

1 PRESENTERS:

2 A-5: Winter Market Update (AD06-3)

3 VALERIA ANNIBALI, OE

4 REBECCA GILLESPIE, OE

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6 A-4: Coordination Between Natural Gas and
7 Electricity Markets (AD12-12)

8 BRAD BOUILLON, Director, Day-Ahead Market

9 and Real-Time Operations Support, CALISO

10 TRIP DOGGETT, President & CEO, ERCOT

11 PETER BRANDIEN, Vice President of

12 Systems Operations, ISO New England

13 TODD RAMEY, Vice President, System

14 Operations & Services, MISO

15 WES YEOMANS, Vice President of Operations,

16 New York ISO

17 GARY HELM, Senior Market Strategist, PJM

18 DON SHIPLEY, Director, System Operations, SPP

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24 COURT REPORTER: Jane W. Beach, Ace-Federal Reporters, Inc.

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

2 (10:03 a.m.)

3 CHAIRMAN WELLINGHOFF: The meeting will come to
4 order, please. That clock is slow, by the way, over there.

5 (Laughter.)

6 CHAIRMAN WELLINGHOFF: According to my iPhone,
7 anyway. Good morning. This is the time and place that has
8 been noticed for the open meeting of the Federal Energy
9 Regulatory Commission to consider matters that have been
10 duly posted in accordance with the Government in Sunshine
11 Act. Please join me for the Pledge of Allegiance.

12 (Pledge of Allegiance recited.)

13 CHAIRMAN WELLINGHOFF: Well since the September
14 open meeting we have issued 70 Notational Orders, down from
15 the 137 over the summer. We worked hard during the summer.16 Before I begin today's business, I've got a
17 couple of things to acknowledge--sort of anniversaries, of a
18 sort. The first one is we need to acknowledge Commissioner
19 Clark's birthday. Happy Birthday, Tony.

20 COMMISSIONER CLARK: Thank you.

21 CHAIRMAN WELLINGHOFF: A stalwart man, coming to
22 your agenda meeting on your birthday.

23 (Laughter.)

24 CHAIRMAN WELLINGHOFF: Second, the Organization
25 of MISO States is celebrating its 10th anniversary this

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1 month. Ten years ago OMS, the organization of MISO States,
2 was created to formally coordinate the perspectives of
3 several states and their involvement in regional energy
4 issues, and specifically with MISO and its stakeholders.

5 The Commission has always valued the public-
6 interest perspective of individual states in any energy
7 debate, and OMS's unique role in working through the issues
8 compromising to resolve individual state differences and
9 aggregating those state perspectives into one voice on
10 regional issues has been invaluable.

11 For the past decade, OMS has been an important
12 voice in such varied issues as the Day-2 Energy Market
13 rollout, Cost Allocation, and Transmission Planning. Their
14 work has informed the Commission's proceedings, contributed
15 to decisions at MISO and, most importantly, benefitted
16 electricity customers throughout the Mid Continent.

17 So we recognize OMS commissioners and its staff
18 for 10 years of dedicated service to our industry. The
19 electric system is better because of your hard work and the
20 future is brighter because you are there.

21 So we want to thank you.

22 Colleagues, statements about OMS?

23 COMMISSIONER MOELLER: Thank you, Mr. Chairman.
24 I'll echo your comments, and also defer to a couple of my
25 colleagues who I think served on the OMS. But as I think

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1 back on the last 10 years and the beginning of the MISO
2 market, and how far it has come, and how much OMS has been a
3 part of it, I think there are congratulations in order, and
4 hoping that many more decades to come will result in similar
5 successes.

6 COMMISSIONER NORRIS: Thank you. I do want to
7 make some comments, because it is obviously an organization
8 near and dear to my heart.

9 Before I do, though, I want to introduce a new
10 member of my staff. I have a new member of my staff, a
11 program analyst, Benjamin Williams, who comes to us from
12 Senator Harkin's office of my home State of Iowa--I don't
13 know how that happened.

14 (Laughter.)

15 COMMISSIONER NORRIS: If you walk into my office,
16 you're going to run into Benjamin first. So he's the guy
17 you want to be nice to.

18 (Laughter.)

19 COMMISSIONER NORRIS: Benjamin, do you want to
20 stand up? Welcome.

21 (Mr. Williams stands.)

22 COMMISSIONER NORRIS: With regards to OMS, it is
23 a great example I believe of multiple states working
24 together and creating benefits for consumers by creating
25 efficiencies in the operation of inter-regional and inter-

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1 state transmission grid and markets.

2 So I just think it is a great example of
3 leadership on the part of the state commissioners in the
4 states involved with MISO. If you haven't looked at it, I
5 always thought if I ever taught energy law Bill Smith's
6 article in 2007 in the Energy Law Journal on RSCs would be a
7 required reading for anybody who needs background on RSCs
8 and their success and how it was set up. So I recommend
9 that to you.

10 But let me cite some folks, people I worked with
11 in OMS over the years, that I think have a lot to do with
12 the success of OMS.

13 First of all, I think the leadership at the MISO
14 recognized early on the value of a strong regional state
15 committee. And so from Jim Torguson, to Graham Edwards, to
16 John Baer, all of them I think have recognized the
17 importance of working closely with the stakeholder group of
18 the OMS and the state regulators.

19 Secondly, the early conveners of OMS, I think of
20 Laura Shappel, and Judy Jones, and Diana Mynes, and Leo
21 Khopendryer, and Dave Hadley, and--I'm probably forgetting a
22 few folks that were there at the very start--Susan Weifill,
23 certainly, of North Dakota. Tony will probably want to give
24 a shout-out there, as well. Susan was hugely impactful on
25 the success of OMS.

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1 So it takes state regulators engaged in this very
2 complicated multi-jurisdictional organization. The name
3 itself is hard to say, let alone pull off an effective
4 advocacy and reaching consensus on issues.

5 So I think the key to their success has been
6 strong state leadership, strong leadership at the OMS.
7 Certainly Bill Smith deserves a shout-out as the Executive
8 Director of OMS. He used to be a FERC employee, worked for
9 the State of Iowa's Commission, and has been instrumental in
10 the success of OMS.

11 So I just want to shout out to those folks who
12 really stepped up--and the staff, Commission staff and all
13 of the states have provided continuity and leadership and
14 expertise that has enabled OMS to be successful.

15 So I want to do a shout-out to them, as well.
16 And just to say that this is a great example for other
17 regions across the country of how you work state to state,
18 multi-jurisdictional to create efficiencies for its
19 consumers, which I think is the ultimate goal we are all
20 trying to do here, is create a sustainable energy system
21 that benefits consumers. And OMS is a shining example of
22 that.

23 So thanks for bringing it to our attention today,
24 Mr. Chairman, and a shout-out to all those folks who have
25 made it successful.

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1 CHAIRMAN WELLINGHOFF: You're very welcome, John.
2 Cheryl?

3 COMMISSIONER LaFLEUR: Well I just have little to
4 add. I want to just underscore the congratulations of my
5 colleagues. It is definitely a milestone worth recognizing
6 for OMS to be celebrating its 10th anniversary.

7 I frequently observe that just about all the
8 issues we look at, certainly transmission planning and
9 market design, are regulated both at the federal level and
10 the state level, and so the work of OMS and its counterparts
11 around the country in bringing the state regulatory
12 perspective to bear on regional issues is absolutely
13 critical to getting these things right. And that is
14 certainly true in MISO, which is growing so much and
15 evolving right now with changes in their operations.

16 So congratulations.

17 CHAIRMAN WELLINGHOFF: Tony?

18 COMMISSIONER CLARK: Thanks. Yes, at this point
19 not a lot to add other than on days like this when it's your
20 birthday and you realize that I was on the North Dakota
21 Commission at the time that OMS came about, you realize that
22 the average tenure for a regulatory commissioner is about
23 three years, I read somewhere. So I am about four times my
24 expiration--past my expiration date, I guess.

25 (Laughter.)

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1 COMMISSIONER CLARK: But thinking back to those
2 days that it was created, and I think all of us were kind of
3 figuring our way through this thing, the whole concept of an
4 RSC was pretty new in people's mind, the credit really goes
5 to those folks who were especially prescient and in on the
6 ground floor of it. John named a number of them, and it's
7 dangerous to go down that path because you will forget some,
8 but again I guess I would especially highlight the work of
9 my colleague on the North Dakota Commission, Susan Weifelt,
10 who i think was the first president of OMS and was really on
11 the ground floor of that.

12 So congratulations to OMS and all the people who
13 worked on creating it. It has been a good model for an RSC
14 committee now for 10 years going strong.

15 CHAIRMAN WELLINGHOFF: Thank you, Tony. And
16 before we go to the Consent Agenda, the final thing I want
17 to do is I want to mark the tragic passing of Bob Anderson.
18 Bob Anderson was a Commissioner at the Montana Commission in
19 1994-1998. He was elected, and he has remained active in
20 the energy community.

21 He is a friend and colleague. He unfortunately
22 was in a tragic accident in Tanzania. He was climbing Mount
23 Kilamenjaro with his wife to celebrate his 70th birthday,
24 and coming back from that there was a roll-over car accident
25 and he was killed. So we will all miss you, Bob.

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1 So with that, if we could go to the Consent
2 Agenda, please. Thank you.

3 SECRETARY BOSE: Good morning, Mr. Chairman, and
4 good morning, Commissioners. Since the issuance of the
5 Sunshine Act Notice on October 10th, 2013, Items E-6, E-12,
6 E-13, E-14, E-15, E-16, and E-17 have been struck from this
7 morning's agenda.

8 Your Consent Agenda is as follows:

9 Electric Items: E-1, E-2, E-4, E-5, E-7, E-9,
10 and E-11.

11 Gas Items: G-1, G-2, G-3, G-4, G-5, and G-6.

12 As to E-4, Commissioner Clark and Commissioner
13 Moeller are concurring with a joint separate statement.

14 As to E-7, Commissioner LaFleur is concurring
15 with a separate statement.

16 CHAIRMAN WELLINGHOFF: If I could see if there
17 are any comments on any of the Consent Agenda items?
18 Commissioner LaFleur?

19 COMMISSIONER LAFLEUR: Yes. Thank you,
20 Mr. Chairman. I'll post a statement on my website, but I
21 wanted to briefly call out Item E-2, which is a final rule
22 substantially approving Reliability Standard TPL-14, which
23 is the circumstances under which you can plan for
24 nonconsequential load loss, the standard formerly known as
25 the infamous Footnote B.

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1 We substantially approved the standard this
2 morning, and I think it is worth noting because it is really
3 putting behind us one of the most vexing issues from the
4 Mark 2010 set of Orders. And it has been a good example I
5 think of how things should work.

6 FERC identified concerns very strongly in some of
7 our past Orders. NERC took advantage of the opportunity to
8 come up with an equally efficient and effective mechanism to
9 address those concerns, came up with an innovative solution
10 to limit and safeguard the use of nonconsequential load loss
11 with a stakeholder procedure, and I think it reflects the
12 careful balancing of reliability and cost, as well as,
13 pertinent to our earlier discussion, respecting the
14 complementary role that state regulators play in making
15 reliability decisions.

16 So I commend it to your attention and want to
17 thank the Standards team and NERC for bringing it to us, and
18 the folks at the Commission who worked on the Order. Thank
19 you.

20 CHAIRMAN WELLINGHOFF: Thank you, Cheryl.
21 Anybody else, any comments on the Agenda Items?

22 (No response.)

