commission  
888 First Street, N.E.  
Washington, D.C.

Monday, April 24, 2006  
2:00 p.m.

1 APPEARANCES:

2 FERC COMMISSIONERS PRESENT:

3 CHAIRMAN JOSEPH T. KELLIHER

4 COMMISSIONER NORA MEAD BROWNELL

5 COMMISSIONER SUEDEEN G. KELLY

6

7 NRC COMMISSIONERS PRESENT:

8 CHAIRMAN NILS J. DIAZ

9 COMMISSIONER EDWARD MCGAFFIGAN, JR.

10 COMMISSIONER JEFFREY S. MERRIFIELD

11 COMMISSIONER GREGORY B. JACZKO

12 COMMISSIONER PETER B. LYONS

13

14 ALSO PRESENT:

15 MICHAEL E. MAYFIELD, Director, Division of  
16 Engineering, Nuclear Reactor

17 JOSEPH McCLELLAND, Director, Division of  
18 Reliability, Office of Energy Markets & Reliability, FERC

19 MARY KIPP, Attorney, Division of Investigations,  
20 Office of Enforcement, FERC

21 MICHAEL J. CASE, Director of Inspection and  
22 Regional Support, NRC

23 SUSAN COURT, Director, Office of Market Oversight  
24 and Investigations, FERC

25 JANE W. BEACH, Reporter

## P R O C E E D I N G S

(2:00 p.m.)

1  
2  
3 MS. COURT: Good afternoon, Chairman Diaz,  
4 Chairman Kelliher, Commissioners, ladies and gentlemen. My  
5 name is Susan Court, and I am Director of FERC's Office of  
6 Enforcement.

7 Today I will serve as moderator of this historic  
8 joint meeting between the Nuclear Regulatory Commission and  
9 the Federal Energy Regulatory Commission.

10 The format for today's meeting will be a dialogue  
11 between the two Commissions, following Staff presentations  
12 on particular topics, and, in particular, topics dealing  
13 with grid reliability.

14 There will be three panels of two Staff  
15 presentations each, and we would like both presentations to  
16 be given for each of the three panels, and then questions or  
17 dialogue after each one of the panels.

18 At this time, I would like to turn the program  
19 over to Chairman Kelliher for some introductory remarks.  
20 Mr. Chairman?

21 FERC CHAIRMAN KELLIHER: Thank you, Susan. I  
22 want to welcome my colleagues from the NRC here.

23 We had a non-public meeting about two years ago,  
24 and Susan said this is an historic meeting. I think it's  
25 historic, in that I'm not sure we've actually had a formal

1 public meeting before. If it's not historic, it's certainly  
2 unusual.

3 NRC COMMISSIONER MERRIFIELD: Mr. Chairman, I  
4 checked with the NRC historian, which we have, and, indeed,  
5 it is, in fact, the first public meeting we have ever had  
6 between our two Commissions.

7 FERC CHAIRMAN KELLIHER: Okay, great. Well, if  
8 we accomplish nothing else today, we've accomplished that.

9 (Laughter.)

10 FERC COMMISSIONER BROWNELL: And then we can go  
11 back to their place for lunch.

12 FERC CHAIRMAN KELLIHER: Their lunch is more  
13 civilized than ours, I have to say that. We'll have to work  
14 on ours.

15 But we just visited the Market Monitoring Center  
16 upstairs, where the Commission monitors electricity and gas  
17 markets; certainly not in the same manner the NRC regulates  
18 the safety of nuclear plants, but just to show our  
19 colleagues at a safety agency, how economic regulatory  
20 bodies operate and how the Commission's role has changed  
21 significantly over the past seven years.

22 Our laws are largely the same, but for last  
23 year's significant changes, but the way we do business has  
24 changed a lot to react to market developments. So, thank  
25 you for having the interest in the Market Monitoring Center.

1           I want to note Chairman Diaz's retirement. He  
2 has been at the Commission for ten years; he's been Chairman  
3 for the past three years; he served very effectively,  
4 particularly in the wake of 9/11, and really moved to  
5 increase the security of nuclear power plants, and had a  
6 major emphasis on international nuclear safety. I just want  
7 to credit you for your accomplishments.

8           NRC CHAIRMAN DIAZ: Thank you, sir.

9           FERC CHAIRMAN KELLIHER: And I've enjoyed working  
10 with you.

11           Let me make a few comments about FERC and the  
12 NRC, because some may be wondering why are these two  
13 Agencies meeting today and what are they going to talk  
14 about?

15           First of all, for those of you who are watching  
16 over the website, you can thank the NRC for the fact that  
17 you're watching it over our website, because that was  
18 something we discussed two years ago.

19           The NRC told us that they show their meetings  
20 through their website, and we decided to do the same last  
21 year. So you can thank the NRC, if you're tuning in through  
22 [www.ferc.gov](http://www.ferc.gov).

23           Now, FERC and the NRC, to answer the question of  
24 why these Agencies meet -- and let me try to address that.  
25 FERC and the NRC have a common interest in ensuring the

1 reliability of the bulk power system.

2 That was the purpose of the Memorandum of  
3 Agreement between the two Agencies in August of 2004. We  
4 recognize that the operations of the bulk power system and  
5 nuclear power plants, are interdependent, and that nuclear  
6 plant operations are affected by the operations of the bulk  
7 power system.

8 Likewise, the bulk power system is affected by  
9 nuclear power plant operations and shutdowns, and that was  
10 something we were looking at in the MMC. We monitor the  
11 status of nuclear power plant operations, which ones are  
12 shut down, both for reliability purposes and market  
13 purposes.

14 In fact, the loss of a nuclear power plant can be  
15 the single largest contingency that transmission grid  
16 operators face. Now, the two Agencies recognize the  
17 interrelationship of reliability and nuclear plant safety,  
18 and, to be sure, that's the reason why we're here today,  
19 meeting jointly.

20 Now, in addition to the day-to-day operational  
21 issues, we are also faced with the President's Advanced  
22 Energy Initiative, which proposes significant new  
23 investments and policies in the area of nuclear power.

24 Considering their size, additional nuclear power  
25 plants can have substantial effects on the transmission

1 grid, ultimately affecting reliability and markets.

2 My colleagues and I, as well as the Commission  
3 Staff, are very concerned that information that the NRC can  
4 share concerning applications, permitting, and planned  
5 construction of new nuclear power plant facilities, and  
6 coordination between our two Agencies can help ensure that  
7 there are no unforeseen regulatory hurdles to the planning  
8 and installation of transmission system improvements  
9 necessary to serve the new nuclear power plants.

10 Now, we have a new responsibility at FERC to  
11 ensure the reliability of the bulk power system. That  
12 responsibility was assigned to FERC by the Energy Policy Act  
13 of 2005, which represents the largest increase in FERC  
14 regulatory authority since the New Deal.

15 Now, in the course of implementing the new law,  
16 we're facing some issues at FERC that are new to us, but are  
17 not new to the NRC:

18 How do we assure that grid operators are  
19 adequately trained to meet their responsibilities? How do  
20 we set standards to ensure the reliability of the bulk power  
21 system, while also promoting a culture that is oriented, not  
22 just around compliance, but achieving excellence?

23 What is the proper relationship between the  
24 federal agencies charged with assuring compliance with  
25 federal standards, in our case, reliability standards, in an

1 industry's self-regulatory organization?

2 And how do we track compliance, identify downward  
3 trends in performance, and reverse those trends?

4 Now, I'm a big believer in studying regulatory  
5 models. I actually think it's interesting. That's probably  
6 a bad admission in a public forum, but I'm a big believer in  
7 studying regulatory models, and applying or adopting  
8 successful models in our regulatory programs at the  
9 Commission. I think we can learn from the NRC's experience  
10 in these areas.

11 With that, I just wanted to address the threshold  
12 question of why these two Agencies are meeting, and I'd like  
13 to ask Chairman Diaz to make some comments, and then turn to  
14 our colleagues on both sides, both the NRC and FERC.  
15 Chairman Diaz?

16 NRC CHAIRMAN DIAZ: Well, thank you, Chairman  
17 Kelliher. It's a pleasure to be here; it's a pleasure to be  
18 here with the Commission and with my fellow Commissioners.

19 I think that we both realize how important it is  
20 that our relationships not only continue, but continue and  
21 get enhanced with time. We're both facing challenges, and I  
22 am delighted to be able to discuss those challenges in a  
23 public meeting with the Commission and my fellow  
24 Commissioners.

25 Of course, you mentioned several times, the issue

1 of electric power grid reliability and nuclear power plants,  
2 and that's at the core of essentially why we're here.

3 The two Commissions signed a Memorandum of  
4 Agreement in 2004, and we have enjoyed a cooperative  
5 relationship, and we are exchanging experiences,  
6 information, and data related to the reliability of the  
7 national electrical supply. I hope we will continue to do  
8 so, and I hope we'll continue to do so in even a better  
9 manner.

10 I think both of us have realized the challenges  
11 that the country faces, and we need to keep at it.

12 I think we have many, many examples of how our  
13 stakeholders have benefitted from the enhanced relationships  
14 and the recent communications between the NRC and FERC,  
15 especially when we talk about providers of power and the  
16 transmission providers.

17 I think that we are all very familiar with the  
18 fact that we created, you know, a Generic Letter 96-02, and  
19 in those responses from nuclear power plants, we have  
20 received information from our licensees that indicate that  
21 they are getting ready to make sure that they respond to the  
22 grids issue; they seem to be ready for the summer.

23 FERC issued an interpretative order to clarify  
24 what it considered to be an acceptable exchange of  
25 information between the nuclear power plants and the

1 transmission providers. We're very pleased you did so. I  
2 think it's been extremely helpful.

3 FERC Orders, of course, were also helpful to  
4 ensure timely responses to our Generic Letter, and we thank  
5 you for your actions.

6 As we will discuss today, the interrelationship  
7 between the electric power grid system and the nuclear power  
8 plant generating system, is vital to a safe and secure  
9 energy supply for the American people.

10 And maybe perhaps, you know, it's not clear to  
11 many people that might be looking at this, but nuclear power  
12 plants are big producers of electricity, and they also in  
13 many ways, anchor part of the grids in which they are.

14 They are also not very good machines for moving  
15 up and down in power. They were really designed and  
16 operated as base power units, and that's the way they really  
17 work best. We like to keep them like that, like to keep  
18 them safe and operating.

19 The role that we both have to play as regulators  
20 in our areas, is certainly vital to the security of the grid  
21 of our nation, and we keep looking, our two Commissions, to  
22 working together, and we encourage our staffs to continue to  
23 communicate, as needed, in all of these areas, so there will  
24 be no gaps.

25 We face some of the same challenges, and we need

1 to keep training our people, we need to keep communicating.  
2 We have found that communication is a vital component of the  
3 way that we manage the Agency and the way that we interact  
4 with our licensees.

5 We have taken many steps to improve those  
6 communications, and hope to be able to share with you, some  
7 of those tools, and also learn from you in the way you  
8 communicate with the people you regulate. I'm not going to  
9 call them licensees.

10 Again, I want to thank the Chairman and  
11 Commissioners for having us here today. We look forward to  
12 a very, very interesting meeting.

13 FERC CHAIRMAN KELLIHER: Thank you. Why don't we  
14 alternate back and forth between the Agencies, and you all  
15 outnumber us, so you'll end up with the last word.  
16 Commissioner Brownell?

17 I'm unused to seeing you on my left.

18 FERC COMMISSIONER BROWNELL: I know.

19 (Laughter.)

20 (Discussion off the record.)

21 FERC COMMISSIONER BROWNELL: I'm delighted to get  
22 back together with our colleagues at the NRC, and we do have  
23 much to learn. I think, as the nexus between security and  
24 reliability and efficiency becomes clearer and clearer in  
25 the aftermath of 9/11, and with the anticipation that we'll

1 be adding many more new and some not so new technologies to  
2 the grid, particularly new nuclear, I think the grid will be  
3 used in very, very different ways.

4 And as we struggle with how to manage market  
5 rules and oversee the grid, it's important that we have this  
6 interaction and understand, but, more importantly, I think,  
7 share our collective knowledge and how we might plan and  
8 guide and oversee the development of the infrastructure that  
9 we're going to see in the next three or four years.

10 We've got 20 years of under-investment in the  
11 grid, and at least as many years in under-investment in the  
12 technologies that we use to manage the grid, and as those  
13 change, I think we need to be able to work quickly together  
14 to respond, in kind, with the appropriate rules and  
15 oversight.

16 One of my challenges as a regulator, has been,  
17 we're very slow to respond to market condition changes. I  
18 think the NRC has probably been more effective, perhaps,  
19 than many agencies, but I know we've really struggled in the  
20 aftermath of some of the catastrophes that happened.

21 So this is great to get ready for the future, and  
22 to be able to work out ways of sharing each others's  
23 knowledge, as we move forward. So, thank you for being  
24 here.

25 FERC CHAIRMAN KELLIHER: Thank you. Commissioner

1 McGaffigan?

2 NRC COMMISSIONER McGAFFIGAN: Mr. Chairman, I  
3 don't want to filibuster, because we want to get on with the  
4 meeting.

5 I'll just note that six of the eight people  
6 sitting at the table, are former Congressional staff; three  
7 of the six are former New Mexico Congressional staff, which  
8 says something, I guess.

9 (Laughter.)

10 NRC COMMISSIONER McGAFFIGAN: We also have a  
11 quorum to do business.

12 (Laughter.)

13 NRC COMMISSIONER McGAFFIGAN: I also note in the  
14 audience, that Annette B. Eddy-Cook and Karen Seer, who are  
15 normally at the table for NRC meetings, are looking entirely  
16 too comfortable.

17 (Laughter.)

18 NRC COMMISSIONER McGAFFIGAN: And I would echo  
19 the Chairman's point. I know this is an issue before you  
20 and we're not going to discuss it today, but, in public,  
21 it's fair for me to say that it is not good for nuclear  
22 power plants to go up and down, and so the particular issue  
23 in New England that I think is before you in some way, where  
24 Seabrook is currently going up and down, because it's the  
25 first contingency for some agreement between New England and

1 New York, is not a good idea.

2 There's got to be a coal plant somewhere that can  
3 go up and down, but I say that -- you have two of us now  
4 saying that going up and down is not a good idea for nuclear  
5 power plants. Thank you.

6 FERC CHAIRMAN KELLIHER: I guess we can add that  
7 docket to our proceedings today.

8 (Laughter.)

9 FERC CHAIRMAN KELLIHER: Commissioner Kelly?

10 FERC COMMISSIONER KELLY: Thank you, Ed, my  
11 fellow New Mexicans, and other Commissioners.

12 (Laughter.)

13 FERC COMMISSIONER KELLY: When we were together  
14 last, we were looking backwards; we were looking at the  
15 blackout of 2003, and we were looking at lessons learned.

16 We were concerned then, in particular, about the  
17 stability of the grid, particularly offsite supplies for  
18 electricity for nuclear plants. And we had a very good  
19 response by the nuclear plants to the blackout of 2003, but,  
20 in a sense, it wasn't because we had thought about it and  
21 planned for it.

22 And I'm pleased that this time we're here to look  
23 forward. The Commission has been given some authority under  
24 the Energy Policy Act, to do some things for grid  
25 reliability, including transmission incentives, and also

1       overseeing the implementation of mandatory reliability  
2       standards, so I'm very pleased that we're able to be  
3       together today to discuss issues that are of mutual concern,  
4       and particularly those.

5               Your participation will help us as we embark on  
6       our EPAct responsibilities. Thank you.

7               FERC CHAIRMAN KELLIHER: Commissioner Merrifield?

8               NRC COMMISSIONER MERRIFIELD: Mr. Chairman, thank  
9       you. I want to join in the congratulations around the table  
10      for wanting to get together in this historic meeting.

11              This is a followon, as you mentioned, to the  
12      meeting that we had and we hosted at the NRC some time ago.  
13      One of the things that I think folks would not have  
14      appreciated, not having been in the meeting, because it was  
15      a closed meeting, was the opportunity we had to show you our  
16      Emergency Response Center and the activities we have  
17      underway in our Agency in our ongoing mission to make sure  
18      that these plants are operating safely.

19              I think that the work that we're doing together  
20      today, is certainly a recognition of good governance, a  
21      recognition of the importance of the overlap between our two  
22      Commissions, as it comes to ensuring that these facilities  
23      are operated safely.

24              I think, in that regard, I certainly want to add  
25      thanks to the Chairman for the activities of this Commission

1 to move forward in assisting us in our efforts to get more  
2 information about some of the energy challenges to the  
3 plants that we are responsible for overseeing; it's been  
4 very, very helpful, and so I do appreciate the actions  
5 undertaken by this Commission, your Commission, back in  
6 February.

7 One of the things that you might not appreciate,  
8 if you weren't one that pays close attention to our  
9 Agencies, that whenever Ed McGaffigan, whenever Ed jumps  
10 into something, I have a tendency of jumping in sometimes  
11 with him, sometimes not.

12 I would add, in recognizing the sensitivities  
13 from your Commission in ongoing issues, as originally  
14 hailing from New Hampshire, issues associated with the  
15 Seabrook Station and its operation, are very important to  
16 the folks who I hold near and dear.

