

1 FEDERAL ENERGY REGULATORY COMMISSION

2

3

4

5 STATE POLICIES AND WHOLESALE MARKETS

6 OPERATED BY ISO NEW ENGLAND INC.,

7 NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.,

8 AND

9 PJM INTERCONNECTION, L.L.C.

10

11 TECHNICAL CONFERENCE

12

13

14

15

16

17 FEDERAL ENERGY REGULATORY COMMISSION

18 888 FIRST STREET, NE

19 WASHINGTON, DC 20426

20

21 TUESDAY, MAY 2, 2017

22 9:00 A.M.

23

24

25

## 1 APPEARANCES

2 FERC COMMISSIONERS

3 CHERYL A. LA FLEUR, ACTING CHAIRMAN

4 COLETTE D. HONORABLE, COMMISSIONER

5

6 FERC STAFF

7 ARNIE QUINN

8 DAVID MORENOFF

9 JAMIE SIMLER

10 AMR IBRAHIM

11 SARAH CRAWFORD

12 HELEN DYSON

13 DAVID MEAD

14 KENT CARTER

15 KRIS FITZPATRICK

16 SCOTIANA COLLINS

17 KURT LONGO

18 TRISTAN COHEN

19 EMMA NICHOLSON

20 MICHAEL P. LEE

21 GRETCHEN KERSHAW

22 MICHAEL CACKOSKI

23 JIGNASA GADANI

24 MARIA FARINELLA

25

1 APPEARANCES -- (CONTINUED)

2 ANNA COCHRANE

3 CHRISTY WALSH

4 LESLIE KERR

5 VALERIE TEETER

6 JENNIFER SHIPLEY

7 MICHAEL P. MCLAUGHLIN

8 TATYANA KRAMSKAYA

9 CAMERON SCHILLING

10 GABRIEL AGUILERA

11 ANGELO MASTROGIACOMO

12

13 PARTICIPANTS

14 SESSION IV

15 PANELISTS

16 KATHLEEN BARRON, Senior Vice President of Competitive Market  
17 Policy, Exelon Corporation

18 THAD HILL, President and Chief Executive  
19 Officer, Calpine Corporaton

20 JOHN HUGHES, President and Chief Executive  
21 Officer,

22 Electricity Consumers Resource Council

23 LISA MCALISTER, General Counsel for Regulatory  
24 Affairs, American Municipal Power, Inc.

25

1           RICHARD MROZ, President, New Jersey Board of  
2 Public Utilities

3           ANDREW PLACE, Vice Chairman, Pennsylvania Public  
4 Utility Commission

5           MICHAEL POLSKY, Founder and Chief Executive  
6 Officer, Invenergy

7           BRIEN SHEAHAN, Chairman and Chief Executive  
8 Officer, Illinois Commerce Commission

9           ABRAHAM SILVERMAN, Vice President and Deputy  
10 General Counsel, Regulatory, NRG Energy, Inc.

11          MARK VANNOY, Chairman, Maine Public Utilities  
12 Commission

13

14   SESSION V PANELISTS

15   PANEL 1

16          CLIFF HAMAL, Managing Director, Navigant

17          WILLIAM HOGAN, Research Director, Harvard  
18 Electricity Policy Group, Harvard Kennedy School  
19 of Government

20          LAWRENCE MAKOVICH, Vice President and Chief  
21 Power Strategist, HIS Markit

22          SAMUEL NEWELL, Principal, the Brattle Group

23          ROY SHANKER, Independent Consultant

24

25

1 PANEL 2

2 JEFFREY BENTZ, Director of Analysis, New England  
3 States Committee on Electricity

4 STU BRESLER, Senior Vice President, PJM  
5 Interconnection, L.L.C.

6 RANA MUKERJI, Senior Vice President of Market  
7 Structure, New York Independent System Operator,

8 Inc.

9 ANDREW PLACE, Vice Chairman, Pennsylvania Public  
10 Utility Commission

11 SCOTT WEINER, Deputy of Markets and Innovation,  
12 New York State Department of Public Service

13 MATTHEW WHITE, Chief Economist, ISO New England,  
14 Inc.

15

16

17

18

19

20

21

22

23

24

25

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

2 (9:00 a.m.)

3 MR. QUINN: Good morning and welcome back to Day  
4 2 of our Technical Conference on State Policy and Wholesale  
5 Electricity Markets. I would like to welcome our panelists  
6 and all of our guests.

7 A couple of housekeeping announcements to start  
8 out with again today actions that purposely interfere or  
9 attempt to interfere with the conducting of the Conference  
10 or inhibit the audience's ability to observe or listen to  
11 the Conference including attempts by audience members to  
12 address the Commission while the Conference is in progress  
13 are not permit.

14 Any persons engaging in such behavior will be  
15 asked to leave the building. Anyone who refuses to leave  
16 voluntarily will be escorted from the building. Also a  
17 quick housekeeping announcement -- yesterday at the end of  
18 the Conference a few items were left behind we have a  
19 jacket, an umbrella and a water bottle.

20 If you were personally attached to any of those  
21 things please see our security staff we have that. I wasn't  
22 told how nice any of those three things were. So  
23 Commissioners I think any opening statements?

24 CHAIRMAN LA FLEUR: I'm ready to plow in.

25 MR. QUINN: Alright let's plow.

1                   So yesterday's conversation was regionally  
2 focused -- the desire and the hope yesterday and I think  
3 largely accomplished or at least I'm declaring victory was  
4 to understand the objectives the states were pursuing, the  
5 perspectives market participants have on that pursuit and  
6 also to get a sense of urgency for whether the Commission  
7 needs to take action or the Commission kind of wait and  
8 allow regional conversations to continue on.

9                   Today's focus will really be on completing the  
10 picture on the long-term paths forward. I think it is fair  
11 to say that in pre-Conference statements and the discussion  
12 we had yesterday there was -- I would say 4 or 5 broad paths  
13 forward that were discussed.

14                   I will try to lay those out. The hope for today  
15 is to kind of walk down each one of those paths one by one,  
16 understanding kind of the complete sense what that path  
17 involves, what the implications of those paths are.

18                   So I think path number 1 that we heard about was  
19 probably defined by no or limited minimum offer price rules.  
20 So a request that the Commission roll back the minimum offer  
21 price rules to either something like only those things that  
22 are pre-empted under Hughes or to nothing at all.

23                   Path number 2 I think looked like accommodation  
24 mostly in the way ISO New England talked about it -- finding  
25 some way to allow state supported resources to get at

1 capacity supply obligation but still reset the price in the  
2 capacity market so that it reflects what a competitive  
3 market would have produced, but there are probably  
4 alternative versions of that accommodate or you know a  
5 little bit of deference path.

6 I think the middle path is a hybrid path that we  
7 are probably on right now. It's an attempt to identify some  
8 state actions that we will apply our minimum offer price  
9 rule, some state actions that we won't apply that minimum  
10 offer price rule -- fairly active litigation about the  
11 boundary between those two points.

12 The path -- moving along the spectrum towards  
13 putting more things into the market I think we had a  
14 conversation in New York and in PJM about trying to identify  
15 the attribute that the state policy is targeting and seeing  
16 if we can get that attribute incorporated into the market.

17 Largely that was a discussion about environmental  
18 attributes and carbon pricing. We didn't talk a lot about  
19 what else happens what the capacity market rules are in that  
20 situation you know whether our MOPR rules change or stay the  
21 same.

22 And then I think the extreme version you know  
23 within the market is everything is either in the market or  
24 there's a strong minimum offer price rule that says any  
25 state support is going to be incorporated into someone's bid

1 and if you don't -- if you have got state support and we put  
2 in your bid you don't clear the capacity market, you just  
3 don't clear the capacity market and that is going to be  
4 extreme within market path.

5           Probably our variance along the way there are  
6 probably little off-shoots of each one of those paths. What  
7 we would like to try to walk through those paths this  
8 morning I think they map fairly well into acting Chairman  
9 LaFleur's doors.

10           I think we would like to talk about whether the  
11 two extreme versions that I laid out devolve into different  
12 versions of re-regulate. Clearly that middle path is the  
13 litigate door and then either side of that middle path is  
14 the kind of find a negotiated way to move forward with some  
15 balance between the wholesale markets and the states.

16           So that's the plan for this morning. I was going  
17 to say we are going to kind of walk through each one of  
18 those paths one by one. I'm pretty sure that each one of  
19 you probably have a favorite path and I imagine we will find  
20 out about that as we walk along that path but we really  
21 would hope to have the focus be completing the picture,  
22 understanding the implications.

23           This is a long panel it is about 3 hours. We  
24 will take a break at some point. I'll target about halfway  
25 through. If I or anyone up here starts to fall over we will

1 call it a little earlier but with that we will get started.

2 So I would like to start with the extreme -- kind  
3 of further along on the deference or kind of accommodation  
4 side of the paths to start. So I would be interested for  
5 all of your perspectives on that kind of no MOPR path.

6 So very limited MOPR, looks like pre-emption --  
7 if you go down that path do we need to change our market  
8 rules? Does the capacity market stay the same? Do the  
9 energy markets stay the same?

10 CHAIRMAN LA FLEUR: Arnie just to give them a  
11 route should we introduce the panel for the people watching.

12 MR. QUINN: Oh I'm sorry.

13 CHAIRMAN LA FLEUR: We have a two minute reprieve  
14 to answer that question.

15 MR. QUINN: That's right. I have in my notes  
16 right after take a break introduce the panel. So thank you.  
17 So obviously thank you to our panel for being here.

18 We have from Exelon the Vice President of  
19 Competitive Policy Kathleen Barron, from Calpine the  
20 President and Chief Executive Officer Thad Hill. I'm sorry  
21 wow I'm off this morning it's going to be a long day.

22 We have John Hughes the President and Chief  
23 Executive Officer of the Electricity Consumers Resource  
24 Council. We have Lisa McAlister the General Counsel for  
25 Regulatory Affairs for the American Municipal Power,

1 Incorporated.

2           We have President Richard Mroz from the New  
3 Jersey Board of Public Utilities. We have Andrew Place the  
4 Vice Chairman of the Pennsylvania Public Utility Commission,  
5 Michael Polsky, Founder and Chief Executive Officer of  
6 Invenergy.

7           Brien Sheahan the Chairman and Chief Executive  
8 Officer of the Illinois Commerce Commission. We have Abe  
9 Silverman the Vice President and Deputy General Counsel of  
10 Regulatory NRG Energy and Mark Vannoy, the Chairman of the  
11 Maine Public Utility Commission.

12           Alright thank you all and again I apologize for  
13 not introducing you to start out with. So walking down the  
14 no or limited MOPR path -- to the extent that you have  
15 thought about that path we would be interested to know what  
16 market rule changes you think would be necessary walking  
17 down that path.

18           I would also be interested to know what you think  
19 the implications are of walking down that path for either --  
20 for the things that you are responsible for -- for your  
21 business model, for the policies that your state has to set,  
22 for the you know -- the business decisions you have to make.

23           And just please again as yesterday if you want to  
24 talk raise your tent card. We are not going to probably  
25 walk down the panel at any point we will just let folks talk

1 when they think. Thad?

2 MR. HILL: Sure thanks sorry I wasn't here  
3 yesterday but I'm glad I got that right. Look you know the  
4 Chairman's 3 doors I think you are asking about -- I don't  
5 know if I quite have this right the door number 2 -- door  
6 number 1 is where the states do what they are going to do  
7 and there is some kind of accommodation made to protect the  
8 markets.

9 And door number 3 is a full re-regulation  
10 recoupage of cost and there are all kinds of you know  
11 issues there. Door number 2 is just you know, let it go and  
12 don't worry about and there are some pretty good examples of  
13 what happens in that case which I think was one of your  
14 questions.

15 You know and I'll tell you it does not work if  
16 you want to have a competitive market. You end up with  
17 layers of subsidies and then once subsidies help somebody  
18 else you end up having to have another layer of subsidies.  
19 In some ways it's not that different than what we are  
20 dealing with in the wounded west.

21 Although it was not a state action the federal  
22 deduction tax credits which led to a whole bunch of wind  
23 getting built, led to the nuclear issue that our friends at  
24 Exelon had in the first place and their solution was another  
25 subsidy. Well that will lead to another.

1           We have seen that happen in NYISO the recent  
2 capacity market clearing in NYISO's own fort you can argue  
3 was at least in some way tied to the subsidies, the nuclear  
4 plants in Illinois received.

5           There are examples in different markets. But let  
6 me tell you the most applicable one I think people should  
7 recognize it's the State of California. I would say today  
8 operates their market effectively in door number 2.

9           And you know there has been literally there's a  
10 mandate-driven effort where the state legislature or the PUC  
11 under mandate passes and they procure very specifically  
12 things as they do. As that happens it has caused all other  
13 capital to pull back.

14           In fact I'll tell you, you can argue it has  
15 encouraged investment in the last 11 years, 10 years there  
16 have been 10,000 megawatts of gas built and 20,000 megawatts  
17 of renewable.

18           However, every single one of those was built with  
19 contracts at prices that sometimes are four or five times  
20 above the market price. What does that drive in Pacific Gas  
21 and Electric territory? Consumers pay and consumers pay  
22 almost a 40 cent kilowatt hour rate. They have got the  
23 highest rates in the lower 48 and they actually have very  
24 low energy prices.

25           That's the definition I think of a failed market

1 where we have really high consumer rates and very low  
2 wholesale power rates. By the way this also creates  
3 liability risks. The  
4 California ISO just put out a study that they view I think  
5 the number is 8600 megawatts of assets that are in the risk  
6 of retirement that are actually required for reliability  
7 they would argue.

8           It creates a real issue. Finally, it creates  
9 some crazy things. I will tell you right now in California  
10 and this is pretty interesting -- because of the state  
11 mandate to build a whole bunch of solar without any kind of  
12 you know restraint there, we actually now have negative  
13 prices in California in the middle of the day.

14           The only place in California where we are  
15 spending capital right now and it is pretty amazing is we  
16 are figuring out every way we can to waste heat in the  
17 middle of the day. Let me tell you if you haven't thought  
18 about this to actually go out and get a room full of  
19 engineers that have been in the power generation business  
20 their entire career and tell them that the highest EPV  
21 project we have a company right now is to waste heat in the  
22 middle of the day because prices are going negative because  
23 of the state mandate.

24           And so you know it is a cautionary tale and you  
25 can bring up Germany -- there's some others as well. But if

1 you are going to go down the path of no MOPR and have a  
2 mandate driven world where whatever happens at the  
3 legislature happens, if there is not some protection in my  
4 view you need to go straight to door number 3.

5           There's retro-active rate making, there's cost  
6 recovery and I think you are going to have to go that way if  
7 that's actually the path you are going to pursue.

8           MR. QUINN: Lisa?

9           MS. MC ALISTER: Thank you. Thank the  
10 Commissioners for having this important event and for staff.  
11 I appreciate your efforts here today. I would say that one  
12 of AMP's major concerns with a type of hybrid approach is  
13 that the RTO's are going to continue to be forced into a  
14 reactive role where they continue to change the market rules  
15 to address policies that are initiated by the state.

16           And the results can prohibit true market behavior  
17 which is really manifested by bilateral contracting where  
18 willing buyers and sellers are able to get the products that  
19 they are looking for.

20           And we think that applying the MOPR to existing  
21 units is really contrary to the basic economic theory where  
22 existing resources, rational bid is to be a price taker.  
23 And using the MOPR really takes more of the process behind  
24 closed doors where the RTO's need to administratively  
25 determine the price and we really think that any blanket

1 proposal that replaces a lower cost offer with a higher  
2 administratively determined offer has more to do with  
3 maintaining existing solar side market power than really  
4 tailoring a real solution to a real problem.

5           And one thing that we heard yesterday and you  
6 know you are in interesting times when AMP agrees with both  
7 NRDC and AEP. We heard some of the value of bilateral  
8 contracting and we agree with that.

9           And under that approach we think that NRTO could  
10 retain its role of developing the resource adequacy  
11 requirements for its footprint. And then we are not  
12 actually advocating for NYISO and PJL.

13           I think there are a lot of different ways that  
14 you can support bilateral contracting and I don't think we  
15 have reached the level at detail that would actually result  
16 in any kind of construct but states could have a choice  
17 whether they wanted to allow the retail electric  
18 reliabilities entity to enter into long-term bilateral  
19 contracts to satisfy their obligations as determined by the  
20 RTO's or they could continue in the mandatory construct.

21           So it is kind of a hybrid approach but I think it  
22 is a lot more flexible than the current capacity construct  
23 which right now really is just focused on one type of  
24 resource to the detriment of all others.

25           MR. MOREHOFF: Thank you Lisa. Following up on

1 that question the description that PJM would retain its  
2 resource adequacy role under that construct, can you talk a  
3 little bit more about that recognizing that we haven't  
4 gotten into details at this point but relative to I think in  
5 some regions I think we heard yesterday there's a view that  
6 there should be a clearly defined entity, whether it is the  
7 RTO or the states or the group that are responsible for  
8 resource adequacy.

9           In your description it sounded like there are  
10 many entities with that role in resource adequacy. If you  
11 could talk a little bit about who is accountable under those  
12 circumstances?

13           MS. MC ALISTER: Yes and one of the things that  
14 we heard yesterday is how important defining the objectives  
15 are and I will say that AMP is typically their ship role in  
16 PJM to try to have a stakeholder process where we have these  
17 important conversations and it took about 6 months just to  
18 get the stakeholders to agree to have those conversations.

19           And we are now in the process of talking about  
20 the objectives. So I don't think we are there yet. I think  
21 we have -- we are batting around 77ish in objectives of what  
22 a capacity constrict should look like.

23           But one of the things that we have thought about  
24 is we agree that it is a federal and up-tier role to have  
25 the adequacy construct or the adequacy obligation. But

1 other folks can do their part in meeting those goals so the  
2 RTO's would continue their current process of determining  
3 what's needed and then it would be up to different entities  
4 with different responsibilities to go ahead and get the  
5 resources to meet those obligations.

6 MR. MORENOFF: Lisa to you but also to others --  
7 recognizing that there are situations already where states  
8 have that kind of complimentary role -- do people have a  
9 view as to whether that works better in a vertically  
10 integrated construct or how does that work in a restructured  
11 environment?

12 MR. SILVERMAN: If I can I think the answer is it  
13 doesn't. Coming back to Arnie's first question -- if we  
14 eliminate any kind of MOPR really and what that really  
15 translates as is allowing states to pursue any type of  
16 objective whether it is zero energy credits, whether it is  
17 renewable energy credits, whether it is dirty energy  
18 credits, whether it's job externalities.

19 And if we do that we have to recognize that we  
20 will lose the benefits of competitive markets. I mean you  
21 know the idea that competition drives down prices, increases  
22 innovation, protects rate payers from excess costs is  
23 something that's been you know really enshrined in the  
24 Federal Power Act since the 1935 in fact.

25 And if we are going to move towards a system

1 where the states are allowed to take 20 - 40 - 50 - 60 - 80  
2 - 100% of the market and insulate it from competition I  
3 frankly don't know what the Commission's job is anymore.

4           And I certainly don't see how the Commission can  
5 meet its statutory obligation to ensure the captive rate  
6 payers are getting just and reasonable rates if at the end  
7 of the day the Commission has no role in evaluating the  
8 sales of energy and things that directly affect those sales.

9           So you know we think about where we are going to  
10 end up and you know this is not an abstract concept.  
11 Competition is the right way to drive down prices. And you  
12 know I often hear these discussions from state actors and I  
13 think why are you voluntarily signing up your rate payers to  
14 pay more than the market actually wants for that product?

15           And we can talk about how to integrate the right  
16 products into the market. In fact I think Arnie sort of  
17 jumping ahead to your 4th question and your 3rd and 4th ones  
18 -- you know those are all stations on the road that we need  
19 to go through.

20           And ultimately you know we do want to get to the  
21 point where the wholesale markets facilitate the state  
22 desires to meet the environmental externalities and the  
23 other externalities that they want to price into the market  
24 but we can do that better through competitive markets.

25           You know I heard a lot of talk of cooperative

1 federalism right? Cooperative federalism works when there  
2 is a give and a take and a push and a pull. And thus far I  
3 mean I hate to say it but I think the Commission has  
4 abandoned the field. They are not pushing back and there's  
5 not that healthy tension about when state programs directly  
6 affect or aim at or target the wholesale market.

7           Those are appropriate places for FERC to come in  
8 and exercise jurisdiction. And you know it made sense over  
9 the past decade to let the states be the laboratories of  
10 democracy to pursue environmental initiatives that perhaps  
11 couldn't be done at scale or you know on an economic basis,  
12 but these are now increasingly mature technologies and we  
13 will all be better off as a nation if we are ruthlessly  
14 efficient in using the competitive market to deploy that  
15 capital.

16           And to say that FERC has no role there I think  
17 really does mean the death of competitive markets and the  
18 time line has to be very quick if we are going to stop that  
19 from happening.

20           MR. MORENOFF: Richard Mroz do you have an answer  
21 to David's question?

22           MR. MROZ: Without coming back to  
23 the main question on the table about the different  
24 constructs David to just respond to your question I'll come  
25 back to a couple of things I mentioned yesterday and maybe

1 just put a finer point to it which is that as I mentioned  
2 state's Commissions find themselves in a place where though  
3 we want to protect our role in resource adequacy  
4 responsibilities we don't have the tools to do it and what  
5 has been missing at least in PJM is that construct is how  
6 the individual states and the states collectively, along  
7 with PJM can ensure that those responsibilities at the same  
8 time focus on the reliability issues along with the grid  
9 operator.

10 In other RTOs priced by other ISOs it's easier  
11 particularly with the one state ISOs so there were some  
12 commentators yesterday talking about that FERC may need to  
13 look at this differently in different regions within  
14 different ISOs so I just want to come back to the question  
15 you just raised in reaction to that.

16 Because in PJM we see a variety of issues that  
17 are in need of attention to get to the resource adequacy  
18 issues and the planning aspect going forward. States are  
19 reacting to -- clearly in the various states that have  
20 adopted legislation they are speaking out because they are  
21 making that policy decision that they feel that there is not  
22 an appropriate focus on resource advocacy of a particular  
23 type.

24 That's the reaction you are seeing and I think it  
25 is a reflection to the fact we don't have an appropriate

1 construct to capture that responsibility and manage it.

2 MR. MORENOFF: Thank you. A related question --  
3 if the option number 1 as Arnie describing it is in some way  
4 significantly reducing the traditional tools that FERC has  
5 used and therefore the ISOs have had available to ensure  
6 resource adequacy. It seems reasonable that there would be  
7 some sort of complimentary step to make sure that someone  
8 else does have the adequate capability to do that -- to fill  
9 in whatever gap there was in return for FERC having less  
10 tools available there.

11 Do you see that as something that would be  
12 primarily a question of additional market rules, are there  
13 additional responsibilities that would need to be done in  
14 the states through legislative or regulatory action in order  
15 to fill I guess -- 1 -- is there a gap and 2 -- is it  
16 something that could be filled through tariffs or is it  
17 something that needs to happen at the state level?

18 MR. MROZ: I haven't thought through the  
19 specifics of that or any particular proposal but it would  
20 seem to me it probably is both. It's probably a combination  
21 of efforts both here at the FERC at the state levels and  
22 along with the RTOs or the ISOs that we would have to  
23 undertake.

24 MR. QUINN: John do you have a reaction to the  
25 initial question or David's follow-ups?

1           MR. HUGHES: First I want to thank the Commission  
2 and Commission staff for allowing me to participate. I have  
3 the privilege of working with companies that are large power  
4 buyers all over the world and all over the United States so  
5 they have quite a bit of experience with all of the ISOs and  
6 the different variations of ISOs and RTOs that exist.

7           And generally there's dissatisfaction with almost  
8 all of them for one reason or another and much of it has to  
9 do with the way they have been implemented or continue to be  
10 implemented. There doesn't seem to be a steady state in the  
11 way these markets are designed which creates considerable  
12 uncertainty which my members don't like.

13           But if they had to pick one that they thought  
14 that they could live with the most it's probably ERCOT.  
15 It's an energy-only situation. It's more complicated  
16 because unlike New York, Massachusetts and California Texas  
17 is very business friendly and they welcome heavy industry.