23 CHAIRMAN WELLINGHOFF: If not, I think we're
24 ready for the vote, Madam Secretary.

25 SECRETARY BOSE: The vote begins with
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1 Commissioner Clark.

2 COMMISSIONER CLARK: Noting my concurrence in
3 E-4, I vote aye.

4 SECRETARY BOSE: Commissioner LaFleur.

5 COMMISSIONER LaFLEUR: Noting my concurrence in
6 E-7, I vote aye.

7 SECRETARY BOSE: Commissioner Norris.

8 COMMISSIONER NORRIS: Aye.

9 SECRETARY BOSE: Commissioner Moeller.

10 COMMISSIONER MOELLER: Noting the concurrence in
11 E-4, I vote aye.

12 SECRETARY BOSE: And Chairman Wellinghoff.

13 CHAIRMAN WELLINGHOFF: I vote aye.

14 Madam Secretary, if we can move to the Discussion
15 Agenda, please.

16 SECRETARY BOSE: The first item for presentation
17 and discussion this morning is Item A-5. This is concerning
18 the 2013-2014 Winter Energy Market Assessment. There will
19 be a presentation by Valeria Annibali from the Office of
20 Enforcement, and she is accompanied by Rebecca Gillespie
21 also from the Office of Enforcement.

22 (A PowerPoint presentation follows:)

23 MS. ANNIBALI: Good morning, Mr. Chairman, and
24 Commissioners.

25 Today I will highlight key findings from the
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1 winter 2013-2014 Energy Market Assessment. The full
2 presentation is posted on the Commission's website.

3 The outlook is generally positive. Nationally,
4 natural gas prices are up 40 to 50 percent from last year,
5 but remain below historic highs. Natural gas and power
6 futures prices for the winter are comparable to last year,
7 except in New England.

8 Natural gas storage is more than adequate for a
9 normal winter, and gas production continues to grow,
10 particularly in the Northeast. We anticipate localized
11 price spikes in New England during periods of high demand
12 due to ongoing constraints.

13 Last winter, restrictions at key compressor
14 stations on Algonquin pipeline increased, limiting the
15 interruptible transportation capacity available. On high
16 demand days, curtailments to interruptible customers were
17 especially likely.

18 Such constraints result in natural gas price
19 spikes in New England and, because natural gas is the
20 marginal price-setting fuel during most hours for generating
21 electricity, this led to power price spikes.

22 Last winter, New England's average power prices
23 for February were higher than any prior month in ISO-New
24 England history. The graph shows the strong correlation
25 between monthly average electricity and natural gas prices
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1 during the last five winters.

2 Looking forward to this winter, a customer in New
3 England can purchase natural gas for delivery in January and
4 February at almost \$12 per MMBtu, almost double the price at
5 the same time last year. Winter electricity peak futures
6 prices are \$100 per megawatt hour, or 52 percent higher than
7 last winter.

8 This concludes the Winter Assessment highlights.

9 CHAIRMAN WELLINGHOFF: Thank you very much,
10 Valeria and Rebecca for that presentation. Colleagues, any
11 questions? Phil.

12 COMMISSIONER MOELLER: I'm just curious about the
13 temperature outlook that you've seen so far. Are we looking
14 at mild, moderate, or severe winter from a temperature
15 perspective?

16 MS. ANNIBALI: So far, different private
17 forecasters have not converged with the national forecast,
18 actually released just this morning. Overall, private
19 forecasters are looking for cooler than normal temperatures
20 in the upper tier/northern tier. However, NOAA released
21 just this morning their latest forecast, which predicts
22 above-average temperatures in the Southwest, Texas, and New
23 England as well, notably.

24 COMMISSIONER MOELLER: Thank you.

25 CHAIRMAN WELLINGHOFF: John.

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1 COMMISSIONER NORRIS: I noticed my neighbor's
2 snowblower was for sale this weekend. I guess I shouldn't
3 make any decisions yet on that.

4 (Laughter.)

5 COMMISSIONER NORRIS: I know we're doing a short
6 period today with you, but I know the work that goes into
7 this. So thank you for all the background and work that
8 goes into preparing one of these reports.

9 CHAIRMAN WELLINGHOFF: Anybody else?

10 (No response.)

11 CHAIRMAN WELLINGHOFF: Thank you, everybody.

12 MS. ANNIBALI: Thank you.

13 CHAIRMAN WELLINGHOFF: Next item, Kim?

14 SECRETARY BOSE: The next item for presentation
15 and discussion this morning is Item A-4 concerning
16 Coordination Between Natural Gas and Electricity Markets. I
17 will introduce today's speakers in the order in which their
18 presentations will be given. In the interest of time,
19 discussion and questions will be held to the end of the
20 final presentation.

21 Our first presentation will be given by Brad
22 Bouillon, Director of the Day-Ahead Market and Real-Time
23 Operations Support for California ISO.

24 Next will be Trip Doggett, President and CEO of
25 ERCOT.

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1 Following Mr. Doggett, Peter Brandien, Vice
2 President of System Operations for ISO New England.

3 Following Mr. Brandien will be Todd Ramey, Vice
4 President, System Operations and Services for MISO.

5 Next, Wes Yeomans, Vice President of operations
6 for NYISO.

7 And following Mr. Yeomans is Gary Helm, Senior
8 Market Strategist for PJM.

9 Our final presentation will be given by Don
10 Shipley. He's the Director of system Operations for SPP.

11 You may begin, Mr. Bouillon.

12 (PowerPoint presentations follow:)

13 MR. BOUILLON: Thank you. Good morning, Mister
14 Commissioner, Fellow Commissioners. You each have my
15 prepared statement. Hopefully you've had a chance to look
16 over it.

17 What I am going to attempt to do is just
18 highlight it to save some time, talking about two areas.
19 The first area is what we've seen over the summer and what
20 we view heading into the winter, the kind of things that
21 we've continued to do well and the things that we've done
22 differently since the last time we met. And then also, kind
23 of some proposed suggestions for the next steps in the
24 proceeding.

25 From the last summer, we really didn't have any
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1 significant issues this summer. It was a relatively mild
2 summer for us in California. Our peak was actually earlier
3 in the year, towards the 4th of July timeframe, as opposed
4 to August or September like we've seen in the past. And so
5 we didn't have any issues for the summer.

6 Some of the items that we have been doing related
7 to gas and electric coordination involve kind of
8 improvements to processes that we have. Right now, the ISO
9 issues: restrictive maintenance, notifications to our
10 market when we have constraints or high load areas, periods
11 of high load. And we now share those with the gas
12 companies. And the gas companies actually voluntarily
13 restrict their maintenance that's in that area associated
14 with the notification.

15 Further, they also contact us if they have
16 critical work going on that could conflict with those
17 notifications. So this was actually voluntarily performed
18 on their part, and they notified us. So we've been working
19 with all of them to coordinate it when it was a focus of one
20 of the three gas entities.

21 The second one is that we actually receive
22 operational flow orders from all the gas companies now, and
23 we actually monitor those to see if issues do come up that
24 are related to our electric business. They were very
25 proactive in sharing those with us. We'd been receiving one
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1 the last time we met, and now we receive flow orders from
2 all three entities.

3 The next thing we are doing is, actually we have
4 a simulator we do for real-time. And in that real-time
5 simulation, we try to simulate real market conditions, and
6 we run our real-time operators through six weeks of training
7 to experience those real-time conditions in an environment
8 that's non-hostile before it gets to real-time and actual
9 production.

10 And we actually running--we are in the process of
11 creating a coordinated gas and electric simulation, and we
12 actually have gas entities participating with us in the
13 electric side in those simulations on-site. So I think we
14 have a very, very good relationship with our gas entities.

15 We have pushed forward in outage coordination.
16 We have coordinated several related gas and electric outages
17 over the summer, pretty much without incident. And we
18 actually have two major outages going on in our state as I'm
19 here presenting at this meeting, and we've coordinated
20 those.

21 Along those lines, we actually had one of the gas
22 entities have an emergency outage, a significant emergency
23 outage, that forced one gas plant offline. And the gas
24 plant that's offline normally in the old days would have
25 sent us just an outage card and it would have said

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1 "fuel-related outage" and that would have been all you would
2 have seen.

3 In this case, the gas company actually contacted
4 us ahead of time and not only did they provide us the nature
5 of the outage and the risk, they actually did provide us a
6 return time and an emergency condition that they could build
7 a temporary fix to provide short-term gas to that facility
8 if we truly needed it for a critical nature. And to me, to
9 be proactive in that is a very large benefit, and I think
10 that is a direct outcome of this gas and electric
11 coordination effort.

12 Looking to winter, we have actually two areas in
13 our control area that do see the late fall/winter peaks. Up
14 north in our Humboldt area, we do see a winter peak. And
15 then down south in the San Diego area, we tend to peak in
16 the late fall. The down-south one is the one obviously that
17 coincides kind of with this San Onofre retirement, and
18 dealing with reliability and coordination in that area. And
19 we're doing that through a combination of proactive outage
20 management and continuous communication with both the gas
21 and electric sides down south. And that will be ongoing.
22 Obviously we're coming into that season now.

23 The second area I wanted to talk about is just
24 where we're headed in these proceedings. In general, the
25 ISO supports the direction that we're headed. We're hoping
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1 that the Commission continues to allow regional flexibility,
2 at least enabling us to be dynamic and adapt on the fly as
3 we're seeing better opportunities, rather than being
4 directed in one direction, I think examples that I mentioned
5 earlier, good examples of things that probably in the last
6 meeting we hadn't necessarily seen, and that we are seeing
7 that do improve our relationships and the reliability side
8 from the electric side.

9 And then the last item is that we generally
10 support the proposed regulation in RM13-17 that authorizes
11 the voluntary exchange of information. And then the no-
12 conduit rule.

13 Thank you.

14 MR. DOGGETT: Good morning, Chair Wellinghoff,
15 Commissioners. I'm Trip Doggett, CEO of ERCOT.

16 I have a few slides this morning, but I really
17 would like to make five key points.

18 The first is that the gas-electric coordination
19 issue is an item, a key item of focus at ERCOT.
20 Communications continue to improve between the ISO and the
21 gas industry, and transmission service providers and the gas
22 industry loads.

23 We continue to invest in consulting expertise to
24 help us quantify the risk associated with gas-electric. No
25 significant issues occurred this summer, and we don't expect
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1 or anticipate any significant challenges this winter.

2 We have been engaging our gas suppliers and
3 pipelines to discuss items such as our black-start
4 resources, and ensuring that we have adequate storage
5 available, and power supply available to anticipate any
6 black-start events. And that has been a great opportunity
7 to grow closer to the gas industry within ERCOT.

8 We also participate in the Texas Energy
9 Reliability Council, which is a group of gas suppliers and
10 pipelines, generators, and large customers. They meet twice
11 a year, as well as on special occasion when there's a
12 significant event that occurs. And also we've engaged a
13 consultant to help us better evaluate the short-term and
14 long-term sufficiency of gas supplies and pipeline capacity
15 to our generators.

16 Some of the observations and conclusions of the
17 consultant is that sufficient infrastructure exists to meet
18 our current power generation needs. Growth in production
19 is--in the shale production is expected to offset any
20 traditional production onshore and offshore that might be
21 declining. And there's also an increased gas pipeline
22 infrastructure associated with the increased shale
23 production, particularly in the Eagle Ford area.

24 Also, the consultant recognizes and believes that
25 there is sufficient existing storage capacity to meet any
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1 seasonal fluctuations.

2 If you look at Texas, a lot of growth occurring
3 in the Permian Basin area to the West, the Ft. Worth Basin
4 in the central part of the State, and tremendous growth in
5 the Eagle Ford Shale area, which is resulting in significant
6 transmission construction as well southeast of the San
7 Antonio area.

8 This is just a typical example of some of the
9 scenarios that have been evaluated by the consultant in the
10 study. And I'll conclude with kind of a recap of summer and
11 looking forward into '13. Because our generators are
12 required to inform us of any limitations that occur to their
13 fuel supply, we track that.

14 Since we were last together, we did have two
15 isolated instances of fuel supply disruption. The first
16 event was July 21st where one plant experienced an
17 interruption due to some lightening and storm activity in
18 the area during a pipeline inspection.

19 And then on September 3, we had gas supply
20 interrupted to one plant due to some complications that
21 occurred during the pipeline inspection.

22 We are not aware of any issues that should impact
23 us this coming winter. The Texas Energy Reliability Council
24 will meet in November just to review the winter outlook, but
25 again I am very pleased with the level of coordination

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1 that's occurring within the State with the gas industry.