17 That activity, in terms of bringing that plant up  
18 and down, is of, in my particular concern, significant.  
19 There have been a total, I believe, at this point, of 20  
20 instances in which that plant has been brought up or down,  
21 averaging nine over the course of the last three months.

22 So that is certainly one that, although I know  
23 you're limited in terms of your getting into it, certainly I  
24 want to use the opportunity to express my concern and to  
25 agree with Commissioner McGaffigan.

1           We don't believe and I don't believe it's a  
2 safety issue at the plant. It is an ongoing challenge to  
3 the operations by the individuals who are in the control  
4 room, and certainly with our maintenance activities, our  
5 allowance for online maintenance, that makes that issue even  
6 more difficult, where a utility is attempting to do online  
7 maintenance and plan on that, to have facing them, multiple  
8 down-powers through the course of a week, and in some cases,  
9 multiple down-powers during the course of a day.

10           As a general matter, I think that's imprudent,  
11 and it's certainly something I would recommend that the  
12 Commission, your Commission take a look at, because,  
13 certainly from my standpoint -- and I agree with  
14 Commissioner McGaffigan -- that is not the direction you  
15 would want to see it.

16           FERC CHAIRMAN KELLIHER: Thank you. I'd like to  
17 recognize Commissioner Jaczko for his Seabrook comments.

18           (Laughter.)

19           NRC COMMISSIONER JACZKO: As you may find,  
20 Commissioner Lyons and I are new to the Commission, or  
21 relatively new, I guess, at this point, so sometimes we  
22 don't always participate in some of the historical back-and-  
23 forth between some of the other Commissioners.

24           But I always like to say that I appreciate the  
25 opportunity to be here. I think, Mr. Chairman, as you said

1 at the beginning -- I think you referred to yourselves as an  
2 economic regulator, more than we are, certainly, as a safety  
3 regulator, but I do think, nonetheless, that there's a lot  
4 that we can learn from the things that you do, and I think,  
5 hopefully, there are some things that you can learn from the  
6 way that we operate.

7 I think we both face some new challenges dealing  
8 with the Energy Policy Act and implications that will come  
9 from that. As you indicated, I think there is a lot of  
10 expansion in your regulatory authority that's come from  
11 that; for us, there's potentially an expansion in the number  
12 of applications for new nuclear power plants that have come  
13 in as a result of that.

14 So I think that we both, going forward, have a  
15 lot of new work on our plates, and I think this is a good  
16 opportunity for us to learn from each other and learn some  
17 good ways to be good, effective regulators.

18 With that, I will comment on the aforementioned  
19 Seabrook issues, very briefly.

20 (Laughter.)

21 NRC COMMISSIONER JACZKO: Simply to say that I  
22 think this is a good opportunity, and, although we may have  
23 disparate realms of responsibility, there are areas in which  
24 I think there is a nexus between the work that you do and  
25 the work that we do.

1           Certainly, Seabrook is one case in which I think  
2           there is that nexus, and I think this is a good opportunity  
3           for us to be able get together and discuss those issues.  
4           Thank you.

5           FERC CHAIRMAN KELLIHER: Thank you. And I don't  
6           mean to be lighthearted; we just can't say anything. I know  
7           you appreciate that.

8           Commissioner Lyons?

9           NRC COMMISSIONER LYONS: As the newest of the  
10          eight Commissioners up here, I would only want to add my  
11          supportive comments to the statements that have already been  
12          made by all of the other Commissioners. I very much  
13          appreciate the opportunity provided by the two Chairmen, to  
14          have this, as has already been said, historic meeting  
15          between the two Commissions.

16          I think it can be very important, and I hope it  
17          helps both Commissions better understand the integrated  
18          nature of our responsibilities in at least some selected  
19          areas. I'm looking forward to the discussion.

20          FERC CHAIRMAN KELLIHER: Great, thank you very  
21          much. With that, why don't we call up the first Staff  
22          panel: Michael Mayfield, the Director, Division of  
23          Engineering, Nuclear Reactor Regulation, NRC, and Joe  
24          McClelland, the Director of the Division of Reliability,  
25          Office of Energy Markets and Reliability, FERC. Thank you,

1 gentlemen.

2 (Slides.)

3 MR. MAYFIELD: Good afternoon, Commissioners. I  
4 am Mike Mayfield. I'm the Director of the Division of  
5 Engineering and the NRC's Office of Nuclear Reactor  
6 Regulation.

7 I'll spend the next few minutes describing the  
8 NRC's interest in grid reliability for nuclear power plants  
9 and the proposed addition of new nuclear plants.

10 If I could have the next slide, please?

11 (Slide.)

12 MR. MAYFIELD: The design of nuclear power plant  
13 electrical system is based on the assumption that there is a  
14 reliable source of offsite power. Systems used for normal  
15 operation and for accident mitigation, use the grid  
16 electrical system as their preferred source of electric  
17 power.

18 Nuclear power plants have protective devices  
19 installed, that will sense grid disturbances, and, if  
20 necessary, isolate the plant from the grid. In most cases,  
21 a nuclear plant will trip upon isolation from the grid.

22 Accident mitigation systems for core cooling and  
23 other safety functions, are designed and tested to operate  
24 on emergency onsite power as a backup to the grid.

25 The loss of power from the grid, constitutes a

1 reduction in the plant's defense-in-depth, and a challenge  
2 to the emergency power system.

3 The offsite power system supplies power to  
4 safety-related components, the primary coolant pumps used to  
5 cool the nuclear core. While auxiliary systems will remove  
6 heat from the core, if power is lost to these pumps, this  
7 would represent a more challenging situation for the plant  
8 operators and may result in an increase in risk of core  
9 damage.

10 Thus, while nuclear power plants are designed  
11 with backup power sources to provide power to equipment in  
12 case of a loss of offsite power, the offsite power system is  
13 the preferred source and the more reliable power supply.  
14 Next slide, please.

15 (Slide.)

16 MR. MAYFIELD: Working with data that the Staff  
17 has received from NERC, the NRC's Office of Nuclear  
18 Regulatory Research has been evaluating grid reliability and  
19 the potential impact on nuclear power plants.

20 This is slide is taken from a report our research  
21 staff has prepared. It shows the annual loss of offsite  
22 power frequency, or LOOP frequency for nuclear power plants  
23 from 1986 through 2004.

24 As you can see, there is a decreasing trend from  
25 1986 through 1996. The decrease in the number of events is

1       due to the decrease in plant- and switchyard-centered events  
2       beginning in the mid-1990s.

3               The number of events in 2003 and 2004 is much  
4       higher than in previous years. All but one of the events  
5       were grid-centered. This represents a significant shift  
6       from plant- and switchyard-centered events, to grid-centered  
7       events. Next slide, please.

8               (Slide.)

9               MR. MAYFIELD: This slide is also taken from the  
10       research report, and shows the trend in annual average  
11       duration for loss of offsite power events at nuclear power  
12       plants. The trend is increasing for the period of 1987  
13       through 1996, but was essentially flat for 1997 through  
14       2004.

15               Average durations have been increasing, in part,  
16       because the number of grid-centered events has been  
17       increasing. This increase in duration is primarily due to  
18       the fact that it takes longer to restore the power from the  
19       grid following a grid-centered event, than for plant- and  
20       switchyard-centered events.

21               The trend from plant- and switchyard-centered  
22       events to grid-centered events, and for increasing-duration  
23       events, are trends with potential impact on nuclear power  
24       plants. Next slide, please.

25               (Slide.)

1           MR. MAYFIELD: Turning to, I guess, the much-  
2 discussed increase in new reactors, today in the United  
3 States, there are 104 operating nuclear power plants,  
4 generating approximately 20 percent of our electric power.

5           Recent activities have brought about a  
6 significant interest in constructing new nuclear power  
7 plants. Based on the information the NRC has received from  
8 our stakeholders, the majority of the proposed new reactor  
9 locations are planned for the Southeastern part of our  
10 country.

11           The nuclear industry plans to begin submitting  
12 combined license applications to the NRC in 2007. The  
13 nuclear industry estimates construction of new plants will  
14 be completed in the timeframe of 2015 to 2018.

15           Based on the proposed construction of new nuclear  
16 plants, the nuclear industry anticipates the addition of  
17 about 20,000 to 25,000 megawatts of nuclear-plant-generated  
18 electricity to be added to the grid in this timeframe. Next  
19 slide, please.

20           (Slide.)

21           MR. MAYFIELD: As I indicated, the majority of  
22 the proposed new reactor locations are planned for the  
23 Southeastern part of the U.S. This graphic gives a little  
24 better picture of the proposed new plant locations.

25           Although not indicated here, the NRC is also

1       aware of new reactors to be located in the State of Florida.  
2       We didn't include them on this chart, simply because we  
3       don't have specific locations proposed yet.

4               This map represents the most recent data on the  
5       proposed locations for new reactors. This picture will  
6       almost certainly change as the industry proposes additional  
7       plants as we go forward. Next slide, please.

8               (Slide.)

9               MR. MAYFIELD: In summary, nuclear power plant  
10       electrical system design is based on the assumption that  
11       there is a reliable source of offsite power. Any reduction  
12       in the reliability of that preferred power source, has a  
13       potential impact on plant safety and is of interest to the  
14       NRC and the nuclear industry.

15               Owing to the importance of the offsite power  
16       system, the NRC is continuing to monitor grid reliability,  
17       work with organizations responsible for regulating the grid,  
18       and working with our licensees to make certain they are  
19       prepared to address changes in overall reliability of the  
20       offsite power system. Thank you.

21               FERC CHAIRMAN KELLIHER: Thank you very much.  
22       Mr. McClelland?

23               (Slides.)

24               MR. McCLELLAND: Good afternoon. My name is Joe  
25       McClelland, and I'm the Director of the Division of

1 Reliability here at the Federal Energy Regulatory  
2 Commission. With me today are Don Lekang, our group's  
3 Manager of Operations, and John Keck from the Oakridge  
4 National Laboratory.

5 It's my pleasure to be here today to discuss the  
6 interdependency of nuclear power plants with the bulk power  
7 system.

8 Nuclear power plants have special needs that  
9 require offsite power supply delivered by the transmission  
10 grid. In order for a nuclear power plant to become  
11 licensed, it must use the offsite power grid as the primary  
12 source of normal and emergency power to shut down the  
13 facility, pursuant to 10 CFR 50, or from earlier guidance  
14 such as the Safety Guide.

15 The offsite power supply must, therefore, be  
16 operated with sufficient voltage, frequency, and stability  
17 to assure that the licensing requirements are met. Slide 2,  
18 please.

19 (Slide.)

20 MR. McCLELLAND: As I mentioned before, each  
21 nuclear plant has special requirements or nuclear power  
22 interface requirements, NPIRs and other offsite power  
23 supply, usually from the transmission grid.

24 These requirements are rather detailed and  
25 specific to the facility. In general, this requires the

1 plant operator to know if the offsite power supply is  
2 operable, in accordance with the plant's unique technical  
3 specifications written by the NRC, as well as to also be  
4 aware of contingencies on the bulk power system, such as the  
5 loss of a generator or transmission line that can affect the  
6 reliability of the offsite power supply.

7 If the offsite power supply does not meet certain  
8 stringent requirements, it must be considered inoperable and  
9 the nuclear plant must take appropriate actions, as required  
10 by the technical specifications. Next slide.

11 (Slide.)

12 MR. McCLELLAND: Depending on the specific plant  
13 and its agreement with the transmission operator, the  
14 nuclear plant operator may need to know about the viability  
15 of the transmission system through information such as the  
16 availability of nearby transmission lines, the total system  
17 load, status of nearby generation, et cetera.

18 This information is available from the  
19 transmission operator or from the reliability coordinator.  
20 The Commission, that is, the Federal Energy Regulatory  
21 Commission, has provided clarification to the standards of  
22 conduct, that permits communication of operational  
23 parameters needed to maintain safety between the plant  
24 operators and the transmission operators.

25 This will be discussed later in the Part II

1 discussion of the Interpretative Order. Next slide, please.

2 (Slide.)

3 MR. McCLELLAND: The special nuclear plant  
4 requirements result in several issues for the transmission  
5 system operator: The transmission system operator must be  
6 aware of and plan for the unique needs of each of the  
7 connected nuclear power plants.

8 For example, in order to keep the nuclear power  
9 plant online or return it to service, the system voltage  
10 level must be controlled to unusually stringent levels, not  
11 only during normal operation, but also during disturbances  
12 and also after a nuclear plant trip.

13 Voltage on the grid can be controlled by managing  
14 the production and absorption of reactive power, so,  
15 adequate reactive power reserves must be available in the  
16 event a nuclear plant trips.

17 Special voltage requirements for the nuclear  
18 power plant may actually be higher than one per unit after a  
19 plant trip. In some cases, the nuclear plant cannot support  
20 grid voltage by providing reactive power, because the  
21 voltage is too low to allow a plant to continue online, or  
22 after a shutdown, to allow it to restart.

23 These requirements may, in some cases, be  
24 different than or incompatible with the requirements of the  
25 NERC reliability standards, therefore, special transmission

1 operating and planning procedures are required to meet the  
2 nuclear plant's offsite power supply and other safety  
3 requirements. Next slide.

4 Nuclear plants are especially sensitive to  
5 voltage variations and frequency swings. There have been  
6 over 100 occurrences where an offsite event initiated a trip  
7 of a nuclear power plant, since 1993.

8 The large number of trips has become a concern to  
9 the nuclear power industry, because it is a contributor to  
10 the risk of a nuclear plant's operation.

11 Due to the large size of many nuclear plants,  
12 sometimes over 1,000 megawatts, the loss of a nuclear plant  
13 is often the single largest contingency faced by the  
14 transmission system operator.

15 Even worse, some nuclear plant trips have caused  
16 and/or contributed to cascading trips, and for the first  
17 automatic nuclear plant trip, the resulting voltage or  
18 frequency decay resulted in more nuclear plant trips.

19 In July of 2004, for instance, three 1250  
20 megawatt nuclear plants tripped in just this fashion. Next  
21 slide.

22 (Slide.)

23 MR. McCLELLAND: NERC is developing a set of  
24 reliability standards to help address some of these issues.  
25 NERC is preparing a standard that requires coordination

1       between nuclear plants and transmission entities, for the  
2       purpose of ensuring safe nuclear operations and shutdown.

3               The draft standard was recently reviewed by the  
4       industry members, and responses are being prepared to  
5       industry comments. In general, the draft standard requires  
6       that the NPIRs be provided in writing to the transmission  
7       entities; that the transmission planner incorporate their  
8       interface requirements in the analysis of the transmission  
9       system; that the requirements be resolved and agreements be  
10      developed;

11             That the system will be operated in accordance  
12      with the agreements, so that the interface requirements will  
13      be met, and that the nuclear plant will be informed when the  
14      interface requirements cannot be met.

15             The standard also contains measures to  
16      demonstrate compliance with the requirements, and provides a  
17      compliance monitoring process. It would be inappropriate  
18      for the Commission to comment on the standard at this time,  
19      as it is still in preparation and has not been submitted to  
20      the Commission for review.

21             The standard was originally to be approved by the  
22      NERC Board of Trustees on May 2, 2006, but resolution of the  
23      extensive comments received during the review, are still in  
24      process, and this date will probably not be met.

25             The show-stoppers, quote/unquote show-stoppers:

1       These are issues that commenters have identified that would  
2       prevent them from voting for the standard, and have been  
3       listed on NERC's website and include:

4               One, the NPIRs submitted by the nuclear power  
5       plants to the transmission entities, are non-negotiable;

6               Two, the term, "transmission entities," may not  
7       specifically capture all offsite power providers, as some of  
8       the nuclear power plants are supplied by NERC-defined  
9       distribution, not transmission facilities;

10              Three, that transmission analytical tools must be  
11       sufficient to adequately predict the impact of unplanned  
12       events on the NPIRs, in order that the proper contingencies  
13       are conveyed to the nuclear power plants.

14              The tools and techniques should then be verified  
15       against actual unplanned events.

16              Four, the standard's requirements, in particular,  
17       R8.1.4, call for providing, quote, "provisions for  
18       suspending standards of conduct, when needed, to ensure grid  
19       reliability, nuclear plant safety, or personnel safety," end  
20       quote.

21              However, commenters urged that the standard be  
22       revised to make it clear that the NERC standard cannot  
23       overrule any regulatory or legal obligations concerning the  
24       shared information.

25              The Nuclear Regulatory Commission staff has

1 reviewed the draft standard and even submitted comments to  
2 it. These comments are under consideration by the drafting  
3 team for the next phase of the standards development. Next  
4 slide.

5 (Slide.)

6 MR. McCLELLAND: One of the biggest obstacles to  
7 the development of effective standards, is the lack of  
8 understanding of the needs and requirements of the various  
9 entities involved. Transmission entities do not fully  
10 understand the requirements placed on the nuclear plant, and  
11 the nuclear plant does not understand the special  
12 requirement it places on planning and operation of the  
13 transmission system in some cases.

14 It is therefore important that the NRC and FERC  
15 work cooperatively to ensure that both the nuclear plant  
16 needs and the reliability of the bulk power system are  
17 addressed.

18 The NRC may find it productive to continue to  
19 engage the industry, through the industry standards  
20 development process. This is an effective and efficient way  
21 to bring about the needed changes.