18           Billions of dollars of new infrastructure in the  
19 form of new manufacturing facilities are being constructed  
20 there. And the market down there does not get in the way of  
21 doing that either with very energy intensive facilities --  
22 they consume both a lot of natural gas and electricity.

23           And Texas and the ERCOT market, is also more  
24 friendly with respect to buying the mere generation which is  
25 a critical resource you know for many of the manufacturing

1 sectors in the United States, especially those that are  
2 capable of benefitting from the fracking revolution.

3           So you know I think the energy only speaks  
4 volumes about what the -- what our opinion would be on MOPR  
5 and that has kind of been recognized for many years as not  
6 having very much to say positively about any of the capacity  
7 markets.

8           In fact we don't like the fact that they are even  
9 referred to as a market. And these are you know very  
10 Frankenstein like constructions of administrative  
11 procedures. They are just convoluted old-fashioned  
12 regulation and then I think in some sense some of the  
13 problems that are on the table here for this two-day  
14 Conference are created by the fact that the capacity  
15 markets, you know, don't work.

16           And so as I have stated in my pre-filed statement  
17 I think the Commission has a responsibility to undergo a  
18 thorough inquiry and what's the right way to do this if you  
19 can do it at all? And I had a last statement to the effect  
20 that I think it is dangerous to go down the path of trying  
21 to accommodate state policies in competitive wholesale  
22 markets.

23           The competitive wholesale markets if designed  
24 properly will be an excellent mechanism by which states can  
25 implement their policies and use that. And they not only

1 should be encouraged to do so -- if you have the courage  
2 yourself to design these markets properly you are going to  
3 insist that they do so.

4           Because otherwise I think they are violating the  
5 Federal Power Act and you'd be telling. So that would be my  
6 statement.

7           MR. QUINN: Thank you, Michael then Thad.

8           MR. POLSKY: I would like to thank Commissioners  
9 and the Commission for inviting me to be here. I represent  
10 -- I'm a founder of a company named Invenergy. We develop  
11 about 10 gigawatts of wind close to 7 gigawatts of thermal  
12 plants and a number of solar as well as storage facilities.

13           I personally have over 40 years-experience in the  
14 power industry. I was one of the first independent power  
15 producers in this country dating back in the early '80's,  
16 witnessed the creating of competitive markets and obviously  
17 now I see sort of complete destruction of these markets.

18           I wasn't here yesterday but I am sort of  
19 observing what's going on here and we kind of tried to lump  
20 up sort of state policies all together and talk sort of in  
21 generality states do this and do that and I would like to  
22 mention a couple of things.

23           1 -- when we created markets, particularly  
24 multi-state market each state I remember this cost benefit  
25 analysis by joining PJM I am going to save a billion dollars

1 and this is a good thing for us and we have -- we need much  
2 lower zero margins because we can rely on the larger pool,  
3 there are plenty of benefits there so I would join the  
4 markets.

5           So after they joined the markets after a few  
6 years now each state started to come in and say do you know  
7 what, we joined the market, we have all of these benefits.  
8 We are not talking about this but let's tweak this market.

9           And states can do a lot of things. They can  
10 create their own tax policies, they can you know they can  
11 you know deal with the real estate tax and so on but they  
12 cannot directly interfere with the markets.

13           Particularly, you know and we do a lot of  
14 renewables which we rely on state RPS's for example which is  
15 a competitive product and everybody competes you know for  
16 the lost cost, you know in our renewable energy for example.  
17 This is available to everybody okay.

18           But there are state policies and subsidies  
19 particularly related to nuclear with Exelon that given to  
20 one company, to one plant or several plants and it is  
21 completely anti-competitive. I mean how we can sit here and  
22 say that the states can do this kind of stuff. It's  
23 anti-competitive not in the electricity market, in any  
24 market.

25           You can't just subsidize one particular

1 individual company you know because they want to be in  
2 business. They want to stay in the market, this is just  
3 anti-competitive and we have to distinguish this kind of  
4 action from generic state actions okay.

5           And particularly, you know nobody talked about  
6 you know, ZECs versus RACs. It is a completely two  
7 different -- we can't lump things together we have to  
8 approach this thing on an individual basis.

9           For example RACs is a competitive product, it's  
10 competitive with bid, it reduces costs to the consumers.  
11 Look what happened with the renewable energy. The prices --  
12 when I started renewables in early 2000 you know prices now  
13 are probably 20% of what they used to be because of the  
14 innovation, because of the competitive nature.

15           Nuclear plants -- the prices are going up. It  
16 was too cheap to be there now we are talking about 40 years  
17 later through subsidized plans because it is not enough. We  
18 have to understand and if FERC would not interfere in this  
19 we have no market.

20           So for us to sit here and prevent -- we can  
21 certainly agree how can we accommodate certain state  
22 policies? There are some states policies just we can't  
23 accommodate. We can't accommodate dumping power by  
24 individual plans because somebody wants to provide several  
25 thousand jobs in a particular state. This is just

1 anti-competitive as it is.

2 MR. MORENOFF: Following up on that going back to  
3 Arnie's sort of original five possible paths it sounded to  
4 me like that is a -- you'd support the path 3 there would be  
5 some things that we should be willing to accommodate and  
6 others that we should not when there would be different  
7 tools that we could use.

8 And I know we will be talking more about that in  
9 some detail. I guess one question I would have for you is  
10 it sounded like the distinction that you would want to draw  
11 there is between anything that is company or plant specific  
12 is unreasonable but something that is generic would be okay  
13 even if it is generic in a way that is narrowly to a certain  
14 field and therefore in some ways arguably discriminatory  
15 against everyone who is not in that field.

16 Is that a fair characterization of your position?

17 MR. POLSKY: You know states have and they always  
18 have certain rights. For example they can exempt power  
19 plants from paying real estate taxes located in the state.  
20 They can impose sales tax.

21 In one state you pay sales tax for the equipment  
22 and other states you don't. Those are state policies but  
23 completely subsidized power in percent of kilowatt hour for  
24 power. You know basically what Illinois says to Exelon you  
25 go sell electricity for whatever price, even if you lose

1 money and I'll pay you the difference. Okay that's what  
2 basically we are talking about China dumping, look at this.  
3 What more dumping we can talk about than this.

4 MR. MORENOFF: So maybe when we come back to the  
5 3rd of the paths talking about ways in which we would  
6 distinguish about what kinds of state policies are  
7 legitimate as we talked about yesterday and which are not,  
8 maybe we can come back to that in more detail.

9 MR. QUINN: Thad, Kathleen, Mark and then you.

10 MR. HILL: Great and I think Mr. Polsky makes a  
11 very good point until he spoke recruiting all state policies  
12 is kind of equivalent in the discussion we were having and  
13 the fact is they are not.

14 I mean if we actually do parse this out there are  
15 environmental policies and there are other policies which  
16 are meant to protect jobs. And we know that in the nuclear  
17 discussions for New York and Illinois and certainly the ones  
18 that are underway in the state houses in Connecticut,  
19 Pennsylvania and New Jersey are subject you know -- these  
20 are plants that have been fully recovered their cost twice  
21 once during restructuring, a second time when high gas  
22 prices -- they are asking for full recovery a third time.

23 Many of these plants are even profitable and we  
24 don't have to have that debate here but certainly we feel  
25 that that's the case in Connecticut. And the effort here is

1 about jobs. There have been discussions about jobs and we  
2 can be cloaked in environmental and we all know and I think  
3 the record will show that these were about jobs.

4           It doesn't seem that it's in the best interest of  
5 competition and FERC and the Commission having the right to  
6 oversee competitive wholesale markets when one state is  
7 trying to subsidize directly for jobs in that kind of way is  
8 one place.

9           Environmental attributes are different. Our  
10 point on that and this gets back to your questions about the  
11 hybrid approach is to price carbon. I mean it's an  
12 externality -- I think that's what we are going for. I do  
13 think states are trying to pick so much wind or off-shore  
14 wind or so much solar, so much hydro are going to end up in  
15 a very different place and we have wholesale power markets.

16           We think the best way is to price carbon but  
17 actually at least here there is an objective of state policy  
18 which is environmentally driven versus ones that are jobs  
19 which is a zero sum game with the states that surround them.

20           And I think that's a distinction that has to be  
21 made here on all state policies on RECs are equal.

22           MR. QUINN: Thank you Kathleen?

23           MS. BARRON: Well, finally called on me, I  
24 appreciate that. There's a lot to say and I would like to  
25 get back to your first question Arnie but just on the

1 question of are all state policies created equal -- and you  
2 all know this. But obviously we have RECs, we have SRECs,  
3 we have ORECs, now we have Zero Emission Credits. All of  
4 these programs because they have no alternative are choosing  
5 a technology and deciding that that is a technology they  
6 think because it is zero carbon will displace emitting  
7 generation and will de-carbonize their fleet.

8           That is the goal of all of these programs and you  
9 can look at them objectively and decide for yourself which  
10 ones are lower cost and which ones are higher cost. And by  
11 any measure is your emission credit programs in both New  
12 York and Illinois are the lowest cost option to de-carbonize  
13 the states, would not have taken the path that they took had  
14 that not been the case.

15           And you can ask Chairman Sheahan or  
16 representatives from New York, they have had plenty of  
17 plants retire over time that they have not stepped in to  
18 support. Those are emitting plants they have let them  
19 retire. They have stepped in to support a number of  
20 nuclear stations because they were not suffering a little  
21 bit they were at risk of retirement.

22           They had been losing money for years, they were  
23 cash flow negative and they were going to disappear along  
24 with their environmental benefits. The state stepped in  
25 because it was cheaper to do that than to bring on new clean

1 generation.

2           And they didn't stop at that of course they are  
3 going to try to pursue new clean generation through RPS  
4 programs and other mechanisms but what they did going back  
5 to your question Arnie is take the guidance from this  
6 Commission.

7           And respectfully I would say we are in path 1  
8 right now. The thing that we use the MOPR to address, are  
9 exercises of market power where someone is pushing  
10 generation into the market just for the purpose of lowering  
11 the price.

12           That is not what the states did here as I just  
13 described. So what they looked at and as you know we have  
14 been here talking to you about the impact of state policies  
15 that I have mentioned what's been going on in California as  
16 a result of a number of things that have happened in state  
17 policy and through price formation.

18           And what we have gotten -- I mean two years ago  
19 we had an order on a complaint that ITNY filed about an  
20 emitting plant that got an RMR because it was needed by the  
21 system but it wasn't picked up in the market and the  
22 question was should that unit be able to bit its cost,  
23 including the RMR payments into the capacity market.

24           And the Commission -- I don't think it's fair to  
25 say that the Commission has had no role. I think if you

1 have done what you could to be thoughtful about these cases  
2 but in that case you said the market was not pricing the  
3 thing that it needed through the capacity market, the RMR  
4 represents something outside of the market that it was fair  
5 for the generator to reflect in its bid.

6           Similarly with an order you issued in the  
7 California ISO when they asked to drop the bid floor from  
8 \$30.00 to \$150.00 the Commission said, "We are going to do  
9 that." Renewable units in that case have legitimate  
10 opportunity cost representative reduction tax credits and  
11 RPS payments that they should be allowed to put in their bid  
12 and therefore we are going to drop the price war to allow  
13 them to do that.

14           So these are choices that you made to say when  
15 something is not priced in the market that it is fair and it  
16 is actually economically efficient for a unit to recognize  
17 those costs when it is making its bid into the market. So  
18 we are at path 1.

19           And so the states that I referenced earlier have  
20 taken your guidance, they have come up with a program that  
21 is not keeping us true to our costs. I mean we should tell  
22 the truth here, these are attribute payments in the case of  
23 Illinois. It's \$11.50 a megawatt hour.

24           If prices go down ZEC does not go up. If our  
25 costs go up the ZEC does not go up, it's a capped payment

1 based on the environmental value that the units are  
2 providing to the state. So they are following your  
3 guidance, they are doing what they could do in the absence  
4 of path 4 which is absolutely as we discussed yesterday and  
5 which we are hearing from a number of these panelists the  
6 place we should go.

7           We should be pricing on the attribute but you  
8 can't change the rules on them in the middle of the game  
9 until you are willing to go down path 4 and you know, if you  
10 did go down path 4 parenthetically all the units we are  
11 talking about here would be in the money so it is not  
12 skewing the market to keep them going while you work on path  
13 4.

14           MR. QUINN: Going back to the question on path 1  
15 though in your view markets just stay where they are though?  
16 The energy markets continue to work the way the energy  
17 markets worked, capacity markets continue to work the way  
18 the capacity markets work or do we need to move to along  
19 path 1 a residual capacity market?

20           Do we need to change the way we do energy markets  
21 at all?

22           MS. BARRON: I don't think we need to change the  
23 way we do energy markets although there are proposals to  
24 address the negative pricing phenomenon which in American  
25 you shouldn't be paying someone to take your stuff. So

1 let's fix that problem.

2 But I think it is a fair question. Would we need  
3 changes down the road in the capacity market whether the  
4 kinds you heard today or others, to adjust what we define as  
5 capacity or how much capacity we are buying? Those are  
6 potential changes if we sometime down the road find people  
7 unwilling to invest and we need to -- like New England has  
8 done, add some sort of price lock mechanism.

9 Those are all things that if you stay on path 1  
10 and you decide not to try path 4 that the RTOs -- if some  
11 day in the future there is a challenge in the capacity  
12 market bringing in new resources which we are not seeing  
13 right now. We are seeing people coming in well below the  
14 cost of new entry, then it should be considered and those  
15 would have to -- we would have to have those proposals come  
16 forward from the RTOs.

17 MR. QUINN: Acting Chairman?

18 CHAIRMAN LA FLEUR: I just want to ask a question  
19 about something you said which described the program of zero  
20 emissions credits as kind of a forcing function that the  
21 states had to do because the markets hadn't done what they  
22 were supposed to do which was price the attribute.

23 Because today I am very focused on process you  
24 know there are all of these ideas but how do we get from  
25 here to here. So I guess if the forcing function is that

1 the state doesn't like what the market is giving it, it can  
2 just start doing things because it really cares and it  
3 really doesn't like what the market is giving it so how will  
4 we ever get on a path to preserve the market if that -- you  
5 know make the market work for reliability if that's what we  
6 want.

7           Because I think the minimum offer pricing rule is  
8 a little bit misnamed. It's really a question in the market  
9 out of the market. How will we ever get on a path should  
10 the forcing function be the other way -- assuming we have a  
11 quorum.

12           If we did something and then brought people to  
13 the table to redesign the market because I'm just wondering  
14 how will you ever redesign the market? I think the state  
15 having the forcing power might just lead to the end of the  
16 market is my concern. I mean I'm just worried how do you  
17 get from that -- how do you ever get it back, does that make  
18 sense?

19           MS. BARRON: It's hard to face the mic and face  
20 you at the same time. Well I tried to signal a little bit  
21 of this yesterday and I know it makes people uncomfortable  
22 but I don't think we restructured the markets overnight  
23 without a fair amount of work going into the give and take  
24 in terms of what's the benefit, what's the cost.

25           We certainly didn't move to capacity markets

1 without a huge amount of pain and suffering and an amount of  
2 time that went by. In both cases the Commission was  
3 involved to some extent. That's different from what we are  
4 seeing now in the pending MOPR case where someone dumps a  
5 complaint on you and you are just supposed to figure out  
6 what to do.

7           It obviously needs to be more comprehensive than  
8 that in terms of the process.

9           The last point I was just making though is you  
10 don't have a crisis in front of you. You are hearing a lot  
11 of people say that there is a crisis in front of you in  
12 terms of we are not going to get investment. And you just  
13 read the analyst reports about what's expected next week in  
14 the PJM option.

15           They are expecting 4 gigawatts of new capacity to  
16 come in with the ZEC bill having been passed in Illinois.  
17 So take your time to figure out what that process is. Don't  
18 feel like you have to jump into something that is going to  
19 be -- you can characterize it as a forcing function, excuse  
20 me, or you can characterize it as changing the rules in the  
21 middle of the game but take the time to follow that process  
22 and see if you can get somewhere.

23           You had a lot of state Commissioners here  
24 yesterday talking about willingness to sit down and do it.  
25 I say take them at their word.

1           CHAIRMAN LA FLEUR: Just a couple of comments.  
2 It made me nervous in your written testimony and what you  
3 just said of like you don't have a reliability problem so  
4 wait until you do then do something because I feel like  
5 unless -- I don't want to throw the resource adequacy ball  
6 unless I know someone is -- I don't want to be Tom Brady  
7 unless I know for sure someone is going to like catch the  
8 pass and I'm not just going to throw an interception or  
9 something. I want to make sure somebody took it you know.

10           And I absolutely agree with all of the people who  
11 said talk to the states and all that. I worry -- I was a  
12 little bit worried yesterday that this was going to become  
13 like a 3 year NERU collaborative where like every May we  
14 would be saying what state should we invite in July?

15           What are we going to do? And in the meantime it  
16 would just be such a slow process. That's why I mean I  
17 guess we have a disagreement on maybe on the urgency but I  
18 am just worried about and I'll shut up and let you get back  
19 to the questions, how you get from here to somewhere.

20           MS. BARRON: I would say and Jaime somewhat tried  
21 to go there yesterday. So what are your principles? What  
22 are the things you are going to worry about first?

23           CHAIRMAN LA FLEUR: Getting a quorum would be  
24 high.

25           MS. BARRON: After that -- number 2 you have a

1 sense of urgency on my side of the table too Chairman. We  
2 would not have been in the place we were at in Illinois and  
3 New York if there was not a sense of imminent danger to  
4 stations shutting down but obviously the states would not  
5 have taken the steps they had if they did not believe that  
6 were true and that they were going to lose that zero  
7 emission benefit.

8           And so the question is should you step in to stop  
9 the states from having done what we all agree would be the  
10 economically efficient thing to do which will have the  
11 consequence --

12           CHAIRMAN LA FLEUR: Does you all agree with that?

13           MS. BARRON: I think if you look at the map that  
14 the cost per ton of carbon abated by a nuclear support  
15 program versus a wind, solar, rooftop solar program in  
16 Illinois you will have the answer to that question.

17           So the question is do you want to step in and  
18 stop the states from acting in that way now which will have  
19 the consequence of having the stations retire when you don't  
20 have an imminent problem in front of you.

21           And I am not suggesting that you wait until the  
22 lights go out. I'm suggesting that you look forward to the  
23 signals in front of you in terms of what kind of investment  
24 with this program in place you are seeing and use the time  
25 that you have -- not years and years to take the action that

1 the states are asking you to take.

2 And if you are going to try to choose among the  
3 problems in front of you don't choose to mitigate the one  
4 that's the least cost alternative for customers.

5 CHAIRMAN LA FLEUR: Well thank you. The only  
6 verb is what I want to do. Sometimes we have to do things  
7 that we have to do, and that's why I'm hoping to get good  
8 proposals. I'll shut up for a while.

9 MS. SIMLER: I've got a follow-up question for  
10 Kathleen if I may. So sitting here listening to the  
11 conversation it seems like there is some angst over how we  
12 have managed through a transition and what steps could be  
13 taken for there to be more of a comprehensive look at some  
14 of the states' interest.

15 I think President Mroz you mentioned yesterday  
16 that there's -- at the time of integrated resource framing  
17 states sat down, you figured out what you needed and that  
18 that's a little bit missing.

19 We also heard a little bit yesterday about  
20 principles and having some sort of idea of where we want to  
21 go and so I'm wondering Kathleen if there's an opportunity  
22 for states, industry, Commission staff in the absence of the  
23 quorum to try to work on the idea of what common principles  
24 could be?

25 Whether that would be helpful for getting ahead

1 of the acting Chairman Commissioner Honorable -- but for  
2 some statement of that if anything like that would help  
3 address what again -- the tension I am hearing of states  
4 will continue to do what they need to do given their policy  
5 objectives and FERC will continue to react unless we have a  
6 way of addressing both of those things.

7 MS. BARRON: I -- if your question is should we  
8 work on some principles collaboratively to sort of guide the  
9 dialogue as we go forward I think that's a great idea. You  
10 know obviously there will be decisions that have to be made  
11 down the road but if you can sort of put out some guide  
12 posts on the front end I think that makes sense.

13 I think the problem of course is you know,  
14 getting some alignment on what all of those principles  
15 should be. You laid out some good ones yesterday. Are we  
16 taking into account the cost of customers? Are we dealing  
17 with the service wide situation is another one that came up  
18 yesterday.

19 I would add are we acting in a way that's  
20 economically efficient? Are we reducing discrimination  
21 among sources of zero carbon resources that some are getting  
22 support, some aren't? You'll hear some of the suggestions  
23 from my colleagues in terms of what those principles should  
24 be but you know I see no reason why we shouldn't go down  
25 that path and try to work on something like that.

1           MR. QUINN: We'll get back to the line --  
2 Chairman Vannoy?

3           MR. VANNOY: Thank you I appreciate the  
4 opportunity to join the discussion. I appreciate FERC's  
5 convening the technical session. I have to go through a  
6 little disclaimer very briefly. I'm Chairman of the  
7 Commission, my views here are my own, they are not the view  
8 of any of the other Boards or Agencies I serve with.

9           I think it's helpful in hearing the discussion  
10 that's going around the table right now and I don't want to  
11 retread yesterday but in Maine's experience you know we went  
12 through restructuring, we very much supported markets. We  
13 had a good experience there going forward with markets.

14           We are getting good results out of markets. I go  
15 in front of our legislature every year new session, every 2  
16 years and I go through this conversation on markets and the  
17 importance of markets. And at the end of the session we  
18 get, you know, we used to do integrated planning, we don't  
19 anymore -- but that now happens at state legislatures.

20           At the end of the session we have a lot of bills  
21 that relate to the out of market purchases of various types  
22 of resources for a whole variety of reasons other than just  
23 carbon and I want to make that very clear -- a whole lot of  
24 reasons for those other than carbon.

25           So when we talk about the no MOPR path going back

1 to the question that's in front of us here I think this  
2 becomes -- this becomes very integrated with how we've  
3 progressed in the capacity markets today.

4 I think we have taken a bunch of little  
5 incremental steps to accommodate and I know there was  
6 laughter at or I shouldn't quite put it that way, but there  
7 was some laughter at bringing up the idea of an energy-only  
8 market.

9 But there are some parallels here that I think  
10 are important because when you look at what ISO New England  
11 has done with scarcity pricing, you know one of the  
12 reactions was against scarcity pricing but if you combine  
13 what we are doing with SCM penalty factors.

14 If you combine what we are doing in reserves, if  
15 you combine all of those we are approaching \$9,000 in ISO  
16 New England for scarcity pricing. So there's an overlay  
17 that I think is useful to think about between what we are  
18 doing in a capacity market to get price signals, to get  
19 performance because it was dampening performance and it was  
20 dampening pricings.

21 So I don't -- I think we have to look when we  
22 look at new MOPR we have to take a deeper look at all of  
23 those rules and what aspects of that we can bring forward in  
24 market rule changes in the face of an overlay that we are  
25 facing of legislative action and legislative action that's

1 looking at PPA's for a whole variety of reasons.

2           When you look forward to what these markets are  
3 going to look like you know we have done some studies in New  
4 England -- one of the studies looked at capacity markets.  
5 You know right now we are maybe 1684 capacity versus energy.

6           One of the studies looked at a future that's more  
7 like 45/55 capacity 55 energy. Well that's just going to  
8 bring this whole issue of how capacity markets work to the  
9 forefront. And where that issue becomes I think very  
10 important is when you look at price signals to the players  
11 in the market and the on-going discussion between the states  
12 of administrative socialization of costs we get into all  
13 kinds of cost questions among the states -- how we are going  
14 to divide up these things.

15           And I think in the capacity market future where  
16 you see 40-45% in that those discussions are going to become  
17 even more important and so maybe part of our discussion here  
18 should be focusing on what that future looks like with  
19 reserves, ancillary services and more of price signals in  
20 energy markets.

21           CHAIRMAN LA FLEUR: I just want to say for the  
22 record I wasn't laughing at energy only markets. I was  
23 laughing when somebody said what's a good market and they  
24 chose the only one we don't regulate -- I was more groaning.

25           COMMISSIONER HONORABLE: And I dittoed that. I

1 was laughing because John would raise the one that we have  
2 no jurisdiction over.