2 CHAIRMAN WELLINGHOFF: Thank you. Peter.

3 MR. BRANDIEN: Okay, as you know, New England
4 does significant coordination and outreach to the gas
5 pipeline, as well as try to understand the supply situation
6 from the LNG and the Canadians to supply our pipes.

7 This past summer we really did not have any gas
8 infrastructure issues, or any operational issues resulting
9 gas. We had a significant gas pipeline outage on the
10 Algonquin Pipe. I think Spectrent did an outstanding job of
11 coordinating that work with us, as well as all the customers
12 connected to the pipe. They really started their outreach
13 in February for a June outage.

14 They let people know where they needed to source
15 their gas from, from the north and the east, versus the
16 south and the west, due to that outage. We were lucky. The
17 weather was mild at the beginning of June, so the pipeline
18 wasn't challenged with that outage.

19 One of the things that we did do at ISO-New
20 England is we hired a full-time gas coordinator, for lack of
21 a better term. That person is helping the control room
22 really understand the gas situation, the gas availability on
23 a day-to-day basis for gas-fired generators.

24 She is out trying to understand what's going on
25 at Canaport, District Gas, Deep Penuke, and Sable Island,

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1 the two offshore drilling platforms off of Nova Scotia. And
2 we're keeping a close eye on those two particular platforms
3 for this winter.

4 Sable Island in the past have had some of their
5 platforms down and reduced their gas supply to the maritime
6 Northeast Pipe. We're hoping that they have all the
7 platforms up this winter. And Deep Panuke is a new field
8 that's coming on. They have been supplying gas. I don't
9 believe they're calling themselves commissioned, fully
10 commercial yet, but we anticipate that soon to be fully
11 commercial and we expect to be getting gas from the north,
12 which would be an additional supply compared to what we had
13 last year.

14 The non-gas fired fossil units are still
15 important to us. Just this past winter they supplied about
16 20 percent of the energy on those peak days. So we can't
17 lose the importance of those other facilities that we have.

18 Near-term actions: We implemented a change in
19 the timing of our Day-Ahead Market that the Commission
20 approved in the spring timeframe. We implemented that I
21 believe in May. And we believe that's provided dividends to
22 the control room.

23 We're getting information from the Day-Ahead
24 Market between 12:00 and 12:30 versus 16:00, and we're able
25 to get information out to the longer lead-time units as well
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1 as the gas-fired units much sooner.

2 The Winter Reliability Program, we're looking to
3 ensure that we have oil in the tanks this winter. We had
4 some issues last winter where the oil inventory of the
5 fossil units, who have a very low capacity factor when we
6 have to go to them, when gas was tight, we had some
7 concerns. We believe that program is going to help us out
8 significantly with this winter.

9 As far as markets go, we're working on hourly
10 offers so that the units can update their offers into the
11 market. That won't be for this winter, but we anticipate
12 that to be in for the following winter. We're hoping to
13 have that in service by the fourth quarter of 2014.

14 We also look to have better price transparency
15 when the system is getting tight. We increase the reserve
16 constraint penalty factors for our 30- and 10-minute
17 reserves, as well as a replacement reserve product. When we
18 bring other units on, we price when we're getting tight on
19 the system to that.

20 So not only with the hourly markets but with
21 these reserve constraint penalty factors we're hoping to get
22 better price transparency where the system gets tight. And
23 that will hopefully incent people to be there to perform for
24 us.

25 The other thing we're doing is looking at the
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1 triggers for when people get penalized for not being
2 available, and looking to change the shortage event
3 triggers. And I think that is before the Commission now.

4 And then the other thing, the Commission
5 clarified the generator obligations. I believe that's open
6 before the Commission.

7 The next slide, information-sharing: We're very
8 encouraged by what we saw come from the Commission with the
9 NOPR. We are anxiously waiting on the final ruling from the
10 Commission so that we can make some changes to our tariff
11 and have a better exchange of information with the
12 pipelines. We do have to change our information policy for
13 that. We know what needs to be changed, and we are
14 anxiously waiting for that.

15 Longer term: Looking to enhance the performance
16 incentives in the Capacity Market by essentially moving the
17 funds from those that don't perform to the resources that do
18 perform. That's longer term. We are looking to file that
19 with the Commission late 2013 and have that implemented in
20 our Capacity Markets starting Capacity Year June 1st, 2018
21 to 2019.

22 With that, that concludes my comments for today.

23 CHAIRMAN WELLINGHOFF: Thank you. Todd.

24 MR. RAMEY: Good morning. My name is Todd Ramey.
25 I'm Vice President of Operations for MISO. I do have a

26

1 slide deck here. There's quite a few slides, so I will
2 promise to move through them quickly.

3 The first one that I will draw your attention to
4 is just a visual representation of the existing gas
5 transportation infrastructure that covers the Midwest
6 Region; pretty well represented for the region in terms of
7 transportation capacity with over 20 major pipelines that
8 cover the Midwest portion of the footprint.

9 It's even a better picture in the MISO South
10 region with over 90 interstate and intrastate pipelines
11 providing lots of supply options to end-users in that part
12 of our footprint.

13 Looking towards the past summer in Operations,
14 it's unusual for us to anticipate an fuel supply issues
15 during the summer period in our part of the footprint,
16 largely driven by a couple of circumstances.

17 One being that our current use and reliance on
18 natural gas-fired resources is relatively low compared to
19 other regions. We only have about 10 percent of our
20 requirements that we expect to be served with natural gas-
21 fired generation during the summer period. Combine that
22 with the general overall lower total demand for natural gas,
23 we typically don't anticipate issues around supply of fuel
24 in the summertime. And fortunately that was the case this
25 summer.

26

1 Okay, Phase III Gas Study. Phase III, cleverly
2 named because it's the follow-up study to two prior studies
3 in the region named Phase I and Phase II studies--

4 (Laughter.)

5 MR. RAMEY: Those studies were kicked off,
6 commissioned by MISO in late 2011, early 2012, as we were
7 anticipating a future where the current situation of not a
8 lot of reliance on natural gas-fired resources was going to
9 change.

10 The results of those earlier studies, Phase I and
11 Phase II, suggested that perhaps increasing capacity factors
12 on existing gas-fired generation in the region, as well as
13 anticipated growth or new construction of gas-fired
14 generation, those studies foreshadow potential reliability
15 concerns around the delivery of natural gas.

16 The Phase II study was published mid-year 2012.
17 At that point, we started getting lots of feedback from
18 stakeholders and the natural gas industry on the details of
19 those studies. In response, we kicked off a stakeholder
20 committee called the Electricity-Natural Gas Coordination
21 Task Force at MISO where we brought in stakeholders and
22 members of the natural gas industry. And over the last
23 year, working with them, we have gained a lot of information
24 and knowledge that was used to support a much better study
25 and update to those earlier studies, which is this Phase III

26

1 Study.

2 The Phase III Study is not yet finalized, but it
3 is getting very close to being finalized. We have released
4 some preliminary findings. And fortunately what we're
5 finding through this updated study is a much better picture,
6 looking forward in terms of supply of natural gas for the
7 region, and the reliability of that gas delivered for power
8 generation.

9 So the study is revealing that, contrary, or in
10 addition to the information that we looked at in the earlier
11 studies, we are really starting to see a clearer picture on
12 the effects of the availability of gas for the region, and
13 the prospects for reliable transportation of the gas is
14 really improving driven largely from a couple of factors.
15 Probably the most important factor is the production from
16 the shale regions, primarily the Bakken Region of the
17 Dakotas. The Marcellus Shale gas production in the
18 Appalachian Region is significantly altering both the supply
19 of combined natural gas for the region, as well as the flow
20 patterns for the pipelines that cross our footprint.

21 Historically, gas came from the west of the
22 footprint and south of the footprint. Some of it stopped
23 over and stayed in the Midwest, but most of it was moving on
24 to load centers East in the United States and Canada.

25 The shale gas is changing those flow patterns
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1 quite a bit and is making the Midwest much more of a central
2 hub for natural gas. And that has the fortunate side effect
3 for our region in really improving the access to gas for our
4 end users, as well as the prospects for reliable delivery
5 and transportation being more of a hub region going forward.

6 So that is certainly a positive outlook for the
7 Midwest.

8 Also with this Phase III Study we took a look for
9 the first time at the prospects for the supply and reliable
10 delivery of natural gas in our new MISO South Region. That
11 part of the footprint being down towards the Gulf Region has
12 historically enjoyed many supply options as well as
13 transportation options.

14 Looking forward, in the next 10 to 20 years that
15 picture doesn't appear to be changing. So we're also in
16 good shape on our new MISO South Region.

17 So while the picture for the supply and
18 transportation of natural gas looking forward is going well,
19 looking much better for our part of the footprint, we do
20 still have some concerns about the adequacy of electricity
21 supply as we look out in response to our asset owners, in
22 response to the MAT's compliance regulations. So looking
23 out three to four years, that's still an area of concern for
24 us. We have less than total clarity at this point on the
25 planned and committed supply resources to cover the demand
26

1 in that time frame.

2 To address those issues and a bit of a lack of
3 transparency on knowing exactly which resources are going to
4 be in place to serve those needs a few years out, we are
5 working closely with OMS to develop a survey of our load-
6 serving entities that went out a few months ago. All of the
7 loads in the footprint are responding well to that survey.
8 We are currently collecting that information and, as a
9 result, we are going to have a much clearer picture of
10 supply and demand balance for the 2016-2017 timeframe.

11 So next steps in terms of electric-gas
12 coordination. One of the things that we've recently
13 initiated is a Coordination Field Trial with the ANR
14 Pipeline. The main purpose of this Field Trial is to
15 improve and increase the level of coordination in the
16 operations' planning timeframe from an hour-ahead out to
17 about a month-ahead.

18 The objective is really to increase the electric
19 and gas coordination in its operational timeframe with a
20 goal of improving the situational awareness for our
21 operators and our control room, as well as the operators of
22 the pipeline systems in the Midwest.

23 So key elements of the Field Trial include
24 monthly coordination of outage activities between the
25 pipeline operators and our operations as well, looking out
26

1 at those maintenance schedules with an eye towards gaining
2 any situational awareness as it may relate to the
3 availability and transportation of gas to our gas-fired
4 generators.

5 The second element of the Coordination Field
6 Trial includes the development of communication/coordination
7 protocols during emergency operating conditions. To the
8 extent that there are emergencies that arise on the system,
9 we've developed communication protocols so that we are in
10 direct contact with pipeline operators. They are engaging
11 us in conversation when they see issues arising with their
12 system.

13 This Field Trial effort is being coordinated
14 through our Electricity and Natural Gas Coordination Task
15 Force. Both the structure and goals of the Field Trial were
16 developed through that Task Force. We will be giving
17 periodic updates to the group, as well as at the completion
18 of the six-month Field Trial we will develop a final report
19 and deliver it to that group for lessons learned. We can
20 expand that coordination to other pipeline operators, or
21 even provide information for other regions of the country
22 that may be beneficial.

23 Other things we're working on include several
24 stakeholder task force driven initiatives, analyses, and
25 papers that are being developed.

26

1 One relates to the implications of the current
2 misalignment of gas and electric timing of the Daily
3 Markets. This analysis, in our view, was completed earlier
4 this summer. The findings for our part of the footprint
5 suggest that this is not a significant issue for our region,
6 so the recommendation at this time is to not move forward
7 and recommend any changes for the timing of our Day-Ahead
8 Electricity Market in MISO.

9 We are going to continue to keep track of the
10 strides and the changes that New England is making in this
11 area, again looking for lessons learned that we may learn
12 that we can adopt.

13 There's another Task Force looking at potential
14 implications of thinking about the reliability of individual
15 resources in the footprint as we make calculations related
16 to our loss-of-load expectation methodology. This is the
17 methodology that leads to our calculations for planning
18 reserve requirements for our resource adequacy construct.
19 So that effort is also in flight.