22 In conclusion, coordinating the safety and  
23 reliability requirements of the nuclear plants, the  
24 transmission operators, the reliability coordinators, and  
25 other involved offsite power entities, is a significant

1 task, but it is a task that must be accomplished.

2 The NRC, FERC, the emerging Electric Reliability  
3 Organization, or ERO, and the industry, can work together to  
4 ensure both safe nuclear plant operations and shutdown and  
5 reliable operation of the bulk power system. This concludes  
6 my remarks. Thank you.

7 FERC CHAIRMAN KELLIHER: Great, thank you, Joe.  
8 I'll start off with a couple of questions, and then turn to  
9 Chairman Diaz, and we can, again, alternate back and forth.

10 But, Mr. Mayfield, I had a couple of questions  
11 about your presentation and some of the data. Your graphic  
12 about annual loss of offsite power frequency, did you have  
13 that broken down by region, by region of the country?

14 I mean, our U.S. electricity markets tend to be  
15 regional in nature, and there's differences in terms that  
16 some are organized markets, run by an RTO; others are not,  
17 and nuclear plants fall into both types of markets. I was  
18 just curious whether the trend -- I'm asking a question  
19 whose answer I don't know, which is sometimes a bad habit,  
20 but let me go ahead, nonetheless, since I'm already down the  
21 road.

22 But do you have information -- is this a steady  
23 trend in the different kinds of regional power markets?

24 MR. MAYFIELD: It is my understanding that the  
25 data that we have, were not broken down by region. The

1 information is certainly available, but the work that the  
2 Staff put together, was an aggregate, looking nationally.

3 FERC CHAIRMAN KELLIHER: Okay. You look at how -  
4 - you indicate that there's an interest, particularly in the  
5 Southeast, to add the new units, and perhaps 20,000 to  
6 25,000 megawatts of new generation, and it just seemed that  
7 that prompts the question of whether this offsite power  
8 issue applies as much in the Southeast as perhaps other  
9 parts of the country.

10 MR. MAYFIELD: It's a good question and I don't  
11 have an answer to it, but it's something that we can  
12 certainly go back and look at.

13 FERC CHAIRMAN KELLIHER: And I had a question for  
14 Joe, and, again, a question that I didn't think of, so  
15 you're not prepared for it, and it may really be more  
16 Sheldon's -- more other parts of EMR that can answer this.

17 But if we're actually going to add 20,000 to  
18 25,000 megawatts of new nuclear generating capacity in the  
19 Southeast, can the current grid support that, or is there a  
20 need for some pretty substantial investments, grid  
21 investments?

22 MR. McCLELLAND: I think what I'd say is that I'd  
23 like to see the data, and it would be something we would  
24 have to examine.

25 FERC CHAIRMAN KELLIHER: Okay. Well, I stumped

1       you both and I apologize for that.

2                       (Laughter.)

3                       FERC CHAIRMAN KELLIHER: I didn't mean to start  
4 off on that note, but let me turn to my colleague, Chairman  
5 Diaz.

6                       NRC COMMISSIONER MERRIFIELD: Mr. Chairman, if I  
7 could just, on that score -- and Mike can back me up on this  
8 one.

9                       We see quite a few events, particularly up in the  
10 Northeast, and I would say that Indian Point has had a lot  
11 of challenges in its area. That has been one site where  
12 we've seen a number of events that have been the result of  
13 offsite issues.

14                      Indian Point is a site that we've seen that has  
15 had more than its fair share.

16                      MR. McCLELLAND: It has had perhaps more than its  
17 fair share, would be a fair statement. There have been  
18 events across the nation. There's the Palo Verde event from  
19 a few years back, and, of course, the large loss of power  
20 from 2003.

21                      So this is not unique to any given station, but  
22 there have been some plants, Indian Point being one, where  
23 it's been a bit more frequent than we might anticipate,  
24 based on the national look.

25                      The other thing that we're seeing from the data,

1 appears to be a seasonal variation in challenges and losses  
2 of offsite power, with, not surprisingly, the summer months  
3 seeing a significant increase.

4 So we're seeing a seasonal variation around the  
5 nation, as well as some isolated events that seem to create  
6 fairly widespread problems.

7 FERC CHAIRMAN KELLIHER: Let me ask you about  
8 your 2003 data. Is that almost all the single incident?

9 MR. MAYFIELD: Yes.

10 FERC CHAIRMAN KELLIHER: It was a very  
11 significant incident, the August 14th blackout.

12 MR. MAYFIELD: Yes.

13 FERC CHAIRMAN KELLIHER: There were also  
14 blackouts in the West in '96, but I guess there are  
15 relatively fewer nuclear plants in the West? There were two  
16 blackouts in the summer of '96, but affecting relatively  
17 fewer units, I suppose, and that accounts for the smaller  
18 diamond in 1996?

19 MR. MAYFIELD: Yes.

20 FERC CHAIRMAN KELLIHER: But if you were to take  
21 the August 14th incident out, then I assume 2003 falls right  
22 back into line with the early 2000s, and the question then  
23 turns to 2004. Why is that one higher? There were not very  
24 large grid disturbances in 2004.

25 MR. MAYFIELD: And for exactly what contributes

1 to the 2004 event, I --

2 FERC CHAIRMAN KELLIHER: Palo Verde?

3 MR. MAYFIELD: Palo Verde, a three-unit trip.

4 FERC CHAIRMAN KELLIHER: The cause being an  
5 offsite power -- a grid --

6 UNIDENTIFIED PARTICIPANT: Three simultaneous.

7 MR. MAYFIELD: Three simultaneous loss of offsite  
8 power events.

9 NRC COMMISSIONER McGAFFIGAN: There was something  
10 in the Phoenix area, Tucson, that -- it was something in one  
11 of the large cities, I think, Phoenix, that --

12 MR. MAYFIELD: The switchyard -- it wasn't a  
13 grid-centered event. It was a local.

14 NRC COMMISSIONER McGAFFIGAN: But it lead to  
15 three units tripping, which then probably caused other  
16 problems.

17 FERC CHAIRMAN KELLIHER: Is it a generation trip  
18 elsewhere that then ended up affecting the grid, and, in  
19 turn, affecting Palo Verde?

20 MR. MAYFIELD: Yes.

21 FERC CHAIRMAN KELLIHER: Okay. Okay, well, those  
22 are -- that's very helpful to put it in context, because if  
23 you take the August 14th blackout, out, then 2003 falls back  
24 into the usual range, or at least the recent range, and then  
25 the one Palo Verde incident that actually wasn't -- it was a

1 generation event, initially.

2 NRC COMMISSIONER McGAFFIGAN: And what I'd say,  
3 Mr. Chairman, in response to your second question, is that  
4 our data would indicate that we haven't had these events in  
5 the Southeast, so that may have a -- now, we don't know,  
6 going forward, but at the moment, we don't have data that  
7 the Southeast has a problem, where most of the nuclear units  
8 are going in.

9 I know that at some points like Belefont, they're  
10 thinking of putting a unit there, precisely because the grid  
11 is so robust in so many directions.

12 FERC CHAIRMAN KELLIHER: In some cases, the grid  
13 was built 30 years ago, with the eye of additional units  
14 being at current sites where there might only be one or two,  
15 currently.

16 NRC CHAIRMAN DIAZ: I wouldn't be surprised if  
17 the selection of most of these units, is directly related to  
18 the fact that the grid is very strong, reliable, and has the  
19 capacity in this area. In fact, I have heard some of the  
20 potential applicants state that that was one of the key  
21 considerations, both as far as having the capability to  
22 carry the load and also as a matter of investment.

23 In other words, the capability was there, the  
24 grid was there, and, therefore, they selected those sites,  
25 just because of that.

1           Having said that, we need to trust and verify it  
2           and so I think we might have a task for our staff that would  
3           say, if the trend continues to add in the Southeast,  
4           significant numbers of units beyond this 20,000 to 25,000  
5           megawatts, which I understand is the ultimate goal, which is  
6           to continue to add base power in those regions, whether  
7           there will be a point at which additional nuclear power  
8           plants will actually be tasking the grid, and when that  
9           happens -- and as you know better than we do, ten years down  
10          the road is a very short period of time to take care of  
11          potential grid additions.

12           Is that something that we have looked at, whether  
13          there is going to be additional requirements for the grid as  
14          these plants are added?

15           MR. MAYFIELD: Not that I'm aware of, sir.

16           FERC CHAIRMAN KELLIHER: Thank you. Any  
17          questions? Commissioner Brownell?

18           FERC COMMISSIONER BROWNELL: I don't want to beat  
19          this horse, but it does seem to me, it would be good if we  
20          could work together, and maybe with DOE in their congestion  
21          study, maybe taking a look at this to break it down  
22          regionally and to really understand what are the  
23          transmission-related events, because they may be building  
24          where the grid is strong, but since a large number of our  
25          complaints come from some of these parts of the country, is

1       it strong in a certain point and it's going to add stress at  
2       other points?

3                   Is it going to be that we continue to have the  
4       problem that other generation can't get access to the grid?  
5       It's not an issue for you, but definitely an issue for us,  
6       and, collectively, I think, an issue or reliability as we  
7       move into a more rigid regime.

8                   So I'd like to take a look at that, because, as  
9       we also look at the issue of national corridors and  
10      transmission pricing incentives, is this something we want  
11      to be thinking about over time, to encourage the right kind  
12      of investment, making sure we're not doing something in the  
13      long run, that actually doesn't bring the true value of that  
14      nuclear power, narrow its options and narrow the marketplace  
15      in which it can participate.

16                  So I look forward to that, and we can certainly  
17      help and work with NERC, if necessary.

18                  FERC CHAIRMAN KELLIHER:  Actually, I think the  
19      NRC has authority in this area, unless EPAct repealed -- is  
20      it Section 105 of the Atomic Energy Act, your antitrust  
21      provision?  That wasn't repealed by the Energy Policy Act,  
22      was it?

23                  NRC COMMISSIONER McGAFFIGAN:  We're out of that  
24      business, I think.

25                  FERC CHAIRMAN KELLIHER:  Was it repealed?

1 NRC COMMISSIONER McGAFFIGAN: Yes.

2 FERC CHAIRMAN KELLIHER: It was, okay. I haven't  
3 kept up with my Atomic Energy Act.

4 FERC COMMISSIONER BROWNELL: Joseph, what a  
5 disappointment.

6 (Laughter.)

7 MR. MAYFIELD: Commissioner, I would just say  
8 that we have, through our Office of Research, an ongoing  
9 dialogue with EPRI, as well as with NERC, and we obviously  
10 have a dialogue with the Staff here at the Federal Energy  
11 Regulatory Commission.

12 Taking the next piece of the analysis, is  
13 something that I think is a reasonable next step, and we'll  
14 take it on and assure that there is communication among the  
15 interested parties.

16 FERC COMMISSIONER BROWNELL: Great.

17 The other thing I would wonder, because we've  
18 done some of what I would call fundamental survey work on --  
19 and this is operator training. In other words, if we have  
20 a grid-related incident, is it due to the fragility of the  
21 grid? Is it due to stress that was unanticipated? Is it,  
22 in fact, due, perhaps in part, to operator training -- not  
23 operator of the nuclear plant, but operator of the grid?

24 It would also be good to dissect that, since  
25 we're going to have to seriously ramp up operator training

1 as we introduce these new rules. I should be giving another  
2 Agency tasks, but it seems to me --

3 (Laughter.)

4 FERC COMMISSIONER BROWNELL: -- you have the  
5 research group and a historian, so, it works for me.

6 (Laughter.)

7 FERC CHAIRMAN KELLIHER: Thank you. Commissioner  
8 McGaffigan?

9 NRC COMMISSIONER McGAFFIGAN: I hope Nora's not  
10 saying we're overstaffed, but whatever.

11 (Laughter.)

12 FERC COMMISSIONER BROWNELL: No, no, not at all.

13 NRC COMMISSIONER McGAFFIGAN: I'm just teasing.

14 I would just -- I don't really have a question,  
15 but more of a comment. We're focused on the Southeast where  
16 all the plants are, and I think you also need to focus where  
17 the plants aren't, because at least the Southeast is going  
18 to be -- if this all goes forward, if we can license them,  
19 if they can be built -- is going to have a lot of new  
20 nuclear baseload, which may give them a large competitive  
21 advantage, compared to the rest of the country at some  
22 point.

23 But the places where there isn't nuclear -- and  
24 we're -- to the best of my knowledge, in the Midwest and  
25 Northeast, it's kind of hard to put coal in, too, even if

1 it's the cleanest you can imagine -- may continue to depend  
2 on natural gas, I don't know whether that -- what that does  
3 for grid reliability going forward, but it may not be good.

4 The big folks -- down in the Southeast, at lot of  
5 it's still pretty regulated, and they probably have more  
6 incentives there to, if they need new, additional  
7 transmission lines, to put them in.

8 In the Northeast, it's -- I know you have  
9 continuing challenges there, so you may want to focus, not  
10 just where the red dots are on that map that we saw earlier,  
11 which is mostly in the Southeast, but where the red dots  
12 aren't, because you may have every bit as much problem  
13 there.

14 FERC CHAIRMAN KELLIHER: Thank you. Commissioner  
15 Kelly?

16 FERC COMMISSIONER KELLY: Mr. Mayfield, I have a  
17 few questions for you. With the annual loss of offsite  
18 power frequency, it looks as if the performance over the  
19 last five years for which we have data, is pretty good. It  
20 seems to be low and stable.

21 Yet, in looking at the data, do you feel that  
22 that performance can be improved, or are you happy with it  
23 where it is? Is it about as low as it can be?

24 And if it can be improved, do you have a sense of  
25 the nature of the cost to improve it?

1           MR. MAYFIELD: Can it be improved? We can always  
2 strive to improve. Would I like it to be lower? Of course.

3           But there becomes a practical limit. What I  
4 don't know, is whether we have achieved that limit. What we  
5 are seeing, as I mentioned in the prepared remarks, is what  
6 at least appears to be a transition from plant- and  
7 switchyard-centered events, which is something that our  
8 licensees control and have been working on, to more grid-  
9 centered events, and that is something that, by and large,  
10 is outside the nuclear power plant's control.

11           So there seems to be a subtle shift in where the  
12 source of these loss of offsite power events lies, and  
13 that's something that, not only because it's outside the  
14 plant's control, but because the durations tend to be a bit  
15 longer, it's something of interest to us, and it's something  
16 that we expect further dialogue with the FERC Staff, as well  
17 as the industry, as we go along.

18           FERC COMMISSIONER KELLY: I think it's really  
19 helpful to have this kind of data. I mentioned before that  
20 we have authority under the Energy Policy Act to initiate  
21 transmission incentives or to provide transmission  
22 incentives, so we're looking at the grid to see what  
23 problems need fixing and whether there's an incentive that's  
24 necessary to get it fixed, so it seems like this is a good  
25 area of inquiry for us.

1           Also, with reliability standards, is it the kind  
2 of thing that should just be mandated, that their power  
3 should be -- offsite power should be less subject to outage  
4 and the outage should be shorter? Is it the kind of thing  
5 that can be mandated, or are there standards that could be  
6 put in place that would have that effect?

7           MR. MAYFIELD: My sense of it is that that sort  
8 of thing is difficult to just mandate. We can push  
9 ourselves, as well as the industry, to do better, and we  
10 should always strive to do so, but to just mandate those  
11 kinds of changes, it's not clear to me that that's all that  
12 effective, in general.

13           In this particular instance, there may be  
14 something; I don't know.

15           FERC COMMISSIONER KELLY: Do you have a sense as  
16 to whether there are engineering issues, or are they more  
17 operator or --

18           MR. MAYFIELD: I don't have that sense of it, no.

19           FERC COMMISSIONER KELLY: Thanks.

20           NRC CHAIRMAN DIAZ: If I may clarify something,  
21 many of the switchyard problems were our own switchyards.  
22 In other words, there were several occurrences which were  
23 pretty dumb. Somebody got into the switchyard and move a  
24 crane and hit the power source; somebody dug a hole and cut  
25 the wires.

1                   Many of those things were self-inflicted. The  
2 results to the owners were significant. I think you can see  
3 that there is a decrease in all of those switchyard errors.  
4 People no longer open their doors to the switchyard, just  
5 like that, and after 9/11, it has become more secure.

6                   So, I think the switch, in many ways, is almost a  
7 natural switch; in other words, we should not have those  
8 self-inflicted, you know, offsite power losses, because of  
9 the operator doing the wrong thing, and then it comes out,  
10 what happens offsite and what are the problems that are  
11 taking place.

12                   And that really puts the ball in your court,  
13 which we happen to be very, very good at doing.

14                   (Laughter.)

15                   FERC CHAIRMAN KELLIHER: Thank you. Commissioner  
16 Merrifield?

17                   NRC COMMISSIONER MERRIFIELD: I'm reminded by  
18 Chairman Diaz's comments, that one of the years that we did  
19 find some issues with switchyards, was where you had a  
20 deregulated utility where you had the transmission separated  
21 from the production and you had two different companies that  
22 weren't able to coordinate.

23                   And I think the utilities, to their credit, have  
24 really gone out and tried to resolve that issue, which  
25 really had been more of a problem.