3 MR. QUINN: I know there are other folks that  
4 have comments. I would like to ask you to move on just  
5 because we have a bunch of stuff that we are trying to cover  
6 today. And move more toward -- we have heard a lot about  
7 any accommodation is bad accommodation and we will get to  
8 kind of the other paths.

9 But for the kind of next step over where we could  
10 accommodate some state actions -- we find some way to  
11 accommodate some actions. My sense is from pre-filed  
12 comments from the process folks have been going through  
13 already that some of you that really don't like the no MOPR  
14 path are a little more comfortable with the let's find a way  
15 to accommodate where accommodate again is allow a resource  
16 to get a capacity supply obligation so the customers get  
17 the benefit of those states important resources for the  
18 purposes of capacity.

19 But when you are saying the price -- set the  
20 price as though that state support can occur. So I would  
21 like to kind of explore that path a little bit more, get a  
22 sense for what that accommodate market design looks like and  
23 if you weren't comfortable with MOPR but you are comfortable  
24 with that accommodate path, what makes you more comfortable?

25 And then again a little bit on whether that's a

1 stopping point, whether accommodate is the end of that path  
2 or there's a need to move to another path eventually, Abe?

3 MR. SILVERMAN: Yeah great thank you. So we have  
4 a five part policy prescription -- before I put it in 3 I'm  
5 going to make it into 5. And the first is to admit that we  
6 have a problem. You know this gets back to the  
7 jurisdictional issue. I completely disagree with Kathleen  
8 that nuclear is de facto, the cheapest source of carbon  
9 abatement.

10 I have my own numbers that show you could do it  
11 -- replace all that nuclear that's at risk in New York for  
12 half the price with renewables. It's 20 or 35,000 megawatt  
13 hours of batteries for the same price. That's 10 billion  
14 dollars of rate payer capital that we are committing without  
15 using any kind of competitive process or testing it against  
16 the market.

17 So the first thing to do though is to put that  
18 question where it belongs which is at the Commission because  
19 I don't expect you to believe me or believe her, you'll  
20 probably believe her, she probably knows more. But the  
21 first thing we have to do is say that this is within FERC's  
22 jurisdiction so that we can actually come in and step up and  
23 say -- and look at these programs and say our captive rate  
24 payers getting access to just and reasonable rates and  
25 non-discriminatory, not unduly preferential.

1           That's not an option. That is the directive.  
2    It's the Commission's duty under the Federal Power Act to  
3    make that analysis. And so the first thing that we have to  
4    do is look to the Supreme Court and say the programs like  
5    the nuclear that target or aim at or directly affect the  
6    wholesale market are within FERC's jurisdiction -- so that's  
7    step 1.

8           Step 2 is that we need like the 6 month time  
9    frame or really the day after we get a quorum back to step  
10   in and staunch the bleeding. The Commission needs to come  
11   out very strongly and say that out of market actions will be  
12   MOPR'd. That's not an end though, that's a middle step --  
13   that's the let's restore just and reasonable rates as  
14   quickly as we can.

15           I was shocked to hear the President of the New  
16   York ISO say yesterday that he doesn't really think the  
17   rates are just and reasonable but it is okay. We have three  
18   years to work out a solution. No! No we don't. This is  
19   something that needs to happen almost immediately.

20           And I think without those kinds of actions we are  
21   not meeting our statutory obligations. The third is to  
22   really direct the ISOs to begin incorporating the state  
23   objectives into the wholesale market.

24           Pete Fuller, you know you are probably all sick  
25   of hearing us talk about two-tiered pricing. Well that's a

1 way of protecting and ensuring that incumbents get just and  
2 reasonable rates and accommodating the state.

3           But even that's not the end of the road because  
4 the next step is how do we achieve -- how do we use  
5 competitive markets with the FERC oversight to facilitate  
6 the actual objectives that the states want?

7           And this comes back to the cooperative federalism  
8 role that we talked so much about yesterday. We need the  
9 states though to come to the table and say, "Hey we don't  
10 just want that power plant, we want the attributes of that  
11 power plant."

12           And once we have identified that or translated  
13 those statutory goals into a market product, we can redesign  
14 the FERC market so that's the 4th step.

15           And then the 5th step which we haven't even  
16 talked about which is kind of funny is the adapt to a future  
17 where 50, 60, 70% of the wholesale market is a zero marginal  
18 cost resource wind, solar, nuclear are going to be on the  
19 margin quite a bit if all of these environmental goals go  
20 through, so that's the 5th step.

21           So it's not one or the other, we need to move  
22 through that risk but with the goal of eventually bringing  
23 in those state mandates, incorporating them, putting a price  
24 on them and allowing everybody to compete.

25           Because that's what we need to do to attract

1 private capital, to avoid putting burdens on rate payers and  
2 having them take technology risk and risking a generation of  
3 stranded cost. So you know again it's that 5 part process  
4 of which the immediate accommodation is to MOPR the nuclear  
5 and MOPR other resources like our own Dunkirk in New York  
6 which is a fossil fuel resource that was kept around by the  
7 state with a contract for jobs and taxes.

8           And it is appropriate for FERC to come in. In  
9 fact I say that it is mandatory as the Federal Power Act to  
10 say that those resources are within your jurisdiction. If  
11 you say it's not I just don't know where we go.

12           MR. QUINN: Just to follow-up on accommodate what  
13 I just heard you say about nuclear and your own plant both  
14 of those are existing plants. Do you have a different point  
15 of view on whether we are accommodating just new resources  
16 or we are accommodating both, new resources and existing  
17 resources?

18           And maybe this goes back to a little of the  
19 discussion that we had yesterday about what role we need the  
20 capacity market to play and whether the primary role is just  
21 organized exit or whether it is bringing new resources.

22           MR. SILVERMAN: Exit and entry are both two sides  
23 of the same coin. You know it is the cycle of life right  
24 birth and death, you need to have the two married together  
25 and you need to treat them the same.

1           This idea that somehow we want to get away from  
2 what's a legitimate state goal -- I hate that term. I may  
3 have used it in my testimony if so I apologize but it's  
4 really a bad term. What we need to do is come in and say  
5 that every state initiative has to be run through the  
6 wholesale market in a way that respects the state's goal but  
7 also meets the Commission's statutory mandate to ensure  
8 just and reasonable rates.

9           So what does that mean for a project that's being  
10 kept around for either price suppression or job benefits or  
11 you know it has a veneer of environmental. That needs to  
12 come in and be accommodated in a way that assures just and  
13 reasonable rates, both for the rate payers and for the  
14 suppliers -- and unless we do that, and that's going to take  
15 comprehensive reform, but that's easy -- you know that part  
16 is relatively straight forward.

17           In fact there are complaints that have already  
18 been filed at the Commission asking you to do that so as  
19 soon as we get quorum back I think we can do that. It's the  
20 next step where we actually invite these resources in and  
21 try to make them part of the market. Again I think two-tier  
22 pricing does that right because it allows the resource to  
23 take on a capacity supply obligation without completely  
24 cratering the price so we get the benefits of competitive  
25 markets.

1           It's true it is a little less lucrative for us,  
2 we don't like it, it's a second best solution but it is a  
3 marriage. It is a cooperative approach and I think some of  
4 the other ideas that ISO New England has floated, you know  
5 are sort of getting at that same idea. PJM is thinking  
6 about something similar.

7           And then sort of you know the next step -- once  
8 we get that solved is to actually co-optimize the forward  
9 procurement of all of these resources. I liked Robert  
10 Stoddard, I think he is going to be on the panel this  
11 afternoon, I hope he will talk more about his you know  
12 integrated REC and the capacity procurement.

13           If we co-optimize and secure for all the various  
14 constraints that the states want, I think that's the  
15 ultimate path forward but we have to save the competitive  
16 markets first or else we are going to lose those benefits.  
17 And just like the nuclear it goes away it's not coming back.

18           If competitive markets go away they are not  
19 coming back either.

20           MR. QUINN: Thad and Lisa do you guys have  
21 comments on our accommodate path?

22           MR. HILL: Yes and I will and I'll use the --  
23 I'll comment on New England and the draft proposal because I  
24 think that's an example of an accommodative path and  
25 probably a less tangible one that's out there right now.

1           Before I do that I do want to add though it is  
2 very clear in an \$11.00 subsidy to one plant over another  
3 plant and by the way we are low carbon too, we are a much  
4 lower carbon than a bunch of coal plants but we are not  
5 getting subsidies.

6           I will tell you all in our sector right now  
7 capital markets are not allowing any of the public companies  
8 to invest one dollar in these markets because of where we  
9 are. So I just want to be clear there was a little bit of a  
10 case Kathleen made for what's put in place we will have time  
11 to figure it all out.

12           There is irreparable harm that is occurring right  
13 now to our companies by this action where you are going to  
14 keep things in the market. It is very different. We have  
15 existing resources that have been planted under the same  
16 rules than it is in markets where they are not.

17           Just because Exelon was more successful in  
18 Illinois than AP or First Energy were trying to save some  
19 coal plants and nuclear plants in Ohio does that make it  
20 right? You all have the authority as FERC it is your  
21 jurisdiction and please step in. This is whims of -- you  
22 had political power in one state for an existing asset to  
23 save jobs and threaten jobs -- this is not about  
24 environmental policy.

25           But anyway you asked about accommodated,

1 accommodated policy let me talk about the New England policy  
2 for a minute what they proposed. We thought it was a  
3 reasonable step and you know the idea -- my quick  
4 characteristic of what they were trying to accomplish is an  
5 asset that is subsidized, has to more or less buy its way in  
6 to a capacity market on a commitment.

7           So you have got assets to retire you put it in  
8 place that prevents over-build in the markets. It also  
9 permits negative impact from the existing generation what  
10 somebody was going to leave otherwise. So it's a pretty  
11 interesting first step to begin dialogue.

12           There are a couple of issues with it though that  
13 I think we should point out practically. First off the  
14 current proposal does nothing to prevent energy market price  
15 discrimination. Specifically if we are talking about bring  
16 1,000 megawatts of hydro in from Quebec, if we are talking  
17 about 800 megawatts of off-shore wind or whatever else might  
18 be talking about there is going to hammer the energy price  
19 and there's no feedback.

20           Now this gets a little more detailed and you can  
21 already use it in a combined cycle reference, a number of  
22 CT, there may be a feedback loop there. You can also think  
23 about other energy market corrections but it is a reasonable  
24 first step and you have to protect the energy market.

25           The other place again specifically where we are a

1 little concerned about it is that it creates a problem once  
2 you enter in you are always going to get zero if you are a  
3 subsidized asset. But we actually think with those two kind  
4 of points where we think there needs to be some dialogue and  
5 work, it's a pretty reasonable step towards accommodation  
6 which is the states are going to do what they are going to  
7 do if they are willing to pay that price and we think it  
8 will be a high price, but it also protects reliability and  
9 it gets with my caveats in place gets you a lot closer to  
10 just and reasonable than just actually going out and you  
11 know effectively exercising buyer side market power and  
12 crashing the market to other assets that invested in a  
13 different refrain.

14                   So I mean it's a place to start for sure.

15                   MR. QUINN: Thank you, Lisa?

16                   MS. MC ALISTER: Thank you. So when you are  
17 talking about accommodating that is the easier of the two  
18 steps compared to doing something further down the line but  
19 what you are essentially saying is that we are going to have  
20 to make determinations on what is a legitimate versus an  
21 illegitimate state policy.

22                   And I think I heard Chairman LaFleur yesterday  
23 she doesn't want to be making those calls. And the other  
24 step that you have to do is then you have to create a  
25 construct that does fold in all of these specific things

1 that we want through two-tiered pricing or some other  
2 mechanism.

3           And you are making an already very complicated  
4 market even more complex when I think you have an  
5 opportunity to do something that is very simple and that  
6 also targets and allows the states to solicit the types of  
7 resources that they are looking for specifically which again  
8 is bilateral contracting where you have got a willing buyer  
9 and seller who are looking for particular attributes, for  
10 particular resources and allow them to go out and purchase  
11 that.

12           But we heard Kathleen say that the states are  
13 doing things because they don't feel like they have a  
14 choice. And I agree with her. I think that the current  
15 capacity constructs have gotten so inflexible that they are  
16 only relying on the market designer's vision of what the  
17 marginal unit is as a reference and it doesn't accommodate  
18 anything else.

19           So I think it is going to be a challenging step  
20 that is going to require collaboration to get there. But I  
21 don't think we should keep building on with different tweaks  
22 and different fixes to make an even more complicated market  
23 when we have other alternatives.

24           And when we are talking about bilateral  
25 contracting the Commission should really use as a benchmark

1 the value of bilateral contracting that it would bring to  
2 market efficiency and reliability as opposed to its  
3 implications for the existing centralized capacity  
4 construct.

5 MR. QUINN: Thank you, Michael?

6 MR. POLSKY: I just want to you know echo on the  
7 Chairman's comments about urgency because we you know -- I'm  
8 a primary producer and private company and we will say we  
9 have to eat what we kill. And what we are witnessing now is  
10 destruction of the market.

11 I know it is easy to sit here in this room and  
12 sort of pretend we have a year or two or three to deal with  
13 this but there are specific issues right here. I think our  
14 speaker yesterday I heard say that an IPP company now a  
15 fraction of what used to be and soon it may disappear  
16 completely.

17 We have a lot of issues right here and there are  
18 things that are obvious okay. We don't need to do a big  
19 study to understand that a subsidized single plan is just  
20 not right. If this is what we have to stop today -- an  
21 Exelon representative said that the lowest cost in CO2  
22 compliance with nuclear plants.

23 I'm in the renewable business. If it's lowest  
24 cost let them bid. They went through legislations because  
25 it is not the lowest cost. It would be the lowest cost they

1 will be open to other sources. Illinois has 136 zero  
2 emission facilities. Why other people cannot bid?

3 Another thing is there are a lot of wind farms  
4 right now people built, historically relied on market  
5 collapsed -- a lot of those wind farms are not uneconomical.  
6 What happened if they all would come to their state and say  
7 we need subsidy because we can't run anymore because we have  
8 to close our facilities because you know -- so what are we  
9 going to do? Give them subsidies \$11.00 a megawatt hour  
10 because they said the cheapest possible source?

11 I mean that doesn't make any sense. I just want  
12 to urge this Commission there is absolute urgency right now  
13 to deal with certain issues today you know when the  
14 Commission gets a quorum and certain issues maybe later  
15 because I agree with some comments that we are dealing with  
16 a market that is not properly constructed in general.

17 We have zero marginal cost resources thrown in  
18 together with fossil fuel resources -- it doesn't work  
19 because we will see basically fuel based resources will lose  
20 eventually, they will disappear. We have to deal with this.

21 But when I say there is an absolute urgency right  
22 now to deal with certain issues today. Because if we don't  
23 restore at least enter with confidence in markets then maybe  
24 next year we don't need this Conference anymore because  
25 markets would not exist.

1           So there is certainly an issue and again I hear a  
2 lot of discussions oh let's look at this, let's look at that  
3 -- you know we have to look at the issue that is in front of  
4 us. Can we subsidize a specific resource or not? The issue  
5 is clearly not.

6           You know should we accommodate some state policy?  
7 Yeah -- but we have to study, we have to deal with this  
8 okay. But again I want to again to elevate this sense of  
9 urgency because private people, companies that have to pay  
10 their employees, they cannot wait that year or two years,  
11 three years from now somebody will come and save this.

12           MR. QUINN: Sir, we will let Kathleen answer the  
13 question from the last version. I would love to move on  
14 from the conversation about whether or not the particular  
15 subsidy for nuclear is good or bad or efficient or whatever.

16           At some point I think we hear it and we get it.  
17 For the particular path -- the accommodate path we are  
18 talking about I hear is that a version of an answer to this  
19 thing that you are saying has an urgent problem?

20           As a wind developer New England has got a limited  
21 you know, a limited exemption for renewable energy. Does  
22 accommodate help you as a developer of that resource -- is  
23 that a reasonable path forward?

24           MR. POLSKY: I feel certain state policies that  
25 rely on competitive supply also rely on market to me those

1 policies are policies that can be accommodated. The  
2 policies that rely simply on individual lobbying, in the  
3 regional companies going out the doors are not the right  
4 policies okay.

5           So if it is a market based policy -- yes they can  
6 be accommodated. We rely all the time on market based  
7 policies. Even if it is subsidized policy but it is market  
8 based. You know people have to compete to get something,  
9 not just given to them on a silver plate.

10           MR. QUINN: Kathleen do you want to say the very  
11 brief last word?

12           MS. BARRON: I'm grateful that you sort of try to  
13 take us back to the question. Obviously it is hard to  
14 compete when there is a fixed number of assets on the system  
15 you know to provide existing nuclear power, so we'll just  
16 let that go.

17           You know if you have a cheap source of  
18 de-privatization you only have a certain number of assets.  
19 The states did what they could to pick only the ones that  
20 they thought were at risk.

21           So moving on from that point to your  
22 question about accommodation I agree with what Lisa said. I  
23 mean the way it came across yesterday it sounded like it was  
24 like oh we will just accommodate and then we will be done  
25 with this -- not from you all but from some of the speakers.

1

2           And you still have to make the choice of which  
3 subsidizes, which state policies are going to trigger a  
4 re-setting of the price. You still have a minimum offer  
5 price in the accommodation pathway because you are resetting  
6 the price of some units that you say that you will have to  
7 decide are getting some sort of out of market support that  
8 makes them subject to that policy you heard yesterday.  
9 There's a whole bunch of subsidies explicit and implicit in  
10 the market figuring out which ones have to be subject to  
11 this policy, it doesn't take you out of that bucket of still  
12 having to make that choice.

13           There are a couple of solutions that have been  
14 offered in this vein. They all have that characteristic.  
15 Some of them don't go as far as others. In other words some  
16 of them would just say and I think this is true of the New  
17 England proposal only resources that are going to be able to  
18 be matched up with an exit resource will be able to come  
19 into the market, so it is still a limiter on whether these  
20 policies can be effectuated or not.

21           And the last point is to say that the existing  
22 exemption is small I'm not sure it's exactly fair in a small  
23 market like New England has 200 megawatts and given the  
24 capacity of valued renewables that's a pretty significant  
25 opening that the Commission gave for that state policy --

1 those sets of state policies to be effectuated.

2 And the challenge in front of you is now that you  
3 have done that what do you do next?

4 COMMISSIONER HONORABLE: Thank you. I'm very  
5 interested to hear the panelist's perspectives about the  
6 question that Arnie has teed up and I think really Chairman  
7 Vannoy and coupled with Abe's color around we are the state  
8 of clay today.

9 The state of clay today is that state  
10 legislatures are making these calls whether you like it or  
11 not, whether you think it's legitimate or appropriate or  
12 not, it's happening. So while we don't want to be in a  
13 position at FERC of swatting down, that's really not a good  
14 place to be.

15 I think the way that we've employed MOPR has not  
16 been a way that provides certainty and consistency. It  
17 seems a bit arbitrary at times. So we are now at a pathway  
18 -- a fork in the road, it has many forks maybe and Arnie has  
19 teed up one, path 1 which is limited use of MOPR.

20 Maybe in a way that would be consistent obviously  
21 with the Supreme Court decisions in time or accommodate and  
22 we have heard one example of that with the ISO New England  
23 proposal. I appreciate those of you who have spoken to  
24 that. If you aren't going to speak to that today I would  
25 urge you in your post-Conference comments to address that

1 because we have to go down one of these pathways.

2           So we are either going to be at a place where we  
3 apply MOPR in a limited fashion or we attempt to accommodate  
4 the state policy that's coming down whether you like it or  
5 not, whether you agree with it or not, whether it is for  
6 economic reasons, whether it is for more jobs, whether it is  
7 for more renewables, it's happening.

8           Whether we are going to duke it out like we have  
9 been doing here at FERC so I just wanted to ask one more  
10 time, I think Arnie's been quite polite to try to keep us on  
11 track -- please speak to accommodate now, this is your time.  
12 We all dressed up and came to this party or file it in the  
13 comments, thank you.

14           MR. QUINN: Thanks Commissioner. You can also  
15 come to all of my meetings. Alright so I think we have John  
16 then Chair Sheahan I saw your card up and then Abe.

17           MR. HUGHES: I'll speak on accommodate.  
18 Accommodation works in two directions. Either FERC can  
19 accommodate the state policies and open a Pandora's box  
20 endlessly tweaking the market design and where we will have  
21 MOPR 1, MOPR 2, MOPR A, MOPR B with unknown, unintended  
22 consequences.

23           But in the end you are probably heading south of  
24 the problem because the states won't agree on anything and  
25 once you allow one state to have MOPR B or something else

1 you know another state is going to want something that  
2 totally you know, contradicts what you did before.

3           And so that is just going to lead you again to a  
4 Pandora's box. The other form of accommodation which I  
5 support is the states have to accommodate their policies to  
6 market rules established by the FERC. And this will allow a  
7 simpler market design I hope that makes it more of an honest  
8 competitive market rather than an administratively  
9 determined one that we have today.

10           MR. QUINN: Thank you Chair Sheahan?

11           MR. SHEAHAN: I don't want to belabor this but  
12 there have been a number of characterizations of FIJA and I  
13 just want to make it clear for the record from the state's  
14 perspective that FIJA is about energy policy. And the state  
15 is acting well within its legal authority to address  
16 legitimate environmental attributes of certain generation.

17           In terms of accommodation I think Commissioner  
18 Honorable's comments really bear some consideration. The  
19 markets don't exist because you know they have some value in  
20 and of themselves. They exist because the states have  
21 bought in.

22           And to the extent that the markets don't  
23 accommodate the state's strongly held policy views, I think  
24 states will begin to move away from them and that's an  
25 important point I think that needs to be kept in mind.

1                   MR. QUINN: Abe?

2                   MR. SILVERMAN: Yeah accommodate one of my  
3 absolute favorite topics because we really do need to move  
4 very quickly. And if there is one thing that I would urge  
5 the Commission to do coming out of this Conference is tell  
6 the ISOs to REC them as soon as we have quorum if not  
7 before.

8                   To come in by a date certain with a plan -- and  
9 you know the first iteration of the plan, the first  
10 evolution of the capacity markets doesn't have to resolve  
11 every problem. I really like the two-tier programs. I'm  
12 very glad that New England has put forward their proposal,  
13 PJM is working on it to put forward sort of their proposal  
14 -- is working on it.

15                   You know I think that's great because that's a  
16 first step. But we really have a time crunch and I would  
17 very much like to see the Commission come out and say, "Hey  
18 ISOs we want to see you come in with a -- you know do your  
19 homework by next week, by two weeks -- seriously by the end  
20 of the year, come up with something that you could implement  
21 in the first half of 2018 for the next capacity option."

22                   And if we don't do that we really do risk falling  
23 way, way behind. And you know, I like the accommodation  
24 that allows a state to come in and have subsidized resources  
25 that it picks, take on a capacity supply obligation which is

1 great, that's one of their major concerns -- but then  
2 recognize that that unit isn't relying on the market for its  
3 fixed cost recovery.

4           It's getting its fixed costs recovery somewhere  
5 else and there's nothing inherently wrong with that but we  
6 need to recognize that the rest of the players who are  
7 deploying shareholder capital as opposed to captive rate  
8 payer capital are relying on the markets for the just and  
9 reasonable rates.

10           And if we want to drive an investment and we need  
11 to, we absolutely have to drive an investment if we are  
12 going to de-carbonize the economy, if we are going to turn  
13 over the existing fleet of generation in the next decade, we  
14 need that shareholder money in the market.

15           And in order to attract that money we have to  
16 protect the market from you know, protect those people  
17 playing in the market from the predacious effects of  
18 competition against a resource that's giving it away -- you  
19 just can't compete with free.

20           So you know one of the things -- I think the 200  
21 megawatt exemption in New England is respectfully a great  
22 example of what not to do. Because what it does is it harms  
23 every market participant and prevents every other resource  
24 from getting the just and reasonable market rate that they  
25 are entitled to.

1           That doesn't mean that their resource shouldn't  
2 be able to come into the market through some sort of  
3 two-tier pricing, but the 200 megawatt exemption  
4 accommodates the states without doing anything to protect  
5 the suppliers.