20 The last thing I'll probably mention is the last
21 slide. We are working to develop and improve information
22 systems, databases, as well as real-time information to
23 improve situational awareness focused both internally for
24 the situational awareness of our system operators in the
25 control room of MISO as well as looking at some information
26

1 that we can aggregate and publish through our website to
2 give more situational awareness information to stakeholders,
3 or even gas pipeline operators, again supporting that
4 situational awareness goal in the real-time operating time
5 horizon.

6 That concludes my comments today. Thank you.

7 CHAIRMAN WELLINGHOFF: Thank you. Wes.

8 MR. YEOMANS: Okay, good. Thank you for inviting
9 the New York ISO to come down and speak on this issue.

10 Having attended the Installed Capacity Technical
11 Conference two weeks ago, I'll be the first to say that this
12 is only a pleasant discussion topic.

13 I'm here to talk about three topics:

14 The New York ISO Summer Operations during our
15 July heat wave, and really the performance of the gas
16 infrastructure during that heat wave; the new pipeline
17 infrastructure that's coming in place for this winter in New
18 York, which is a very positive story; and winter
19 preparations.

20 We did, as most of the country did on July 15th
21 through 19th, have a significant heat wave come across the
22 entire Eastern Interconnection for six consecutive days.
23 That's a very long, significant heat wave characterized by
24 high temperatures and high humidity, as everyone knows.

25 The New York ISO set a new all-time peak load of
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1 33,956 megawatts on Friday. Very unusual to hit an all-time
2 peak on a Friday, but we did it. I would have said for most
3 of my career that was impossible. But the summer before
4 ConEd set a new all-time ConEd peak on a Friday.

5 The previous all-time peak was back in 2006, and
6 we beat that by 17 megawatts. All operating criteria were
7 met during that heat wave this past summer.

8 Operating observations from the heat wave,
9 generation performance was excellent, as was the
10 transmission performance and the demand-response
11 performance. During the heat wave, all available
12 generators were scheduled for operation the last three days
13 of the heat wave, so every single unit that was available
14 was committed and scheduled.

15 Very few forced outages during the week. Very few
16 tube leaks. We started out the week with six nuclear power
17 plants, and we ended the week with six nuclear power plants.
18 So that was good and helpful.

19 I haven't been moving the slides, right? Okay.
20 There were a couple of small outages as a result of fuel
21 unavailability really in the range of 200 to 300 megawatts,
22 so not 1,000 megawatts, not thousands of megawatts. So on a
23 percentage basis, very small. And it happens that those
24 units did have oil capability, but the oil bid curves
25 weren't dispatched so the capability wasn't needed. So the
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1 performance of the gas was very good.

2 Many gas pipelines and LDCs in New York did issue
3 system alerts and OFOs during the week but I'll always take
4 the opportunity to remind people that an OFO on a gas
5 pipeline does not mean a generator can't get gas; it's
6 really a statement saying that to maintain pressure stay
7 within 2 percent of your nomination. So if a 1,000-megawatt
8 combined cycle had nominated and scheduled properly for 750
9 megawatts of gas, the issuance of the OFO certainly doesn't
10 mean they can't get that; it just means they need to stay on
11 schedule and there's less flexibility to go beyond that.

12 So certainly an OFO does not mean curtailments.
13 It does not mean they can't get gas. It just means whatever
14 you schedule properly in the Day-Ahead, please stay on those
15 schedules.

16 We did have some indications of some low
17 pressures on some of the New York City LDCs that did not
18 impact total generation, but it did change how the loading
19 of some GTs were loaded. So where in other situations you
20 could load a lot of GTs quickly or all at once, they did
21 have to stagger those to maintain pressures. But over the
22 course of the heat wave, that was not a problem.

23 This is just a picture of the peak load
24 development during the week, really from Monday to Friday,
25 with Friday being the peak. The top of the blue bar is the
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1 physical load that we measured with a peak of 33,956
2 megawatts on Friday. So you see that kind of build across
3 the week.

4 But above that, we did activate demand response.
5 We activated 470 megawatts the first three days in the Lower
6 Hudson Valley to maintain transmission security, but then we
7 activated the entire amount of DR in New York State of 1,070
8 megawatts on Thursday and Friday to maintain operating
9 reserves. And that's the purple bar. So if you were to add
10 the physical load that we measured plus the DR amount, then
11 the physical load that we would have had had we not called
12 DR would have been the top numbers at 35,026.

13 And then this is just the back casted amount of
14 where the load would have been over the course of Friday had
15 we not activated DR. So the black line is the physical load
16 that we measured. The dashed line is where the load would
17 have been had we not activated DR.

18 Okay, so now changing topics to New Pipeline
19 Infrastructure in the New York area, and actually
20 specifically to New York City, the New York Pipeline
21 Expansion Projects in the New York City are increasing gas
22 capability to the citygates by about 1 billion cubic feet
23 per day.

24 Now that's to the citygate, not inside the LDC,
25 or inside the New York facility groups of National Grid and
26

1 ConEd. But nonetheless, the capability to the citygates
2 has increased--is, beginning November 1st, forecasted and
3 predicted to be a tremendous increase.

4 Of the three projects that make that up are the
5 Transco Northeast Expansion Project. This includes 12 miles
6 of additional looping where they actually dig up the right-
7 of-way and install additional parallel pipes. There's 12
8 miles of that. Twenty-seven miles of upgrades. And then a
9 significant amount of increased compression. And this is a
10 citygate into Midtown Manhattan.

11 The next project is actually a brand-new pipe.
12 It's 16 miles from New Jersey across the river into New York
13 City, the Spectra New York-New Jersey Expansion Project.
14 This is a .8B a day pipe, a very large. So the first
15 connection is an expansion. The second one is a brand-new
16 citygate connection, a very significant big pipe, again .8B
17 a day.

18 And then the third one, we need to be careful.
19 This is an expansion but not an additional connection in New
20 York City. This is behind the Spectra. So the Tennessee
21 300-Line Upgrade is really behind the Spectra Project to
22 support that. So one way to say it is, it's in series.

23 So you wouldn't add these three numbers, but you
24 can add the first two numbers. If you said what's the
25 incremental increase, if you were standing in Manhattan.

26

1 But again, these are very positive upgrades to
2 the citygate. And to be clear, then, time will tell how
3 much that helps with the constraints inside of New York
4 City. And these are all three scheduled to be in operation
5 by November 1st.

6 Moving on to winter preparations. We have
7 completed what we're calling our Fuel Survey. This is where
8 we're getting very good voluntary cooperation from our
9 stakeholders, from our generators, and the pipelines in
10 regards to--for the gas-fired or the dual-fuel units, to
11 what degree are they purchasing capacity releases, firm
12 capacity releases, and have firm delivery instead of
13 interruptible? So we're keeping track of that inventory.

14 And then the oil inventories for the dual-fuel
15 units. You know, it's one thing to say you have oil
16 capability. It's another to say there are only 10 gallons
17 in the tank, or 100,000 gallons in the tank. So we've
18 completed our inventories of what are starting inventories,
19 what might be burn rates during a cold streak, and then what
20 are delivery rates.

21 So if the inventory is low and the delivery is
22 only once a month, then that's one thing. If the delivery
23 is every 12 hours, that's different. So we think we have
24 some very good information in place and are well prepared
25 for any significant cold streaks this winter.

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1 We have our continuous ongoing pipeline
2 maintenance programs really in place and completed. This is
3 where we're just trying to coordinate pipeline outages with
4 generator outages, with electric transmission outages, and
5 we have that in place and in good shape for this winter.

6 Turning the page, New Operations Procedures for
7 Electric-Gas Coordination: We do now have an extreme cold
8 weather procedure where, to the extent that we see a cold
9 streak coming a week ahead, or a day ahead, we have some
10 procedures where we have additional voluntary outreach of
11 communications confirming what gas nominations generators
12 have made. And again, then kind of a real-time update on
13 the oil inventory for the dual-fuel units.

14 Gas visualization and operator awareness. We
15 hope to be commissioning a new control center, a new control
16 room in December of this year, around December 10th. With
17 that, we have a brand-new videoboard, and many side windows,
18 and one of the big significant side windows is a gas
19 awareness video board of the pipeline system, the gas
20 pipeline system. Phase I of that is there, a static
21 videoboard. But then we hope over the next 12 months to
22 populate that with real-time information, to the extent that
23 we can get that.

24 We have hired a consultant to look at the fuel
25 assurance risk for this winter for New York. And the result
26

1 of that analysis is that we're in good shape for this
2 winter. And then we've done our own deterministic view,
3 which is just as simple as taking the winter peak, and then
4 you look at six nuclear power plants, the New York Power
5 Authority Hydro, the dual-fuel, the oil, and do all that
6 math. And both the risk assessment from Levitan and our own
7 deterministic assessment indicate that we have sufficient
8 reserves for a cold streak this winter.

9 And that concludes my talk.

10 CHAIRMAN WELLINGHOFF: Thank you, Wes. Gary.

11 MR. HELM: Good morning, Mr. Chairman,
12 Commissioners, I appreciate the opportunity to come here to
13 discuss the gas-electric interface in PJM.

14 Commissioner LaFleur, I do have to point out, I
15 appreciate you wearing your colors today. Good luck to the
16 Sox.

17 (Laughter.)

18 COMMISSIONER LaFLEUR: Thank you.

19 MR. HELM: Being from Philly, I appreciate--

20 COMMISSIONER LaFLEUR: I'm just trying to let it
21 make its own statement.

22 (Laughter.)

23 MR. HELM: So I do appreciate your passion.

24 I do want to take this time to basically equate
25 my views with the current state of Philly's four teams with
26

1 the shale gas infrastructure:

2 We're young, we're growing, and we have
3 expectations for the investments that have been made.

4 (Laughter.)

5 MR. HELM: So not to reiterate what Wes had just
6 gone through as far as pipeline expansions in the Northeast.
7 A lot of those that he mentioned around New Jersey/New York
8 will also benefit a constrained area of PJM where we saw
9 some issues last winter. So that is very helpful to us.

10 The one thing I do want to point out, which
11 usually is under the radar, is the expansion of the mid-
12 market, basically the infrastructure to get the gas out.
13 We've been seeing an awful lot of that in Pennsylvania,
14 Ohio, West Virginia, a lot of these states within our
15 footprint. They're getting infrastructure built that's
16 allowing the gas to get to market.

17 This helps PJM in the Eastern areas closer to the
18 load, which is definitely beneficial, but it's also helping
19 in the Midwest. We're seeing shale plays such as the Bakken
20 that's feeding into the Midwest Markets that's also
21 impacting our region. Definitely, definitely beneficial.

22 The other thing I would like to point out is some
23 other pipelines in our area, such as Columbia Gas, are going
24 through modernization programs where they're actually
25 upgrading the existing pipeline infrastructure, and doing

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1 things such as replacing 1950s-vintage compressors where you
2 can significantly increase the flow of gas through there.

3 We are also seeing the changing flow patterns. I
4 know that's been mentioned before, but that is also having a
5 big impact where at times you are seeing the Marcellus gas
6 being less expensive than Henry Hub.

7 So this movement of gas resources is happening at
8 a critical time in PJM where this similar economic pressures
9 are having an impact on our existing coal generation fleet.
10 So since early 2011 when the Mercury-In-Air Toxic Standard
11 Rule was proposed, we've seen over 20 gigawatts of coal-
12 fired resources either announce a retirement, or actually
13 retire. This is significant. It is having an impact.

14 And one of the things that is influencing how
15 these units, you know, the viability of these units, is gas
16 prices. And things--you know, we expect, I'm sure you're
17 keeping track of gas prices, the projections going forward,
18 they're fairly stable looking out.

19 So these resources, coal resources, and even
20 nuclear resources, are being challenged as far as
21 maintaining their viability. So one thing that I do want to
22 say is that the capacity market in PJM has been doing a good
23 job at managing this change in resources.

24 I'm showing you a slide of the auctions that
25 occur each May. This is since 2007. And you can see the
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1 top two lines where they intersect where we actually are
2 looking at more gas coming online in the future than coal.