1           I think a couple of the areas -- Commissioner  
2           Brownell mentioned the issue of training. I'm reminded of  
3           our last meeting where we had a discussion about operator  
4           training at our plants. One of the major developments  
5           coming out of Three Mile Island, was a notice that we need  
6           to, in fact, have enhanced training for the individuals who  
7           are operating nuclear power plants.

8           One of the sidelines of that was a movement and a  
9           requirement in our Agency to have simulators, full-scale  
10          simulators, so that the individuals who were trained at the  
11          nuclear units, would have an opportunity to really  
12          understand how that unit operated outside of the control  
13          room of the operating plant.

14          I noticed in a recent visit that I had in Arizona  
15          -- Arizona Power has a facility in downtown Phoenix where  
16          they do a lot of the coordination for their area, and, in  
17          fact, are in the process of placing a simulator for their  
18          control room operators who are involved in the grid issues.

19          In fact, the individuals who are responsible for  
20          implementing that, are, in fact, folks who had come from the  
21          training facility at Palo Verde, who were helping to set up  
22          that simulator facility.

23          I don't know if our staff could perhaps -- if  
24          that's been an issue at all. We've discussed between the  
25          two Agencies, our experience with simulator facilities in

1 training, or whether that may be something worthwhile for  
2 some discussions to occur, that may benefit FERC.

3 Mike, do you want to comment on that?

4 MR. MAYFIELD: I don't know that we've had  
5 specific discussions on that training aspect. I know that  
6 one of the issues that our Commissioners asked us to address  
7 in the Generic Letter, had to do with, do we train the  
8 nuclear plant personnel in their interaction with the grid  
9 operator?

10 And so they have protocols in place. Do they  
11 actually train on exercising those protocols? That's  
12 something that we did pursue in our Generic Letter. I don't  
13 know the results from those responses.

14 I don't know of any particular coordination that  
15 we've had, Commissioner.

16 NRC COMMISSIONER MERRIFIELD: Well, if that's  
17 something that you all would find of interest, I mean, I  
18 think that's an issue that we could certainly discuss, if  
19 you wanted to, our experience with simulator facilities and  
20 operator training.

21 That is one of the areas that I think has  
22 resulted in enhanced performance at the reactors we oversee,  
23 and as you've demonstrated your concern about making sure  
24 that the operators at these transmission facilities, have  
25 the appropriate training to be able to understand what

1 challenges they may face in an operating environment, there  
2 may be some lessons we could share with you in that regard.

3 FERC COMMISSIONER BROWNELL: That would be great.

4 NRC COMMISSIONER MERRIFIELD: The only other  
5 comment I wanted to talk about on this panel, does relate to  
6 communication. This is something that I think the FERC  
7 Staff can't talk to right now, because it's in front of you.

8 There was a letter -- and this goes to Mike, if  
9 you want to make some comments on this -- there was a letter  
10 from the Nuclear Energy Institute on March 21st, basically  
11 challenging the position of our Agency in terms of  
12 attempting to get some generic information about the  
13 preparations our licensees are making in preparation for the  
14 summer operations, and basically saying that they don't  
15 believe our authority includes -- we don't have any  
16 authority over a nuclear power plant's interactions with  
17 transmission providers.

18 As a general matter, I think, for myself,  
19 personally, I mean, I think we're trying to make sure -- we  
20 are very limited in our approach in making sure that our  
21 licensees have an understanding of how the grid operates,  
22 the communication protocols and things of that nature, but I  
23 didn't know, Mike, if you wanted to make a comment in terms  
24 of a staff, NRC staff position on this particular issue and  
25 the appropriateness of our being able to ask the questions

1 on this issue.

2 MR. MAYFIELD: At the NRC Commission meeting a  
3 year ago, I believe you, Commissioner Merrifield,  
4 characterized the interaction between the NRC staff and the  
5 FERC Staff, as where NRC is reaching the limits of its  
6 regulatory reach. I liked that phrase.

7 And as we structured our Generic Letter, we've  
8 tried to be very careful that we're focused on questioning  
9 the nuclear power plants about their readiness, their  
10 preparedness to deal with grid events.

11 The communication with the grid operators, it's  
12 not us trying to regulate the grid; we weren't trying to  
13 ease into going beyond the limits of our reach, but to focus  
14 on the plant's interactions with the grid, and their focus  
15 on their systems and their procedures for dealing with grid  
16 events, and assuring themselves of a reliable source of  
17 offsite power, and changes in the reliability of that  
18 source, so that they can be prepared to make whatever system  
19 changes they need to make to deal with it.

20 But we were somewhat surprised by the letter. I  
21 know that our counsel has had some interaction with the NEI  
22 counsel on that view.

23 We've tried to be very careful and very clear in  
24 what we were asking about, and that it didn't go beyond  
25 focus on nuclear safety.

1                   NRC COMMISSIONER MERRIFIELD: Thanks for  
2 providing that clarification.

3                   FERC CHAIRMAN KELLIHER: Commissioner Jaczko?

4                   NRC COMMISSIONER JACZKO: I have one comment that  
5 I wanted to make, and then a question for Mr. McClelland.

6                   One of the things that I think is important as we  
7 talk about some of the figures that Mike put out about the  
8 20,000 to 25,000 megawatts for new capacity, is that we are,  
9 of course, looking at that from strictly, I think, the  
10 nuclear perspective, but there may be other generating  
11 sources that will go in to some of those regions.

12                   In the discussions that I've had, certainly with  
13 the nuclear utilities, their indication is that they may be  
14 considering nuclear, but they may also be considering coal,  
15 and that it's not just one source.

16                   So, in terms of the transmission stability, in  
17 terms of the grid reliability, there may be more than the  
18 20,000 to 25,000 megawatts that will be involved in some of  
19 those regions.

20                   The question I had, involves the -- you talked  
21 about this a little, Mr. McClelland, about the new standards  
22 development for the nuclear plant offsite power  
23 coordination. You mentioned one of the show-stoppers in  
24 there.

25                   I wrote down, I guess, that industry is saying

1       that in order for these standards to work, the tools have to  
2       be good enough to do this. Can you talk a little bit about  
3       what the state of the art is in some of these grid tools,  
4       and when you think, or if, certainly from the Staff's view,  
5       they are good enough or when they might be good enough to be  
6       able to do these kinds of things?

7               MR. McCLELLAND: The tools, in particular, are  
8       the modeling tools -- simulation tools; mathematical models  
9       to show load flows and congestion on the transmission  
10      system; future load growth; contingencies; outages at  
11      generators; transmission lines, et cetera; and then the  
12      insertion of new generation, the retirement of old  
13      generation.

14             The concern that was posted by industry, is that,  
15      currently, the standards don't specify a particular type of  
16      model. They also don't require that the models be verified.

17             In other words, if there is a contingency, if  
18      there is a problem, that's conveyed back to the nuclear  
19      plant operators, and the actual problem -- the models aren't  
20      pulled out, at least there's no requirement to pull the  
21      models out and compare what the model predicted, versus what  
22      was actually observed on the system.

23             So the concern with the standard is, although  
24      analytical tools -- you know, there's a requirement for the  
25      transmission operators to run these analyses and to provide

1 this contingency information back over to the nuclear power  
2 plant folks for the NPIRs, there's really no validation and  
3 there's no standardization as far as the level or the amount  
4 of accuracy that's provided by the models themselves.

5 NRC COMMISSIONER JACZKO: So could each  
6 transmission operator or system or whatever the entity is,  
7 have a completely different model that they're using, or  
8 different tactics that they're using, and they may be  
9 getting different results?

10 MR. McCLELLAND: They could have a different  
11 supplier, and, yes, they could have different results. The  
12 thought would be that even if you approach it from a  
13 different standpoint, a different method, or a different  
14 supplier, that you would end up with the same result, but  
15 there's no requirement now within the standard to validate  
16 that you are ending at the same result, and that, indeed,  
17 your modeling is accurate.

18 NRC COMMISSIONER JACZKO: Thank you.

19 FERC CHAIRMAN KELLIHER: Commissioner Lyons?

20 NRC COMMISSIONER LYONS: I think I just have two  
21 comments to make: One would be to thank both of the  
22 presenters, and also to note that as I listened to the  
23 presentations from both of you, I get the impression that  
24 there already is strong joint staff work and cooperation  
25 going on between the two organizations, which I think is

1 very, very positive.

2 At the same time, I would hope that either of you  
3 get to the point where you think you are reaching an  
4 impasse, that you don't hesitate to involve the two  
5 Commissions, wherever, perhaps, we can add some value.

6 The other comment I was going to make is  
7 following up on Commissioner Merrifield's comment about any  
8 assistance we might provide in operator training ideas, and  
9 also Commissioner Brownell's note that have a research  
10 entity or a research organization at the NRC.

11 That would be just to comment that as part of  
12 that research organization, they're doing a considerable  
13 amount of work on human reliability, and, human reliability  
14 as it impacts operations in a nuclear power plant.

15 I've been interested, as I have come to learn a  
16 little bit more about that work, about the lessons that  
17 we're able to learn from other industries -- the airline  
18 industry, the oil industry, to some extent -- but all of  
19 this contributing to an overall pool of knowledge on human  
20 reliability, which might be of some relevance to FERC as you  
21 also look at operator training and operating reliability.

22 I had just those two comments. Thanks.

23 FERC CHAIRMAN KELLIHER: Thank you. I think we  
24 have looked at your experience in the area of operator  
25 training, and we've briefly looked at your use of simulators

1 in the nuclear industry. It's a much less commonly used  
2 tool in the electricity industry with respect to grid  
3 operators, but it's becoming used increasingly.

4 And there actually are some pretty impressive  
5 training programs in the electricity industry for grid  
6 operators. MISO's control room might be worth a visit for  
7 you all, in particular, and you can see the strength of  
8 their grid operator training program.

9 But I think it is modeled, consciously, to some  
10 extent, on the programs that exist in the nuclear industry.

11 I just wanted to make one comment on something  
12 we've kind of talked around, but not quite said, but that  
13 nuclear plant performance has increased very significantly  
14 in recent years.

15 I don't know the proper measurement of that. Is  
16 it the capacity factor increase?

17 NRC CHAIRMAN DIAZ: Capacity factor, and from the  
18 safety viewpoint, the issue that all of the safety-related  
19 indicators are at an all-time best, and pretty stable, with  
20 not much change.

21 They're now going to what we call an asymptote.  
22 They're about as good as you can probably get right now.

23 FERC CHAIRMAN KELLIHER: Well, what would you  
24 attribute the increase to?

25 NRC CHAIRMAN DIAZ: Well, it is, of course, the

1 Commission's job.

2 (Laughter.)

3 FERC CHAIRMAN KELLIHER: I should have  
4 anticipated that. See, we're an economic regulator, so we  
5 sometimes think market forces have a factor in these things,  
6 and we just wondered, do you think the increase in  
7 competitiveness in the wholesale power market, has given the  
8 grid operators -- not grid operator -- the nuclear plant  
9 operator, a heightened reason to be efficient? Is that a  
10 secondary factor, do you think?

11 NRC CHAIRMAN DIAZ: I believe that there's no  
12 doubt that the need to be competitive, plays a significant  
13 role. My fellow Commissioners can add to this, but I  
14 believe that what happened in the last ten, 12, 15, years,  
15 is that the industry realized that they needed to be better.

16 As the industry got better, I think the NRC got  
17 better, and there was more focus on issues that were more  
18 important. When the NRC did that, the industry was able to  
19 get better, so it was really in many ways the fact that the  
20 focus on safety was there, and the focus on reliability and  
21 increasing the capacity factor, was tied to safety.

22 And it's that almost synergistic effect that  
23 allowed them to get the job done better, and, at the same  
24 time, we actually got more efficient at doing things. We  
25 were able to focus on the things that were more important.

1           We actually, even in many ways, changed, you  
2 know, the way we regulate, and as we changed, the industry  
3 was able to also pay attention to those things that were  
4 important to their reliability and their safety.

5           I think it was almost something symbiotic. You  
6 know, they got better, we got better; we got better, they  
7 got better, and I think that's a very realistic view of what  
8 happened.

9           It might very well be that, you know, in  
10 democratic countries like ours, that's the way to go, that  
11 you don't always, you know, get people moving by 2x4,  
12 although a 2x4 occasionally is necessary, too, but it is the  
13 fact that they actually started to say, we need to get  
14 better.

15           They saw competition coming, there was the issue  
16 of the regulation vs. no regulation in the marketplace. All  
17 of those things came together, and it resulted, I think, in  
18 a better industry and resulted in a better NRC.

19           NRC COMMISSIONER MERRIFIELD: One of the things  
20 that I think we pride ourselves on is being a risk-informed  
21 agency. I think one of the things that the utilities have  
22 done and we have mirrored that, as the Chairman says, is  
23 that I think today, versus where they were ten years ago,  
24 utilities are in a much more effective corrective action  
25 program, so that they can identify issues at the plant and

1 put those in a priority way in terms of that which is going  
2 to be most significant, both for safety and for overall  
3 performance and operations of the plant.

4 Similarly, in the reviews that we do, we look at  
5 the corrective action program, and we try to prioritize our  
6 activities, based on the risk. I think that the convergence  
7 of those and the economic factors you talked about, have led  
8 utilities to recognize that it's in their economic interest  
9 to operate the plants safely and at a high-capacity factor,  
10 and prioritized in the right way, maintenance.

11 Now, we also made a movement to allow more online  
12 maintenance through our maintenance program. We identified  
13 that some of that, in fact, has less of a risk than the time  
14 when the plant is offline.

15 This has helped to increase the overall capacity  
16 factor, as well, because they can continue to operate in a  
17 way that meets our requirements, yet enhance their capacity.

18 The other thing I think the Chairman didn't  
19 mention, which I think is noteworthy as well: There has  
20 been a lot of consolidation within this field. Many of the  
21 smaller units were purchased by larger operators, who I  
22 think, in some senses, had better programs or greater  
23 capacities, and that has resulted in an increase, both in  
24 safety and in the utilization of those facilities when it  
25 comes to capacity factors. I think that plays into it, as

1 well.

2 NRC COMMISSIONER McGAFFIGAN: I would just echo  
3 that last point, that when Nils and I came to the Commission  
4 in '96, there were a fair number of plants down or about to  
5 be down, and they tended to be single-unit utilities that  
6 are -- who have been transferred since to somebody who  
7 really wants to run a nuclear plant.

8 That's been good for both safety and capacity  
9 factors.

10 NRC COMMISSIONER MERRIFIELD: But that's not to  
11 say that single-unit utilities can't run a very safe,  
12 productive operation. And there are a number of them out  
13 there; it's just that some of those who have chosen to get  
14 out of the field, were some of those who were having the  
15 greatest difficulty maintaining the focus at their plants.

16 FERC CHAIRMAN KELLIHER: The almost opposite was  
17 somewhat true, wasn't it, that if you look at the poor  
18 performers, a disproportionate number of them were single-  
19 unit?

20 NRC COMMISSIONER McGAFFIGAN: That is true. We  
21 had a lot of single units that were problems, and then we  
22 had ComEd, when Nils and I arrived.

23 ComEd is now Exelon, and it's a very, very good  
24 performer, but they had to bring in Mr. Rowe and Mr.  
25 Kingsley to get there.

1                   NRC CHAIRMAN DIAZ: In terms of numbers, there is  
2 a very interesting number that maybe summarizes, and that is  
3 the fact that up to 1997, so, almost ten years ago, there  
4 were an average of 5.6 nuclear power plants shut down every  
5 year for a period of six months or longer. That number was  
6 down in the year 2003, to one, and it's down to zero now,  
7 which is --

8                   FERC CHAIRMAN KELLIHER: Ordered shut down by the  
9 NRC?

10                  NRC CHAIRMAN DIAZ: No, no, they shut down  
11 themselves.

12                  FERC CHAIRMAN KELLIHER: In anticipation --

13                  NRC CHAIRMAN DIAZ: They shut down, normally in  
14 anticipation, but it's called extended plant shutdowns.  
15 They have a problem, and then they were shut down for six  
16 months or longer.

17                  Now, that doesn't mean that's going to stay at  
18 zero, but the number, 5.6, was five percent, and that's a  
19 very significant number, and it's -- the graph is actually  
20 extremely revealing, in that they took care of the problems  
21 and they learned -- there was a learning curve -- to fix  
22 problems faster, better, and to satisfy regulatory  
23 requirements at the same time.

24                  FERC CHAIRMAN KELLIHER: Great, thank you. Any  
25 other comments?

1 (No response.)

2 FERC CHAIRMAN KELLIHER: Let me just correct a  
3 comment that I made earlier, that there is no docketed  
4 ongoing proceeding regarding Seabrook. We are aware of the  
5 NRC's concerns, but I referred to a docket earlier. There  
6 is no docket; there is no docketed ongoing proceeding.

7 And, with that, let me call up the second staff  
8 panel. Mr. Mayfield can stay where he is, I believe, and  
9 Mary Kipp, an attorney with the Division of Investigations,  
10 Office of Enforcement at FERC, thank you.

11 (Slide.)

12 MR. MAYFIELD: Well, good afternoon for the  
13 second time. I wanted to talk a bit about our Generic  
14 Letter on Grid Reliability and the Impact on Plant Risk and  
15 the Operability of Offsite Power.