6           And so I think that's an example of where not to  
7 do it whereas if you had a two-tier pricing scheme, the 200  
8 megawatts still comes into the market over the long-term but  
9 it doesn't harm the people who have deployed capital, you  
10 know that has shareholder dollars at risk.

11           And it's just you can't have those two trade off  
12 against each other or it will drive capital away at the  
13 right time we need it the most.

14           MR. QUINN: Thanks, Thad?

15           MR. HILL: Sure I mean on some level some of the  
16 questions we are talking about are being litigated and we  
17 will hear from the courts on these and then the courts are  
18 going to say what they are going to say. In the meantime  
19 there is a sense of urgency for you all for FERC to step in  
20 and fill the space.

21           Look in the multi-state ISOs -- New England or  
22 PJM it is impossible, it is folly to think that you are  
23 going to come up with a plan that's going to accommodate  
24 every state's individual interest. You are not going to be  
25 able to do it.

1           You can make changes to the market and  
2 accommodate some general themes but whatever that is is  
3 going to have to be pretty firm because states are never all  
4 going to be happy just like melting generators will all  
5 never be happy.

6           And so there has to be a willingness at some  
7 point to step in place and you can accommodate to a degree  
8 -- the states are going to have to accommodate the other way  
9 around.

10           We talked about some of the programs, a  
11 two-tiered capacity market but what New England has said  
12 there's some energy market ideas out there and whatever they  
13 are Abe is absolutely right -- if we are going to put money  
14 to work we have to get comfortable that we are going to get  
15 a fair shake.

16           And if somebody up the road that works for a  
17 bigger company is getting free money from the state, we have  
18 to have the ability if there's a negative impact, that we as  
19 a receiver we can't invest. But I do think it's for sure  
20 that you are not going to be able to accommodate all the  
21 states and every wish they have, otherwise you know 6 states  
22 in New England or however many states are in PJM -- 10, 12 -  
23 13 thank you.

24           13 plus D.C. you are not going to get there so  
25 you are going to have to put forth a plan that works. And

1 by the way if the states ultimately don't like it they have  
2 every ability to step out of the market and not you know,  
3 not have to deal with a lot of these issues and re-regulate  
4 the market and take over resource adequacy and then we can  
5 talk about for those of us with plants in those states, just  
6 and reasonable and retro-active you know rate making and all  
7 of those other things, you know that's kind of door number  
8 3.

9           But we can't stand door number 2 and the  
10 discussions that we are having right now -- it is firmly  
11 door number 2. Door number 1 is a better answer but you  
12 can't accommodate everybody.

13           MR. QUINN: Thanks, Vice Chair Place.

14           MR. PLACE: Yeah I just figured we are coming  
15 close to your break and trying to wrap some closure around  
16 this. But I don't see any -- I listened to everybody here  
17 this morning, I don't see any way around I mean John's point  
18 regrettably that there's a path doesn't tweak it -- tweak  
19 the markets.

20           I just think that it's inevitable that we are on  
21 that path that you see what's coming from state legislature,  
22 see what legitimate -- and I'm not drawing a distinction  
23 between illegitimate and legitimate but there are legitimate  
24 concerns from states on the legitimate attributes the states  
25 want to monetize in the market.

1           There's no way around it. I understand that the  
2 capacity market by its nature is complex today and it is  
3 only going to get more complex but I don't see that there is  
4 any way to turn that clock back and I think we can get to  
5 your point to Thad's point sorry -- way too many people on  
6 the panel.

7           That you can get sort of generic first  
8 principles, you can say alright you need -- if there's a  
9 state attribute that is coming into the market that we are  
10 faced with, that FERC's faced with, they say alright can we  
11 fit that into a market, can you price it in the market?

12           If you can't maybe that's the only part where you  
13 say look you can't, FERC draws the line you go duke it out  
14 as Commissioner Honorable pointed out.

15           However, outside of that if you bound that point  
16 but inside everything else I just don't think that there's  
17 any way around not tackling this in a more complex rule in  
18 the energy capacity markets.

19           I hope that's helpful in a way but I mean I very  
20 much appreciate Abe's points and I think you just have to go  
21 there and there are mechanisms that you can do that don't  
22 discriminate against one generation source to another.

23           MR. SILVERMAN: And I'll just be really quick.  
24 You know markets aren't broken because they don't  
25 internalize for carbon. We need to ask the market to do the

1 right thing. You know there's nothing magical about the  
2 existing structure we have -- it's an accident of history  
3 right?

4           So regardless I think everybody at this table  
5 would agree it's not the competition isn't the best way  
6 forward -- it's the national policy, it's the policy of this  
7 Commission, it's everyone's competition who is not for that?

8           But it is the question of how do we design the  
9 market and ask the market to solve for a changing set of  
10 desires. It used to be least cost and reliability now in  
11 certain states it is carbon, other states its other  
12 attributes -- we need to bring them in.

13           And it's not you know again markets aren't broken  
14 we just need to ask them to do something different.

15           MR. MORENOFF: Before we wrap up on path 2, I  
16 wanted to go back to one of the topics with the discussion  
17 of long-term contracting. Recognizing that this is not a  
18 perfect parallel -- about 10 years ago the Commission did  
19 several rounds of comments and what eventually led to Order  
20 Number 719 having heard lots of concerns that there wasn't  
21 sufficient opportunity or completion of long-term contracts.

22           Unfortunately after those many rounds of comments  
23 the best thing that we could come up with was to say why  
24 don't we have every RTO do a bulletin board and that will be  
25 a place where people can express their views and that will

1 help people come together.

2           By the fact that we are having -- I have every  
3 reason to believe the bulletin board did not fully address  
4 that problem. Nonetheless, some of the speakers today I  
5 feel like have said if only there was an opportunity to do  
6 long-term contracting not constrained by capacity market  
7 everything would be great. That to me implies a degree of  
8 confidence that the problems that were there 10 years ago no  
9 longer exist, have been mitigated. Can we talk a little bit  
10 more about why is it that long-term contracting, if only  
11 the opportunity was present we now think would be the  
12 solution.

13           MR. HILL: Sorry I mean you know I don't think we  
14 need long-term contracts. I mean I think you have to look  
15 at the data. There have been tens of thousands of megawatts  
16 through generation done in competitive markets.

17           Again, remember we have all time low cost,  
18 there's no reliability problem and tens of thousands of  
19 megawatts are showing up with no long-term contract. In  
20 places where there is a lot of faith in the market like  
21 ERCOT they are getting renewables, they are getting built  
22 without a lot of long-term contracts because the math works  
23 and they can compete.

24           So I don't think we need to go back to long-term  
25 contracts. And if you price carbon and it happens to work

1 -- some of these wind assets worked in Texas just because of  
2 the market price. But if you price carbon and the price  
3 signals there just like nobody needs contracts to build  
4 combined cycles the investment is going to follow and we are  
5 absolutely seeing that.

6 So I don't think that there's a long-term  
7 contract solution. I think the data of the last 10 years is  
8 absolutely crystal clear on this.

9 MR. QUINN: John?

10 MR. HUGHES: I admit that the low prices right  
11 now have sort of taken interest away from long-term  
12 contracts but they may not stay low. Who knows next week  
13 there will be some environmental study that kills the  
14 fracking revolution and I hope that doesn't happen.

15 But I think our members would like the option for  
16 it and where they can exercise that option they would  
17 vigorously do so. I would add though that if the prices go  
18 up again and I would imagine Exelon will want to take their  
19 units and put them back in the market.

20 MR. QUINN: Lisa?

21 MS. MCALISTER: Thanks, so right now PJM's model  
22 accommodates bilateral contracting as long as it is for  
23 existing units. For new units you could get MOPR done and  
24 you are at risk of paying twice for capacity.

25 But I think one of the problems that we have

1 right now is that in RPM suppliers have a choice. They can  
2 enter into long-term bilateral contracts or they can hope  
3 for continued intervention by PJM and FERC to make up the  
4 missing money through the capacity construct.

5           And so I think having that construct there has  
6 diminished the opportunity for long-term bilateral  
7 contracting and we would love to go out and do the bilateral  
8 contracts but they are not available right now.

9           If you take that away it may be that they come  
10 back and there is no other opportunity but to do that and we  
11 again think that would better accommodate the needs of both  
12 suppliers and load.

13           MR. HILL: Lisa, we would be more than happy to  
14 do long-term contracts with any of your representative  
15 entities. We do a lot of public power long-term contracts  
16 so we should talk afterwards.

17           MR. QUINN: So the Chair Vannoy, Abe and then  
18 Kathleen.

19           MR. VANNOY: Thank you so responding on long-term  
20 contracting. Maine's experience hasn't been good with  
21 long-term contracting. We have lost a lot of money over the  
22 years in long-term contracts.

23           But I think an interesting point on that -- when  
24 I say we lost a lot of money to what? Well the reference  
25 points to market so I think in our discussions of you know

1 you look at New England, maybe at Vermont for example -- I  
2 won't speak for Vermont but when they long-term contract I'm  
3 sure they are looking at what the market price is as to  
4 whether it is a good deal or not so just and reasonable  
5 rates come out of the market price.

6           Go back to -- a lot of discussion on pricing  
7 carbon coming from my neighbor here. We have said  
8 unequivocally in New England we are not interested in  
9 pricing carbon and we are continuing with discussions not  
10 along a carbon front but along other attribute lines. So I  
11 just want to make that clear.

12           And then finally to clear up on the MOPR  
13 exemption -- the MOPR exemption was a compromise. It was a  
14 compromise on what the for a capacity market curve was going  
15 to look like and part of that was the MOPR exemption.

16           MR. QUINN: Abe?

17           MR. SILVERMAN: So we actually as a company love  
18 bilateral long-term contracts. We will get right behind  
19 Thad and talk to you afterwards. And you know competition  
20 can work in a bilateral market. I mean my company has been  
21 incredibly successful in winning long-term contracts in  
22 California.

23           Now I have got to tell you they are more  
24 expensive. Rate payers are paying more in California for  
25 the same product. It is not just looking at San Francisco

1 as expensive. You know there is a benefit to the  
2 competitive market that you know has driven down prices for  
3 new generation.

4 But with that said hey, listen if you want to go  
5 out and put something out for bid you want you know -- 2,000  
6 megawatts of carbon-free generation in a state for example  
7 -- put it out for bid.

8 And I think one of the things that you find very  
9 frustrating from -- if you are sort of wondering why we are  
10 all ganging up on Kathleen with generators it's not just  
11 that they are getting money, it's not just that they are  
12 being carved out of the market not having to ride through a  
13 real downturn caused by natural gas prices which is  
14 competition at work.

15 But it is also the tenure of the contract. We  
16 would love to be able to go out and get it an above market  
17 contract for 10 years that would be wonderful. I mean  
18 that's really something that's just not out there in the  
19 market available to us under any way, shape or form.

20 But when we think about it --

21 MR. QUINN: Just real quick is it just a 10 year  
22 contract is not available to you rather than the way you  
23 articulated it which was it is not a 10 year about market  
24 contract?

25 MR. SILVERMAN: Not one backed by rate payers

1 across an entire state no.

2 MR. QUINN: Is a 10 year contract available to  
3 you?

4 MR. SILVERMAN: It depends on the market right,  
5 in California it certainly is. In fact that's the majority  
6 of the new power plants that we have built out in California  
7 but the renewables are having a slightly longer tenure.

8 And when we talk about a financing mechanism for  
9 getting particularly new renewables, but other resources  
10 build we actually don't necessarily think putting a price on  
11 carbon directly in the sense of a carbon tax or something  
12 else is actually the best way to incent renewables.

13 We like the long-term contracting structure. We  
14 think it has been incredibly successful at getting new  
15 renewables built and that's something we will do all day and  
16 all night. But the key point about bilateral contracts  
17 though is we do have to make a decision about how to  
18 integrate them into the market.

19 There's nothing inherently wrong with bringing  
20 bilateral contracts into PJM. Really it could exist in the  
21 market today. The biggest problem that we have had is  
22 something you just said though -- when you have a contract  
23 -- when you have a market that is relying on bilateral  
24 contracts or a footprint that's relying on bilateral  
25 contracts, you need to have an effective price signal.

1           And I know this conference isn't about NYISO  
2 right now is that the market is showing an incredible low  
3 price value of capacity and the bilateral contracts follow  
4 that right on down. So you have to have -- even if it is a  
5 residual market like NYISO you have to have a price boggy to  
6 shoot at.

7           And then people can go and make reasonable  
8 estimates and enter into the kind of long-term contracts.  
9 That's why bilateral contracts could work.

10           MR. QUINN: Thanks so we will do Kathleen, I see  
11 Michael and then we will take a break and come and talk  
12 about the paths 3 and 4.

13           MS. BARRON: I was just going to draw together a  
14 comment both John and Abe made about the nature of the state  
15 support programs related to nuclear. I think the states  
16 involved were certainly smarter than me, smarter than John.

17           They accounted for future price increases in  
18 their design in the way that they developed the price signal  
19 for nuclear in that to the extent market prices go up, the  
20 payment from the state goes down. And they also targeted as  
21 they said earlier, only the stations that they thought they  
22 needed to.

23           So in that sense they tried to draw the program  
24 as narrowly as possible to be as consistent with improving  
25 efficiency in the market as they could be and so I think we

1 should give them more credit for doing something that's  
2 efficiency enhancing than you might have heard already.

3           And then the last point just Abe brought up  
4 NYISO, NYISO is not the subject of the Conference but twice  
5 over the last two days we have heard you know, this  
6 contention that the Illinois program is somehow affecting  
7 the outcomes and the markets are ready and there was an  
8 allusion to the NYISO option that just occurred.

9           It's just that you don't really need -- you don't  
10 need to take my word for it, just look at the chart that  
11 NYISO has released analyzing the supply curve in the last  
12 reserve option where the price cleared versus where it would  
13 have cleared for example if our Clinton Station was not in  
14 the market it might have gone from \$1.50 to \$5.00.

15           It would not have picked up any of the units of  
16 the companies that are complaining about it today as having  
17 affected the outcome. It's just not true.

18           MR. QUINN: Michael and Lisa.

19           MR. POLSKY: I just want to comment on the  
20 long-term contracts. As far as renewable concerns somebody  
21 mentioned some being built -- all the renewables are built  
22 with long-term contracts.

23           People built renewables without long-term  
24 contracts some years ago they all got killed. So in a way  
25 long-term contracting for renewables is an absolute must to

1 enter the market for the new renewables.

2           But I want to say that people think long-term  
3 contracts there you go and you talk to people and they pay  
4 you whatever you want -- it's a highly competitive  
5 environment. This is what I want to stress here, it's a  
6 competition.

7           We can't just think okay I just went to somebody  
8 and they said Invenergy is a nice company we'll just sign a  
9 contract with a nice price. It's a very highly competitive  
10 field.

11           And long-term contracts now -- probably the lower  
12 price in the renewables at least that even market -- people  
13 don't sign long-term contracts until it beats forward market  
14 curve. So long-term contracts are not a present to somebody  
15 you know at bond market prices.

16           So all the CNI's -- commercial industrials they  
17 look at the long-term contracts and they look at the forward  
18 curve and decide below the forward curve not what Kathleen  
19 just said pay the premium. They want environmental  
20 attributes, they want a long-term contract and they want it  
21 below market price okay?

22           So it's not really -- but the key is again to  
23 distinguish is the competitive nature. Nobody signs  
24 long-term contracts without competition. So this is a key  
25 issue here.

1 MR. QUINN: Lisa?

2 MS. MC ALISTER: Thank you I agree. I'm not  
3 saying that long-term contracting is a gift. I think it is  
4 a competitive environment but I did want to respond a little  
5 bit to the market signals.

6 I agree everybody is looking at the forward  
7 curves to sign long-term contracts but the current capacity  
8 construct, while it provides some price signal, it is a  
9 one-year price signal that's very volatile and it is not  
10 used as the basis -- at least from AMP's perspective for  
11 entering into long-term decisions.

12 For example investing nearly 3 billion dollars in  
13 350 megawatts of undelivered hydro which we did -- we have  
14 also invested in solar. We have got 80 watts that just came  
15 on line, it's the largest commercial solar operation in  
16 Ohio, in Bowling Green, Ohio.

17 We made those decisions in concert with our local  
18 municipalities on the basis of having a diverse supply and  
19 all of our members' preferences and to avoid the volatility  
20 and the pricing structures that we have been talking about  
21 today, so thank you.

22 MR. QUINN: Thank you. Alright so if we could  
23 take about a 10 minute break, back here at about 5 minutes  
24 to and we can wrap up within market solutions.

25 (RECESS.)

1           MR. QUINN:  Alright we are going to get started  
2 because we have a limited amount of time and we have a  
3 decent amount of ground to cover.  Alright I would like to  
4 get started.  I'm going to start regardless of whether  
5 people are sitting down.

6           So I'll remind the panelists if you are not in  
7 your seat the old saying is that if you are not at the table  
8 you are on the menu.  It might be appropriate for the one  
9 seat that's empty.  I hope none of this is being  
10 transcribed.

11           So what we have got left for the last hour is a  
12 discussion I think we are going to skip over our middle path  
13 if you remember the framing is path number 1 -- limited or  
14 no MOPR; path number 2 -- accommodate state policies by  
15 allowing resources to get a capacity supply obligation but  
16 set the price as though no state support existed.

17           Path 3 -- you know we talked about being kind of  
18 the status quo.  I think we have a pretty good sense of what  
19 the status quo looks like.  We live and breathe our status  
20 quo so I don't think we are going to spend any time right  
21 now on the status quo given where we are.

22           Path 4 and Path 5 are what we would like to talk  
23 about in the remaining hour.  We would like to give our  
24 Commissioners plenty of time to ask questions so we are  
25 going to try to spend about 20 minutes each on those two

1 paths.

2 Path 4 is the bring it into the market path. I  
3 think in New England that path was described as achieve and  
4 we had some discussion with PJM in New York yesterday  
5 specifically of a version of bring it into the market which  
6 was carbon pricing. So that will be the discussion about  
7 Path 4.

8 Path 5 is it has to be in the market and if it is  
9 not in the market it is going to get a very strong minimum  
10 offer price rule. Because we have such a limited amount of  
11 time it would be wonderful to spend zero of the 40 minutes  
12 on whether or not Exelon has a good or bad deal from any of  
13 the various states.

14 So if you all promise not to take shots at  
15 Kathleen I will promise not to call on Kathleen to respond  
16 to those shots. So Path 4 I think we have talked about, you  
17 know, bringing the state objective into the market to the  
18 maximum extent possible.

19 So I think what we would like to talk about is  
20 what is it, what policy objectives are we attempting to  
21 bring into the market. What we have mostly talked about are  
22 environmental benefits but it would be good to know whether  
23 we are talking about something other than environmental  
24 benefits -- that we are trying to price into the wholesale  
25 market.

1           I think that we would like to understand from the  
2 states how that works -- from your perspective and we heard  
3 a little from Chairman Vannoy of whether that's a realistic  
4 thing or not. So we would like to hear from the states  
5 whether that's a realistic path forward.

6           Then I think we'd really like to hear what people  
7 think we are doing with the rest of the state policies, the  
8 state support that we haven't brought into the market. Are  
9 those things still subject to the MOPR? Are those things  
10 something that we no longer attempt to address through the  
11 MOPR because they are fairly small?

12           So that's the kind of path -- the time we would  
13 like to spend about the next 20 minutes, President Mroz?

14           MR. MROZ: Yes to your question. You know from  
15 my comments yesterday, from my pre-filed comments that it  
16 has been my opinion that the state issues, the state  
17 attributes should be brought into the market.

18           I -- there's been a lot of discussion about the  
19 state attributes being particularly focused on environmental  
20 attributes, that is a policy decision that many states have  
21 made. I have raised both in our state for discussion with  
22 my colleagues in other states, with the FERC, with staff and  
23 the Commissioners I have raised this with the industry that  
24 I do believe that there are also other factors that go to  
25 reliability, that go to the related issues around

1 infrastructure -- I mentioned this yesterday that could  
2 otherwise if particularly in a state like New Jersey if  
3 nuclear facilities close that there are assets that will be  
4 in my words, stranded.

5           There could be other costs associated with the  
6 replacement of generation. It would have to replace those  
7 units that then fail so in my mind and Chairman Vannoy  
8 mentioned that there are attributes other than environmental  
9 that need to be brought into this discussion. I believe  
10 they do.

11           And as I mentioned yesterday I comment PJM for  
12 the effort it has started to undertake to try and begin to  
13 anticipate what those related costs are. And I do believe  
14 that that is something that was not really focused much  
15 attention on here in the last 24 hours but I do think it's  
16 part of the equation.

17           I think it's something that should also be  
18 considered lest we have generation units that fail and as I  
19 say ultimately the consumers are going to have to continue  
20 to pay for infrastructure that is being built now or that  
21 will have to be built before those units close.

22           MR. QUINN: Thank you, Michael?

23           MR. POLSKY: We use the foreign market and what  
24 market means we have to define its competition. If there is  
25 no competition there's no market. So I just you know, there

1 are certain state policies like environmental specifically  
2 like RPS for renewables okay.

3           There are 30 states that have RPS's. The whole  
4 renewable industry exists because of state policies on  
5 RPS's. I want to be clear that with no RPS's there would be  
6 no renewable in this country at all or maybe very little.

7           And the whole technical improvements and price  
8 curves we see because of the amount of deployment but it is  
9 a market competitive strategy. What states come with a  
10 policy in this market go fulfill this policy. So whatever  
11 policies it has to be market compatible.

12           It's not about clean by the way, it is just how  
13 the world works. You have to have a policy that is market  
14 compatible. So if the state has an environmental policy  
15 fine then here's the policy and you market go to fulfill  
16 this policy, that's what you know regulators do or  
17 legislators. They come up with a policy and have market  
18 fulfill.

19           But there are clearly not market compatible  
20 policies. If policies are not market compatible they should  
21 not be allowed, no matter what, how you color it okay. So  
22 that's the fundamental principal here okay.

23           Is the policy market compatible or policy market  
24 destructive, okay? And I think this has to be a guiding  
25 principle here. How this policy -- but definitely my view

1 states have to have the ability to effectuate policy okay.

2 But if we know clearly that policy is to save  
3 jobs, nothing to do with environment then it is not a  
4 policy. This is not a policy, this is just individual  
5 action that interferes directly with the market.

6 Let me tell you one more thing okay -- we as an  
7 independent producer we have to rely on market signals to do  
8 business. We don't do business in isolation just by saying  
9 I'm going to build solar in New Jersey, I'm going to do this  
10 here -- we have to rely on market signals.

11 So the recent RPS everybody knows there is an  
12 RPS, there is what duration what the length and market is  
13 fulfilling. But if policies are known it could change  
14 tomorrow because some states come up with a strange policy  
15 to support something and then there is a complete collapse  
16 of the plans that we were preparing and other people  
17 preparing to do.

18 This is just not market compatible policy. And I  
19 think in my view FERC has to give clear signals what a  
20 market compatible policy is or what not otherwise we will be  
21 here every year at this Conference. Maybe today Exelon as  
22 opposed to Shell, tomorrow it will be somebody else at this  
23 Conference and we will be continuing to talk about this.

24 We have to attack this issue up front. What is  
25 -- market compatible policy and what's clearly not market

1 compatible policy.

2 MR. QUINN: Thank you Lisa?

3 MS. MC ALISTER: Thank you getting back to your  
4 question about bringing attributes into the market. I think  
5 of the two wholesale markets, the energy markets are better  
6 able to value or select additional attributes.

7 And as a result of our last Technical Conference  
8 on this issue in 2013 I think the Commission has done a very  
9 admiral job of working on price formation issues and we  
10 think that's a good direction to head.

11 And there are going to be new technologies with  
12 different operating parameters and capabilities that we are  
13 going to have to address -- distributed resources, energy  
14 storage and we shouldn't lose sight of improving the current  
15 price formation processes regarding transparency of operator  
16 decisions, modeling all known constraint and more accurate  
17 price formation rules during periods of transmission  
18 congestion and volatile fuel prices.

19 And we would also comment PJM on their efforts to  
20 help come up with solutions to these problems and we look  
21 forward to working with them on this.