3 Now what I want to point out as far as looking
4 more closely at our winter operations is that the circled
5 area, that was the Capacity auction that was done in May
6 2010. Those are the results for that auction.

7 Those are the resources that are in the market
8 now for this winter. So this is sort of what we're looking
9 at being around. So there's still a significant amount of
10 coal, a fair amount of gas, but we're also seeing this as
11 one of the early years of the significant increase in demand
12 response.

13 And so that also has an impact on our winter
14 reserves. However, one thing with our winter reserves, they
15 are I would say more than adequate. Our normal installed
16 reserve margin, we have targets around 15 percent. This is
17 based on summer operations. We normally run around 20
18 percent in the summertime.

19 In the winter it's much higher. You can see it's
20 anywhere from 30 to 45 percent margins that we run. Now the
21 blue line I just wanted to show you, this is our weekly
22 target winter reserve margin that we use to schedule
23 outages.

24 So as we've seen generation outages, scheduling
25 those is very important. It has a big impact on what we do.

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1 And so we try to maintain those reserve margins around
2 roughly 27 percent in the wintertime when we look at
3 scheduling outages.

4 Now before I get into things that we're doing for
5 the future, I also want to just have a look back at our
6 summer operations. Summer operations, we saw across our
7 footprint roughly average temperatures; a few heat waves
8 that happened. I know during one heat wave in late July we
9 were in discussions with pipeline and a generator about the
10 availability of gas, and this centered around getting gas
11 that was on interruptible transport and how that would be
12 available.

13 The thing that these discussions highlight is how
14 important communications are. That is very important to us.
15 We are continuing to develop that with the pipelines by
16 participating in winter preparation meetings, as well as
17 having pipelines come to PJM to participate in our training
18 and sharing information there.

19 Now also I would like to mention, regarding late
20 September when we saw the hot weather when we actually had
21 some load-shed events, I had to look at that from the gas-
22 electric perspective. While it wasn't related to gas
23 availability, the one thing we did learn, these outages have
24 impacts on the gas pipelines. And we did receive calls from
25 pipelines as far as communicating during these events.

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1 Because if we have a load-shed events and a
2 manufacturer is not--you know, does not have electricity, is
3 not producing something, and therefore they're not also
4 using gas, this gas goes somewhere. So it again highlights
5 the importance of communication and how we have to share in
6 real-time as far as minimizing impacts to both the gas side
7 and the electric side.

8 So moving on to what we're doing for the future,
9 we have formed this Gas-Electric Senior Task Force. And
10 that Task Force has--you know, which was formed back in
11 March of this year--has been going through an education
12 period, bringing in people from states, from the pipes, as
13 well as even FERC. And I would like to thank Gary
14 Marenholtz and Larry Anabole for providing a presentation to
15 us. All this information is very helpful to our
16 stakeholders.

17 We are at the point now where we are going to be
18 proposing a problem statement to our Markets and Reliability
19 Committee in late October basically reflecting a stakeholder
20 interest. One of the things that has been talked about,
21 gas-electric harmonization of the schedules, do we need to
22 do anything there?

23 I know some of our members have--specifically
24 merchant generators have looked at, it would be beneficial
25 to move our Day-Ahead Market up maybe two hours to they
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1 would know their electric commitments before making their
2 gas nominations. So they see some benefit there.

3 The other thing is being able to reflect all the
4 fuel-related costs in the different markets: Capacity
5 Market as well as the Energy Market. Are there ways to do
6 that that would help make the gas side run smoother?

7 So again we're getting inputs from all sides,
8 states as well as the generation side, what would be helpful
9 there. And so we plan on undertaking that work, the hard
10 part of that work, late this year or early next year.

11 And I'd like to finish off with one of the
12 things, talking about the issues of market costs. These are
13 issues that really, for PJM on the market side, what we're
14 also interested in is how things are working on the
15 infrastructure side. And so we are actually part of an
16 Eastern Interconnection Study on gas infrastructure.

17 And so just a brief update on that. I know I
18 briefed you in the past, but this is incorporating a large
19 stakeholder process. To that end, we actually have a
20 meeting scheduled in D.C. at the end of this month to kick
21 that process off.

22 We hope to within the next week begin the study
23 in earnest, beginning with what you see up there, baselining
24 the electric and natural gas systems. What do we have now
25 in place? And then moving on to looking at the
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1 infrastructure, the capability of that infrastructure to
2 meet the needs of each of the participating regions. And
3 then moving on to a contingency analysis of gas and electric
4 infrastructure in each of the regions, and what the impacts
5 of those would be.

6 And then finally, finishing off with an analysis
7 of dual-fuel. The importance I think, we noticed the
8 importance last winter when we had Operational Flow Orders
9 on pipelines in the Northeast. Basically what this meant is
10 all the pipes were being taken up by firm customers, and
11 they were using all that gas.

12 So we had generators on interruptible
13 transportation that could not get gas. But the one thing is
14 this: If they had oil available, they could switch to those
15 oil schedules and run on oil.

16 Now we had some particular issues related to the
17 Super Storm Sandy as far as those oil backup systems being
18 available. This year they are in service ready to go. So
19 as far as the winter issues, things in the Northeast,
20 Northern Jersey, look good. And as I mentioned earlier, we
21 have a lot more infrastructure going in that's due in
22 November of this year.

23 And so all that is happening at the same time.
24 But I do want to stress that this dual-fuel is a very
25 important aspect, and that is one of the things, when we
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1 talk about looking at fuel costs in the market, that also
2 includes dual-fuel. And we have, as far as the impacts on
3 dual-fuel, in our discussions with EPA on their proposed
4 regulations on greenhouse gases, we have made it known that
5 you need to make considerations for dual-fuel. You cannot
6 just lump it in with natural gas. The emissions profile is
7 different, and we need the ability to operate those units
8 when needed. So that is an important aspect going forward.

9 So the other thing I wanted to point out, which
10 was the last point on this slide, was the significant data
11 requirements. When we're modeling the system as far as the
12 study, we're looking at both the electric and gas side, and
13 we will be modeling the flows--basically called "hydraulic
14 modeling."

15 For that we require a lot of information. We are
16 going to basically have a two-pronged approach looking at
17 getting out information from the pipelines, but most likely
18 also coming to you and seeing what information we can get
19 from reports that are submitted to the Commission.

20 And that I know is going to be a heavy lift on
21 all sides because there's a lot involved in this, and we
22 stress the importance of that study.

23 So to wrap it up, again I appreciate the
24 opportunity to discuss this. It is an important issue to
25 PJM, and we want to keep--we're fortunate to have a wide
26

1 diversity of resources available to us, but we also want to
2 be able to seamlessly integrate this growing gas resource in
3 our footprint.

4 Thanks, and I look forward to the discussion.

5 CHAIRMAN WELLINGHOFF: Thank you, Gary. Don.

6 MR. SHIPLEY: Good morning, Mr. Chairman and
7 Commissioners. I appreciate the opportunity to be here and
8 discuss SPP's perspective on this issue.

9 I do not have a PowerPoint, but I have presented
10 an opening statement, or a statement that I'm sure you have.
11 I would just like to call out a couple of highlights of that
12 statement.

13 Since we were here in May, we have had an active
14 season in the region on the gas-electric coordination and
15 the development of that, really being led by our stakeholder
16 process, which includes a joint task force of SPP members,
17 other interested stakeholders, state regulatory folks, and
18 SPP staff. And through that activity, we have been able to
19 ensure compliance with initiatives and have forward-looking
20 thoughts and consideration for our current state plus the
21 new state, as you all are aware that we're moving very fast
22 toward the implementation of a Day-2 Market, and
23 consolidating the balancing function in our region.

24 So we're beginning to turn our attention toward
25 how does gas-electric coordination change in that new
26

1 environment after March 1st, if at all. We do feel like
2 there will be some additional impacts when we change the
3 balancing functions to an SPP operation.

4 So that stakeholder process has been very
5 involved. Now we were fortunate this summer in the South.
6 I think actually my neighbors to the North had a much more
7 severe summer than we did even in the South.

8 We had the--projected from our engineering SPP
9 operations engineering of a mild summer, which with our load
10 was about ontrack for what they projected. And we did not
11 have any kind of gas-electric coordination issues, or gas
12 fuel supply issues in our region through the summer.

13 What that allowed us to do is to take on a very
14 important outreach project that we had envisioned through
15 our stakeholder task force of going from our SPP operations
16 out to some gas supply entities in our region, and we
17 selected two of our primary pipeline operations of Northern
18 Natural Gas and Southern Star.

19 And Operations staff went to both locations, in
20 Omaha and in Owensboro, Kentucky, and had very productive
21 meetings and developed some relationships and some beginning
22 discussion over winter preparedness communication protocols
23 at both facilities.

24 At both facilities we toured the operations
25 control rooms, look at what the gas operators were looking
26

1 at, their pipeline structures, how they operate, and we
2 related some of the same activities of how they manage
3 constraint and how we do it on the electric side, and came
4 away with some very good information that we have been able
5 to improve our gas displays in our control room.

6 We continue to work on that. As reported in May,
7 we began to try to improve our situational awareness to our
8 operators by having some gas displays and trying our best to
9 associate public notifications on the gas websites to an
10 alarm system or something in a display that our operators
11 are aware of at that time. And we developed procedures
12 around that.

13 While we are still a little short of an actual
14 one-for-one if it's an OFO notification coming up in our
15 display, we're still a little short of that, we're still
16 working. We have increased the knowledge of our operators
17 in this area, and the visits to the two control centers
18 allowed us to begin discussions of some sharing of
19 information of gas pipeline identifiers, things like that
20 that we can use in our models that would help us with this
21 alarming system. So, very, very productive.

22 As we approach winter preparedness, we have
23 created a draft communication document that we intend to use
24 ahead of projected weather events. The gas and electric
25 both would have the ability to initiate this communication
26

1 protocol, but it would--after that decision was made, the
2 actual initiation would come from the SPP operations team
3 and would lead the call.

4 We are developing templates for that discussion
5 because we intend to keep the information shared on that
6 call to public information only. So it would be in a time
7 that we have coordinated prior to the call that the
8 information is publicly out there on the websites either for
9 the electric side or the gas side, and that we would have a
10 free discussion of upcoming events, what the gas industry is
11 seeing as possible constraints, what the electric side sees
12 as constraints, possible issues. And as you know in our
13 region, as we're a North to South type region, it's very
14 possible it would be very regionally located inside the SPP
15 region. The North might have one set of temperature or
16 conditions that the South wouldn't experience. So we would
17 manage through that.

18 But we would do that in a two- to three-day-ahead
19 type forecast situation. So as we're prepared as we go into
20 the upcoming event, and that we've made phone calls, we've
21 got names attached to certain things, and we can on a
22 moment's notice access resources as needed on both sides
23 with a greater understanding of what each side is expecting
24 to face.

25 What that will do is also keep us out of being in
26

1 each other's way during the event. We would hope to have
2 that prepared beforehand where we're not having to make
3 calls during time of crisis outside of an action call.

4 So that's what we're moving toward. We do plan
5 to reach out to a third provider in our system before
6 winter, and that would be Enerjex that, between those three
7 those are the three primary providers in our footprint.

8 So those are some of the actions that we've taken
9 since May, and in our area of winter preparedness. And I
10 must say that we are very encouraged at the relationship
11 building that has gone on in our region with our gas
12 pipelines.

13 We have increased our knowledge on the electric
14 side tremendously just by knowing how the operations of the
15 gas folks operate in our region, what their needs and
16 concerns are, and we have tried not to be bogged down with
17 the limitations of sharing of information and use what we
18 already have, or what we can share.

19 That's kind of our approach. We feel confident
20 that a regional approach is still appropriate. I think SPP
21 has always put that forth through these actions and
22 activities over this issue the last few months. But as we
23 stay involved with our gas partners, we actually believe
24 that is a very effective approach to stay regionally based.

25 So with that, we thank you again for the
26

1 opportunity to come and share the progress and look forward
2 to further discussion. Thank you.