16 Over the last several years, the NRC had been  
17 emphasizing the importance of the reliability of the grid  
18 and the means by which nuclear power plant operators are  
19 maintaining awareness of the condition of their offsite  
20 power sources.

21 We've been gathering information from our  
22 licensees through inspections, and, recently, through a  
23 Generic Letter that requests specific information relative  
24 to how licensees are complying with our requirements. If I  
25 could have the next slide, please?

1 (Slide.)

2 MR. McCLELLAND: I noted that we recently issued  
3 a Generic Letter to our licensees, requesting the specific  
4 information. This is one of the tools we use in  
5 communicating with our licensees.

6 Effective communications with our licensees and  
7 other stakeholders, is a mainstay of the NRC's regulatory  
8 program. We have a variety of tools we use in communicating  
9 with the licensees, and the slide depicts five of these  
10 tools:

11 The first is an Information Notice, which is used  
12 to inform the nuclear industry of recently-identified,  
13 significant operating experience that may have generic  
14 applicability.

15 The next step up is a Regulatory Issues Summary,  
16 which is an informational document that's used to  
17 communicate with the industry on a broad spectrum of  
18 matters.

19 Neither an Information Notice nor a Regulatory  
20 Issues Summary, require anything of the licensees. We would  
21 expect that they would review the information for  
22 applicability, but there is no requirement that they  
23 respond.

24 The Generic Letter is the next tool that we use,  
25 and this is, of course, the one we used in looking at the

1 grid reliability. The Generic Letter is used to address an  
2 emergent or routine technical issue that does have generic  
3 applicability.

4 Now, a Generic Letter requests information from a  
5 licensee, under 10 CFR 50.54(f), and it requires a written  
6 response. A Bulletin is the next tool that we use, and it's  
7 used to address significant issues having generic  
8 applicability, but that also have a great urgency associated  
9 with them.

10 The Bulletin requests information from or  
11 specifies and action by a licensee, and it also requires a  
12 written response from the licensee. Finally, the Commission  
13 can issue an Order, which is a written directive to modify,  
14 suspend, or revoke a license, to cease and desist from a  
15 given practice or activity, or to take such other action as  
16 may be proper.

17 I lay these out to give you a sense of where we  
18 are in terms of evaluating grid reliability and its impact  
19 on nuclear plant safety.

20 So we have sought information and we used a  
21 vehicle that mandates or requires a written response from  
22 our licensees, but it wasn't something where the urgency was  
23 such that we went to the Bulletin as a communication device.  
24 If I could have the next slide, please?

25 (Slide.)

1                   MR. McCLELLAND: As part of the process for  
2                   issuing a Generic Letter, the NRC staff must receive NRC  
3                   management endorsement addressing any public comments prior  
4                   to issuing the Generic Letter.

5                   The Generic Letter on Grid Reliability received  
6                   extensive public comment, mostly from the industry, and at  
7                   the direction of the Commission, the NRC staff held a public  
8                   workshop to further explain the basis for the Generic  
9                   Letter.

10                  The NRC issued the Generic Letter on Grid  
11                  Reliability in an effort to determine if compliance is being  
12                  maintained with NRC requirements, and to collect information  
13                  governing electric power sources.

14                  Effectively, in the Generic Letter, we described  
15                  what we believe constitutes compliance with the applicable  
16                  NRC regulations, and sought information from the licensees  
17                  to determine if we have a common understanding of that  
18                  compliance.

19                  We're specifically interested in how licensees  
20                  were addressing grid reliability in meeting our regulations  
21                  on offsite power requirements. In issuing this Generic  
22                  Letter, the NRC did not impose any new requirements on  
23                  nuclear power plant licensees; rather, we sought information  
24                  about how licensees are ensuring compliance with our  
25                  regulations. Next slide, please.

1 (Slide.)

2 MR. MAYFIELD: As I noted, the process for  
3 issuing a generic letter includes a public comment  
4 opportunity. About a year ago, the NRC issued the draft  
5 generic letter for public comment. Numerous comments were  
6 received, primarily from the industry and their  
7 representative organizations. The comments were addressed  
8 and a final version of the generic letter was prepared.

9 At the direction of the Commission, the NRC staff  
10 held a public workshop to further explain and clarify the  
11 questions contained in the generic letter. The workshop was  
12 held on January 9th and 10th of 2006. FERC staff agreed to  
13 participate in this workshop, focusing on the permissible  
14 information exchange between nuclear power plant operators  
15 and transmission system operations, which was one of the  
16 issues being raised by the industry.

17 The permissible exchange of information was the  
18 subject of considerable discussion and having the FERC staff  
19 participate in the workshop was a significant benefit to the  
20 NRC staff and to the workshop participants and something we  
21 very much appreciated. Susan and the other FERC staff that  
22 participated were able to effectively answer many of the  
23 questions that the nuclear plant operators were putting on  
24 the table.

25 The generic letter on grid reliability as

1       officially issued on February 1, 2006. The Federal Energy  
2       Regulatory Commission issued an interpretative order on  
3       February 16th to further clarify the standards of code for  
4       the exchange of information between nuclear power plant  
5       operators and transmission system operators. We believe  
6       this order has been very useful in furthering the dialogue  
7       on this issue.

8               Finally, I would note that all generic letter  
9       responses were received from our licensees by April 3, 2006.  
10      The generic letter focused on gathering information on how  
11      nuclear power plant operators monitor the offsite power  
12      system to determine whether offsite power is operable and  
13      capable of providing adequate power to the safety-related  
14      equipment in the nuclear power plant.

15             The NRC also focused on gathering information on  
16      how grid conditions are used in assessing and managing risks  
17      when equipment is taken out of service for maintenance  
18      during power operations, particularly where the contribution  
19      of that equipment to plant risk is sensitive to the  
20      availability of the offsite power. In the station blackout  
21      area, the NRC questioned the validity of the original  
22      assumptions used in assessing this issue in view of the  
23      recent loss of offsite power vents caused by grid failure.

24             May I have the next slide, please.

25             (Slide.)

1           MR. MAYFIELD: In addition to issuing the generic  
2 letter on grid reliability, the NRC issued a temporary  
3 instruction, which is a one-time inspection performed by NRC  
4 regional offices to gather information relative the  
5 readiness of nuclear power plants to assess grid-related  
6 events during the hot summer months of 2006. We have issued  
7 similar inspection requirements for the past two years and  
8 the 2006 inspection addresses some specific aspects of the  
9 2005 inspection results.

10           Our initial review of the temporary instruction  
11 responses has indicated that all licensees recognized the  
12 importance of offsite power, which is a very positive  
13 finding. We also continue to find that licensees vary  
14 widely in their responses to the offsite power concerns.

15           The NRC also issued an information notice to  
16 inform nuclear power plant operators of a recent Office of  
17 Nuclear Regulatory Research study that confirmed an increase  
18 in frequency of loss of offsite power and station blackout  
19 events during the summer months. This report is the subject  
20 of some continuing dialogue between the Office of Nuclear  
21 Regulatory Research and the Electric Power Research  
22 Institute. Both organizations are operating from the same  
23 data base, but the interpretation of that data is something  
24 where there is continuing dialogue to make sure that we all  
25 understand how to process the data and the conclusions that

1 should be drawn from it.

2 Next slide, please.

3 (Slide.)

4 MR. MAYFIELD: As I said, our preliminary  
5 assessment of the temporary instruction showed the nuclear  
6 power plants were prepared for continued safe operations  
7 through the summer of 2006. Furthermore, our initial review  
8 of the temporary instruction response has indicated that all  
9 licensees recognize the importance of offsite power, but  
10 continue to vary widely in their responses to the offsite  
11 power concerns.

12 Our initial assessment of the licensees responses  
13 to the grid reliability generic letter revealed that  
14 communication protocols between transmission operators and  
15 licensees do exist. The application and implementation of  
16 these protocols is something that is still under review.

17 This concludes my presentation. Thank you.

18 FERC CHAIRMAN KELLIHER: Thank you.

19 Ms. Kipp.

20 MS. KIPP: Good afternoon. My name is Mary Kipp  
21 and I'm an attorney in the FERC Office of Enforcement. I'm  
22 here today to provide an overview of the interpretative  
23 order in Docket No. RM01-10005 pertaining to FERC standards  
24 of conduct.

25 For ease of reference, when I say "Commission"

1 today, I'll be referring to FERC and I will refer to the  
2 Nuclear Regulatory Commission by name or as NRC.

3 Before delving into the interpretative order,  
4 I'll briefly describe the standards of conduct. In November  
5 2003, the Commission issued a final rule on standards of  
6 conduct for transmission providers in Order No. 2004, which  
7 became effective on September 22, 2004. The standards of  
8 conduct govern the relationship between FERC jurisdictional  
9 natural gas pipelines and electric public utilities, which  
10 are referred to as transmission providers and their  
11 marketing and energy affiliates.

12 As relevant here, energy affiliates can include  
13 nuclear power plants that generate electricity sold into the  
14 wholesale electric market. The standards of conduct are  
15 designed to prevent transmission providers from granting  
16 undue preferences to their marketing and energy affiliates.  
17 To that end, they contain various information-sharing  
18 prohibitions to help ensure that transmission providers  
19 don't use their access to information about transmission to  
20 unfairly benefit their own or their affiliates sales to the  
21 detriment of the competitive markets.

22 In the rulemaking proceeding for Order 2004, the  
23 Commission adopted several exceptions to the restraints on  
24 communications between transmission providers and their  
25 marketing and energy affiliates. These exceptions include

1 information needed to keep a system in operation in  
2 emergency conditions, information required to maintain the  
3 operations of the transmission system and to maintain  
4 interconnected facilities and information necessary to  
5 perform system dispatch.

6 As Mr. Mayfield told you, on January 9th, at the  
7 NRC's request, FERC staff participated in an NRC public  
8 workshop regarding its then proposed generic letter. During  
9 discussions, representatives of nuclear power plants  
10 expressed concern that the Commission's standards of conduct  
11 limit the ability of nuclear power plants to comply with all  
12 the requirements of the NRC and to answer the questions  
13 posed by the generic letter.

14 In response to those expressions of concern, on  
15 February 16, 2006, the Commission issued an interpretative  
16 order relating to the standards of conduct. The order  
17 eliminates any ambiguity as to whether the Commission's  
18 rules were intended to impede communication regarding safety  
19 and reliability between transmission providers and their  
20 affiliated nuclear power plants.

21 In that order the Commission clarifies that  
22 transmission providers may communicate with affiliated and  
23 non-affiliated nuclear power plant personnel to permit  
24 compliance with the NRC's requirements of its draft generic  
25 letter. The Commission also recognizes that in addition to

1        permitting communications necessary to operate and maintain  
2        the transmission system, the transmission provider and its  
3        interconnected nuclear plant must engage in certain limited  
4        communications to operate and maintain the interconnection  
5        and the safety and reliability of the nuclear power plant.

6                The order provides that such communications  
7        include those between transmission control center and the  
8        nuclear power plant control room regarding switching,  
9        output, transformer availability, opening or closing  
10       breakers and other operational parameters necessary to  
11       maintain the safety and reliability of the transmission  
12       system and then nuclear power plant. They also encompass  
13       information necessary to coordinate switching and  
14       maintenance at the interconnected nuclear plants.

15               Finally, they include information on grid  
16       disturbances and the duration of power and availability in  
17       order for the nuclear power plant to plan for offsite power  
18       in the event of a grid-related loss of power or station  
19       blackout. The order also reemphasizes that transmission  
20       providers can communicate any information to nuclear power  
21       plants if that information is simultaneously posted on OASIS  
22       and they can take whatever steps are necessary to keep a  
23       system in operation under emergency conditions. The order  
24       reiterates, however, that the nuclear power plant operator  
25       may not serve as a conduit for information sharing with

1 employees of other marketing or energy affiliates.

2           Although the Administrative Procedure Act does  
3 not require notice or comment on interpretative order, the  
4 Commission, nonetheless, invited comment from all interested  
5 parties. Two parties submitted comments. In its comments,  
6 Eselon Corporation asked that the Commission reaffirm the  
7 interpretative order with some additional clarifications.  
8 Eselon requests that the Commission clarify whether an  
9 affiliated transmission provider can provide a nuclear power  
10 plant specific information about transmission system  
11 conditions on a real-time basis. Eselon suggests that such  
12 information include a technical description of the grid  
13 disturbance and its specific location on the system, the  
14 grid elements that may be affected by the disturbance, the  
15 projected duration of the disturbance and the steps being  
16 taken by the transmission provider to resolve the  
17 disturbance.

18           The Nuclear Energy Institute filed a letter in  
19 support of Eselon's comments. And, as Commission Merrifield  
20 has already stated in that letter, NEI also says that  
21 industry believes that while the NRC has regulatory  
22 authority over the safe operations of nuclear power plants,  
23 only FERC and NERC have authority over nuclear power plants  
24 interactions with transmission providers.

25           That concludes my presentation.

1                   FERC CHAIRMAN KELLIHER: Great. Thank you very  
2 much.

3                   Any questions? Mr. McGaffigan?

4                   NRC COMMISSIONER McGAFFIGAN: It's more just an  
5 addition and I'll start by complimenting Commissioner  
6 Merrifield.

7                   When we first received the final proposed staff  
8 generic letter -- I think it was last December -- he and I  
9 had a conversation soon thereafter and we discussed his  
10 converting that to a voting matter because we were concerned  
11 that the staff needed an additional round of interaction. I  
12 don't think, in all honesty, we were wise enough to know  
13 that a key part of that was interaction with FERC, but it  
14 turned out to be absolutely essential for us to be able to  
15 get the answers that we wanted to get in a timely way.

16                   I'm afraid, if we hadn't had the meeting, we  
17 would have got a lot of answers back saying pending FERC  
18 clarifying by interpretative order -- you know, this matter  
19 of information sharing we can't answer. In this case it  
20 shows a little bit of interaction between the Commission and  
21 the staff and it was unanimous, I think, in the Commission  
22 that we needed to have additional public interaction before  
23 this document was made final and we look wise in retrospect  
24 now.

25                   I'm not sure we were quite wise enough to know

1 that FERC was the essential element.

2 NRC COMMISSIONER MERRIFIELD: I would agree with  
3 that characterization. I think, overall, the process has  
4 worked well. Like Commissioner McGaffigan said, I'm glad we  
5 took the extra time to do that. I think it made for a  
6 better product. I think it showed off the opportunity for  
7 our staffs to work together and benefitted from all the work  
8 that Susan and your staff put in to helping us there.

9 I disagree with the NEI letter, but we've already  
10 talked about that.

11 NRC CHAIRMAN DIAZ: I was just going to make a  
12 comment. I was looking at Ms. Kipp when she was talking  
13 about how we have a separation. This separation between  
14 what the NRC and what FERC can do is not uncommon to us. We  
15 actually experience this in many places. For example, the  
16 last few years we actually have an ongoing relationship with  
17 the Department of Homeland Security in which they have  
18 authority what we call outside of the fence and we have the  
19 authority inside of the fence. That fence sometimes is not  
20 very clearly defined.

21 However, having said that and having established  
22 the fact that we have different areas of responsibility,  
23 what makes it work is the communication between the two  
24 agencies of the government. In the particular case of the  
25 FERC and the NRC, I think you're going to find the same

1 thing as time goes on that there is a separation and that we  
2 understand pretty much what the separation is. But  
3 sometimes the fence is not clear and when the fence is not  
4 clear is where we need to probably increase our  
5 communication between the two agencies and bring the  
6 licensees in I think is an important issue because they have  
7 a major stake in what's happening.

8 FERC CHAIRMAN KELLIHER: I just would like to  
9 comment that our interpretative order really was, as has  
10 already been acknowledged, was the product of our close  
11 relationship between the two agencies. It was one Susan  
12 participated in your January 9th and 10th public workshop on  
13 the generic letter that we really came to understand the  
14 licensees' complaints and their perceptions that the  
15 standards of conduct rule was impeding communication, so  
16 we've already seen some fruit of our relationship in that  
17 respect.

18 Colleagues?

19 (No response.)

20 FERC CHAIRMAN KELLIHER: No? Yes.

21 NRC COMMISSIONER JACZKO: I have one question to  
22 clarify.

23 One of the points you talked about, Ms. Kipp, was  
24 the -- as part of the order, one of the techniques that they  
25 can use to do this communication is to simultaneously post

1 on a particular website, OASIS. Could you describe what  
2 OASIS is and whether you perceive that as being a primary  
3 means for them to communicate this information?

4 MS. KIPP: OASIS is a acronym for Open Accessing  
5 Time Information System and it's routinely used by regulated  
6 entities to post information such as this so that everyone  
7 has equal access to the information.

8 I don't frankly know enough about what the needs  
9 of the nuclear plants are to say whether I think that would  
10 be a primary way to communicate this information or not.

11 NRC COMMISSIONER JACZKO: Probably, from the  
12 transmission side, though, it is regularly used by  
13 transmission side as a way to post real-time information?

14 MS. KIPP: Yes, it is.

15 NRC COMMISSIONER JACZKO: Mr. Mayfield, you could  
16 comment. I'm not sure if you're familiar with OASIS or not.

17 MR. MAYFIELD: By virtue of a couple of two-  
18 minute explanations, so, no, sir. I'm not really in a  
19 position to say whether I think it would be useful for this.  
20 It's absolutely something we can continue the dialogue on.