22 CHAIRMAN LA FLEUR: I had a question about -- I'm  
23 sorry I'm having a senior moment the gentleman from  
24 Invenergy Mr. Polsky and Abe both talked about having as a  
25 distinguishing when we look at state policies whether they

1 are set up open to all market competitive or not which  
2 sounds a little bit like the concept of when we talked about  
3 whether you take the production in tax credit in the case of  
4 MOPR.

5 Well if it is open to everyone in the technology  
6 as opposed to specific, whether that's a good rule or not I  
7 think that was the rationale. So are you saying that that  
8 would be a determinant of whether something got repriced --  
9 like as long as it was done in a competitive bid in some way  
10 it wouldn't get repriced but it would get repriced if it  
11 didn't?

12 Is that the proposal? And could you expand a  
13 little bit on how we might decide if something is market  
14 competitive because that's I think dare I say a fresh idea  
15 that came in.

16 MR. POLSY: I'm not sure I'm 100% clear on your  
17 question and what it would mean to price but what I was  
18 trying to say here is that obviously we have to be  
19 realistic. If state has certain right to accommodate  
20 certain policies let's assume that okay. Because if we  
21 assume states have no rights for anything then we don't have  
22 to talk about it.

23 But if states have certain policies -- let's say  
24 environmental policies and as long as this policy is a  
25 clearly defined policy that fulfills through market work

1 forces okay then in my view this policy is market compatible  
2 compared to policy that is simply I'm just going to give a  
3 handout to this particular member you know because of what  
4 their resources are, which is not fulfilled through market  
5 forces.

6 CHAIRMAN LA FLEUR: Can I start with the  
7 preposition that states do have rights and let's assume all  
8 state legislation is valid. It's not my place to say it's  
9 not. What I have to decide is does it affect the just and  
10 reasonable price or not, that's my only job -- not to be a  
11 judge of the states.

12 So I thought when I heard -- maybe it was when  
13 Abe said it before you are saying it's been through some  
14 kind of competition whether it is a bidding for bilateral or  
15 whether it is an RPS renewable portfolio standard or  
16 something else that everyone was eligible for -- that's a  
17 proxy for just and reasonable solar.

18 You don't need to re-price it or what were you  
19 saying. Like how would you do that?

20 MR. POLSKY: Okay in my view yes if it went  
21 through a competitive process okay and you know generally  
22 competitive process always works okay and in this particular  
23 case it would not need to be repriced.

24 MR. SILVERMAN: Yeah and I think there's a couple  
25 of different ways to skin the cat right, there's not one

1 size fits all. I mean Chris Wilson as far as I can tell is  
2 probably the world's foremost leading expert on Edgar but I  
3 mean that is a place where the Commission has come in before  
4 and talked repeatedly about whether a solicitation is  
5 non-discriminatory, whether it should be you know allowed to  
6 be passed.

7 CHAIRMAN LA FLEUR: Sorry I didn't hear the word.

8 MR. SILVERMAN: The Edgar --

9 CHAIRMAN LA FLEUR: Oh Edgar, yeah.

10 MR. SILVERMAN: And so I think you could you  
11 know, if the Commission wanted to could go in that direction  
12 where they come in and say you know make a case by case  
13 determination.

14 Is this is a competitive process? I mean I have  
15 to say you know the beauty of the Federal Power Act is that  
16 99% of the time you know it when you see it and you can  
17 spill 300 pages of testimony on a very simple proposition.  
18 Is it competitive and open to all parties and identify a  
19 competitively neutral product?

20 Either yes or no you know, you kind of recognize  
21 it very quickly. So that's one way to go. One of the  
22 things I really like about some of the two-tier pricing  
23 schemes or the New England scheme that they have talked  
24 about is that they are almost independent of intent so we  
25 can get out of the business of policing whether the state

1 action is legitimate or within their sphere and we protect  
2 just and reasonable rates, both for the suppliers and also  
3 frankly for customers because you know they are able to take  
4 on --these resources are able to get some market revenue  
5 against the fixed cost that the rate payers would otherwise  
6 be paying and use that as an offset.

7 And I like it because it does have that -- you  
8 know you take intent simply out of the question entirely.

9 CHAIRMAN LA FLEUR: Did you have that as a MOPR  
10 exception in PJM for a while then everyone came it and  
11 wanted it changed? Like if states did a competitive bid it  
12 didn't face a MOPR?

13 MR. HILL: No I think with all due respect to my  
14 colleagues here I generally agreed with almost everything  
15 they said earlier. You know there's a clear Supreme Court  
16 case Abe zeroed that this is not the case.

17 A state can go out and do a process however  
18 competitive the process and then the result of that is  
19 effectively exercised in the market by your power, by your  
20 side market power excuse me.

21 We have an 8-0 Supreme Court decision so that is  
22 not the case. There's a much higher standard than is the  
23 process competitive. It is whether or not it is going to be  
24 just and reasonable to the others. The state going on and  
25 doing an RFP to bring in a new power plant is going to crush

1 prices to everybody else, especially if that is the intent.  
2 It doesn't matter how competitive that process is.

3 CHAIRMAN LA FLEUR: So there are two things. One  
4 is how the state chose which is what you are talking about  
5 but there is also how does that scheme -- whatever it is, no  
6 matter how competitive it was, fit into the other states  
7 that might have not -- I mean that's what you are worried  
8 about crushing prices "for everyone else" that's the other  
9 people who aren't a part of that same system.

10 MR. HILL: That's right. I mean I think this is  
11 the concept of what can you price and this gets to one of  
12 the things that hasn't been mentioned although it was  
13 mentioned yesterday by Mr. Ott is the energy markets.

14 So we can talk about pricing carbon right and  
15 environmental attributes. The energy market is being  
16 subject in almost every single market to massive impacts by  
17 out of market subsidized resources.

18 And it wasn't as clear as what was going on in  
19 New Jersey and Maryland and its kind of impact and this is  
20 why you know everybody is picking on Kathleen as who is  
21 responding to this in some ways.

22 It doesn't mean that I'm not going to pick on her  
23 but --

24 CHAIRMAN LA FLEUR: Pick on this point.

25 MR. HILL: Yeah exactly. No I'm not -- she's

1 good. But the reality of it is is that there are major  
2 distortions to the energy market that are going to drive  
3 some bad outcomes. And we have to recognize when there are  
4 negative marginal cost resources out there we need to think  
5 about what it is that we can do for the energy market.

6           And by the way when prices are pricing negative  
7 which they do sometimes, there are a bunch of resources that  
8 are actually on the grid that are positive marginal cost  
9 resources, they have to be there. And they hadn't got  
10 lifted, they are there -- we are jacking the prices for all  
11 of them which is impacting the forward markets and we have  
12 to bump some wind down when there is a little over wind  
13 chain and that is hurting forward markets and hurting the  
14 ability for transparency.

15           So I would argue you know carbon would be a good  
16 thing for the states with no attributes. Energy price  
17 formation I think is probably failing us generally right now  
18 given all of these distortions and I think this gets a  
19 little bit at the you know, competitive processes you still  
20 have to be careful about it.

21           The third attribute which I don't think needs to  
22 be priced and I will go the other way just to kind of  
23 directly answer your question is there has been talk of  
24 resiliency and there has been talk of reliability and there  
25 has been talk of -- although I haven't heard it explicitly

1 today diversity of resources.

2           That job belongs to the RTO. That is the raison  
3 d'etre, that's all the French I know, that's the reason for  
4 being. And you know it's their job and if the states --  
5 that is the RTO's job and if the states actually think that  
6 they are failing there they have the option to leave, but I  
7 don't think that you can actually -- when we talk about what  
8 you are going to -- the deal that is going to get cut to use  
9 their term if you are going through door number 1 or  
10 whatever you agree to the attributes of some hybrid  
11 approach, I don't think that's got to remain with the RTO  
12 then a far better place and then you state to decide, is  
13 there too much gas or what do they do when it is cold out or  
14 whatever the mights might be.

15           So it's a price environment -- carbon if you want  
16 it we have to get energy markets right and I think there is  
17 some real need for innovating thinking there but the rest of  
18 it I think the RPO's have and I think they have done a great  
19 job.

20           CHAIRMAN LA FLEUR: Well isn't that the markets  
21 first name reliability? Isn't that what it's called  
22 reliability pricing mechanism?

23           MR. QUINN: Right, so I think I've got Abe, John,  
24 Chair Vannoy and Vice Chair Place and then Kathleen.

25           MR. SILVERMAN: Great thank you and you know Thad

1 I mostly agree with what you are saying but when we talk  
2 about whether we are going to accommodate the resources you  
3 know I do think that we should get beyond this idea that a  
4 state is right or wrong in most cases.

5           You know that's not to say there is not a  
6 spectrum. Clearly I think if we had a jobs program  
7 masquerading as an energy bill that that would be a problem.  
8 I think you know as we get closer and closer to the  
9 environmental attributes that a state is looking for I do  
10 think they have a role in setting those and then markets  
11 should accommodate them.

12           This all comes back to dual federalism versus  
13 cooperative federalism right they are a little bit different  
14 and the Federal Power Act has kind of evolved over time.  
15 But so when we look and we say what these markets should  
16 accommodate a state environmental program, a state and  
17 environmental goal should be first on the list of things  
18 that the federal government recognizes. That's the heart  
19 of it.

20           That to me is the heart of the cooperative  
21 federalism, but we need to do it in a way that also meets  
22 the other parts of the Federal Power Act and that is first  
23 it is a jurisdictional product in some cases. I mean you  
24 know nuclear comprises virtually 100% of the supply stack at  
25 Illinois.

1           Would we really say that a state can come in and  
2 you know wind or anything else and take 100 -- carve 100%  
3 out of the wholesale market and say it doesn't affect or  
4 pertain to the wholesale market?

5           And unless you could say yes to that question  
6 it's FERC jurisdictional and so I think the Commission's  
7 role here is the same regardless of whether the state  
8 attribute is you know, if zero carbon or some sort of lower  
9 emission it needs to step up and provide the platform for  
10 just and reasonable rates.

11           Amazon for clean energy, right? Nobody would say  
12 that going to the grocery store where you have one grocery  
13 store in the middle of nowhere with no competition is going  
14 to get you a just and reasonable price for brownies right?

15           No, you are going to go and you are going to shop  
16 at a super store, you are going to go online and compare  
17 prices -- I don't know why brownies, it just is. So when we  
18 think about these programs and really only FERC could play  
19 this role. Only FERC can set up the apparatus that allows  
20 us as a society to get the best possible competitive price  
21 for the environmental attributes we are looking for.

22           And so if the state comes in and says we want a  
23 hard carbon target of certain emissions or they say we want  
24 5,000 megawatts of clean energy or they say you know, any  
25 other kind of you know competitively neutral goal I think it

1 is incumbent upon the Commission to come in with oversight  
2 to make sure that the rates are just and reasonable and  
3 accommodate that.

4           You know it is security constrained, economic  
5 carbon dispatch if we have to. Certainly we can design a  
6 capacity market that has the various you know, various  
7 tranches of different product.

8           Those are the kinds of things that I think we  
9 need to do but the base principle has to be don't destroy  
10 the competitive market so that the resources that are  
11 counting on the competitive market for 100% of their fixed  
12 cost recovery need to be you know, treated and given just  
13 and reasonable rates. It's not an option that's what the  
14 Federal Power Act commands.

15           MR. QUINN: Right, John?

16           MR. HUGHES: Thank you. I like Michael's  
17 description of market compatibility and maybe we need a  
18 market compatibility test to screen attributes. I think  
19 attributes have to be germane to the business of wholesale  
20 electric market.

21           I get really nervous when we try to drag in  
22 attributes that are outside the market. We are going down  
23 the slippery slope of really heavy duty command and control  
24 regulation and big government that I don't think people  
25 benefit from notwithstanding the intentions behind the

1 politicians that want to do it.

2 MR. QUINN: Thanks, Chair Vannoy?

3 MR. VANNOY: Thank you. I want to take the  
4 discussion back to the attributes and I think as we move  
5 down this path that we are on, go back to an earlier comment  
6 was that all public policies are not created equally I think  
7 the same can be said about electrons -- all electrons are  
8 not created equally.

9 Our market rules have to adapt to the necessary  
10 attributes to provide that reliable service that we are all  
11 looking for. I think PJM has taken a shot at some of those  
12 in their generator reliability attribute matrix. I think  
13 some of those attributes that are listed on that matrix are  
14 important ones that we should be focused on.

15 And as we -- you know the reality is as we move  
16 to more power electronics, less inertia on the system all of  
17 those things are going to affect reliability. Physics are  
18 not going to follow some market rule that we have created  
19 and we have to be cognizant of that as we go forward.

20 So I think we would all benefit in our ISOs from  
21 a real honest discussion about the real technical issues and  
22 the type of attributes that we need to ensure reliability.  
23 When you look at -- carbon has been talked about a lot.

24 I want to respond to that very briefly. When you  
25 look at ISO New England and carbon, pricing carbon in our

1 market -- we are one of the lowest carbon intensive markets  
2 in the country yet when you look at all in delivered prices,  
3 transmission distribution, generation, various state  
4 policies and you look at average prices across New England  
5 we are the highest.

6           So when you move to put let's call it a \$10.00  
7 price on carbon in the market -- what does that result in?  
8 We have a flat supply curve, it is not going to change the  
9 dispatch but it is going to increase rates to customers by  
10 half a billion dollars.

11           So we have to be very careful about what  
12 attributes we are looking at to go back to the point of  
13 reliability and address the point of reliability in those  
14 attributes.

15           MR. QUINN: Thank you, Vice Chair Place?

16           MR. PLACE: Thank you. Yeah I'm not sure I'm not  
17 going where Chairman Vannoy is on the carbon price but if  
18 you return revenues back to the states in a mechanism I  
19 would argue for benefitting when you do low income support,  
20 avoid being aggressive it is not a net loss.

21           But President Mroz started this -- yes I think  
22 you can and should and must or have to or it is already  
23 happening, integrate state policies into this market. But  
24 if it is distorted the rule is as Abe was pointing out is it  
25 distortive or not?

1           You know it as you see it. Case by case I think  
2 we can handle that, I think we can know which bucket these  
3 lie in. Yes you are going to introduce some more complexity  
4 however it is not undoable it is not unmanageable and from  
5 my perspective thinking about the carbon issue, you can't  
6 integrate carbon into that in a technology neutral, source  
7 neutral way that is not distortive to the market.

8           But if you do have policy to that deflected a  
9 little bit over to the question of size I don't think it  
10 matters whether it is small or large, you just come down is  
11 it distortive or it is not distortive. In some ways the  
12 cows have already left the barn, the milk is already spilled  
13 and a lot of these policies in the market and you can say  
14 that to date as Andrew Ott said yesterday much of this has  
15 been non-substantive.

16           But we are getting to the point where it is  
17 substantive. So really I draw the line okay if it is  
18 not-substantive let's not waste our time arguing about it  
19 but by and large much of this is going to be substantive.  
20 And just ensure that we have mechanisms whether it is MOPR  
21 or whether it is the two-tiered market price signal you can  
22 get there, you have to get there. I think we can do it and  
23 it is -- we can do it in a way that doesn't crush the  
24 market.

25           MR. QUINN: Thank you Kathleen?

1           MS. BARRON: Thank you. I'll pick up on  
2 something Thad said earlier about energy market price  
3 formation. Because obviously the way we decide energy  
4 markets already we have decided which attributes matter to  
5 us and which ones don't.

6           And I thought it was pretty striking what Andy  
7 Ott said yesterday when he was speaking. He said -- he was  
8 describing the problem negative pricing and the fact that we  
9 have inconsistency in terms of environmental policies  
10 throughout the large PJM footprint that are devaluing  
11 nuclear stations.

12           And he said we have tried to politely ignore the  
13 problem but it is no longer ignorable. And so you see PJM  
14 coming forward with both a proposal to work on changing the  
15 way we are pricing energy and that's what Thad was eluding  
16 to as well as should we try to be pricing in other  
17 attributes including carbon which clearly in PJM would  
18 change the dispatch.

19           I mean that's why Calpine has long been in favor  
20 of carbon price because it has efficient gas resources that  
21 would benefit from that model. But you know, either of  
22 those two paths you know the one nuclear plant in PJM that  
23 has some amount of state support if it gets picked would be  
24 economic. So there was a statement that Abe made before the  
25 break that you know FERC should take action to mitigate all

1 state actions. We don't want to have to determine which  
2 ones are bad and which ones are good.

3           The only thing you have in front of you is a  
4 complaint that is targeting at that one nuclear plant in PJM  
5 that could get a state's support payment. So you don't have  
6 in front of you something to do what you have been hearing  
7 about today and I just want to keep that in mind.

8           The complaint chose not to address this bigger  
9 issue it just chose to target that one station and I just  
10 wanted to make sure that you know, if we are going to take a  
11 step back we really do take a step back.

12           CHAIRMAN LA FLEUR: We do have cases in front of  
13 us about MOPRs for existing resources. They aren't all just  
14 the complaints. We have a bunch of those things.

15           MR. SILVERMAN: And if I may just real quick,  
16 when I said all resources I'm talking about if we have a  
17 two-tier pricing scheme that is going to accommodate such  
18 resources. I'm not talking about under the existing  
19 structure, so if I was unclear about that.

20           MR. QUINN: Chair Vannoy?

21           MR. VANNOY: Yes thank you. One other area on  
22 reliability and kind of the urgency of the discussion that  
23 we are having here today -- when you look at ISO New  
24 England's regional energy outlook they didn't put this issue  
25 as their number one issue.

1           The number one issue in New England is fuel  
2 scarcity or fuel supply, fuel security -- those questions.  
3 So when we look at attributes maybe that's another attribute  
4 we need to be looking at. And you know the way we respond  
5 to that right now is we are burning oil during winter  
6 reliability programs but that's not exactly where we want to  
7 be.

8           So we ought to be moving forward in that area of  
9 fuel security and maybe that gets wrapped into these  
10 discussions. And we have been at this for some time. Going  
11 back to the urgency question I'm hearing from other  
12 panelists that this needs to be solved immediately.

13           I think we are working on it, we are moving  
14 forward and we are taking steps.

15           MR. QUINN: Thad you have another word and then  
16 we are going to move on to path 5.

17           MR. HILL: Okay while to your point I think the  
18 most urgent thing other than the one plant in Illinois, that  
19 Kathleen referenced and I'll try to play nice Kathleen. The  
20 MOPR getting a plant one -- it is incredibly destructive  
21 when you are a public company and you depend on public  
22 investors to be able to invest your money and set your calls  
23 to capital when you have this going on.

24           Even one plant that people think is a trend is  
25 unbelievably destructive. Real quickly and this is to the

1 attributes. Whether it is fuel supply or diversity supply,  
2 my point is and I hope I was clear about this. I think that  
3 whatever the issue is that it is up to the ISO.

4 My only point was I don't think they need to  
5 accommodate states, I think it is their job on reliability.  
6 I think there are a whole bunch of attributes which the ISOs  
7 should take into account.

8 It's just that we need to make sure they get it  
9 right. On my point I just don't think you know whatever  
10 passes our state legislature when it gets to reliability  
11 that seems pretty clearly in the ISOs camp.

12 MR. QUINN: John real quick.

13 MR. HUGHES: Very quickly some of these  
14 attributes are really under the purview of NERC and NERC has  
15 standards dealing with security and many of its various  
16 forms. And so I think part of this discussion we need to  
17 look at the appropriate form for trying to internalize these  
18 attributes and not assume that it is always going to be done  
19 by tweaking the energy market.

20 MR. QUINN: I just want to see if we can spend a  
21 tiny bit of time on path 5 because I think we have heard  
22 folks ask us to kind of push to an extreme that says  
23 essentially if it is not in the market, if it can't be  
24 brought into the market whatever the attribute is, if it is  
25 a reliability attribute, if it is an environmental

1 attribute, if it is something else, then that resource, that  
2 support is subject to a very strict minimum offer price  
3 rule.

4           The resource is repriced as it enters into the  
5 market. If it doesn't clear the capacity market it doesn't  
6 clear the capacity market. That's just the deal and so I  
7 would like to see whether I can get any of you to take the  
8 bait on whether that's a good path forward, that's a  
9 sustainable path forward, if that path you know lands at a  
10 place where we still have a set of states that are willing  
11 to have the utilities participate in the wholesale energy  
12 markets or not.

13           And especially from our state representatives  
14 whether that path is a path, John?

15           MR. HUGHES: Again quickly if it preserves  
16 competition and results in the lowest possible rates to  
17 customers do it.

18           MR. QUINN: Michael?

19           MR. POLSKY: When we created competitive markets  
20 all states they thought that they were doing exactly what  
21 you just said they are doing. They thought they would join  
22 in the market and they relinquished to markets a lot of  
23 things that they were doing the states okay.

24           Only after that they started testing things to  
25 try to see how much they can get away with and that's why we

1 are sitting here. Okay people already forgot why they  
2 joined the market. So in reality in my view that was the  
3 intent and that's why it stayed during the markets because  
4 they thought that markets now will play that role and states  
5 would only deal with issues that really were the prerogative  
6 of the state itself.

7           So I think unfortunately that's kind of how it's  
8 evolved and that's kind of happened historically. I mean  
9 people tried to get away as much as they get away with and  
10 nobody in their right mind in early 2000 would have thought  
11 the states could support this plan or that plan.

12           It was not even thinkable okay. Now we are  
13 sitting with issues 15 years later presumably thinking we  
14 are a free market country you know, trying to support the  
15 regional units okay. I'm not picking on Exelon, I mean  
16 that's how we roll.

17           So what you said --

18           MR. MORENOFF: Michael I apologize for  
19 interrupting but because the time is tight and because that  
20 is getting dangerously close to the same conversation we  
21 have had I am going to cut that off. I want to focus a  
22 little bit more specifically on the question about the  
23 implication of if we are not talking about that specific  
24 example but a broader range of state policies that would  
25 all be subject to the MOPR.

1           On one hand what does that do for competition and  
2 then I think as Arnie had eluded to from the state's  
3 perspective we had several people observe that states always  
4 have the ability to direct their utilities to leave the RTO,  
5 to leave the market is a long-term sustainable path if FERC  
6 is going to MOPR all state policies from the states'  
7 perspective.

8           MR. POLSKY: Are you asking me?

9           MR. MORNOFF: Probably the state folks but if  
10 other people want to weigh in, Chair Sheahan?

11          MR. SHEAHAN: You know I would just say that  
12 whether it is the RPS I thought it was interesting to hear  
13 Andy yesterday talk about the fact that it is just not  
14 significant enough for them. Kathleen mentioned it again,  
15 Vice Chair Place I think kind of touched on that -- you know  
16 we are engaged in Illinois in our utility of the future  
17 discussion next grid where we are going to kind of take this  
18 on.

19          There's a lot of momentum in Illinois we have a  
20 very aggressive RPS. And so very quickly you know those  
21 environmental attributes in particular are going to have an  
22 impact on the markets and to the extent that the markets  
23 don't respond to state priorities.

24          I think the door that states will head for has  
25 the word exit over it.

1           MR. QUINN: Chair Vannoy?

2           MR. VANNOY: Thank you. I think the key here is  
3 confidence in the market from both sides and I think as you  
4 walk down one path where you MOPR everything out you are  
5 going to see states that don't have confidence in the  
6 outcomes because I mean we have this in New England where  
7 states are purchasing long-term contracts.

8           They are going to have excess capacity that their  
9 consumers are paying twice for. It shows up in their retail  
10 rate, it is not a good situation. On the other hand you  
11 have other states who are concerned about the socialization  
12 of the costs of other policies. So there's a conflict there  
13 that is brewing so that takes us back to accommodation-type  
14 things and I think when you look at what New England did in  
15 the MOPR exemption, we looked at what the RPS was across the  
16 states, we had a very tailored, very restrictive approach to  
17 that MOPR exemption.

18           That's working for us now. It took a number of  
19 years we are now into this IMAPP process, we are working  
20 through those details, we will continue to work at.

21           CHAIRMAN LA FLEUR: This path 5 which is MOPR  
22 everything -- is there a difference between things states  
23 are doing to bring in new resources you know where we have  
24 the New England plan?

25           Maybe what the states want above all is for it to

1 get a capacity award because it is getting revenues anyway,  
2 were things that were done to support existing resources  
3 which seem -- I mean those just seem to be two different  
4 buckets in terms of accommodate and I would welcome any  
5 comment on that.