3 CHAIRMAN WELLINGHOFF: Thank you, Don, and I want
4 to thank all the members of the panel for very comprehensive
5 but yet efficient presentations. And the distances some of
6 you have traveled, I have to say I am quite encouraged by
7 the information that you have provided. I think we are
8 making substantial progress in this area of gas-electric
9 coordination.

10 I don't have any questions for any of you,
11 though, but I know some of my colleagues may. Commissioner
12 Moeller?

13 COMMISSIONER MOELLER: Thank you, Mr. Chairman.

14 The same comments from me. I want to commend all
15 the electric markets and the management for what you've just
16 told us about the efforts you've undertaken to focus on the
17 issue, the outreach to the gas industry, and this will be an
18 ongoing set of issues but very encouraging this morning
19 about what we've heard.

20 There's still a lot of work to do, but also the
21 inter-regional, or the inter-market efforts such as the EIPC
22 Study has a lot of good work going on.

23 I have a quick question for most of the panelists
24 specific to their market, and I guess to start with Mr.
25 Bouillon, thank you for mentioning the SONGS outage.

26

1 Obviously that is driving a lot of concern in California
2 over the next few years.

3 I commend Governor Brown for putting together his
4 task force the day after the closure announcement was made.
5 And it is my understanding from what I have picked up that
6 the Water Resources Board has actually been quite reasonable
7 and flexible in dealing with the 316(b) water intake issue
8 and how that has potentially profound impacts on California
9 generation.

10 The fact that they have been reasonable is
11 encouraging, but I would like your comment on that.

12 MR. BOUILLON: I am not an expert in that area.
13 My understanding is that the flexibility that they're
14 affording us is going to help us accommodate other programs,
15 obviously, and the timing of those programs to get them in
16 place to facilitate reliability in the south in particular.

17 Beyond that, I'm not very knowledgeable in that
18 area, other than it's been supportive and they've been
19 working with us to say okay what do we need? As opposed to
20 saying here are the hard dates. And that is--

21 COMMISSIONER MOELLER: Well, good. That's
22 encouraging, and we certainly hope it continues.

23 Mr. Doggett, I think I know the answer to this
24 question. I have alluded to it before, but of the 34
25 recommendations that came out of the FERC-NERC Report of
26

1 what happened in February 2011, you're pretty comfortable
2 with the implementation of those?

3 Do you need any help from us in terms of
4 encouraging any--I know it was a wide range of
5 recommendations to a lot of different entities, but your
6 thoughts?

7 MR. DOGGETT: There were certainly a wide range
8 of recommendations. I probably cannot comment on the gas
9 side of the recommendations, but on the electric side I feel
10 very comfortable that those have been addressed. And I
11 don't see a need for any assistance to make that happen.

12 COMMISSIONER MOELLER: That's good news. Thank
13 you.

14 Mr. Brandien, would you--is your initial
15 assessment, too, similar to what we heard from Enforcement
16 staff, that, cross-our-fingers, we're looking at a warmer
17 than normal winter in New England?

18 MR. BRANDIEN: The report that I had forwarded to
19 me from our forecast department earlier this week was they
20 expect a normal winter with a few cold spells, which is
21 normal.

22 (Laughter.)

23 MR. BRANDIEN: And it's those cold spells that,
24 you know--

25 COMMISSIONER MOELLER: What we're worried about.

26

1 MR. BRANDIEN: --we're going to be challenged
2 with. And I think the winter program in having the oil
3 inventory there for us, the challenge for us is
4 understanding the gas supply and when to bring the oil on.

5 The program puts the oil in the tanks. It's up
6 to myself and my staff to understand when the gas
7 infrastructure is going to be constrained to the point where
8 you need the oil on, if the price doesn't bring them on. If
9 we assume that we're going to get prices like we did last
10 January and February, we saw the oil brought on just due to
11 economics. The prices got that high.

12 So I'm hoping that the economics works out so
13 that the right resources are brought on and I don't have to
14 step in with some sort of a heavy hand and alter the mix
15 that is there because the gas supply is constrained but it's
16 not being reflected in price. And we believe some of the
17 things that I spoke to on the reserve constraint penalty
18 factors should help with the price transparency and get the
19 right price in the energy markets such that the right
20 resources are brought on that I don't have to step in and
21 bring them on.

22 COMMISSIONER MOELLER: I look forward to talking
23 with you in six months, and hopefully no drama to report.

24 Mr. Ramey, a couple of questions. First, the OMS
25 Survey of the generation fleet, when is that due?
26

1 MR. RAMEY: As I mentioned earlier, we are
2 already starting to see a lot of that information coming in
3 from the load-serving entities in the footprint. The last
4 update I received this week was almost 90 percent of the
5 load in the footprint we received data from. So we're
6 looking through that now and we're continuing to work with
7 the remaining LSCs so that we can collect all of that
8 information.

9 Right now we're anticipating that we will
10 complete collection of that data shortly, within the next
11 few weeks, and help to turn around analysis of the
12 information and have a much clearer picture of the adequacy
13 outlook for the '16-'17 timeframe by the end of this year.

14 COMMISSIONER MOELLER: Good. Well another kudos
15 to OMS for doing that and helping out in getting very
16 valuable information.

17 While I still want to focus on the positive, I
18 think it was slide 12 and it was a similar message I heard
19 at the Board meeting in August. Looking at '16-'17, there's
20 no way you can meet reserve targets based on the inability
21 to get new generation built in that time.

22 Can you elaborate a little bit more? I mean,
23 this is pretty serious.

24 MR. RAMEY: That's been an issue that we've been
25 trying to focus attention on in the Midwest for the last
26

1 couple of years. I think our current projections, based on
2 the information we have, based on firm commitments for
3 supply resource availability to meet projected demand for
4 the '16-'17 timeframe, we're looking at currently being 3 to
5 8 gigawatts short of those minimum requirements.

6 But some information that we're starting to
7 gather from the survey process is starting to provide some
8 clarity on how that gap will be filled. Various
9 alternatives are available that may be able to be delivered
10 in a much shorter timeframe, such as repowerings of certain
11 facilities that were either now suspended that we're
12 currently assuming will retire until we learn more
13 information. Options like that we're hopeful we're going to
14 learn more about yet this year.

15 It clarifies the situation and hopefully it's a
16 better outlook for the '16-'17 timeframe here in just a few
17 months.

18 COMMISSIONER MOELLER: Well I appreciate your
19 efforts on it, but it's something we're all going to have to
20 pay attention to because those projections are somewhat
21 concerning for the reliability of the region.

22 MR. RAMEY: We appreciate the effort that you all
23 have placed on the question we raised, and I think we are
24 making good progress.

25 COMMISSIONER MOELLER: Mr. Yeomans, thanks for
26

1 the report. I wondered, I didn't hear you mention, about
2 part of the reason you I think got through this heat wave so
3 effectively with that incredible unit commitment was your
4 new scarcity pricing scheme that took effect this summer.
5 That had to have something to do with the fact that you met
6 load.

7 MR. YEOMANS: Yes, I would agree with that. And
8 for anybody that doesn't know this, the new scarcity is
9 additional scarcity pricing when we activate demand response
10 that does the But-For with the reserve pricing when it came
11 in. But when you do the But-For issue, some would say or
12 the correct higher prices, then it just helps the market
13 signals and, quite frankly, what I call the RTC, but the
14 evaluation for imports from other markets.

15 COMMISSIONER MOELLER: Congratulations getting
16 through a new peak.

17 Mr. Helm, again I really want to focus on all the
18 positive things you've been doing, but can you elaborate a
19 little bit more on that load-shedding event and kind of what
20 led to it in terms of I know it was unusually warm weather.
21 Was it shoulder season? A maintenance outage that
22 contributed to it? Could you elaborate a little bit more?

23 MR. HELM: Yes, I'll start off by saying, you
24 know, we put out a preliminary report and we're working on a
25 more detailed report that we hope to get--we plan on getting

26

1 out prior to the end of the year. I believe it's late
2 November/early December timeframe.

3 But yes, what you had mentioned were contributing
4 factors. Where it is shoulder season, we definitely had
5 more units out than we would during the summertime during a
6 heat wave that contributed to that problem.

7 COMMISSIONER MOELLER: Well, we'll be looking
8 forward to that study.

9 Mr. Shipley, just a comment of more encouragement
10 to SPP as you move forward to the Day-2 implementation. We
11 will be watching it closely and wish you well.

12 CHAIRMAN WELLINGHOFF: Than you, Phil. John,
13 anything?

14 COMMISSIONER NORRIS: Thanks. Let me start, Mr.
15 Ramey, with your comment that you and Phil were talking
16 about. And that is, the 3 to 8 gigawatts that you may be
17 short in '16-'17 in MISO.

18 Is it fair to characterize your concern, though,
19 is about the adequacy of the resources, but is it fair to
20 say that you're not at this point concerned about having
21 adequate gas supplies, or infrastructure to deliver gas to
22 meet that whatever is eventually going to show up?

23 MR. RAMEY: Yeah, I think the information we
24 learned through the most recent Phase III study is
25 suggesting that earlier concerns around either the supply
26

1 availability of natural gas or transportation reliability to
2 serve projected current--or uses from current resources,
3 anticipating possible increased capacity factors, and
4 possible incremental new gas-fired resources, that we're
5 pretty comfortable at this point that we will have adequate
6 supplies certainly, and we will have reliable transportation
7 to meet those challenges.

8 So I think, yes, we are starting to get much more
9 comfortable and we're in pretty good shape looking out three
10 to five years, even maybe ten years.

11 COMMISSIONER NORRIS: Okay. And then following
12 up with you on that, and expanding it to the rest of the
13 panel, it looks like you looked at moving up your Day-Ahead
14 schedule in MISO but have not decided to act on that yet, if
15 I recall.

16 MR. RAMEY: Correct.

17 COMMISSIONER NORRIS: For materials. And, New
18 York, you have a slightly earlier Day-Ahead schedule. New
19 England, you just enacted one in May. PJM and MISO a little
20 later in the day.

21 If you will, talk about--start with New York and
22 New England--what do you see as the benefits to having this
23 slightly earlier Day-Ahead in PJM and MISO. You're thinking
24 about it? What's the decision point? And I often think
25 it's that decision of how much you lose in terms of
26

1 forecasting versus what you gain in terms of knowledge of
2 commitment. But could you guys expand on that a little bit
3 and help me? Because as we look at changes, perhaps, to
4 make I think this could be insightful for us.

5 Go ahead.

6 MR. YEOMANS: Yeah, just speaking for New York
7 we're still discussing this with our stakeholders. We're
8 kind of in the middle. But, yeah, we close our market at 5
9 a.m. So bids from generators are due at 5:00 a.m. in the
10 morning. And then for a long time we were posting at 10:00
11 a.m. to give the results so people knew whether they have a
12 schedule to generate tomorrow or not, at 10:00 a.m.

13 We have in the last couple of months found some
14 process improvements to advance that to 9:30 a.m. And just
15 to help the generators. If we can get the schedules out
16 sooner, it gives them another 30 minutes to get into that
17 Day-Ahead gas day to purchase gas. But I guess the issue
18 reduces to some price certainty, and some prefer quantity
19 certainty.

20 So those that prefer price certainty don't want
21 it in advance. They like to know what's the price of gas
22 they're going to buy for tomorrow before they put their bid
23 in. So they kind of like the later markets. But others
24 prefer the quantity certainty, and they like it earlier,
25 which is: Quick, give me my schedule so I can figure out
26

1 whether I'll actually buy gas or not.

2 So the debate is price certainty versus schedule
3 certainty. Some want one, some want the other. We're right
4 in the middle with our 9:30 a.m. And, quite frankly, it's
5 workable.

6 The comments we're hearing to our stakeholder
7 process is that the generators by and large are actually
8 very good at predicting themselves whether they're going to
9 get committed in our market for the next day. And so at
10 4:30 a.m. they have a reasonable level of confidence as to
11 whether they're going to get committed or not, and with that
12 confidence they just go ahead and start buying the gas at
13 8:00 a.m. even though we haven't formalized their schedule
14 until 9:30.