21 NRC COMMISSIONER JACZKO: Thank you.

22 MS. COURT: Commissioner, actually, the FERC in  
23 1996 required information to be posted on OASIS in Order No.  
24 889 and then, subsequently, in the standards of conduct  
25 rulemaking, which Ms. Kipp mentioned, Order No. 2004, also

1 required that this type of information to avoid the  
2 prohibition against communication that might give an  
3 affiliate an undue advantage required that information be  
4 posted on OASIS.

5 For electricity providers, it is the major way of  
6 -- transmission providers I mean it's the major way of  
7 communicating to the market.

8 NRC COMMISSIONER JACZKO: Thank you.

9 NRC COMMISSIONER McGAFFIGAN: Mr. Chairman, do  
10 you number your orders consecutively? Did you go from 889  
11 to 2004?

12 (Laughter.)

13 FERC CHAIRMAN KELLIHER: No, we skipped around.  
14 Order 888 wasn't in sequence. That's the building address,  
15 if you've noticed. Order 888 was the Commission's landmark  
16 transmission open access order. That might have been the  
17 first time, but since then we've taken some order numbers  
18 out of sequence. I haven't yet done that, but I have to  
19 note we did skip Order 666.

20 (Laughter.)

21 FERC CHAIRMAN KELLIHER: We kept the sign of the  
22 beast in reserve for further action. But, beyond that,  
23 we've gone in straight numerical sequence since I've been  
24 chairman.

25 NRC COMMISSIONER McGAFFIGAN: Thank you.

1                   NRC COMMISSIONER MERRIFIELD: Perhaps because  
2 we're more of an engineering agency, I'm reminded we have an  
3 advisory committee on reactor safety that sends us letters  
4 updating us on their activities on behalf of the agency and  
5 I think they're up to letter No. 540 or something of that  
6 nature, being an engineering-based rather than a lawyer-  
7 based agency, perhaps we're a bit more focused on the  
8 numerology.

9                   (Laughter.)

10                  FERC COMMISSIONER BROWNELL: Or maybe the  
11 billable hours aren't as high.

12                  (Laughter.)

13                  FERC CHAIRMAN KELLIHER: Any other questions for  
14 the second panel?

15                  (No response.)

16                  FERC CHAIRMAN KELLIHER: No. Okay. Thank you  
17 very much.

18                  Why don't we call the third staff panel. That's  
19 Michael J. Case, the Director of Inspection and Regional  
20 Support, NRC and our own Joe McClelland, who is the Director  
21 of the Division of Reliability, Office of Energy Markets and  
22 Reliability, FERC.

23                  Thank you gentlemen.

24                  MR. CASE: Good afternoon. My name is Michael  
25 Case and I'm the Director of the Division of Inspection and

1 Regional Support for the NRC.

2 I have three rather broad topics to cover on our  
3 reactor oversight process, consensus standards and our  
4 interactions with the Institute for Nuclear Power Operations  
5 and not a great deal of time to do it, so I'll get right to  
6 it.

7 We'll start with Slide 1. Let's start with the  
8 inspection and assessment program.

9 (Slide.)

10 MR. CASE: Oversight process is a risky form  
11 tiered approach to ensuring plant safety. There are three  
12 key strategic performance areas -- the areas of reactor  
13 safety, radiation safety and safeguards.

14 Within each of the strategic performance areas  
15 are cornerstones that reflect the essential safety aspects  
16 of facility operation. Satisfactory licensee performance in  
17 these cornerstone areas provides reasonable assurance of  
18 safe facility operation and that the NRC safety regulations  
19 are being met.

20 Within this general framework of strategic  
21 performance areas and cornerstones, the reactor oversight  
22 process provides a means to collect information about  
23 licensee performance, assess the information for its safety  
24 significance and provide for appropriate licensee and NRC  
25 response.

1                   Because there are many aspects of facility  
2 operations and maintenance, the NRC inspects utility  
3 programs on a risk informed sampling basis to obtain  
4 representative information.

5                   (Slide.)

6                   MR. CASE: Moving on to the second slide, in its  
7 design and implementation -- and it started back in the 1999  
8 timeframe -- so we're in the sixth year of implementation.  
9 The reactor oversight process tried to achieve the  
10 characteristics of being objective, predictable,  
11 understandable, risk informed and open. An overview of the  
12 reactor oversight process is provided on the next slide.

13                   (Slide.)

14                   MR. CASE: For each cornerstone areas, we  
15 developed findings from inspections and the licensee  
16 collects performance indicator data. The inspection  
17 findings are evaluated for safety significance using the  
18 significance determination process and the performance  
19 indicator data is compared against prescribed risk-informed  
20 thresholds. The resulting information is then assessed and  
21 appropriate NRC responses determined using guidelines in a  
22 predetermined action matrix. Typically, action includes  
23 supplemental inspections for selected issues. Enforcement  
24 action is taken on significant inspection findings as  
25 appropriate.

1           The NRC communicates the results of its  
2 performance assessment and its planned actions in a  
3 publicly-available correspondence on its website and through  
4 public meetings with each licensee.

5           The NRC quarterly review of plant performance,  
6 using both the performance indicator data and the inspection  
7 findings will determine what additional actions it will take  
8 if there are any signs of declining performance. This  
9 approach to enforcement is intended to be more predictable  
10 than previous practices by linking regulatory actions to  
11 prescribed performance criteria. The reactor oversight  
12 process utilizes multiple levels of regulatory response with  
13 NRC regulatory review increasing as performance declines.

14           The first two levels of heightened regulatory  
15 review are managed by the appropriate regional office. The  
16 next two levels call for an agency response involving senior  
17 management attention from both the headquarters and regional  
18 offices. The NRC action for performance that declines below  
19 the licensee response level may include meetings with the  
20 utility, additional inspections and required corrective  
21 action and response by the utility. Further declines in  
22 performance would warrant stronger actions by the NRC,  
23 including an order or even suspension of the utility's  
24 operating license.

25           Now moving on to the standards issue, a key

1 building block in the inspection program is the inspection  
2 finding which involves a performance deficiency where the  
3 licensee fails to satisfy a regulatory requirement or an  
4 accepted industry-wide standard or practice. Therefore, the  
5 predictable application of the inspection program requires a  
6 solid understanding of the safety standards under which the  
7 licensee operates the facility. The primary mechanism for  
8 designing requirements and standards for these activities is  
9 through the imposition of legally-binding requirements  
10 contained in Title 10 of the Code of Federal Regulations,  
11 primarily Part 50. These requirements are imposed by  
12 rulemaking process which conforms with the Administrative  
13 Procedures Act and involves public participation.

14 Current NRC regulations include detailed  
15 technical requirements covering the design, construction and  
16 operations of the facilities. The requirements address a  
17 variety of topics, including engineering standards,  
18 radiation protection and emergency preparedness. They also  
19 include overarching requirements related to quality  
20 assurance, corrective action programs and other licensee  
21 programs. These requirements are derived from a variety of  
22 sources including research results, operating experience and  
23 engineering practice.

24 One important source of information is the  
25 industry consensus standard process. In accordance with the

1 National Technology Transfer and Advancement Act, the NRC  
2 participates in numerous standard development organizations  
3 such as the Institute of Electrical and Electronic  
4 Engineers, IEEE, and the American Society of Mechanical  
5 Engineers, ASME, to define the codes and standards. In some  
6 cases these codes and standards are incorporated into our  
7 requirements through the rulemaking process.

8 In order to promote an efficiency and uniformity  
9 in licensing, the NRC also publishes an extensive regulatory  
10 guidance covering every aspect of design and operation. As  
11 in the case with the regulations themselves, the guidance is  
12 derived from a variety of sources, including the consensus  
13 standard process. The development and modification of  
14 regulatory guidance follows a process that includes public  
15 participation once again. Regulatory guidance may accept  
16 codes and standards, either entirely or with described  
17 exceptions. Licensed applicants or licensees are not  
18 required to follow this guidance and they may define  
19 alternate methods for complying with our regulations.  
20 However, they are strongly encouraged to follow the guidance  
21 because of efficiency and the desire for uniformity.

22 NRC regulations also specify processes to be used  
23 for important decisions such as issuance and modifications  
24 to licenses. The licensing process involves extensive  
25 interaction between the applicant, the staff and it

1 includes, once again, public participation. For example,  
2 the conditions of licenses constitute legally-binding  
3 requirements and Joe, in his presentation, talked about the  
4 technical specifications for a nuclear reactor and they lay  
5 out the minimum conditions under which the plant can  
6 operate. Failure to meet those conditions places a  
7 requirement on the facility to cease operation until the  
8 problem is resolved. As with rules and regulatory guidance,  
9 technical specifications may also incorporate provisions  
10 from consensus codes and standards.

11 (Slide.)

12 MR. CASE: Moving on to the Institute of Nuclear  
13 Power Operations on the next slide, although not a consensus  
14 standard body, the Institution for Nuclear Power Operations  
15 and the NRC also interact on licensee performance issues.  
16 Institution for Nuclear Power Operations or NPO is a non-  
17 governmental organization sponsored by the nuclear utility  
18 industry whose mission is to promote the highest levels of  
19 safety and reliability in the operation of nuclear  
20 electrical generating plants.

21 The NRC, of course, is focused on the public  
22 health and safety mission. As such, the NRC and NPO  
23 undertake complimentary, but independent, activities. A  
24 memorandum of agreement is used to help ensure the goals of  
25 both organizations are achieved in the most efficient and

1 effective way without diminishing or interfering with our  
2 responsibilities and authorities and the goals of NPO.  
3 There's three main areas where we interact with NPO. Those  
4 are the coordination and exchange of operating experience  
5 data, the coordination of NRC inspections and NPO evaluation  
6 activities and, finally, the observation and coordination on  
7 training-training-related activities.

8 Of these three main areas, it's in the training  
9 area that NPO and NRC activities are most closely  
10 interwoven. As an underlying assumption of the coordination  
11 plan, the NRC recognizes that NPO's training accreditation  
12 process and the associated training evaluation activities  
13 they undertake is an acceptable means for self-improvement  
14 and training. Such recognition allows industry initiative  
15 and reduces NRC inspection activities.

16 The NRC recognizes that NPO training  
17 accreditation process is a means, but not a requirement for  
18 meeting the NRC rules on training and qualification of  
19 nuclear power plant personnel. NPO, on their part, provides  
20 us access to the NPO documents, the criteria they used, the  
21 information that they gather and gives us an opportunity to  
22 observe selected NPO activities related to training and  
23 accreditation.

24 NRC COMMISSIONER MERRIFIELD: Mr. Case, let me  
25 just clarify because I think we're very familiar talking

1 about NPO and that's a topic, obviously, which is not as  
2 familiar to the folks here at the FERC.

3 Our focus is really on regulatory requirements  
4 and NPO, setting aside training, where there is more of the  
5 interaction that Mr. Case has spoken of, is in access of our  
6 regulatory requirements. That's really the drawing line.  
7 Their focus isn't on assisting utilities and meeting our  
8 regulatory requirements. It's really going in access of  
9 those. Their own programs pursue excellency. That's how  
10 they characterize their activities and just to put that into  
11 context I think is important in this presentation.

12 MR. CASE: That's absolutely correct. They're  
13 looking for operational excellency and we're looking for the  
14 minimum regulatory requirements -- adequate requirements.  
15 So, in as much as we can cooperate in those areas, we take  
16 advantage of those cooperations. You see most of that  
17 cooperation in the training areas -- the most well-developed  
18 area.

19 FERC COMMISSIONER BROWNELL: Could I just add on  
20 to that because that's a good distinction and I still am not  
21 sure I understand?

22 If NPO develops best in class standard, you have  
23 a -- not least in class, but better in class rule. Would  
24 that drive you to reconsider or I'm --

25 MR. CASE: No. We have our regulatory

1 requirements -- adequate assurance.

2 FERC COMMISSIONER BROWNELL: Right.

3 MR. CASE: What NPO attempts to do this, and they  
4 do this through peer reviews as well as their own  
5 professional staff based in Atlanta, is to look at best  
6 practices and enhance both the performance and safety of the  
7 plants in access of those regulatory adequate assurance  
8 standards.

9 FERC COMMISSIONER BROWNELL: Okay. Thank you.

10 FERC CHAIRMAN KELLIHER: I think we're aware it's  
11 different because our construct is admittedly different than  
12 the electric industry where we have a new organization and  
13 we haven't had anything like it before -- well, at some  
14 point after the Commission certifies an ERO, we will have an  
15 electric reliability organization.

16 NPO is a reasonable proxy for NPO in the nuclear  
17 safety arena, but it's not exact and NPO is not a self-  
18 regulating organization. Right? The ERO will be. The ERO  
19 will have some delegated enforcement authority. NPO  
20 doesn't. What we would like -- at the end of the day, I  
21 think we'd like to have the ERO propose reliability  
22 standards to FERC. We make them effective. When we approve  
23 them, those standards are enforceable and they will have  
24 some enforcement responsibility. We will have ultimate  
25 enforcement responsibility, but we want them to have -- the

1 NPO aspect I think we really want the ERO adopt is the  
2 notion of promoting excellence beyond compliance and the  
3 trick will be, at least in the NRC context is you have two  
4 separate organizations. You have the government  
5 establishing and enforcing standards directly and you have a  
6 private sector organization that has a completely different  
7 responsibility -- promoting excellence. It won't be quite  
8 as neat in our arena where we'll have a private body  
9 developing standards, proposing them to us. We're  
10 establishing them. They have some enforcement authority.  
11 We do. We also want them to promote excellence beyond  
12 compliance. It's going to be different.

13 One reason we're talking about the NPO model in  
14 the area of electric reliability is that it's the only self-  
15 regulating organization like body that the electricity  
16 industry is familiar with. The other ones are basically  
17 commodity exchanges, securities exchanges. They're not ones  
18 that will resonate really with the electricity industry as  
19 well as NPO because NPO's respected.

20 NRC COMMISSIONER McGAFFIGAN: I just might add  
21 that one thing that constrains us, in my view -- at times  
22 overly constrains us and it goes to Nora's question is we  
23 have something called the Backfit Rule and it requires not  
24 just that the cost be less than the benefits. The benefits  
25 be more than costs, but that there be a substantial increase

1 in public health and safety or common defense and security  
2 as a result of this action. It's the word "substantial."  
3 Even if something is cost effective and may have up the  
4 ante, our rule 10 CFR 50109 requires us, at that point, to  
5 make both determinations. That the benefits exceeds costs  
6 and that there's a substantial increase in public health and  
7 safety.

8 This sort of dates from the post-TMI period where  
9 the commission send and then that commission said further  
10 commissions shall not send. Send in the sense of throwing  
11 the kitchen sink at the industry in the post-TMI era without  
12 perhaps total discipline. I'm on record over the years as  
13 not the greatest fan of the Backfit Rule because our foreign  
14 counter-parts, without a Backfit Rule, tend to have a lot  
15 more backfits that they require usually in the 10-year  
16 periodic update basis.

17 One commissioner -- I'm sure my colleagues have  
18 very different views -- I would not recommend that you  
19 hamstring yourself with the Backfit Rule as you go forward.

20 (Laughter.)

21 NRC CHAIRMAN DIAZ: Can we comment on that one?

22 I disagree. I think the Backfit Rule serves a  
23 good purpose. It might not be that at all times we really  
24 need to go beyond where we are. I think there is a pressure  
25 that I think is a healthy pressure, both from the NRC and

1 from NPO that is demanding. I think the results are clear  
2 that people take safety, not only seriously, but make safety  
3 first. Then they connect safety and reliability in a very,  
4 very direct fashion. We don't. We think reliability is  
5 there because safety is there. They might think the other  
6 way around. The reality is that both get to work together.

7 NRC COMMISSIONER McGAFFIGAN: I think you framed  
8 it in a way that I feel comfortable saying I agree. Very  
9 good.

10 FERC CHAIRMAN KELLIHER: Mr. Case, you were  
11 almost done.

12 MR. CASE: I am done. That was almost a perfect  
13 segway by Commissioner Merrifield to the discussion part.

14 I just wanted to thank you for the opportunity  
15 for explaining some of our programs in a very short period  
16 of time.

17 FERC CHAIRMAN KELLIHER: Thank you.

18 NRC COMMISSIONER JACZKO: Mr. Chairman?

19 FERC CHAIRMAN KELLIHER: Yes, sir.

20 NRC COMMISSIONER JACZKO: Before we leave the  
21 topic perhaps of NPO, I think I can offer some additional  
22 thoughts on NPO; particularly, as you start to look at your  
23 relationship with the electric reliability organization.

24 One of the things I think is important to  
25 distinguish between the NRC and NPO is -- an important

1 aspect of that is the information accessibility. NPO  
2 operates as an industry self-regulatory body and, as such,  
3 information that they collect that they obtain is, more  
4 often than not, proprietary information. It's accessible to  
5 the NRC for internal use, but not necessarily for public  
6 dissemination and I think that's an important aspect of our  
7 relations. One that, in my view, is something we might try  
8 and work to improve a little bit our ability to use  
9 information that we get from NPO because it can often be  
10 helpful in making a safety case that need or identifying  
11 issues that may have identified.

12 It is very much an industry-focused group that  
13 provides information to the industry for their own  
14 betterment and improvement, but doesn't serve as the NRC's  
15 role, which is assuring the public health and safety in that  
16 function.