6           And I'm not trying to get into what we are trying  
7 not to talk about but just in terms of structural. Is that  
8 the same thing or --

9           MR. SILVERMAN: Mike do you mind if I take that?  
10 No I don't think they are the same thing. I think the  
11 Commission should be very highly skeptical when a state  
12 steps in to prevent efficient entry.

13           I don't think the Commission should ever rule out  
14 any possibility that there is a competitively neutral you  
15 know, reason to prevent efficient entry XR Mars would be a  
16 classic example.

17           But I think the Commission should you know put on  
18 its reading glasses when it sees a case like that and be  
19 highly skeptical whereas new entry is a little bit  
20 different.

21           CHAIRMAN LA FLEUR: But you said they are two  
22 sides of the same coin so the state is bringing something in  
23 that wouldn't have bid in, isn't that a little bit of it?

24           MR. SILVERMAN: It is a little bit of the same  
25 coin but it is also different. I'll try to walk through

1 this mine field. But I mean I think you have to recognize  
2 that there are you know, there are very reasonable -- there  
3 are a lot of reasons why a state wants to bring in new  
4 entrants.

5 I think environmental -- I mean we have a  
6 pressing environmental problem that we have to address. And  
7 so if we sort of put it in the face of do we want to prevent  
8 states from bringing in and solving environmental problems  
9 in a way that is not least cost for consumers, in a way that  
10 requires a state to come in and purchase 100% of its  
11 environmental attributes outside of the market, pay twice?

12 I don't think that's A -- politically sustainable  
13 or B -- frankly just and reasonable. I think a much better  
14 question to ask is how do we facilitate, how do we use the  
15 power of competition overseen by FERC to procure what the  
16 state is looking to procure at the least possible price?

17 And again you know uneconomic entry versus  
18 uneconomic retention -- in some ways they have the same  
19 impact on the market but I think this is just one of those  
20 places where the Commission is going to have to make a call  
21 and say that uneconomic retention is probably a bad thing  
22 and probably needs to be MOPR'd because it is such an easy  
23 and direct way to adversely affect and really crater the  
24 wholesale market. I don't know if I would thread that  
25 needle or not.

1           MR. PLACE: Yeah thanks I'm just not sure you are  
2 threading the needle on that one but I do appreciate the  
3 effort. But I just can't draw a distinction between new and  
4 existing and say that that is a hard line.

5           If you care about -- again that's why I come back  
6 to the efficiency and the elegance of a carbon price. Then  
7 you are saying alright that's an attribute we want and  
8 whether it comes from -- Kathleen out here, a nuclear plant  
9 or an off-shore wind turbine in Lake Erie.

10           I'm agnostic about that and I'm not sure I could  
11 say this is this and this is that. I think they are both  
12 sides, they are both sides of the same coin thank you.

13           MR. QUINN: Lisa do you have a response to the  
14 acting Chairman?

15           MS. MC ALISTER: I do thank you. I think we are  
16 not in favor of broad application of MOPR period. But I  
17 think you can draw a distinction between new and existing  
18 for what at least PJM's MOPR was initially based on and  
19 that's to prevent market-side power.

20           And it was targeted to natural gas units that  
21 could be constructed within a time frame and of such a size  
22 that they could enter the market within that three year  
23 window and actually have market power.

24           And I think long-term if you are going to do  
25 broad application of MOPR, what you are going to do is

1 introduce a lot more uncertainty into the market because  
2 resources are not going to know whether they are going to  
3 clear or not or if they are going to get MOPR'd.

4           And I think that's actually very damaging excuse  
5 me, to the competitive market. And I do want to be clear  
6 that we are in favor of competitive markets.

7           We are better off since Order 888 and I think it  
8 is legitimate for customers to want what they want and the  
9 market should accommodate that. It shouldn't say no we are  
10 going to choose for you not because we know what's better  
11 for you but because we have such a fragile construct that we  
12 can't accommodate anything else.

13           MR. QUINN: Thad?

14           MR. HILL: And I just needed to speak because  
15 Chairman LaFleur just called Abe being inconsistent and I  
16 said something a few minutes ago that could be and I want to  
17 -- I'm scared to death to be inconsistent.

18           What I said a few minutes ago I said that before  
19 the break we were supportive and thought that the New  
20 England idea was a step in the right direction. The reason  
21 we said that -- because I do not think there's a difference  
22 at all between new or somebody leaving.

23           What I will say is the markets are very different  
24 than the realities on the ground are. In New England, the  
25 threat, the price formation and reliability if it were

1 allowed to go directly to number two is new entry.

2 Yes, I know there's the Dominion plant in  
3 Connecticut but I think everybody in this room knows they  
4 are making money and they are not going to retire anyway  
5 regardless of what happens in Connecticut probably.

6 In PJM the threat isn't as much new entry as it  
7 is assets leaving. So while you know I think they are  
8 exactly the same thing you know, the fact that New England  
9 policy deals with one and we may work with it as a matter of  
10 accommodation, the fact of the matter is economically it is  
11 exactly the same thing.

12 And I think the policy you know, outside of any  
13 kind of regional practicalities -- what's doable needs to  
14 treat them all the same and I would say by far the most  
15 serious issue out there, whichever of these options is your  
16 door number 2. If you are actually going to subsidize  
17 resources and not have defense of price formation of the  
18 remaining assets we are going to subsidize another layer and  
19 another and we cannot go down that corridor whatever the  
20 right answer is.

21 MR. QUINN: Alright Commissioners I'll turn over  
22 the questions to you.

23 COMMISSIONER HONORABLE: I want to thank you all  
24 this has been an excellent panel. I don't know where to  
25 begin. We have asked a number of questions throughout. Let

1 me ask you this because you have really tried hard. At  
2 first you didn't try very hard but once we cornered you, you  
3 started trying to take on some of these paths.

4 Now I want to ask you to go even deeper now  
5 because -- and I appreciate your candor and I think through  
6 it we are really trying to crystalize and synthesize what  
7 the future looks like for competitive markets.

8 And taking into the account the reality of state  
9 action -- so it seems that through our discussion we  
10 probably and I want you to challenge me on this if you don't  
11 agree. I know Abe will. We are probably not headed down a  
12 path 1, probably I'm thinking about the consensus here that  
13 I am hearing today.

14 Probably not a path 4 or 5 -- and I'm going to  
15 tell you why I am undergoing this exercise. You are scaring  
16 me a little bit because you are either talking about path 2  
17 that's fine. It would encompass a two-tier option process  
18 much like the ISO New England substitution option effort.

19 But what is scaring me is that some of you are  
20 still talking about path 3 which I think is where we are  
21 today in many respects. So tell me now am I drawing this  
22 too narrowly to constraint it to path's 2 and 3?

23 I want to walk away from this and feel like we  
24 have gotten something done and I need you to tell me if I am  
25 wrong to think that the consensus of grounds -- well maybe

1 consensus is too strong of a word is focused too narrowly on  
2 path 2 or 3 or if you think that's about what you have heard  
3 here as well, Vice Chair Place?

4 MR. POLSKY: Thank you.

5 COMMISSIONER HONOPRABLE: Oh I'm sorry Mr.  
6 Polsky, okay now I'm sorry. I thought you had your tent  
7 card up and it was Mr. Polsky's tent card. I know who you  
8 are.

9 MR. POLSKY: Commissioner I feel path 3 do  
10 nothing is just too settled. It is just not -- I mean what  
11 we will see you know complete market disintegration or  
12 massive bankruptcies or things like that.

13 It is just not -- if anybody in this room feels  
14 that this is a sustainable path they are just playing with  
15 fire. Because whatever actions we see today there will be  
16 more actions not like we will stop today okay this is the  
17 stop we will see no more actions, no new interferences.

18 So to me path 3 is just an academic exercise to  
19 see how long we will stand up before we fall down. So to me  
20 now path 2 the reality -- I kind of agree with you that and  
21 we went through this and sorry I just want to talk about  
22 stranded costs.

23 Remember we went -- when states went through  
24 deregulations they recognized that plants are uneconomical  
25 and the rate payers Exelon recovered billions of stranded

1 costs for their nuclear plants. A lot of plants in New  
2 England recovered so states recognize that they are not  
3 competitive resources so therefore let's put them there,  
4 let's recover the costs and let them deal with the  
5 competitive markets.

6 Now we come back and we try to forget what we  
7 have done before and go the next round on the same thing.  
8 So this is to me this is kind of repeat of the same things.

9 COMMISSIONER HONORABLE: Yes it's insanity.

10 MR. MORENOFF: Again with apologies and  
11 particular concerns we are not have more conversations about  
12 the Exelon nuclear plant, thank you.

13 COMMISSIONER HONORABLE: But let me say this I  
14 agree with you. Doing the same thing over and over and  
15 expecting a different result is insanity. And path 3 could  
16 be status quo which I hear so many of you saying is  
17 unacceptable. But then the reason why some of the  
18 discussion is making me a little unsettled is because you  
19 are also attempting to pass judgment on whether certain  
20 state policies are legitimate, whether they should be  
21 included, whether it is a jobs plan masking as an energy  
22 plan.

23 I heard my friend down at the end of the row say  
24 so we are going to have to get on the same page. But I  
25 agree with your point and I want to go on then to Abe?

1           MR. SILVERMAN: Yes so you know I actually have a  
2 slightly different view of path 3 I think. To me path 2 is  
3 the 6 month to a year time frame where we begin to  
4 accommodate state efforts to come into the market.

5           And I think what exactly that looks like is going  
6 to be different in every market. I think the substitution  
7 effort in New England is a great first step. I personally  
8 like the two-tiered pricing scheme. PJM has another  
9 variance and each market really I think if they are not  
10 doing it with expedition you know and real concern they need  
11 to be doing it and I would love to see a statement coming  
12 out of the Commission or Commission staff or individual  
13 Chairman and Commissioners.

14           CHAIRMAN LA FLEUR: Chairman.

15           MR. SILVERMAN: Yes thank you. Saying that we  
16 all expect the ISOs to come in with a baked proposal you  
17 know the day we get quorum back to address these incredibly  
18 important issues and it has to be now.

19           Now longer term and I do see these very much as  
20 you know steps right. We have the staunch the bleeding MOPR  
21 stuff which is already pending. We have the ISOs out there  
22 trying to develop some sort of accommodation for states that  
23 ensure just and reasonable rates for existing supply and  
24 load you know that's going to be sort of the next evolution.

25           But then the third evolution which is actually

1 how I see path 3 is identifying the market attributes and  
2 then having the Commission -- four is that four? Well I  
3 actually thing that is the ultimate end goal has to be that  
4 step 4 where we do identify the market attributes and bring  
5 them into the market.

6           So again we are doing it you know, buying things  
7 in bulk is always cheaper. Buying them where we have a  
8 competitive market is always going to be the right way to  
9 go. So again you know there's that path we are on now that  
10 is more accommodate but then the longer term has to be to  
11 that facilitation of buying things cheaper.

12           COMMISSIONER HONORABLE: Very helpful, thank you.

13           MS. BARRON: Yeah I was just going to jump in in  
14 defense of path 4. I mean as I count the heads on this  
15 table I think you have a majority of people including the  
16 state Commissioners, including importantly states that have  
17 not taken action yet who are asking you to take path 4 or to  
18 consider path 4.

19           COMMISSIONER HONORABLE: Do you all agree with  
20 that by nods of heads, okay very good.

21           MS. BARRON: Expressing their willingness to work  
22 on path 4. So you know I don't know why the suggestion is  
23 that path 4 needs to be down the road in 5 years when we  
24 figure it out kind of path. Why we don't have the urgency  
25 about path 4 when we all know that we have been facing these

1 problems at least from the perspective of our fleet for  
2 years.

3           We have been losing money for years so let's put  
4 a time clock on that, let's work on that. That was in PJM's  
5 pre-filed comments their first initiative. Let's work on  
6 that with the same amount of expedition that we want to  
7 apply to some of these other things.

8           MR. QUINN: Thad?

9           MR. HILL: Well I was just going to echo that. I  
10 mean path 4 it may be what the army of one, and a Commission  
11 of one soon but there will be a -- you are FERC and you do  
12 have the ability to regulate and this is yours right?

13           And path 4 is what we should all aspire to I  
14 think because competitive markets want and as Abe said let's  
15 price the things. Now if states are going to do things  
16 outside of this and the courts let them, then you shouldn't  
17 let it impact price right? And that's within your control  
18 as well which is maybe that's a hybrid afforded to but it is  
19 only a failsafe.

20           Our aspiration should be we price what's valuable  
21 and the market works.

22           COMMISSIONER HONORABLE: Thank you that's very  
23 helpful and what I hear you all saying is we are not picking  
24 one path and it's that path alone, we can work on things  
25 simultaneously, we can have aspirational goals and then

1 bring Abe and Kathleen on the same page maybe.

2 MR. MROZ: Commissioner Honorable I would agree  
3 and the status quo is just not sustainable. I think that  
4 and commenters mentioned this yesterday you have got the  
5 industry and the markets potentially now chasing the next  
6 subsidy that comes from a state.

7 The concern is it will continue to de-stabilize  
8 the market, that's not good for anyone. It's not good for  
9 regulators, it's not good for the industry certainly and you  
10 know I am struck by reading the analyst reports you know  
11 weekly.

12 It seems like they pay more attention to what any  
13 particular state is doing or what a particular legislature  
14 is considering more than they are looking at the underlying  
15 fundamentals of a company.

16 So it is that which if you take action which I  
17 think that this conference has shown that there is a  
18 willingness to do something will be received very well  
19 across the board from industry, from the regulators and as I  
20 have said we would look forward to working with the ISO,  
21 with our colleagues in the other states and the industry to  
22 try to work through a solution in one of these that does  
23 build these attributes, all of them hopefully into the  
24 market.

25 MS. MC ALISTER: Thank you. I'm not sure that

1 our proposal fits neatly into any one of those five buckets  
2 specifically but I do agree that we need to do what we can  
3 through the energy markets but then we also need to  
4 compliment that with the capacity construct that supports  
5 and encourages the use of bilateral contracts for those  
6 attributes that cannot be priced into the energy markets.

7 COMMISSIONER HONORABLE: Thank you.

8 CHAIRMAN LA FLEUR: Thank you. It would be more  
9 of a comment and people can reply in their written comments  
10 because I know we are trying to get to lunch although if I  
11 see cards pop up right away -- if Colette is only a little  
12 bit uncomfortable she is way less uncomfortable than me or  
13 whatever you said.

14 COMMISSIONER HONORABLE: I'm being careful I  
15 don't want to scare people.

16 CHAIRMAN LA FLEUR: I was just kidding but it is  
17 -- we are in an uncomfortable place. So I am just trying to  
18 think through not what path I would go on if I were -- if I  
19 saw Professor Hogan coming and I was writing an article  
20 saying this is what we should do but kind of what we  
21 actually have and what we can do with the tools that we  
22 have.

23 I'm assuming we have a quorum and what we can do.  
24 And the re-regulator changed the regulatory compact I don't  
25 think is something we can do unless a state wants to take

1 it. That's Tom Brady throwing you know the incomplete pass.  
2 Somebody has to catch it and I haven't heard anyone yet say  
3 -- I mean that they wanted to.

4 So that means we still have the responsibility  
5 under the Federal Power Act to make sure there is a just and  
6 reasonable wholesale price in these markets that even if we  
7 don't like the status quo are the status quo.

8 And so thinking of what FERC can do as a forcing  
9 function beyond a little on the complaints which could push  
10 the ball but I don't think anyone thinks okay there, we are  
11 done, everything is good now, people are happy.

12 It seems to me if you make us make up a thing it  
13 is going to probably be an "accommodate" because we cannot  
14 tell the states what we want them to achieve. We heard from  
15 New England loud and clear -- don't set goals for us FERC.

16 We are on a path, we are working on something,  
17 don't make up what you want us to do and it's possible we  
18 could kind of look out and look at the different states and  
19 craft something brilliant but it's really if we are trying  
20 to achieve something -- if we are trying to achieve state  
21 policy, we need the states to tell us what that policy is.

22 So in terms of what's actually before us and what  
23 we can do other than order somebody else please work on  
24 this, it's really I think right now in the hands of the  
25 states if we are going to get to an "achieve" define what it

1 is we are trying to achieve.

2           Either for states to agree, okay there's an  
3 environmental attribute and once you agree you can price it.  
4 If it is resilience, if it is environment I mean it might  
5 not be perfect but markets work if you set the parameter.

6           But I don't think we FERC -- unless I'm mistaking  
7 something can just make up an achieve solution that is  
8 likely to be sustainable in these big multi-state markets.  
9 So we are going to have to act once we have a quorum but I  
10 think we are going to need proposals coming in if we are  
11 going to get out of the accommodate path because I just  
12 don't see a lot of other -- I just unless somebody can tell  
13 me something easy, that's just what I have heard the last  
14 day and a half.

15           So I think we have to do what we have to do. We  
16 have dockets pending we have to decide them, we have to do  
17 things, but if we are going to get to some new place it is  
18 going to take other people to tell us where they are trying  
19 to go, am I wrong, does anyone want us to decide a design  
20 and achieve, you know -- Colette?

21           COMMISSIONER HONORABLE: And we also heard you  
22 loud and clear. I know someone mentioned yesterday you  
23 don't want a top down approach. You don't want us to try to  
24 figure this thing out and it will have greater buy-in and  
25 greater success if it is developed and coming up.

1           MR. QUINN: Matt White had his card up after  
2 Commissioner Honorable, maybe go to Matt first.

3           MR. WHITE: You're very kind. I wanted to offer  
4 a clarifying observation that I believe dovetails on your  
5 most recent comment Chair LaFleur. This is regarding the  
6 path 4 which was the incorporate the attributes that states  
7 design to the market the so-called achieve thing as it was  
8 called in New England.

9           More so than any of the other paths that you have  
10 put on the table Commission staff, in our experience in New  
11 England this path incorporates views and perspective that  
12 are so divergent they are almost impossible to call the same  
13 path.

14           Many people as you have heard in the last two  
15 days in New England have viewed that really as some form of  
16 carbon pricing, whatever it is -- cap and trade whatever.  
17 Others view that as either not what they view as path 4,  
18 simply not on the table as you have heard from Chair Vannoy.

19           But have articulated visions in which path 4  
20 would be what in my words I would characterize as the ISOs  
21 being authorized to administer little more than an RFP for  
22 specific resources in specific locations in chosen amounts  
23 by a state and quantities by a state with performance  
24 standards selected by an entity other than the ISO.

25           So yes it becomes an administrative agent of an

1 RFP they might otherwise conduct on their own behalf. I  
2 don't want to take a position on either of those two -- of  
3 course as an economist I have my views but I will leave them  
4 for the moment.

5           But rather in the vein of the clarifying comments  
6 you asked of us to point out that agreement that you may  
7 hear among stakeholders that incorporating the attributes is  
8 a desirable path, may mask very substantial differences in  
9 what they actually envision much more so than on any other  
10 paths we have seen. And that divergence of views, because  
11 it may surface later may make moving down this path a much  
12 longer and more difficult process.

13           And that's at least a reflection. It's my  
14 personal view of one of the things we have learned as the  
15 ISO observing the process and doing it over the past year.

16           CHAIRMAN LA FLEUR: Thank you for marring my  
17 momentary optimism with reality.

18           MR. WHITE: Sorry it's for a reason.

19           MR. QUINN: So I guess we will probably just wrap  
20 up for lunch then. I want to say thank you to the  
21 panelists, this has been a three hour juggernaut. It's been  
22 a really good conversation we appreciate all the  
23 perspectives and look forward to what comes next, back at 1  
24 o'clock a very hard start at 1 o'clock with people in their  
25 seats.

1

2

3 A F T E R N O O N S E S S I O N

4 CHAIRMAN LA FLEUR: Okay we are going to get  
5 started in a minute. If folks could take their seats, wow  
6 it feels awesome to sit at the Commission table again but I  
7 am only here for 2 minutes to introduce a special guest.

8 We are very honored to have with us this  
9 afternoon Congressman Joseph Kennedy from Massachusetts. I  
10 am very proud to say he is my Congressman but that is not  
11 why he is here. He actually volunteered to come and speak  
12 with us about the capacity market.

13 As you may or may not know, Congressman Kennedy  
14 and his energy advisor Eric Finns could undoubtedly ace a  
15 quiz of everyone on Capitol Hill about how the ISO New  
16 England markets work.

17 CONGRESSMAN KENNEDY: It's an important caveat  
18 compared to everyone else on Capitol Hill.

19 CHAIRMAN LA FLEUR: I won't say how he came to  
20 know that but it wasn't all a great experience but  
21 Congressman Kennedy was first elected in 2012. He is in his  
22 3rd term and he is very happy to say for some time has been  
23 a member of the Energy and Commerce Committee and the Energy  
24 sub-Committee where we are extremely happy to have him in  
25 that role.

1           And I want you to give me help in welcoming him  
2 to the Commission, thank you.

3           CONGRESSMAN KENNEDY: Madam Chairman thank you  
4 for the kind introduction, thank you for having me here  
5 today. Thank you for allowing me to stop by. Any pothole  
6 requests or trash removal or snow removal or anything else  
7 that is necessary Tom and I will pass along to the mayor  
8 most rapidly.

9           Commissioner Honorable -- thank you both for  
10 hosting this important Technical Conference and for your  
11 service at FERC. You have both been a constant source of  
12 guidance as I have tried to focus on energy issues in  
13 Congress and I appreciate your responsiveness and your  
14 support.

15           I also want to thank Director Quinn as well for  
16 the opportunity to speak at the Conference briefly before I  
17 have to run off to vote. To all of the other participants  
18 gathered here today I commend you for being here at this  
19 Technical Conference to review the interplay between  
20 organized markets and state level policies by providing  
21 critical oversight of RTO and ISO structures you can  
22 identify their influence and shaping and meeting state  
23 energy objectives.

24           But more than that, you broaden this debate to  
25 ensure that these markets are not only benefiting generators

1 but also consumers as well. As the Chairman mentioned a few  
2 years ago a power plant in my district abruptly closed due  
3 to dramatic increase in capacity rate prices in New England.

4 In the years since that announcement I have met  
5 with many of you and many stakeholders back home in  
6 Massachusetts to analyze our regional energy markets and to  
7 try to understand the process by which the rates consumers  
8 see on their month's bills comes to pass.

9 As many of you know I have become deeply  
10 concerned about that process. If there is one thing that I  
11 have learned in Congress is that the more complex a system  
12 becomes, the more likely that someone is being  
13 short-changed.

14 And I fear that is the reality facing us today.  
15 Everyone in this room would agree that oversight of energy  
16 markets is a challenge. The highly technical rules and the  
17 economic theories that underpin these structures are  
18 difficult for market participants to understand, let alone  
19 members of Congress or the general public.

20 Another challenge is the relationship these RTOs  
21 have to the federal government. Their actions effectively  
22 carry the weight of federal pre-emption causing courts to  
23 provide more deference than they would if these  
24 organizations were truly independent.

25 Finally, I did a long-standing view at FERC that

1 it holds the responsibility to ensure well-functioning  
2 markets. I believe, however, that too often in recent years  
3 this Commission's debate over just and reasonable rates has  
4 focused too much on market participants at the expense of  
5 the consumers who are left with the bill.

6           And that's why at today's Conference I am asking  
7 you to broaden your focus beyond solely tweaking the market  
8 rules and instead -- leverage your unique experience and  
9 expertise into the deeper reforms that I believe are  
10 necessary. After all one of the purposes of this Conference  
11 is to determine whether state objectives and policies can be  
12 achieved through existing market mechanisms.

13           From my first day in Congress I have shared your  
14 frustrations with our country's lack of a cohesive energy  
15 policy. That failure continues to have a profound  
16 consequence at the regional, state and local levels.

17           In making policy choices, decision makers must  
18 take into consideration issues ranging from reliability to  
19 capacity and new generation. But going even further  
20 decisions must factor in resource diversity, environmental  
21 impact, jobs and most importantly cost to consumers.

22           Debate over market structures is only one piece  
23 to this puzzle and it is certainly not the only way to meet  
24 these goals. The question of accountability and oversight  
25 is an important one to answer and Congress we tried to

1 address this piece by piece.