15 Now once in awhile they're wrong, but by and
16 large that's working pretty well. But we're still talking
17 about it, and if there's a groundswell to move it sooner,
18 you know, we're open to that. If there's a groundswell to
19 go later, which I don't think would happen, then we'd be
20 open to that. But we're still listening.

21 COMMISSIONER NORRIS: Mr. Brandien, do your
22 generators have as much confidence?

23 MR. BRANDIEN: I feel strongly that I'd like to
24 see an alignment about the gas days. And I'm in the
25 constrained areas. I get jealous listening to these guys
26

1 speak about all the infrastructure enhancements that they've
2 got going on.

3 And we talk about moving the day and letting them
4 schedule gas, but remember they're getting an electric
5 schedule from midnight to midnight. And they're scheduling
6 gas on a gas day--I'm talking East Coast time--ten o'clock
7 in the morning to ten o'clock in the morning.

8 So they're scheduling gas, there's 14 hours in
9 one day and 10 hours in the other day, but they don't have a
10 schedule for the 24-hour gas day. And the problem that we
11 experience is, if something happens, if we have to activate
12 operating reserves because we lost a unit and they're
13 burning more gas and they begin to run low on the scheduled
14 gas that they have for the 10:00 a.m. day to the 10:00 a.m.
15 day, it's going to run out near the end of the gas day,
16 which is in the morning during our morning load pickup, and
17 the supply side, even though last time I was here they said
18 they're available all the time and they can get gas arranged
19 all the time, that's not my experience. The supply side
20 isn't available--if I call a generator up at, you know,
21 9:00, 10:00, 11:00, 3:00 in the morning, I said I'm going to
22 need you to run more than what I see you have scheduled for
23 gas, and they'll say, "Okay, let me see what I can do," but
24 they can't do anything until early in the morning when
25 people start showing up at, you know, 6:00, 7:00, 8:00 to
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1 arrange to see whether or not they can get additional gas in
2 that gas day to take them to ten o'clock.

3 So there's many times we experience units kind of
4 pulling up lame saying: I'm out of gas. I could say at
5 min, or I've got to come offline, talk to me at 10:00 when I
6 can schedule more gas.

7 So it's this misalignment in the two days, the 14
8 hours in one day, and the 10 hours in the next day that
9 causes me problems in the constrained area.

10 If I was in an unconstrained area where the units
11 could overdraw on the pipe until they could make the
12 arrangements when people show up at 7:00, 8:00 in the
13 morning, it probably isn't a problem.

14 But in the constrained area like New England
15 where they can't overdraw on the pipe because it causes
16 problems on the pipe, then I have problems. And if there
17 was an alignment where the 24 hours of both gas and electric
18 aligned, I would be in a much better situation.

19 Or, if the supply side had a 24-hour desk all the
20 time where they can go out and make arrangements to try to
21 get that additional supply, or to get me an answer between
22 the supply side and the pipeline side on whether or not they
23 could get--support that additional gas burn of the gas
24 generators, or do I have to make a different option and go
25 to a different pipe, or a different unit, or a different
26

1 fuel type. And that's where, in a constrained area like New
2 England, the misalignment of the gas and the electric day is
3 a problem.

4 We minimize it by trying to get better
5 information to the unit sooner, or the part of the gas day
6 that they're scheduling, but it still does not solve the
7 problem of the 10 and 14 hour misalignment.

8 COMMISSIONER NORRIS: Mr. Ramey, Mr. Helm, you've
9 said not to make this? I believe both of you commit your
10 Day-Ahead after the gas day opening, right?

11 MR. RAMEY: Correct, yeah. MISO--I was listening
12 to comments on either side of me, and the challenge that you
13 articulated to make this an interesting question for you are
14 the exact reason why it's not as compelling an issue in the
15 Midwest.

16 There's not a whole lot of constraints on the
17 pipeline system today. The relative proportion of gas-fired
18 generation, the footprint is very much lower than markets to
19 the East. Our asset owners who do have gas-fired generation
20 are comfortable that they are comfortable with their ability
21 to predict whether and when they're going to clear in the
22 electricity market and take actions on the gas side
23 accordingly.

24 Our market design affords a lot of flexibility
25 for asset owners to update the economics of generation
26

1 specifically around changing fuel prices either from Day-
2 Ahead gas prices to Spot Gas prices, or even fuel switching
3 if there's a need to switch for some of our resources that
4 do have dual-fuel capability. We allow hourly updates in
5 the Real-Time market for asset-offer prices to reflect
6 that.

7 So the combination of market design, the reality
8 of the dynamics on the pipe, the reality of the dynamics of
9 gas-fired generation, really adds up to a position where our
10 stakeholders are comfortable with an 11:00 a.m. closing of
11 the Day-Ahead market. We're clearing the case at that time
12 and publishing our Day-Ahead results much later than New
13 York, for example. We're publishing at 3:00 p.m. in the
14 afternoon. So our gas-fired generation owners aren't
15 finding out their electric schedules until 3:00 p.m.

16 All that, added up, the feedback we're getting
17 from the majority of our stakeholders is that they're
18 comfortable with the timing of the Day-Ahead market today.

19 Now perhaps it's a little bit different picture
20 in the MISO south region. A much higher reliance on natural
21 gas down there. Many of the stakeholders that are engaged
22 in these conversations from the south part of the footprint
23 are grabbing their collar a little bit. They think they're
24 okay. We certainly get some feedback from them that they
25 want to keep an eye on it. And of course at MISO we're open
26

1 to making changes as the need arises and stakeholders see
2 it, and we work with them. It's really not a huge effort
3 for us to make adjustments of that timing.

4 MR. HELM: Thank you. Yes, in PJM we actually--
5 this did come up in our education process of our Gas-
6 Electric Senior Task Force. It's one of the things that the
7 stakeholders are interested in exploring further.

8 The one thing where you look at moving our market
9 up a little earlier, you're getting some electric side
10 forecast risk. So the later you can keep it, the more
11 certain you are of what you're going to need there.

12 But as far as going forward, it's part of the
13 problem statement that we'll be proposing at the end of this
14 month as far as looking into that issue further: Do we need
15 to do that? Would it be beneficial?

16 So we will be looking to add more detail.

17 COMMISSIONER NORRIS: Wes?

18 MR. YEOMANS: Yeah, I responded to the issue of
19 advancing or retarding the closing and the posting of the
20 electric day, which is an issue. But, yeah, as I listened
21 to Peter speak, the other issue is now aligning a gas and
22 electric day, which is a different issue than what time
23 would you open and close an electric day.

24 So on that second issue, the observation out of
25 New York would be that the great majority of the time when
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1 the system is not gas-constrained nor are there any OFOs, it
2 turns out, you know, the gas pipelines and LDCs do sell some
3 pretty good balancing services. So to take the example of
4 6:30 a.m. in the morning where you're coming to the end of
5 the gas day, and someone that's been overburning has a
6 problem, they're out of balance so they need to back off and
7 they want to give a de-rate to the New York ISO, and that's
8 the world's worst time because the electric load is going
9 up, in the great majority of the time where there's not an
10 OFO or we're not constrained, there's some very good tariff
11 gas balancing services that the pipelines provide so a
12 generator can just buy those services. They don't give us
13 the de-rate, and it's not a problem.

14 But for the sliver of time where there are OFOs,
15 or we're constrained, now all of a sudden those services are
16 not available and it is a problem. And we have seen the
17 observation that Peter is speaking to of really just cold
18 days, but last January on cold days sure enough at 6:30 in
19 the morning we'd receive some gas-generator de-rates and
20 balancing services are not an option. And again the comment
21 is: They say, and by the way, sit tight. At ten o'clock
22 we'll have all kinds of gas.

23 So at 6:30 a.m. they don't. We take the de-rate.
24 Now if they have oil, they switch to oil and submit a
25 different bid. But if they don't have oil, then they also
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1 then don't have gas until ten o'clock, and then at ten
2 o'clock a new gas day starts and mysteriously and
3 miraculously they have all kinds of gas.

4 COMMISSIONER NORRIS: Thanks. Go ahead,
5 Mr. Brandien.

6 MR. BRANDIEN: If I could just try to have you
7 think of it as two separate things--and this is what Wes was
8 going to--the physical day, and the scheduling of that
9 physical day.

10 People could more or less leave their schedule in
11 the physical day as they see it. But instead of a midnight-
12 to-midnight and a ten-to-ten day, let it be five in the
13 morning to five in the morning for both gas and electric,
14 and schedule it around that.

15 So separate the two, the Day-Ahead scheduling and
16 then the physical day, and let people do their scheduling
17 even if it's on the same timeline they have, but instead of
18 having two separate physical days align the physical day
19 that they're scheduling to.

20 So think of it as two distinct issues.

21 COMMISSIONER NORRIS: All right, I may need to
22 have you follow up on that so I get how that would work.

23 Going back to Mr. Helm, I understand you write
24 that PJM is looking at changing their Day-Ahead schedule?
25 Let me make sure I got that right.

26

1 MR. HELM: Yes. We haven't proposed to change
2 our schedule, but it's actually part of a problem statement
3 that we'll be looking at that issue further. So it's part
4 of our Gas-Electric Senior Task Force. One of the things is
5 looking at how fuel costs are reflected in the markets. But
6 another thing is also schedule harmonization. Is there
7 anything we can do on our end that would benefit the markets
8 and operations? So we have not made the decision, but we
9 are definitely looking at it.

10 COMMISSIONER NORRIS: Okay. All right. Thank
11 you for your comments. You know, we've had, what, five or
12 six tech conference around the country on this. We've had
13 two tech conferences here on scheduling and communication,
14 and Phil and Cheryl have had leadership with NARUC on a
15 collaborative. And then we bring you all in here today.
16 Someone is going to get the impression pretty soon that
17 we're concerned about this.

18 (Laughter.)

19 COMMISSIONER NORRIS: But I would say, I have a
20 sense from industry you're all concerned about it. So I
21 guess my message here is, I think, New England, you have
22 come to us with some serious problems, and we're dealing
23 with winter rules, and capacity markets for performance
24 rules going forward that will impact this. I think the
25 message from me--I can't speak for all of us here--is we

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1 want to be helpful on this, but we also understand a lot of
2 your engineers kind of have that can-do attitude, we can
3 figure this out on our own. So we've got a lot of trust and
4 faith in you figuring this out, but my message would be that
5 you make sure to let us know if there's something we can do
6 differently, some rules that can be changed. And we're
7 looking at some changes that may involve the schedule and
8 coordination issues, and communication issues.

9 But I hope the message is clear to industry and
10 to the RTOs that we are aware that you're dealing with a
11 transformative period out there, with gas prices where
12 they're at, and the rush to gas, and New England even more
13 rushed to gas, to be dependent on one fuel source concerns
14 me, but this Commission is concerned about it and wants to
15 work with you to make the adjustments necessary and make
16 this a reliable system.

17 So thanks for your work on this.

18 CHAIRMAN WELLINGHOFF: Thank you, John. Cheryl?

19 COMMISSIONER LaFLEUR: Well thank you all for
20 coming, for excellent presentations and discussion, and for
21 all the work that your organizations and the gas industry
22 are doing around this issue.

23 I have a few specific questions and then one cut-
24 across question for Mr. Brandien. As you mentioned, we have
25 entertained a lot of filings from ISO New England and more
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1 are expected on ways to evolve your markets--you know, to
2 price in more fuel security to deal with this issue.

3 One of the dimensions we look at, when we look at
4 market filings, is how much you're doing within the market
5 rules by refining the market rules, versus one-off out-of-
6 market solutions. And I would look at the solution that we
7 approved for this winter to put, you know, incent oil
8 storage in the tanks, more of an out-of-market solution.

9 Could you comment on looking for next winter and
10 beyond, things you might be looking at to look at a broader
11 range of resources, and more in-market solutions for this
12 issue?