17 FERC CHAIRMAN KELLIHER: Thank you.

18 Mr. Case, are you concluded?

19 (No response.)

20 FERC CHAIRMAN KELLIHER: Mr. McClelland?

21 MR. McCLELLAND: Thank you, Mr. Chairman.

22 With me today is Rege Binder. He's our group  
23 manager of safety and security.

24 In this presentation I'll discuss the  
25 Commission's new authority over reliability pursuant to the

1 Energy Policy Act of 2005. On August 8, 2005, President  
2 Bush signed the Energy Policy Act of 2005 into law. Title  
3 12, Electricity, Subtitle A, Reliability Standards, Section  
4 1211 called for the enactment of mandatory reliability  
5 standards for all users, owners and operators of the Bulk  
6 Power System. The Commission was named as the government  
7 agency to oversee these standards.

8 As part of the implementation of EAct, the  
9 Commission issued Order 672 on February 3, 2006. The order  
10 details the rules concerning the certification of the  
11 Electric Reliability Organization or ERO and the procedures  
12 for the establishment, approval and enforcement of the  
13 electric reliability standards.

14 I guess I should back up and say, for the  
15 purposes of this presentation, I'll follow Ms. Kipp's  
16 convention. Therefore, when I say the "Commission," that  
17 shall mean the Federal Energy Regulatory Commission and,  
18 when I refer to the NRC, I'll simply say NRC. She untied a  
19 very serious knot for me in this presentation.

20 Thank you, Mary.

21 (Laughter.)

22 MR. McCLELLAND: The North American Electrical  
23 Reliability Council or NERC has filed the only application  
24 with the FERC to become the ERO in the United States as well  
25 as a request that NERC's existing 102 reliability standards

1 be approved as mandatory and enforceable under the Federal  
2 Power Act. In general, the model established by Congress in  
3 EPAct is for the ERO to develop and propose reliability  
4 standards to the FERC and then for the FERC to approve or  
5 remand them back to the ERO for development.

6 The Commission can also, and I'm quoting from the  
7 EPAct, "Upon its own motion or upon complaint, may order the  
8 ERO to submit to the Commission a proposed reliability  
9 standard or modification to a reliability standard that  
10 addresses a specific matter if the Commission considers such  
11 a new or modified reliability standard appropriate to carry  
12 out this section."

13 Once a reliability standard is approved by the  
14 Commission, the ERO has the primary responsibility to  
15 enforce it with Commission oversight. The Commission,  
16 however, retains the right to conduct independent  
17 enforcement actions.

18 EPAct also requires the ERO to perform  
19 reliability and adequacy assessments for the Bulk Power  
20 System in North America. The FERC's regulations clarify  
21 that the frequency of these reports are to be determined by  
22 the FERC. In addition, the Commission's Order 672 requires  
23 the ERO to develop and file with the Commission within one  
24 year of certification reliability enhancement programs to  
25 improve the reliability of the Bulk Power System.

1                   As part of Congress' reliability model, the ERO  
2 may delegate, with Commission approval, some of its  
3 functions to regional entities. Such functions primarily  
4 involve the enforcement of the reliability standards.  
5 However, even after such a delegation, the ERO still has the  
6 primary responsibility for those functions and must oversee  
7 how the regional entities carry them out.

8                   NERC filed, as part of its certification  
9 application, a pro forma delegation agreement which it  
10 proposes to use as the framework for delegating functions to  
11 the regional entities.

12                   Next slide, please.

13                   (Slide.)

14                   MR. McCLELLAND: A requirement that provides for  
15 a reliability is a requirement that provides for reliability  
16 operation of the Bulk Power System and can be a mandatory  
17 reliability standard. A reliability standard may address  
18 operations, cyber security or the design of planned  
19 facilities. It may not require the construction of new  
20 facilities.

21                   Next slide, please.

22                   (Slide.)

23                   MR. McCLELLAND: EPAct's definitions go beyond  
24 transmission facilities in order to encompass all of the  
25 elements necessary for the reliability operation of the Bulk

1 Power System. EPAct's definition of Bulk Power System  
2 includes facilities and control systems necessary for  
3 operating an interconnected electric energy transmission  
4 network. It also includes generated energy needed to  
5 maintain transmission system reliability. The term "Bulk  
6 Power System" encompasses facilities, control systems and  
7 energy. It specifically excludes, however, facilities used  
8 in the local distribution of electric energy.

9 Next slide, please.

10 (Slide.)

11 MR. McCLELLAND: Once approved by the Commission,  
12 reliability standards are mandatory and apply to users,  
13 owners and operators of the Bulk Power System. The  
14 Commission's Order 672 established a process facilitated by  
15 the regional entities in which users, owners and operators  
16 of the Bulk Power System register with the ERO. It is  
17 anticipated that there will be more entities subject to the  
18 reliability standards under EPAct than currently follow the  
19 NERC standards.

20 NERC has proposed the Commission decide instances  
21 when an entity denies responsibility under the reliability  
22 standards. EPAct calls for the development of a reliability  
23 standard to be an open and balanced process that starts at  
24 the ERO or a regional entity. Only the ERO can propose  
25 reliability standards to the Commission. If the reliability

1 standard originates at a regional entity, it must first go  
2 through an approval process at the ERO. After which, the  
3 ERO can propose it to the Commission. Reliability standards  
4 only becomes mandatory under the Federal Power Act after the  
5 Commission approves it. When a reliability standard is  
6 filed with the FERC, the Commission may approve it or remand  
7 it to the ERO for further development with whatever guidance  
8 the Commission deems appropriate.

9 In addition, and we covered this prior, but I  
10 thin it's worth reiterating. Upon its own motion or a  
11 complaint, the Commission may order the ERO to develop a new  
12 reliability standard to address reliability concerns. The  
13 Commission may also order the ERO to modify an existing  
14 reliability standard to address reliability concerns. In a  
15 case where the Commission remands a proposed standard or  
16 orders the development of a new standard or the modification  
17 of an existing standard, the Commission may order a deadline  
18 by which the proposed new or modified reliability standard  
19 must be submitted.

20 Next slide, please.

21 (Slide.)

22 MR. McCLELLAND: Enforcing standards. One of the  
23 primary means of enforcing liability standards is through  
24 the compliance audits conducted by the ERO and regional  
25 entities. If a violation of a reliability standard is

1 detected, the ERO or regional entity may take remedial  
2 actions immediately without Commission approval. Remedial  
3 actions are not penalties as defined in EPAct. Examples of  
4 remedial actions are letters to the CEO of the offending  
5 entity, development of a remediation plan with deadlines or  
6 additional training requirements.

7 In addition to any remedial actions, the ERO and  
8 regional entity may impose a monetary or non-monetary  
9 penalty for the violation of a reliability standard.  
10 Notices of penalties must be filed with the FERC by the ERO.  
11 The alleged violator may apply to the Commission to review  
12 the proposed penalty. The Commission may also review the  
13 penalty on its own motion. If the Commission takes no  
14 action, the penalty goes into effect on the 31st day after  
15 the filing.

16 The Commission will determine on a case-by-case  
17 basis whether a proceeding to review an enforcement penalty  
18 should be non-public. Concerns such as cyber security  
19 vulnerabilities and other disclosures that would jeopardize  
20 system security will be considered in making these  
21 determinations.

22 Next slide. There's a lot of information, so I'm  
23 moving very quickly.

24 (Slide.)

25 MR. McCLELLAND: Users, owners and operators of

1 the Bulk Power System are not required to become members of  
2 the ERO nor do they have to be ERO members to participate in  
3 the development of standards. In addition to obtaining  
4 certifications, the Electric Reliability Organization from  
5 the FERC the ERO must seek recognition as to reliability  
6 organizations in Canada and Mexico.

7 The ERO's rules as well as changes to them are  
8 subject to FERC approval. Order 672 requires the ERO to  
9 periodically demonstrate that its satisfies on an ongoing  
10 basis the statutory criteria to qualify as the ERO.

11 The Commission has also directed the ERO to use  
12 these periodic assessments to demonstrate that it is  
13 improving the quality of its activities and those of the  
14 regional entities. As part of this process, the ERO must  
15 explain how it considers and responds to recommendations for  
16 improvement received from regional entities or from users,  
17 owners and operators of the Bulk Power System.

18 The public will have an opportunity to comment on  
19 these assessments.

20 The FERC is responsible to oversee the ERO's  
21 performance. This includes reviewing and approving the  
22 annual budgets for the ERO and for the regional entities to  
23 carry out their duties delegated to them by the ERO under  
24 the statutory obligations.

25 The Commission can order the ERO or a regional

1       entity to fulfill its responsibilities. The Commission can  
2       take action against the ERO or regional entity for non-  
3       compliance with its orders. Actions may include remedial  
4       steps and improvement programs, civil penalties, suspension  
5       or even decertification.

6                This concludes my worldwind explanation of the  
7       Energy Policy Act. Thank you for your kind attention.

8                FERC CHAIRMAN KELLIHER: Great. I want to thank  
9       both of you for your presentations, both Mr. Case and Joe,  
10       because the reliability responsibility that we're given by  
11       EPAct it's really different than what we do in most other  
12       areas.

13               We're generally an economic regulatory body.  
14       We've had safety responsibility really in two areas up to  
15       this point -- hydro projects; we're responsible for safety  
16       for FERC-regulated hydro products; and in more recent years  
17       LNG projects, the import facility we ensure the safety of  
18       those--and now this new responsibility is more like what you  
19       do than what we do historically.

20               So it's helpful to have the overview of how NRC  
21       assures the safety of existing operating project. I think  
22       it was a good overview from both agencies on how you do work  
23       in the area of nuclear safety regulations and how we propose  
24       to do our work in the area of electric reliability.

25               My colleagues have any questions?

1                   FERC COMMISSIONER BROWNELL: I do. I know  
2 everybody is going to hate me, so I'll talk fast.

3                   Mr. Case, I'm sorry to leave you on the hook. On  
4 page 3 you talked about the significance determination  
5 process and then you have some subsets. Could you just  
6 explain that a little more for me?

7                   MR. CASE: This sort of gets to the some of the  
8 Chairman's comments on safety significance and risk  
9 importance.

10                   When we find issues in the inspection program,  
11 the significant determination process helps us put it in a  
12 safety context so that we can find the ones that are more  
13 important than the others. That's sort of what it does. A  
14 lot of our findings are actually of very low safety  
15 significance. Some through this process are actually of  
16 higher safety significance, so we focus on those. That  
17 helps both us and the licensee focus on the matters that are  
18 most significant for safety.

19                   FERC CHAIRMAN KELLIHER: May I interrupt. This  
20 is how you do triage, for example. You're trying to decide  
21 the seriousness of an event or an incident?

22                   MR. CASE: An inspection finding -- they may go  
23 out in the field and find something. It may stem from an  
24 event.

25                   FERC CHAIRMAN KELLIHER: Thank you.

1                   FERC COMMISSIONER BROWNELL: Just to continue  
2 along that line because it's something we've talked to NERC  
3 about as next steps. If you have, for example, 50 rules, do  
4 you designate the numbers 1 through 10 or whatever would be  
5 cardinal sins, would be real serious as oppose to those less  
6 thresholds? Is that done up front? If I'm being inspected  
7 and I know if I fail these three, then I'm probably going to  
8 be chatting with the Commission more regularly.

9                   MR. CASE: I see Commissioner McGaffigan shaking  
10 his head.

11                   NRC COMMISSIONER McGAFFIGAN: That's not the way  
12 it works. The significance determination process takes an  
13 event -- the Davis-Besse event is a red. Most are green --  
14 very low safety significance. I think that the way a  
15 licensee figures out what's important -- I mean they should  
16 know it already, but they can see how they can get into the  
17 wrong box in a significance determination process for that  
18 cornerstone. That tells them what we regard as important.  
19 You have to work at it to get something that's red or  
20 yellow. We have four colors, not unlike the traffic lights.  
21 We have green, white, yellow and red. That's the order in  
22 which we go, but we don't -- our rules are complex and they  
23 don't lend themselves to this rule, which is more important.  
24 It's just that if you violate some of these rules, you're  
25 going to get yourself into deeper trouble quicker.

1                   NRC CHAIRMAN DIAZ:  It's more than a rule.  It's  
2 actually the accumulated experience and the probablistic  
3 risk assessments and the determination has been made.  The  
4 significance determination process is complex in itself.  In  
5 fact, if you look at the list of attributes in there, the  
6 one that I might argue with it is understandable.  It's not  
7 that easy to understand.  If fact, there is a little bit of  
8 magic in these things that we're trying to work out and make  
9 it more understandable as time goes on.  But what it is, is  
10 we know that certain structure systems and components on the  
11 power plants are more important to safety than others.  
12 Something that happens to those areas come up in importance.  
13 Something that happens in radiological protection or  
14 emergency preparedness are dealt with, with special  
15 importance.  And then, according to that, the event or the  
16 deficiency that they did not take care of or the lack of  
17 conducting an operation that should have been conducted then  
18 assumes a certain importance according to what box it is.  
19 Then it's slowly, but surely -- sometimes very slowly works  
20 out.

21                   What it allows is a more unbias, a more rational  
22 way to achieve a determination of the significance of the  
23 lack of action or the event that took place.  It actually  
24 has served as well -- it is a tool in progress.  It's not  
25 finished.  We just changed some of the things.  It allows,

1 even in general, to a regulatory agency a way of assigning a  
2 safety significance or a significance -- it doesn't have to  
3 be safety -- to an event or to something that took place  
4 that somebody didn't do.

5 FERC COMMISSIONER BROWNELL: One more quick  
6 question. That is, you talk about consensus-driven  
7 standards. How long does it take? We've looked at NERC  
8 where it takes typically longer than I'm going to be on the  
9 Commission to actually get a standard approved. In today's  
10 world, we just don't think that's probably the best way to  
11 go about it. How long does it take to get through the  
12 consensus?

13 MR. CASE: It takes quite a bit of time in our  
14 industry as well. I would say on the order of years to work  
15 it through the system. Sometimes we do things in parallel  
16 with a consensus standard process. That's when we get into  
17 these things like generic letters. So, if we see things  
18 that are safety significant and we feel that we don't need  
19 to wait -- you know, we can wait for the consensus standard  
20 process, we may initiate action through our own vehicles and  
21 then they may meet down the road.

22 FERC COMMISSIONER BROWNELL: That's helpful.  
23 Thank you.

24 NRC CHAIRMAN DIAZ: In other words, we might  
25 initiate rulemaking that would eventually be associated with

1 a standard. That takes a little less time, but eventually  
2 they meet.

3 FERC CHAIRMAN KELLIHER: Commission McGaffigan?

4 NRC COMMISSIONER McGAFFIGAN: Just one quick  
5 question.

6 The periodic performance assessments you  
7 mentioned Mr. McClelland on your last slide, are those  
8 public? Is that going to be something that -- our  
9 performance assessments you can click on our webpage and see  
10 exactly where everybody is. These are going to be public as  
11 well? NERC is going to conduct them and they're going to be  
12 public?

13 MR. McCLELLAND: Yes, that's correct. And also  
14 provide feedback on the regional entities as well as 360-  
15 degree feedback by the regional entities activity -- the  
16 ERO. The first assessment would start at the end of year  
17 five or be due at the end of five years and the assessments  
18 thereafter would be every three years -- if I've got my  
19 numbers right. Is that right, Rege?

20 NRC COMMISSIONER McGAFFIGAN: So the first  
21 assessment would be in 2010, counting 2005 plus 5. Is that  
22 correct?

23 MR. BINDER: I think we need a little  
24 clarification. There are two types of assessments. One  
25 where the ERO is assessing its performance and that happens

1 multiple years down the road. Another assessment is where  
2 the ERO is assessing the reliability of the transmission  
3 system and that will happen more frequently, probably at  
4 least annually.

5 NRC COMMISSIONER McGAFFIGAN: But the  
6 performance, thing that's closest to our assessment process  
7 would seem to be a judgment of, say, individual entities  
8 within the grid, how they performed say the previous year or  
9 the previous quarter.

10 In our process, every quarter everybody's  
11 inspection findings and performance indicators with about a  
12 month or two delay from the end of the quarter go up onto  
13 our web page.

14 I was thinking naively that perhaps you have  
15 something similar in mind where the performance assessments  
16 of say individual segments of the grid go up on some sort of  
17 periodic basis onto some sort of public view.

18 MR. McCLELLAND: Yes. That would be a third  
19 category and that would be what's currently termed as  
20 compliance audits. Those are posted on a quarterly basis of  
21 the individual entities within the regions. Any violations,  
22 any infractions or any alleged violations are posted with  
23 the compliance audit process. Actually, it would be one of  
24 three reports and there could others specific to certain  
25 topics where the Commission may need to inform itself

1       pursuant to judgment about a reliability standard, so a  
2       resource adequacy assessment could be done on an annual  
3       basis, for instance. Self-assessment by the ERO and the  
4       regional entities is done five years and every three years  
5       thereafter. And then, enforcement reports and activity is  
6       done on a quarterly basis as well as any other special  
7       assessments the Commission may order.