2           For the second year in a row the House passed a  
3 bill that I wrote to ensure judicial review of rates that  
4 take effect by operation of law when FERC does not act.  
5 Whether they are deadlocks like there were three years ago  
6 or cannot acts due to a quorum like the unfortunate  
7 situation we find ourselves in today.

8           I have also pressed both the last administration  
9 and the current one to take action so that we have a fully  
10 functioning Commission. More to the point and this is where  
11 I'd ask all of you to come in -- we cannot afford to delay  
12 these efforts any longer. We cannot continue to make the  
13 system more complex without solving the underlying problems  
14 of cost, of resource diversity of a liability infrastructure  
15 and our environmental responsibilities.

16           I urge you to think big and to look forward to  
17 working with you all on the path ahead. Let me just say in  
18 addition to those prepared remarks this is one of the most  
19 complex areas of regulation that I have certainly dealt with  
20 in my four plus years in Washington.

21           Madam Chairman you were very kind to say that I  
22 understand it. The best thing I can do is hire people that  
23 actually do when luckily I hired one of them that did and  
24 he's dived into these issues with an awful lot of your help.

25           Congress's role in some of the oversight of this

1 area can get confusing and challenging even amongst my  
2 colleagues. I again would double down and ask for all of  
3 you here and the organizations and companies and entities  
4 that you represent to try to help us understand how we work  
5 our way through some of these challenges because an example  
6 of my home state in Massachusetts the discussion we have on  
7 our energy infrastructure and debates there I think could  
8 use more full-fledged understanding of the benefits and  
9 drawbacks.

10 Yes we would all -- in the words of one of my  
11 colleagues, love to be in a world where energy is clean, it  
12 is available, it is cheap and it is far away. We are not  
13 quite there yet and until we do there are trade-offs we need  
14 to make. I'd ask your suggestions and your support and your  
15 voices to help make sure that our public has an informed  
16 debate as to these trade-offs as well.

17 Because at this point I will tell you we don't.  
18 And we will keep trying to do what we can but we need your  
19 help with it too so thanks very much.

20 CHAIRMAN LA FLEUR: Well thank you so much for  
21 reminding us of that and I think that will set us in the  
22 right direction, thank you.

23 MR. QUINN: Alright welcome back from lunch. I  
24 appreciate all of you taking the time to come and meet with  
25 us and talk about the issues that we have in front of us

1 during this Technical Conference.

2 I will make sure I introduce the panelists. We  
3 have Cliff Hamal the Managing Director at Navigant. We have  
4 William Hogan, Research Director at the Harvard Electricity  
5 Policy Group and the Harvard Kennedy School of Government.

6 We have Lawrence Makovich of HIS Markit, Vice  
7 President and Chief Power Strategist. We have Samuel  
8 Newell, Principal from the Brattle Group. I have Roy  
9 Shanker and Independent Consultant.

10 We have Robert Stoddard, a Senior Consultant at  
11 Charles River Associates, speaking on behalf of the  
12 Conservation Law Foundation and we have Susan Tierney,  
13 Senior Advisor at the Analysis Group.

14 Welcome all of you. Again thank you for joining  
15 us.

16 So the purpose of this panel is to discuss  
17 potential solutions for sustainable wholesale market designs  
18 that both preserve the benefits of regional markets and  
19 respect state policies.

20 I think I stole that language directly from the  
21 Notice. We don't expect the panelists to give us detailed  
22 market designs but would rather like to focus more on the  
23 principles and the objectives one would follow in designing  
24 those markets to address the central question in front of us  
25 how we reconcile state public policy with well-functioning

1 wholesale markets.

2           Again I think just to set the stage and provide a  
3 little bit of context for all of you, I think the morning  
4 conversation was very much focused on us having a complete  
5 understanding of the potential paths forward.

6           We had our 5 paths that translated into 3 doors.  
7 In choosing amongst the 5 paths or the 3 doors we are going  
8 to have to use some set of principles and objectives and one  
9 of the things that I think we have heard throughout the  
10 Conference is that one of the things the Commission could do  
11 is articulate that set of principles or that set of  
12 objectives.

13           So I think that would very much be something we  
14 would like to get out of this discussion -- is your point of  
15 view on all of those things. I'll appreciate that is  
16 complicated by the fact that for most economists there's one  
17 principle -- economic efficiency. Just do the thing that it  
18 economically efficient, now we are done.

19           So we have written down our principle and we  
20 should walk away. We might now have that option available  
21 to us and so to the extent that the option that all of you  
22 would think is the obvious economically efficient answer to  
23 the extent that it is politically difficult to get there, we  
24 will need a set of complimentary objectives.

25           And so I would encourage you to kind of engage in

1 the question on that basis as well. I think we would like  
2 to start though to kind of not backtrack but address one  
3 question that came up at the end of the last panel.

4 As we talked about our 4 or 5 paths, path number  
5 4 was the let's try to integrate as many of the objectives  
6 and policies the states are attempting to achieve out of  
7 market actions into the wholesale market.

8 And we had some discussion about what it is -- a  
9 realistic expectation that could be brought into the market.  
10 I think we would like to start with all of you on that  
11 question before we jump to principles and trade-offs and  
12 objectives.

13 Do you have an opinion on what should, can be  
14 brought into the markets? And yes the rules today will be  
15 if you have something to say put up your tent, I'll try to  
16 keep track of who asks to go first.

17 MR. SHANKER: I think Mr. White's comment from  
18 ISO New England settles 4. It sounds great until everyone  
19 writes down their list and then you find a mutually feasible  
20 set of conditions and I think it is misleading and it would  
21 be a mistake to try and generically suggest that we follow  
22 that in terms of guidance from the Commission.

23 Because I think to some extent you have heard  
24 time is of the essence for a lot of people and just sorting  
25 that out to come to that conclusion or to the deliver the

1 stakeholder process is a year, maybe a little bit more.

2           Number 5 was the one I was personally more  
3 interested in because in part it would answer that 5 is in a  
4 way in response to your request about what to do. I think  
5 it's within the Commission's jurisdiction and that doesn't  
6 mean not as an actuary but I think you have the capability  
7 to take actions to internalize much of what we were talking  
8 about today, particularly in terms of what I would think are  
9 the most obvious and transparent externalities we have been  
10 talking about with respect to the carbon.

11           We would have an interesting discussion about  
12 what's the right value but that there should be a value is  
13 almost a credibility test on the legitimacy of a lot of the  
14 actions that you are seeing in front of you and a reasonable  
15 effort.

16           I would rather see the effort go into three  
17 months of fighting about what is that number and how to do  
18 it in a matter, staying away from taxation, but as a matter  
19 that's fairly straight forward. We know how to design it,  
20 we know that we will have some surplus funds. We will have  
21 the usual argument about who gets those but we will pass  
22 through just as you said a high degree of efficiency and do  
23 away with hopefully almost all of the legitimate concerns  
24 that you have seen expressed.

25           I think with that you are certainly going to have

1 to have the ability to sort on some of the more questionable  
2 aspects and so a MOPR-type mechanism does come in. I would  
3 hope, if everybody is being straight-forward and saying it's  
4 de-carbonizing, we put in an adder, we are done the other  
5 would go away.

6 But this is sort of like a safety net and I don't  
7 think you can avoid it. And I know that we heard expressed  
8 by the Commissioner from Maine that you know, no way carbon  
9 maybe will leave and from my perspective and again I'm  
10 speaking solely for myself, is if someone wants to leave or  
11 isolate themselves from the market, you know which is  
12 another alternative they should do that.

13 And it shouldn't be perceived as a threat. I  
14 testified in Maine when they considered leaving ISO New  
15 England and they did the balancing and they said gee are we  
16 really willing to give up all the good things to have more  
17 independence about state policy and the way transmission was  
18 being allocated.

19 I think every state can make that decision. The  
20 legal play that goes with that decision -- I don't know that  
21 I know exactly the details of how it would work. Certainly  
22 something like an FRR alternative than PJM is viable and so  
23 yeah I think you can have a hard criteria and I also think  
24 it is out the outlying of what I would recommend would be my  
25 recommendation on how you would proceed.

1           MR. QUINN: A follow-up question on that and it  
2 goes to your question about what you would have to deal with  
3 minimum offer price rules for the other things. I think in  
4 some of the discussions we have heard is that for carbon  
5 pricing, for some levels of carbon pricing you will get a  
6 certain set of carbon-free resources that are supported by  
7 you know something that is a price around the social cost of  
8 carbon, about \$40.00 or something like that.

9           But there are another set of resources that are  
10 also carbon emission free that you would need a much higher  
11 carbon price for. To the extent that you -- markets decided  
12 to have a carbon price or a carbon adder but there were some  
13 carbon emission-free resources that didn't -- were still not  
14 economic based on that price, would you suggest that those  
15 resources continue to be subject to a minimum offer price?

16           Would you try to accommodate those resources in  
17 kind of the way ISO New England has talked about  
18 accommodating other state policies so do you think once you  
19 have identified the environmental attribute you price that  
20 and any action that focuses on resources that would fall  
21 into that category should be subject to a strict MOPR?

22           MR. SHANKER: I think if I understand your  
23 question I think it's the latter. The argument presumably  
24 would fall out of the price is too low. So instead of  
25 \$40.00 it should be \$60.00 and if that doesn't satisfy the

1 requirement for the resource then we sort of agreed that if  
2 it is too expensive, then it is too expensive.

3           And, the fact that somebody was circumventing  
4 that with a side payment then you are into the land of  
5 MOPRs. But part of the debate of setting that number is to  
6 make people happy that we are getting the right balance of  
7 the resources.

8           MR. QUINN: Bob?

9           MR. STODDARD: Thanks, my friends call me Robert  
10 by the way. So let me start with a pragmatic point which is  
11 we would need to move fast. And that by definition means we  
12 need to have consensus.

13           If we end up with half the states in New England  
14 disagreeing about what we have done, it is a very long road  
15 to the Supreme Court and that's where it is going to go. So  
16 our goal has been as a pragmatic point of view of how to  
17 move forward quickly is to try to get a broad consensus  
18 amongst the states that what we are putting on the table --  
19 what the policies we are responding to are the policies they  
20 have implemented.

21           Or at least the reasons of why they implemented  
22 the policies -- as I said in my pre-filed comments I think  
23 most of the particular decisions getting made in the law are  
24 the result of an over-arching goal. This is clearest in  
25 Massachusetts. They say we want to achieve a certain carbon

1 reduction -- oh and by the way since there is no mechanism  
2 outside of Massachusetts to achieve that we are going to  
3 make up our own mechanisms and we are going to do this  
4 action and this action and this action in support of the  
5 big action.

6           And has Abe Silverman said this morning,  
7 ultimately we have to set up the markets to achieve the  
8 policy goals. In which case hopefully the policy makers  
9 will set the policy goals but not fret about the  
10 implementation.

11           They will have confidence that the markets the  
12 ISOs are setting up can meet those goals. So I think the  
13 answer to the question of what should the policies be that  
14 the markets support are the policies the state's request.

15           Now at least in New England almost all of these  
16 have at their root environmental protection. And so I think  
17 the carbon attribute is important or some other measure of  
18 the carbon attribute in my pre-filed comments I lay out a  
19 particular mechanism.

20           The key about that mechanism is it answers the  
21 last follow-up question you gave to Roy which is, what if  
22 the price we set isn't high enough. Well the point of using  
23 markets is that we don't set the price, we have suppliers  
24 who offer resources they could bid in.

25           We have demanders in this case, the states where

1 their entities, the utilities saying, here's what we want  
2 and oh by the way here's how much we were willing to pay for  
3 it and that creates a demand curve against which there is a  
4 supply curve and the market tells us what the price is.

5           So it would be a way of revealing implicitly a  
6 price of carbon abatement in each market depending upon its  
7 particular solutions, technologically and the appetite of  
8 the states to buy that.

9           That's the great advantage of using markets.  
10 Just as a side note and then I'll turn it over to the next  
11 speaker. I do want -- we keep focusing on a capacity market  
12 as where things are broken or where there could be problems  
13 -- the energy markets are really where we should be very,  
14 very concerned.

15           All of these out of market long-term contracts  
16 not only affect capacity prices but they also render huge  
17 swathes of the market insensitive to the L&P's that are  
18 coming out of ISO New England.

19           And those L&P's are supposed to drive the  
20 efficiency of the dispatch, tell people when there is too  
21 much power, tell people when there is more power needed and  
22 provide the right incentives for resources to choose what  
23 kind they are, when they operate and what their maintenance  
24 schedule is.

25           So we are really defending the energy market and

1 the capacity market which is always intended to be a  
2 follow-on residual market to that is a natural follow-on to  
3 it.

4 MR. QUINN: Thank you, Sam?

5 MR. NEWELL: Thank you Arnie and FERC staff and  
6 thank you to the Commissioners for having us here. Arnie  
7 you asked about path 4 integrating as many of the objectives  
8 as possible into the markets. I like that path because we  
9 have seen that centralized markets have worked very well to  
10 meet the needs they were designed to meet at lower than  
11 expected cost, spurring competition and innovation.

12 And it would be nice to continue to rely on that  
13 and get those benefits going forward. Now when you asked  
14 about as many objectives as possible I think the states have  
15 a lot of objectives. There is one that stands out as by far  
16 the most transformative for relative to the current fleet  
17 and relative to the current market design and that is  
18 de-carbonization.

19 That is with some states aiming for 80%  
20 de-carbonization within one investment cycle from where we  
21 are today. So to me that is the one to focus on the most  
22 and it is also the one that I think is most readily  
23 integrated into the wholesale markets.

24 And we have seen -- there are several approaches  
25 some of which have already been tried and succeeded in other

1 forms. We have talked about carbon pricing and that is the  
2 most market based with the -- you know sharpest locational  
3 signals, given rise to the broadest competition.

4 I think the economists tend to like that one the  
5 most. And I think it is practical and in our preliminary  
6 work with New York ISO shows that to be very promising. And  
7 another approach is with clean energy markets, something  
8 like RPS but hopefully broader based technology neutral and  
9 perhaps with enhanced product definitions like the ones that  
10 Robert described in his pre-filed testimony.

11 So now you asked also whether there's a need for  
12 MOPR, I suppose not everything falls under that. If it is  
13 at all within markets you don't have to worry about MOPR but  
14 what if some of it falls outside of that is it a higher  
15 implied cost of carbon abatement?

16 And I do think you still need some kind of MOPR  
17 but I would rather see something more in the direction that  
18 ISO New England has proposed that doesn't just outright  
19 exclude or pretend that those resources aren't there. So  
20 that's what I like about their approach.

21 MR. QUINN: Thank you, Cliff?

22 MR. HAMAL: Thank you and I really appreciate the  
23 opportunity to be here today. It's quite an honor. Your  
24 question about integration of the markets embeds a question  
25 of what's the market. Is the market the FERC jurisdictional

1 RTO run markets or is it other things like RGGI and  
2 renewable energy credits and other things that go outside?

3 I believe people will respond to all incentives  
4 and I use the term liberally -- markets is anywhere that  
5 money is changing hands to create incentives. So I think we  
6 need to be really clear about that in what we are trying to  
7 accomplish within that and where it has to fall.

8 And I'll get back to how I feel about whether it  
9 needs to be FERC jurisdictional or not and fall within ISOs.  
10 But the second thing is -- I mean I'm a fan of carbon taxes.  
11 I think they would be an efficient way to accomplish a lot  
12 of good. The price is really high.

13 We talked about \$40.00. When you multiple that  
14 by all of the carbon and talk about how much money is moving  
15 around and where are those revenues going to go this is  
16 going to be you know quite the food fight with a lot more  
17 people involved than we have here currently.

18 So it sounds great and an economist -- and I'm on  
19 board. I think it is a great way to go but there is a lot  
20 at stake if you start doing that. Cap and trade can work,  
21 it's got other problems -- I don't think it works as  
22 efficiently.

23 But I don't think it accomplishes everything the  
24 states want to do. I think it is really clear that the  
25 states want to promote carbon-free but they also want to

1 promote you know innovation and technology. No one is  
2 building off-shore wind because they think that's the  
3 cheapest place to build off-shore wind.

4           Arguably they are doing us a favor by developing  
5 a new technology which shows great promise down the road.  
6 This industry has had a huge history of that. It also has  
7 had a huge history of failure in that regard. It's a mixed  
8 bag but that is part of what the state's objectives are  
9 trying to accomplish so I don't think merely putting a price  
10 on it will get there.

11           If we try to bring it into jurisdictional markets  
12 cleared by the RTOs I think it is going to be really  
13 complicated. You know I just think we have a -- I don't, I  
14 have great doubts about the capacity markets as they are  
15 today. I think rolling in another element, trying to  
16 determine what to do with multi-year elements, locational  
17 issues, quality issues joint optimization is an exponential  
18 complicating factor which is going to lead to a lot more  
19 hearings and disruptions in continued process with that.

20           And last time you questioned about MOPR, I'm not  
21 a fan of MOPR either but if you think of MOPR as a way to  
22 keep prices up for the rest of generation then it doesn't  
23 matter if we got there through a carbon price or something  
24 to motivate new generation or not -- we are going to have  
25 those same problems.

1           We have to decide what that is about. Do we want  
2 to have just markets clear and let those prices go down  
3 because we get really aggressive on carbon or not? And I  
4 think it is a struggle when you deal with the MOPRs.

5           MR. QUINN: Thanks, Lawrence?

6           MR. MAKOVICH: Your question has to do with  
7 trying to price things like flexibility and the CO2 profiles  
8 of generating resources and things like resiliency. And I  
9 think you know all of this is pointing to the fundamental  
10 root problem here, is that we have got state interventions  
11 that are distorting the market prices, both capacity and  
12 energy and to the extent that our market outcomes are moving  
13 further and further away from what are efficient  
14 well-structured market outcome would look like then you are  
15 going to have to start to respond and try to price things  
16 that you would have had in a well-functioning power market  
17 outcome.

18           So if we didn't have these distortions I think  
19 what you would find is that between the capacity and energy  
20 prices you would get a nice mix of fuels and technologies  
21 and a resilient power supply portfolio.

22           And I think that a competitive market does  
23 deliver flexibility in the investment profile. But to the  
24 extent that the distortions are moving us off of that we are  
25 going to have to start to try to compensate by pricing for

1 the things we know ought to be there and the problem is that  
2 these distortions are going to get bigger and bigger and it  
3 is going to be more and more difficult to properly price  
4 more and more of these attributes that we are losing.

5 MR. QUINN: Can I ask a follow-up real quick? I  
6 think the degree to which there is a distortion or that we  
7 are creating a need -- we are creating a system need based  
8 on a distortion I think might go to one perspective.

9 Is what you are saying that -- I'm trying to  
10 verify that to the extent that we just have a state policy  
11 of renewable portfolio standard that works outside of the  
12 market but brings on a set of resources with a certain  
13 operational characteristic, that regardless of what we do,  
14 that need exists and so we are going to have to price that  
15 flexibility or if it is ramping or whatever it is.

16 Are you suggesting that we wouldn't have that  
17 need if we could just stop the policy on the front end? You  
18 know ultimately is that the goal is to kind of prevent  
19 things from happening so that we don't have associated needs  
20 that have to be priced?

21 MR. MAKOVICH: Right so the example being we have  
22 state interventions to mandate subsidized wind and solar.  
23 And the intent there is to reduce the CO2 profile of the  
24 power supply. The consequence of this though is to suppress  
25 wholesale prices and to disproportionately reduce the cash

1 flows to base load generation.

2           So the consequence of this state intervention is  
3 to lead to the closure of premature, uneconomic closure of  
4 baseload power plants. When those happen to be nuclear you  
5 end up with the perverse result of you are not making a  
6 trade-off between the state objective of reducing CO2 and  
7 having a less efficient market, you have got both bad  
8 outcomes.

9           The market is less efficient and with the closure  
10 of the nuclear units you are not reducing CO2 which is then  
11 creating the rationale for you know, a well-functioning  
12 marketplace that does internalize a CO2 emission charge,  
13 those nuclear plants would be economic and run.

14           And having done analysis of this I can tell you  
15 that if New York were to move forward with a price on CO2  
16 emissions and no subsidies we wouldn't be talking about the  
17 need to pay nuclear units to keep running, the market prices  
18 would keep them running.

19           And so you end up moving down this slippery slope  
20 as Bill Hogan said in his filed testimony subsidies beget  
21 subsidies and that these subsidies to keep the nuclear  
22 plants running are the result of the dislocations we have  
23 created in the markets from the subsidies on the renewables.

24           MR. QUINN: That's helpful, Sue?

25           MS. TIERNEY: Well first of all I just want to

1 pay homage to the fact that I bet this is the only federal  
2 building in Washington DC where there is a discussion of  
3 carbon pricing and de-carbonization, so very good folks, we  
4 like it.

5 UNIDENTIFIED SPEAKER: And solar panels.

6 MS. TIERNEY: I want to agree with a couple of  
7 statements that I have heard and then plant a flag in  
8 disagreement on some others. Where I agree is that I do  
9 think that the issue is urgent of addressing the -- I kind  
10 of called it in my comments the nibbling away of the markets  
11 by a lot of different pieces.

12 Such as those players who don't get to  
13 participate in one of the special deal aspects of the market  
14 is one in which I just don't think it's sustainable  
15 financially and you have heard that. I think that the --  
16 all of the markets do need attention.

17 Even though it is an urgent issue I do think all  
18 of the markets need attention and that is not a fast thing.  
19 And by that I simply mean certainly the price formation in  
20 energy markets continues to be not perfect for many reasons  
21 that have been said over the course of the two days.

22 Capacity markets are administratively determined  
23 really and they are suffering from the problems and even  
24 ancillary services are probably incomplete in terms of the  
25 product categories that we need in a changing world.

1           So I do think the urgency of the problem is  
2 mismatched with the complexity of the task. Systemic to  
3 your question Arnie about whether there are preferences from  
4 a principled point of view between number 2 and number 4, my  
5 personal preference is number 4 is more elegant.

6           It allows for pricing rules to play their role in  
7 markets. It allows for a dovetailing in a way that certain  
8 things like the RGGI program today dovetails with the  
9 Federal Power Act authorized markets.

10           So I think it is more elegant but I do think that  
11 even if this particular group is talking about carbon and  
12 I'm the first among them to talk about the need for markets  
13 to reflect the impacts of carbon on the economy.

14           I think that it is a very slippery slope about  
15 where are you going to set the line about the attributes?  
16 So if some -- you know, thermal plants need water, some  
17 states might have a free water supply. Every plant needs  
18 land whether it is rooftop or other real estate so we all  
19 know that lots of states and localities use land as  
20 bargaining chips for economic development.

21           So I can see that even though that's a very  
22 elegant solution and we might vote to start with our urgent  
23 big one soon I think there will likely be practical problems  
24 associated with defining the attributes.

25           And that of course presumes that push comes to

1 shove and the states can't agree in a multi-state RTO that  
2 the RTO would file something affirmatively under its own  
3 powers to do so.

4           So although I love that one it strikes me that  
5 number 2 may be the practical place where FERC ends up. The  
6 Chair, the acting Chair, the forever Chair who has had two  
7 Chairmanships over her career -- her suggestion that number  
8 2 might be a place where FERC ends up because of the  
9 difficulties of having a federal preference forced on a  
10 region.

11           I think that's probably true. So I think that's  
12 where we end up. I think that number 5 -- I actually  
13 thought that Roy described number 5 as actually number 4 so  
14 I am a little confused at what number 5 is anymore but  
15 number 5 I think will surely lead to states opting out. I  
16 absolutely believe that that's the case.

17           Number 1 is just not going to happen for good  
18 reasons and number 3 is death. Death by little shark bites.  
19 So I think number 2 is where you need to go and then to  
20 potentially use the forcing function of asking each RTO to  
21 come in to how they want to address this particular problem  
22 of nibbling away at the markets.

23           MR. QUINN: Thank you, Roy?

24           MR. SHANKER: Yeah. One clarification that I  
25 think a couple of things may have gotten partially jumbled

1 listening to Cliff's comments. I think uniformly we have  
2 talked about some sort of an adder we have been talking  
3 about it based on a relative carbon intensity in the energy  
4 market.