13 MR. BRANDIEN: Well as you know, New England has
14 taken the approach that we're fuel-neutral and we want the
15 markets to send the signal to make the resources make the
16 investment; whether or not that is dual-fuel, whether or not
17 it is storage in LNG tanks, whether or not it's firm
18 transportation on gas pipelines, whether or not it's other
19 non-gas resources coming to the market to meet the demand,
20 that's where we're going.

21 And we're trying to have the ancillary markets,
22 the energy market and the capacity markets all work together
23 to get that end game. And, yes, the winter reliability
24 program is a one-off. We wish we didn't have to do it, but
25 we felt a need to do it for this coming winter because some
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1 of these other things that I'll speak to in a second won't
2 be in place.

3 By the winter of 2014-15, we should have the
4 hourly offers in place. That would allow resources, if they
5 have to call on the LNG they have in storage that's a higher
6 price than what they had offered in the Day-Ahead market,
7 they could reflect it more real-time.

8 If they have to switch from a gas supply to an
9 oil supply, they can reflect it real-time. So the issue we
10 have now with the asset owners is they have some concerns
11 about generating at a loss when they're needed for
12 reliability. Hopefully that will mitigate some of their
13 concerns.

14 The other thing is when the system begins to get
15 tight, are we sending the right price signal? We have three
16 levels of reserve-constrained penalty factors in the market
17 now where we bring on some what we call replacement
18 reserves, because generally there's a difference between the
19 integrated value and the instantaneous value, and you commit
20 the system to the integrated hourly value. So we know we
21 need a few more megawatts on, and we know we're going to
22 lose some amount of megawatts, whether it's a de-rate or
23 whatever. So we have this lower level reserve constraint
24 penalty factor where we're going to repl--price when our
25 replacement reserve is getting tight, rather than to press
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1 the energy market price when we bring on these additional
2 resources for this other service.

3 And then when the system gets tighter, our 30-
4 minute product, the price goes up. And then if we get into
5 our 10-minute reserves, the price goes up. So thee should
6 be better price transparency in the energy market, and we
7 will have that in for this year, or we have it in for this
8 year.

9 The other thing is, the incentives in the
10 capacity market. The triggers for a shortage event in our
11 capacity market is we have to be short our 10-minute
12 reserves. So we start taking actions in the operations of
13 the system to make sure we always have our full 30-minute
14 reserves, and then we take actions when we start going short
15 30-minute reserves. But the system is tight, but we're not
16 sending the proper signal, or incentive--

17 COMMISSIONER LaFLEUR: I know we have to be
18 careful, because I think this one is pending.

19 MR. BRANDIEN: So we went to get the right
20 incentives in the markets for people to perform when they
21 need to perform.

22 So we have that that's before the Commission now.
23 Sorry to speak so much to it.

24 And then longer term, we want to file with the
25 Commission our performance incentives in the capacity
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1 markets. And we're working with our stakeholders now to
2 send a stronger incentive in the capacity market for people
3 to perform when the system is tight.

4 So we're looking to have the proper triggers in
5 the capacity markets, the proper incentives in the capacity
6 market, and the proper energy market pricing. And hopefully
7 that will cause people to make the right investments to
8 resolve the lack of fuel diversity, or constrained fuel
9 situation that we're in in New England right now.

10 COMMISSIONER LaFLEUR: Well thank you for that.
11 And it sounds like you're going at it in a very
12 comprehensive way. And as I look at it, all of those things
13 are trying to price more fuel security into the electric
14 product in all the various markets, to then incent people to
15 line up more fuel security.

16 And I know you are fuel-neutral. I hate to put
17 you on the spot, but given your changing resource mix and
18 all the retirements we're seeing, does ISO New England have
19 a position on whether we need more gas pipelines into New
20 England, other than envy, which you articulated earlier.

21 (Laughter.)

22 MR. BRANDIEN: Yes. You know, I believe that the
23 solution needs to have additional gas infrastructure. I
24 don't see how we move forward with the resources that we
25 have today. The technology that is there today for even
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1 more efficient combined cycle gas turbines, we're going to
2 have that. Even with renewables coming like wind, there's
3 some challenges to that. I think we're going to need gas
4 infrastructure. Even when I put in LNG into the picture, to
5 call on the LNG during those spikes, I believe that gas
6 infrastructure is part of the solution.

7 COMMISSIONER LaFLEUR: Well thank you for that,
8 because that gives us a way to assess what we're seeing as
9 we move forward.

10 Just switching gears a little, one issue I've
11 really been following is the impact of the FINSA
12 regulations, and some of the work that is going on right now
13 between now and July on gas pipeline availability.

14 And I know Mr. Doggett mentioned a couple of
15 isolated fuel supply issues related to pipeline inspections,
16 but are any of you seeing more pipelines coming out of
17 service in a worrisome way?

18 I know California is ahead of the curve on this
19 with all the California PUC pipeline--pipelines have been
20 taken out of service a lot, particularly in northern
21 California. Has this been an issue? Or is it well in hand
22 in this topic?

23 MR. BOUILLON: From California's side, we've
24 actually been doing synuvian inspections for about, I think
25 we're coming into our fourth fall of the inspections. And
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1 as you stated, it did start in the north. But we've had
2 some significant ones in the south as well, and we have two
3 actually going on right now while we're in this hearing.

4 And the impacts to us have been minimal because
5 we've been coordinating it. So from a reliability
6 standpoint, it has not been an impact to California.

7 COMMISSIONER LaFLEUR: Pete?

8 MR. BRANDIEN: We see it the same in New England
9 where they coordinate with us. And I believe we had more
10 last year than what we saw this year. So I don't know if
11 they were at the end of a cycle and they'll be able to get
12 on a different cycle for the next round, but so far we've
13 been able to coordinate it.

14 COMMISSIONER LaFLEUR: That's great. It just
15 seemed, looking at it from my observation, the shoulder
16 seasons are getting narrower and the non-shoulder seasons
17 are getting wider. But that's good news.

18 A final question just for anyone, and this picks
19 up on something Commissioner Norris said. You know, right
20 now as you know we're looking at two cut-across issues,
21 communications and scheduling, physical and market. And
22 other than that, letting the regions work on these issues.

23 Gary mentioned maybe needing FERC's help to get
24 some information for some of the modeling, but is there
25 anything else you think we as a Commission should be doing
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1 and looking at that we're not that would help on this? We
2 have all of you here.

3 MR. YEOMANS: Yes, Wes Yeomans with New York.
4 No, as I think of the last 18 months, the technical
5 conferences that you've had, the discussions on all the
6 issues that the FERC Commission has facilitated have been
7 fantastic. It's made it a lot easier for us to work with
8 the gas industry. It's made it easier for us to form a very
9 workable stakeholder group that includes the gas LDCs and
10 pipelines.

11 So if you're asking for incremental things, it's
12 hard for me to think of a list of that. But I will offer, I
13 would advise everybody, including the Commission, to pay
14 attention and keep track of this EIPC Study, this large
15 regional Study. I think we're expecting great things to
16 come out of that. When I say "great things," projections of
17 the future.

18 So I think, you know, if we're talking about this
19 winter, we're in good shape. If we're talking about next
20 year, we're in good shape. But that's not the challenge. I
21 think the challenge is what's the world going to look like
22 in five years with this tremendous Marcellus Shale, this
23 huge volume of inexpensive gas for 30 years? What's the
24 future going to look like 5 and 10 years? And I think we
25 all are going to get some great insight from the EIPC.

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1 So the one thing I would say is, all of us,
2 including FERC, pay attention to the EIPC as they come up
3 with results in Phase I, Phase II, and Phase III, and then
4 we can all remeet and talk about geeze, what market design
5 changes do we need? What new reliability standards do we
6 need? Do we need to change planning criteria, or not? And
7 maybe the result is we don't. But the one thing I can think
8 of is pay close attention to the big studies.

9 MR. DOGGETT: I don't have any additional
10 suggestions, but it might be a good time for me to say that
11 most of you recognize we talk to one another through our
12 IRC, ISO-RTO counsel, and I would just highlight that this
13 is very important to all of us. And we've asked our
14 Operations committee within the IRC to form a working group
15 on this topic.

16 So they will be addressing it. We are looking at
17 it collectively, and we may have some recommendations we can
18 bring back to you out of that work.

19 MR. HELM: Yes, I would also like to echo, just
20 continuing to shine a light on the issue. I know, like Wes
21 had mentioned, it has definitely been helpful in our
22 communications with the pipelines.

23 So going forward, I also want to mention
24 regarding the IPC study, that we will be looking at FINSA
25 regulations as part of that study and the impacts there. So
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1 going forward, these discussions are very helpful. It helps
2 us to think through the issues, too. So thank you.

3 COMMISSIONER LaFLEUR: Thank you, all.

4 CHAIRMAN WELLINGHOFF: Thank you, Cheryl. Tony?

5 COMMISSIONER CLARK: I think most of my questions
6 have been asked and answered, but I will throw up one and it
7 will probably be mostly to Peter and Wes because it's a
8 question about state and local efforts and gas capacity in
9 the Northeast.

10 Understanding that this is probably better
11 addressed to the pipeline industry itself and not you, so I
12 will preface that, but Cheryl brought up a question to you,
13 Peter, about the fact that expanded infrastructure gas
14 capacity in one way or another makes a lot of problems go
15 away. And understanding that ultimately that may mean, for
16 example, more pipelines, and it's understood that as you get
17 toward the Northeast it's a difficult part of the country to
18 site that sort of infrastructure in, I'm wondering, granted
19 FERC has broad jurisdiction over interstate natural gas
20 pipelines, but there's a lot that state and local
21 governments can do to either frustrate or encourage that
22 development to happen.

23 I'm wondering what feedback you're getting from
24 state and local governments as they engage on this issue of
25 the interdependency between the electricity market and the
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1 gas markets, and whether you have a sense for their level of
2 engagement and understanding of the importance of gas
3 capacity as their markets evolve?

4 MR. BRANDIEN: The states in New England are very
5 engaged, and we've got the New England Commission on Energy,
6 or NESCO, whatever that is--

7 (Laughter.)

8 MR. BRANDIEN: And they actually commissioned a
9 study. And so they're studying the gas infrastructure and
10 determining if and how much infrastructure they believe
11 needs to be built in New England.

12 It is six New England states. You know, they all
13 don't see the world the same. You know, you tend to have
14 the load concentrated in the lower three states, and less
15 load in the upper three states. And they've got different
16 renewable portfolios. So I would say that they're taking it
17 seriously. They're studying it. They know it's
18 constrained.

19 The level of how much infrastructure needs to be
20 built, if any, I would say varies by state and maybe by
21 people within the state; different, you know, between the
22 regulators and the governor's office and, you know,
23 different departments within the state. But they are
24 actively engaged.

25 MR. YEOMANS: For New York, I would characterize
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1 it as the New York State entire government, but especially
2 the Public Service Commission, is highly engaged. It has a
3 strong, powerful, good understanding of the issues, and I
4 would put their level of support at high.

5 They have a strong understanding of the
6 cost/benefit, so that these gas generators with fantastic
7 heat rates are a lower cost supplier of electricity, and
8 they endorse that. They support that. And they recognize
9 that that may require gas pipelines. And I do believe they
10 support that.

11 They understand the connection with the
12 reliability piece, and the environmental piece. And that
13 just for almost every gas megawatt that comes, that's a coal
14 megawatt that goes away, or an oil megawatt that goes away.

15 So I guess I would characterize their engagement
16 as high, and I would put it at very supportive.

17 COMMISSIONER CLARK: Great. Thank you.

18 CHAIRMAN WELLINGHOFF: Thank you. And again, I
19 want to thank all the members of the panel for providing
20 this information in this discussion. Thank you, very much.

21 Is there something else, Madam Secretary?

22 SECRETARY BOSE: Nothing more, Mr. Chairman.

23 CHAIRMAN WELLINGHOFF: We're adjourned.

24 (Whereupon, at 12:00 o'clock noon, Thursday,
25 October 17, 2013, the 998th meeting of the Federal Energy
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1 Regulatory Commissioners was adjourned.)

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