8               FERC COMMISSIONER BROWNELL: What we've heard  
9       here today would suggest that we or NERC is anywhere close  
10      to the rigorousness with which they're doing evaluations nor  
11      the frequency, if I understand -- I think it's a desirable  
12      place to go and it's why we're looking at it, but we're not  
13      anywhere near that.

14              NRC COMMISSIONER McGAFFIGAN: Do you have  
15      performance indicators? That's my last question. Or do you  
16      intend to develop performance indicators to help you with  
17      these assessments?

18              MR. McCLELLAND: Within the standards themselves  
19      there are 102 reliability standards. There are measures  
20      contained within some of the standards. Some of the  
21      standards do lack measures. But those measures would be  
22      used or could be used to actually determine what the  
23      performance -- the metrics associated with the performance  
24      according to that standard. Then that standard could then  
25      be taken further to levels of non-compliance or levels of

1 compliance.

2 NRC COMMISSIONER McGAFFIGAN: What I might  
3 suggest to commissioners is that you go to our webpage, look  
4 at reactor oversight. With probably just a couple of  
5 clicks, you'll get to choose a plant -- Palo Verde or  
6 Calvert Cliffs and you'll see whether they're green for the  
7 various performance indicators in the latest quarter,  
8 whether they're green for the various inspection findings  
9 and then individual inspections. You click a couple more  
10 times and you can read an individual inspection report.  
11 That's what we have and I'm not sure it's a model, but it  
12 may be something to look at.

13 FERC CHAIRMAN KELLIHER: I think we'd like to get  
14 something close to that where, instead of clicking on  
15 nuclear power plant, you could click on a transmission  
16 operator and see how well and reliable that operator is  
17 running the grid.

18 FERC COMMISSIONER KELLY: I just wanted to thank  
19 you for this presentation. It's really opened up a new way  
20 of looking at enforcement for me. We've been talking about  
21 setting up an enforcement process at the ERO and the ERO  
22 setting it up and one of the things that I observed from  
23 looking at your diagram here is that enforcement really is  
24 just a small part of your process. But rather it's the  
25 assessment. It's the agency response and it's the

1       communications that are perhaps even more important and I  
2       think that we need to focus more and emphasize on more the  
3       other aspects of oversight rather than just focusing on  
4       enforcement.

5                NRC COMMISSIONER MERRIFIELD: One of the things  
6       that we didn't mention that I think is important in that  
7       analysis is when we put together the ROP we also did an  
8       assessment of how we should use our enforcement. We used to  
9       have what we used to call "Level 4" violations, which was  
10      the least risk significant in violations that we had. Those  
11      are also, as you can imagine, the largest number of  
12      violations. Frequently, these would result in small fines -  
13      - 4, 5, \$6000 -- and would bring a lot of notoriety to a  
14      nuclear power plant in the media.

15               From a risk standpoint, they were really very,  
16      very low and we made a calculated decision as a commission  
17      that we would no longer issue civil penalties associated  
18      with those very low-level violations. We instead consider  
19      them non-cited violations so that we are still -- our staff  
20      is still identifying those as an issue, taking those to the  
21      licensee, requiring them to deal with them in their  
22      corrective action program, but not raising them to the level  
23      where they're being issued a fine or a penalty. In that  
24      case, it really lowered the temperature between ourselves  
25      and the licensees we regulate to really focus on the stuff

1 that's more important.

2 I think that the acknowledgement you make about  
3 where enforcement sits in our process, I think, is an  
4 excellent observation.

5 NRC COMMISSIONER McGAFFIGAN: I might just add  
6 that we were criticized when we designed the reactor  
7 oversight process as a replacement for a previous, we  
8 believe less-disciplined process. The previous less-  
9 disciplined process did produce more fines. It produced  
10 less safety, but more fines. We think that you still can  
11 get fines witness First Energy at Davis-Besse, historically,  
12 large fines. But the emphasis in the new process is on  
13 performance and less on going through a process of figuring  
14 out whether it's 15,000, 50,000 or 100,000 per day that  
15 we're doing in this particular instance and I think that has  
16 improved things. People still don't like getting anything  
17 but green. A very large percentage of our licensees -- of  
18 the 103 plants somewhere in the high 80s I believe at the  
19 moment have green boards -- no inspection findings above  
20 green and no performance indicators above green and the peer  
21 pressure and the desire for regulatory margin leads them to  
22 want to be there perhaps more than whatever small fine we  
23 could impose on them.

24 FERC COMMISSIONER KELLY: Having started out in  
25 school as a chemical engineer, I can understand the attitude

1 and temperament of those engineers. They want As and  
2 nothing less will do.

3 (Laughter.)

4 FERC COMMISSIONER KELLY: Speaking of  
5 engineering, I'd also like to compliment you on this graph  
6 itself. It's very well-engineered and I can read it very  
7 easily.

8 (Laughter.)

9 NRC CHAIRMAN DIAZ: Thank you very much.

10 FERC COMMISSIONER KELLY: One other thing I'd  
11 like to learn more about is your parallel process. I find  
12 that very intriguing because one of our big concerns is the  
13 length of time it takes to develop these reliability  
14 standards. I'd really appreciate learning more about what  
15 you do and what you can do when you see a safety problem,  
16 but you don't yet have a consensus standard.

17 FERC CHAIRMAN KELLIHER: You have different  
18 authority than we do. You can, in the penalty set  
19 standards. We have to rely on a -- we can require a  
20 standard be submitted to us, but we can't independently  
21 self-initiate and establish a standard of our own.

22 NRC COMMISSIONER MERRIFIELD: You would have an  
23 authority to have -- could you institute an interim  
24 preliminary requirement in the absence of an industry-based  
25 standard?

1                   FERC COMMISSIONER KELLY: I think that we might  
2 be able to have a standard that deals with emergency needs  
3 that aren't covered by standards. There might be another  
4 avenue. It's not as clear. We don't have the tools that  
5 you have, but maybe we should ask for it.

6                   FERC CHAIRMAN KELLIHER: It's probably safer to  
7 talk about the latest statutes as oppose to operating -- the  
8 way the standard is suppose to operate is we certify an  
9 electric reliability organization. The only way reliability  
10 standards can be enforceable under the statutory provisions  
11 in last year's law is that EROs submit reliability standards  
12 to us. We can accept or remand them. We can't modify them.  
13 So we can accept or remand. If it's an established standard  
14 that we've approved and we later on decide it actually  
15 doesn't meet the statutory standard, we can remand that. We  
16 can require that the ERO propose a substitute or replacement  
17 standard.

18                   If we decide that the scope isn't quite right, we  
19 approve some universal standards. Let's assume that  
20 universe is correct -- nothing is wrong with any of those  
21 standards, but we need to expand the scope -- we need some  
22 additional standard, we can require that they submit them,  
23 but we can't initiate our own rulemaking like a federal  
24 agency usually would or the NRC might typically and  
25 establish a standard directly.

1                   NRC CHAIRMAN DIAZ: I assume the establishment of  
2 the ERO -- do we need to revisit our memorandum on the  
3 standard with FERC and NERC? Is it significant enough that  
4 we need to take another look at whether what we presently  
5 have is complete and address it?

6                   FERC CHAIRMAN KELLIHER: We can take another look  
7 at it. I don't see why it would be incomplete. We are the  
8 agency that would be establishing reliability standards. We  
9 would ultimately be enforcing them. We can require the ERO  
10 change standards. It just seems appropriate that it's an  
11 inter-agency agreement.

12                   NRC CHAIRMAN DIAZ: Okay.

13                   FERC COMMISSIONER KELLY: There still might be  
14 significance with this parallel process because although we  
15 don't have the authority to develop standards the ERO does  
16 and the ERO could establish a parallel process for itself if  
17 that was necessary.

18                   FERC CHAIRMAN KELLIHER: The ERO has said that  
19 they can establish standards under some emergency  
20 procedures. They don't have to go through the full NRC  
21 process to develop a standard in a couple of months as  
22 opposed to perhaps a couple of years. Part of it comes down  
23 to how urgently do we think they need to establish a  
24 standard and since I think we can direct them to establish a  
25 standard. We can, I think, establish a deadline for the

1 development of that standard. We can, in effect, require  
2 that they use the emergency process to develop new  
3 reliability standards.

4 I see nodding over there, so I assume that I'm on  
5 good grounds for that.

6 Commissioner Lyons.

7 NRC COMMISSIONER LYONS: I had a questions quite  
8 similar to the one that Chairman Diaz just asked, and  
9 perhaps you've already answered it. I was curious, as the  
10 ERO is set up, whether the primary interaction of the NRC  
11 staff would shift from an interaction with FERC staff to an  
12 interaction with ERO staff, which is similar to the question  
13 -- not identical -- to the one that Chairman Diaz asked  
14 about the MOU. I was just curious whether our NRC staff  
15 level of interaction would tend to shift in some way?

16 FERC CHAIRMAN KELLIHER: I don't think so. I  
17 think, perhaps, in the NRC context the ERO might be  
18 something like a regional office, an NRC region. I'm  
19 guessing. No? Doesn't the region make some initial --  
20 don't they conduct investigations of their own?

21 NRC CHAIRMAN DIAZ: They conduct investigations,  
22 but they don't develop standards.

23 FERC CHAIRMAN KELLIHER: In the sense of once a  
24 standard is in place, how does it work? I think it might be  
25 some kind of proxy to a regional --

1                   NRC CHAIRMAN DIAZ: Regional conducts the  
2 oversight.

3                   FERC CHAIRMAN KELLIHER: Regional conducts  
4 investigations. They make recommendations to the NRC  
5 itself. It's somewhat like the way it's going to work in  
6 the reliability context. The ERO will be the first-line  
7 enforcement agency. Their actions can be appealed to the  
8 Commission.

9                   NRC COMMISSIONER LYONS: I asked the question  
10 because I believe he said that the ERO is responsible for  
11 developing a proposed standard, which is then reviewed by  
12 FERC and I was guessing that it might then be important for  
13 NRC staff to be involved with ERO staff as they develop some  
14 standard which could, in turn, impact the safety of nuclear  
15 power plants through our interest in good stability. I  
16 don't know.

17                   FERC CHAIRMAN KELLIHER: I think that's fair.  
18 You all currently participate in other ANSI processes.  
19 Right? The reference was to the IEEE and the other  
20 engineering body whose name escapes me -- ASME. It probably  
21 is reasonable that you might want to participate in this one  
22 as well.

23                   FERC COMMISSIONER BROWNELL: We can facilitate  
24 kind of the introductions to the key staff with whom we  
25 work. It's also interesting, at some point, for one or some

1 or all of you to go to a NERC board meeting. I think we've  
2 all been there. A lot of interaction of course there with  
3 our Canadian counter-parts, which also has some impact I  
4 think on some of the discussions we're all having. So I  
5 very definitely--I don't think it would replace interaction  
6 here, but I think it would supplement it. Everybody needs  
7 another meeting or two in their life.

8 (Laughter.)

9 FERC CHAIRMAN KELLIHER: Do you have any  
10 questions of the panel?

11 Joe, do you have a question of us?

12 MR. McCLELLAND: Just a comment to Commissioner  
13 Lyons. On the nuclear power interface requirements proposed  
14 standards that NERC is currently developing, NRC staff did  
15 submit comments to that standard directly to the NERC for  
16 their consideration with the standard.

17 NRC COMMISSIONER MERRIFIELD: Mr. Chairman, I had  
18 a question. Not have the familiarity with the requirements  
19 imposed on you under EPAct, I'm reminded of a situation we  
20 had at one of our plants it must be about eight years ago at  
21 this point and that was the Calloway Plant in Missouri owned  
22 by Amergen. They recognized that they had a significant  
23 issue in terms of a drop in VARS because of the transmission  
24 that was going on literally right next to the plant, which  
25 they identified as being a challenge to plant operations.

1           The result of that is that Amergen ended up  
2 investing, as I recollect, somewhere between \$40- to \$60  
3 million to have the appropriate protective equipment put in  
4 so they would not be subject to a vulnerability from that  
5 power transiting the area.

6           Is there anything in EAct -- and I guess this  
7 may go to Mr. McClelland -- is there anything in EAct that  
8 would affect a similar circumstance or is that outside of  
9 the parameters of what you're taking a look at in your  
10 responsibility?

11           MR. McCLELLAND: Outside the parameters of the  
12 reliability standards? Yes. I'm not sure. We have 102  
13 pending. I'm not familiar enough with the incident or the  
14 universe of the 102 to know whether something would be on  
15 point about that event.

16           NRC COMMISSIONER MERRIFIELD: Okay. Thank you.

17           FERC COMMISSIONER BROWNELL: Conceivably, if it's  
18 not in this round of standards and you all thought it was  
19 important, we could recommend it or you can recommend it. I  
20 don't think there's anything that limits your opportunity.  
21 If it's something that isn't covered, and I think in the  
22 first round of standards we're really starting -- I won't  
23 say with the lowest common denominator, but not where we  
24 want to go. I think these standards are going to expand in  
25 scope, but also ratchet it up in terms of where the bar is.

1           For purposes of getting something on the books,  
2 they're required. I think we'll be dealing with the ones  
3 that were in existence and there are some of those that  
4 we've always questioned. If it's not covered and should be,  
5 then we should talk about that.

6           NRC COMMISSIONER MERRIFIELD: I guess in a few  
7 weeks we've made comments about our concerns about Seabrook  
8 and I'm recognizing -- we talked a little bit earlier of the  
9 information that we are attempting to obtain from our  
10 licensees about the situation in the communications that  
11 they have with their transmission operators. I guess the  
12 question is, if we identified an issue from our staff that  
13 we thought was a concern, figuring out the way of bringing  
14 that to you and how that may get dealt with is something I'd  
15 certainly like to have a better understanding of.

16           FERC CHAIRMAN KELLIHER: Any other comments?  
17 Should we make some succinct, concluding remarks?

18           I just want to say that this meeting was not only  
19 historic, but I thought it was interesting and useful, at  
20 least from our point of view, to see how the NRC assure  
21 safety of operating nuclear power plants and I do think  
22 there are some lessons that might translate over to our  
23 regulatory construct. The discussion has been very  
24 interesting, too. I really have enjoyed this.

25           That was about all I wanted to say. Again, I

1 wanted to commend the chairman. I've enjoyed working with  
2 him and I'm going to miss him.

3 NRC CHAIRMAN DIAZ: Thank you so much.

4 Let me just make one comment. I think we need to  
5 have a meeting next year if only for the purpose that we'll  
6 have it over at the NRC and the staff, when they say "the  
7 Commission," they're referring to the NRC and then they say  
8 FERC.

9 (Laughter.)

10 NRC COMMISSIONER McGAFFIGAN: Mr. Chairman, I  
11 think we should also have the emeritus members of the  
12 Commission invited to the lunch.

13 (Laughter.)

14 NRC CHAIRMAN DIAZ: There's one point that I  
15 think we need to get our staff to work. I mean there's  
16 really no good commission meeting unless we put this stuff  
17 to work, and I think that when we look at what is going to  
18 happen in the next few months it would be good if the staff  
19 could gather for both commissions a more complete picture of  
20 the additions to the grids, the problems to the grid, the  
21 events that are taking a certain amount of frequency, where  
22 are the regions in the country in which we actually need to  
23 be paying attention to, the impact to you and the impact,  
24 potentially, to nuclear power plants. I think that big  
25 picture is something that we need to be developing. I think

1 from the discussions in here it's obvious that we have some  
2 of the data, but we need to put together in a manner that  
3 both our commission can actually deliberate on.

4 FERC CHAIRMAN KELLIHER: Thank you for that  
5 statement. But the way we're developing reliability  
6 standards does allow very free discussions between the  
7 agencies. We are going to establish reliability standards  
8 by rulemaking. That allows us to work closely with our  
9 Canadian regulators, to work with the industry reliability  
10 organizations and also with the NRC. The next step we're  
11 going to take is to release a staff preliminary assessment  
12 of the proposed 102 reliability standards and we would like  
13 your reaction -- the staff's reaction to those standards.  
14 Then we'll have a technical conference and then we'll move  
15 towards a proposed rule. Since it's a rulemaking, we can  
16 have free discussions.

17 NRC CHAIRMAN DIAZ: Very good.

18 FERC CHAIRMAN KELLIHER: Any other colleagues?  
19 Jeff?

20 NRC COMMISSIONER MERRIFIELD: I would like to  
21 mirror your comment. I want to also thank Commissioner  
22 Brownell for the relationship you've been able to establish  
23 in your service. It's been very much welcomed the  
24 relationship you've established, which is good.

25 I also would go along with our chairman, although

1 he said it I think somewhat in jest. This Commission's  
2 transition -- presumably, you will have new members on your  
3 commission next year. It appears we will have at least one  
4 new member on our commission next year as well and I think  
5 the notion of having a regular engagement to continue that  
6 knowledge transfer and make sure that we continue to be  
7 aligned on seeking solutions to these important problems we  
8 share as a board. I would certainly urge that this not be  
9 just a historic meeting, but also one that sets a foundation  
10 for an increasing amount of involvement between the two  
11 commissions in the future.

12 FERC CHAIRMAN KELLIHER: Good suggestion.

13 Any other comments?

14 (No response.)

15 FERC CHAIRMAN KELLIHER: Thank you very much.

16 (Whereupon, at 4:35 p.m., the above-entitled  
17 matter was concluded.)

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