5           The reference -- subsequent reference at least on  
6 my part to whether there was a MOPR wasn't that the  
7 implementation of what we were talking about was in the  
8 capacity market is that the likely manifestation of somebody  
9 trying to sneak around would be captured in the capacity  
10 market construct.

11           So that's the safety net and I think I got the  
12 impression, I'll let Sam speak for himself, I got the  
13 impression we were talking about the same and I think maybe  
14 that wasn't clear to Cliff.

15           The second thing is coming back to Sue's comment  
16 if number 2 -- if there's a Commission mandate, I'll put it  
17 that way, and that's the starting action and the difference  
18 between what I was thinking was 5 maybe I'm mis-numbered is  
19 that I am suggesting that the Commission come forward with a  
20 mandate that's broad, uniform, as broad a footprint as they  
21 can, maybe all of the RTO's.

22           And the difference between that and what Sue was  
23 saying is each of the RTO has come forward under a  
24 Commission mandate and tell me what you are going to do -- I  
25 don't know that there's that big of a difference. The place

1 where I would become worried to the extent there was a  
2 difference is the tar baby of the stakeholder process.

3 I think and again I'm wearing my consultant hat,  
4 not legal hat, I think you have authority to mandate both.  
5 I don't think that's in doubt. There are parallel type  
6 attribute and even financial actions associated with  
7 attributes under different conditions in the existing  
8 tariffs that don't look too much different -- they function  
9 differently but they encompass the same regulatory reach I  
10 think as an adder.

11 So I think you can do it and if you did it and  
12 come back as a compliance filing then maybe I wouldn't see a  
13 real big difference between somebody else does it a little  
14 this way versus that way.

15 If the mandate is let's be congenial about this  
16 and have a year and a half of everybody pre-positioning  
17 their litigation or two years of litigation positions in the  
18 stakeholder process then I want number 5 if it is a mandate  
19 and that's the distinction. That is what I was trying to  
20 get to.

21 MR. QUINN: Thanks, Bill and then Cliff.

22 MR. HOGAN: So A politically pragmatic when you  
23 started off by saying I couldn't appeal to efficient markets  
24 because that's completely off the table and I've been sort  
25 of recovering for that for the last hour. And it reminds me

1 I think I was sitting where Sam was sitting about a dozen  
2 years ago if I recall and I went through a diagnosis and I  
3 said the problem was fundamentally if you don't have  
4 efficient markets because you don't have appropriate  
5 scarcity pricing, you have the real time market and that's  
6 the thing which is causing all of these other things to  
7 happen.

8           And you ought to fix that first that's the most  
9 important thing and there was a lot of good conversation.  
10 And the response actually from Andy Ott I believe at the  
11 time was this is a really good idea. This really makes a  
12 lot of sense but we are really busy and as soon as we fix  
13 the capacity markets we are going to take this up.

14           And now one of the regrets I have over the last  
15 many years is I haven't been more aggressive about saying  
16 this is really a dereliction of duty on the behalf of the  
17 Federal Energy Regulatory Commission and if you don't get  
18 these real time markets to be efficiently designed and have  
19 appropriate scarcity pricing, you give people the right  
20 incentives and quit socializing the cost of all of the  
21 components that go into it, this is a problem you have  
22 created for yourself.

23           Okay so and that is what I think is the most  
24 important think that the Federal Energy Regulatory  
25 Commission should be doing. That will not solve all of the

1 problems that you are talking about here today. But it is a  
2 big job so it is not like that's an easy thing to do as  
3 evidenced by the fact that we are still having this  
4 conversation and I am reminding you of what I said 12 years  
5 ago, that's a difficult thing to do.

6           But it would work in the right direction and it  
7 would get you going so that some of the things that are  
8 going on here would be either not a problem or less  
9 problematic. Now it won't solve the problem of people who  
10 want to do things which are fundamentally inconsistent with  
11 the efficient market and they just insist on doing it and  
12 they have the capability to do it.

13           But at least if you had an efficient market and  
14 you had the things priced properly and got rid of some of  
15 the socialization, the people who were making those  
16 decisions would be bearing most or all of the cost  
17 associated with doing that.

18           And if they choose to do something which is in my  
19 view not in their interest then they are absorbing the cost,  
20 that's much less of a problem than if they are doing  
21 something and then fobbing the cost onto everybody else in  
22 creating all of these cost socialization problems.

23           So I'm happy to talk more about specifics. I  
24 listed some in my prior comments but I really do think that  
25 if the constraint here is that we have to accommodate all

1 the states and make everybody happy, we have to make  
2 capacity markets work, we don't have the time or the  
3 attention to focus on the things that make efficient markets  
4 the fundamental of efficient markets.

5           If we are going to have consideration of  
6 re-introducing contract paths and bilateral contract actions  
7 and firm capacity all the stuff that we spent almost two  
8 decades explaining why that doesn't work and proving it in  
9 practice that it doesn't work.

10           If we are not going to do that I don't know what  
11 to do. I mean this is just -- and you can't solve all the  
12 problems of the country. Now I am in favor of a carbon  
13 banana is that what it is -- I can't use the word, the "T"  
14 word but I am definitely in favor of a carbon banana and if  
15 we can do that I stand on my choice of words.

16           But that seems to me to be arguably not under  
17 FERC's jurisdiction. I don't know if you can pull it off  
18 I'll be there with you at the barricades if that is what you  
19 want to do. But I do think that there are things that are  
20 under FERC's jurisdiction that I discussed in my written  
21 comments and that's what we have talked about before.

22           And I'm not smart enough to figure out how to  
23 make capacity markets work without people gaining. So I  
24 don't know how to do it. My goal is to make them irrelevant  
25 and I think that should be your goal too.

1                   MR. QUINN:  Chairman?

2                   CHAIRMAN LA FLEUR:  Dr. Hogan I want to ask a  
3 clarifying question.  First of all I said I was depressed  
4 yesterday that based on Sue's testimony there was something  
5 we neglected for 3 years but now that you brought up  
6 something you testified to 12 years ago.  I understand I  
7 think why fixing scarcity pricing and I think we have tried  
8 to do some things on price formation, obviously not enough  
9 for what you said.

10                   I understand why that's important but I think I  
11 want to understand you said if we got that right then if  
12 people made uneconomic decisions in the market they couldn't  
13 put the money on other people.

14                   I know they wouldn't have uplifts socialized but  
15 how would that help with somebody who wants to buy off-shore  
16 wind if the market is in conflict.  I don't think I  
17 understood your comment.

18                   MR. HOGAN:  This is what I'm not saying and it is  
19 very important because it is part of this political issue.  
20 I'm not saying things that everybody is going to be happy  
21 who is outside of whoever is doing this.  So if you are  
22 subsidizing uneconomic resources and dumping into the market  
23 the people that are competing with that are going to be  
24 unhappy.

25                   The incumbent generators and the other kinds of

1 things -- but the loads who are outside of that region are  
2 going to be delighted because prices are going to come down  
3 because of the subsidies that are taking place and causing  
4 the whole thing.

5           So at least you would want that to pass the test  
6 that if somebody in a state does something which increases  
7 the overall cost of the system that they incur at least that  
8 much cost themselves.

9           And if they want to and they are prepared to do  
10 it or nobody is paying attention or something like that, I  
11 don't know how you can stop that. I mean if they are  
12 prepared to absorb it -- but what we have is built into this  
13 system is all of these subsidy mechanisms where they are  
14 shifting the costs on to other people.

15           So I mean and I have listed off some of them and  
16 we can talk about more, which they are out there. And I  
17 think if you could fix the problem so at least you have in  
18 the idealized market case we had efficient pricing -- that  
19 used to be the old joke, where's the best place to have your  
20 -- to be a consumer and it is right on the edge of an RTO  
21 but on the other side right so you get all the benefits but  
22 you don't have to pay the costs.

23           And I think it really is structured just the way  
24 that people want to take advantage of things then they have  
25 to absorb those costs and they don't get to participate.

1           So should subsidized resources be participating  
2 in the capacity market and not getting the double payment  
3 problem? No. Why do we have capacity markets -- trying to  
4 correct a defect in the energy market because we don't have  
5 enough scarcity prices?

6           Now should we pay people who are making the  
7 problem worse so we get them in on the deal too? The answer  
8 is no. They just shouldn't be there. Now I'd also get rid  
9 of the capacity market but that's another important more  
10 complicated conversation.

11           But I think that's the thing to focus on and  
12 despite the politically unpragmatic you know and foolish  
13 plan, this kind of attitude that I have now evidenced in  
14 violation of the structures I think that's where you should  
15 be concentrating your attention.

16           And it can be done and I would describe that  
17 elsewhere. I'm happy to talk more about my list and adding  
18 to the list of things that you should do but that's where I  
19 would focus.

20           MR. QUINN: Cliff did you have anything?

21           MR. HAMAL: I'll pass. Roy mentioned my -- but  
22 it seemed so long ago.

23           MR. QUINN: So Sue then Roy.

24           MS. TIERNEY: I really hesitated to put up my  
25 card to talk about scarcity pricing in capacity markets

1 because I respect Professor Hogan so much as one of the  
2 biggest brains I have ever met. And that was actually  
3 honest.

4           But 12 years ago I wrote a piece in which I said  
5 it is really a theoretically desirable place for electricity  
6 markets to move toward scarcity pricing. For all the  
7 reasons that Bill has so wisely written about but at that  
8 time I wrote and I feel even more strongly now that those --  
9 I don't understand how they have been politically  
10 sustainable in Texas.

11           I suppose because they have not had the pattern  
12 of scarcity pricing that caused the Governor to call the  
13 Commission to say cut it out. I think that scarcity pricing  
14 that we see or we see symptoms or expressions of scarcity  
15 pricing when for example in New England natural gas becomes  
16 unavailable and prices spike to the marketplace and every  
17 Governor sends their Commissioners to the legislature to  
18 talk about how they are going to fix that particular  
19 problem that's just been encountered in the marketplace.

20           So as much as I think it's my right brain is  
21 supposedly the logical one I don't know. That logical side  
22 of my brain says absolutely that is the right way to go. I  
23 think that we will find ourselves here addressing the  
24 fallout of scarcity pricing if you spend a ton of time on  
25 that and not addressing some of these other issues, that is

1 not a fast exercise.

2           And I am not smart enough to figure out how we  
3 are embarking on a world that will be I would expect much  
4 lower carbon that includes resources with high fixed costs  
5 and almost no variable cost. So scarcity pricing in that  
6 kind of a world and lead times for excuse me -- getting  
7 resources into the market is causing my brain to fritz out.

8           MR. QUINN: So we will do Roy and Lawrence then I  
9 think we want to move on to kind of talking about principles  
10 and objectives.

11           MR. SHANKER: Capacity scarcity and energy only  
12 -- I think this is one of the few areas I sort of disagree  
13 with Bill. The starting point is reliability and input and  
14 output -- ask that question.

15           And if you say that it is an input you have a  
16 capacity market. You may not know that you have it and you  
17 may not realize that you have it but even in Texas there  
18 will be a point which I think Brattle was a good example,  
19 somebody continually takes a look at do we have adequate  
20 entry, is the penalty factor high enough?

21           If it isn't high enough do we adjust it and  
22 that's because if it is not high enough and we are not  
23 getting entry we are concerned about reliability and that's  
24 because reliability is an input.

25           And so one form directly or indirectly you have a

1 capacity market. If you say it is an output then you ration  
2 in some fashion based on price and we don't worry about any  
3 of this and I don't know a market that has those properties.

4 So the distinction is how fine is the detail in  
5 which we are resolving how efficient in terms of the  
6 argument I think both Sue and Bill might hear the same  
7 argument and come out in a little different place.

8 The more detailed, the finer the resolution is  
9 the higher the efficiency. But there shouldn't be the  
10 perception that there is not a capacity market, there is.

11 The second thing again I'll stretch when Bill  
12 suggested that the carbon adder and I really mean adder  
13 because I'm looking at this in the context of a mechanism  
14 that creates a surplus because of the way charges are  
15 applied and money goes back out.

16 I don't see any reason that we cannot -- we  
17 differentiate between units like PJM versus New England and  
18 forced a 4D versus ICAP. You know we differentiate and  
19 compensate units differently based on start-up, run time,  
20 minimum run and cool down.

21 We have differentiation between whether they can  
22 be fast or slow ramping, give them different regulation  
23 signals. PJM has adders in a different way just to be  
24 clear, I'm not saying they are the same. Based on emission  
25 limited resources they get an opportunity cost to ration

1 their output.

2 I'm not sure where an attribute distinction that  
3 can be monetized is clearly once we agree on the price on  
4 the intensiveness of carbon it looks to me just like all of  
5 those other things and so I wouldn't see that and I would  
6 encourage -- you know I am sure you are going to get lots of  
7 comments and we have no loss for legal advice here.

8 I would encourage you to pursue that to pin it  
9 down because it is so powerful a tool here that to not be  
10 100% convinced that you couldn't do it would be a big error.  
11 I believe you can I don't think there's any problem at all.

12 MR. QUINN: Thank you, Lawrence?

13 MR. MAKOVICH: I think there's a couple of  
14 principles here that bear you know focusing on and the first  
15 one is that I think there is general agreement that if you  
16 have got electricity markets and you are trying to  
17 incorporate state policy objectives of reducing CO2 that the  
18 proper way to do that, the most efficient way to do that is  
19 to use cap and trade or set the price, an appropriate price  
20 on CO2 emissions.

21 That will alter the marketplace but it will not  
22 distort it. And I think it's really important then to try  
23 to anticipate whether you think that the proper market  
24 structure, a well-structured power market is an energy  
25 market with the operating reserve demand curve or whether it

1 is an energy market with an associated capacity market.

2           Either way if you have as a benchmark what that  
3 outcome is going to look like with an efficient carbon  
4 price, then you have got a basis to make some judgments when  
5 you have got people coming to you because you know you have  
6 distortions creating in either of those cases, episodes of  
7 increasing duration of negative prices.

8           Because you have got these policies that are  
9 distorting things so I think whichever marketplace you think  
10 is well-structured, analyzing that with an appropriate CO2  
11 price has got to give you the proper grounding to make a lot  
12 of the decisions that you have got ahead of you.

13           MR. QUINN: Thank you so I want to move on to a  
14 discussion about principles or objectives that we would use.  
15 Potentially choosing amongst the various paths we could go  
16 but it might also be that it's important as we talk about  
17 some of the proposals that we have heard for accommodating  
18 states if we accept that it is going to be difficult to  
19 achieve within our markets.

20           We are going to give up on Roy's admonition that  
21 we figure out for sure that we can't do it. But if we  
22 accept that we are trying to accommodate state policies with  
23 you know, some manner of letting them get a capacity supply  
24 obligation but then setting a price so that you almost  
25 ignore that state support -- or some other form of

1 accommodation.

2           What kind of principles would we use in thinking  
3 through proposals like that and just to provide some basis?  
4 We had a couple in the pre-filed comments, sets of  
5 principles that we heard from various folks. David Patton  
6 set out a couple of principles I think premised on the  
7 believe especially in ISO New England that the focus of the  
8 capacity market really was to organize exit because most of  
9 entry was going to come from state supportive resources.

10           So his principles were things like prevent the  
11 credibility of the market by protect -- the credibility of  
12 the market by minimizing our official surpluses. Prevent  
13 the inefficient entry of new conventional resources given  
14 the entry of subsidized resources and then minimize excess  
15 cost to be borne by RTO customers.

16           NRG also had a couple principles. I'll read them  
17 out again this is just mostly to kind of ground the  
18 discussion -- allow state backed resources to take  
19 obligations on the capacity market consistent with their  
20 ability to support resource adequacy while recognizing the  
21 fixed cost recover for those resources is coming from  
22 outside of the market.

23           Insure that resources relying on market revenues  
24 are able to access sufficient clearing prices to maintain  
25 reliability and apply reliability must-run contracts.

1 Insure that all resources being counted for resource  
2 adequacy have comparable if not identical performance  
3 obligations and create financeable capacity market structure  
4 that continues to incent investment when and where needed to  
5 support resource adequacy, even as state sponsored  
6 resources proliferate.

7           So I guess our question to you is do you have a  
8 similar set of principles that 1 -- you know the Commission  
9 could use as we evaluate different proposals and including  
10 proposals that would ask us to accommodate state policies if  
11 they are not going to be incorporated into the market?

12           MR. SHANKER: You are not going to be happy with  
13 the answer. We are here because those questions were asked  
14 repeatedly PJM what is it now 11-12 years ago, same in ISO  
15 New England about the same time frame in the capacity  
16 markets.

17           Each of those markets came out of the  
18 administrative law judge decision's age with I thought  
19 excellent orders. Each was directed into settlement. Each  
20 went through a settlement process where the types of  
21 questions you are asking were addressed.

22           Each was watered down and distorted, biased,  
23 damaged enormously by the compromises. Now I have to say  
24 that we would still be here on the environmental RPS type of  
25 distortion regardless but we would have been here with an

1 industry that was financially much, much sounder and  
2 probably much more willing to adapt if not adapt itself.

3 I put the number in PJM of a transfer close to  
4 Joe's here he will understand the cases that I am referring  
5 too, but between 15 and 100 billion dollars over the last 10  
6 years that got transferred between suppliers and load.

7 And that's a lot of money and it would have  
8 changed the entire face of the industry. It would have  
9 changed the cases in front of you in terms of re-regulating  
10 and fights over exit and ability to adapt to environmental  
11 controls.

12 And part of this was a huge set of bad  
13 compromises. Dr. Bowring talks about underpayment in his  
14 comments, I know you have all read them. It is worth going  
15 back in the state of the market reports -- there are numbers  
16 linked to his general statement.

17 And in pretty much each case you can link it to a  
18 compromise and so the general principles I said before are  
19 the ones that I would stick with. And I know this is so  
20 politically incorrect to stand in front of the Commission  
21 and I know the Chairman is probably out but the reality is  
22 you are here to be making some very hard decisions now and  
23 whether you agree with me or not trying to punt to  
24 accommodate which is I think we have called the alternative  
25 in the face of a lot of things that we understand and know

1 not to be correct.

2           If we had our druthers we would not do, it is a  
3 big mistake.

4           MR. QUINN: Bill?

5           MR. HOGAN: When the Clean Power Plan was first  
6 published, you remember the Clean Power Plan, so when it was  
7 first published I actually wrote a paper which was in the  
8 Electricity Journal and I will submit it again for the  
9 record again if necessary.

10           But the purpose of it was to address the question  
11 about how to deal with carbon in these organized markets and  
12 the mistakes that you could make and what to do and what not  
13 to do. And it laid out the carbon tax as the economic goal,  
14 this is the efficient way to do it and if we could do that,  
15 that would be terrific and would fit and everything would  
16 work fine.

17           And it went through a series of alternatives that  
18 are approximations of that which went from the good to the  
19 bad to the ugly and then down into -- and the last one on  
20 that list as I recall was environmental dispatch, where you  
21 change the objective function for costs of CO2 emissions.

22           And that creates havoc in the system. So I think  
23 there are a lot of things like that -- where it is just  
24 understanding how the system actually works and making sure  
25 when people propose things you compare it and the message

1 here is to compare it against the economic thing that  
2 actually works which is the carbon tax idea.

3           And then if you are going to do something which  
4 is not that but you have to check to see how close it is and  
5 how far away you are and what some of the problems are going  
6 to be.

7           CHAIRMAN LA FLEUR: It is awesome having you guys  
8 here by the way. I want to ask a somewhat provocative  
9 question that was provoked by something Roy said and Sue as  
10 well. I mean obviously we don't live in a politics free  
11 world.

12           Part of the reason Representative Kennedy became  
13 so interested in this issue was because of a spike up in the  
14 capacity market that affected his constituents. But there  
15 has been several references in your pre-filed testimony to  
16 the problem of the stakeholder process as a market design  
17 mechanism -- is there something you think we can or should  
18 do differently?

19           I mean we have kind of assumed that this is the  
20 way it has to be and I don't mean by that Cheryl LaFleur  
21 gets out her pen and designs a market. I know I am not  
22 capable. But some other method or something because I mean  
23 that's just a question honestly.

24           COMMISSIONER HONORABLE: Let me add on, I can't  
25 allow Cheryl to be on that island alone because I think by

1 my comments I have made very clear over the course of  
2 yesterday and today that I think in the short term that path  
3 2 is the correct one.

4           So I take to heart your comments Roy and Sue. I  
5 think in a Utopic world 4 would absolutely be a path that  
6 would be a viable one if there could be consensus. I have  
7 to say that for the record I think my comments have made  
8 that clear but I don't want Cheryl to be out on an island  
9 alone. We have to find a pragmatic pathway forward and we  
10 appreciate your expertise in helping us carve that out in a  
11 way that demonstrates our political courage.

12           MR. MAKOVICH: Well actually in answering the  
13 question that you both posed you do have I think a  
14 fundamental principle which is that compromising negotiation  
15 among stakeholders is not always going to give you the best  
16 answer. And so FERC needs to be a check on that and in  
17 particular I think to Arnie's question about what is the  
18 principle -- the principle is you want to keep markets  
19 demand driven.

20           And what I mean by that is you ought to keep in  
21 mind the principle, the objective of using markets in the  
22 electricity sector is to minimize the cost of giving people  
23 the electricity they want when they want it, internalizing  
24 a CO2 cost and maintaining grid security.

25           Now everybody might not accept that but we do

1 have a threat here where we are going to violate this  
2 principle because when we have states that are mandating 50  
3 or 80% renewables and they are starting to use the market  
4 instead of it being customer driven it is now supply driven.

5 That we are going to be using market forces to  
6 set prices to equilibrate electricity production that's not  
7 giving us the power when customers want it and use prices to  
8 reshape customer demand in order to align.

9 And if we lose sight of the fundamental principle  
10 these markets need to be demand driven, we are going to  
11 undermine support of the markets because it is not  
12 ideological it's very practical.

13 MR. QUINN: Thanks, Cliff?

14 MR. HAMAL: Thank you. I would like to address  
15 the Commissioner's questions and then return back to where  
16 we were with the question you had. But with respect to how  
17 we develop options -- I struggle with that.

18 I personally believe that we should move much  
19 more toward a bilateral market and allow people to contract  
20 for individual attributes of capacity that matches what they  
21 need, that has the characteristics, including duration to  
22 get what they want to accomplish.

23 It's a bit complicated thing. I'm not going to  
24 try to explain that here. But I have talked to a lot of  
25 people about it and on an individual basis you can make some

1 mileage and get some understanding of it.

2           But whenever you enter into one of these  
3 stakeholder agreements and I have been involved with PJM and  
4 New England -- everyone sitting around tables much larger  
5 than this one, politely talking across a very large room,  
6 interested in moving incrementally forward.

7           It's hard to address the kind of sweeping change  
8 that Commissioner Honorable was mentioning at the opening of  
9 this hearing. How do we get something different? And you  
10 know you pose an interesting question I hadn't planned on  
11 addressing, but if the Commission established ways for  
12 people to debate, really, truly different options and bring  
13 them forward without the Commission's endorsement.

14           But here's a different way of looking at it. I  
15 would like to see my ideas pushed forward and others as  
16 well, but to articulate them, to develop them with some  
17 depth I think may be a way to get out of that you wouldn't  
18 get from the stakeholder process so that's one suggestion I  
19 have.

20           The question we started off with was about the  
21 objectives and the principles that we would have for  
22 developing a market going forward. I start with presumption  
23 and we are assuming that we are in the world today states  
24 and federal -- states have objectives that are legitimate  
25 that lie outside of what the Commission can deal with but we

1 are trying to incorporate them into the market.

2           Most of those are environmental -- that's what we  
3 have been talking about all the time. It's really  
4 interesting about the environmental objectives is in this  
5 case the benefits go beyond the state boundaries. I mean  
6 arguably they go all over the world, arguably they are part  
7 of trading the momentum around the world to get people to  
8 make changes from places we don't even know how to get to.

9           But what we really have is an interest that  
10 someone is willing to step forward to take change to deal  
11 with additional cost for a better world, environmental  
12 benefits. I think one objective should be that we shouldn't  
13 in the federal market -- in the wholesale markets do things  
14 that penalize those entities the customers that are going  
15 out of their way to begin with to take extra cost actions to  
16 try to create these environmental benefits.

17           We shouldn't penalize them and that's what we are  
18 doing. I mean I just find it really frustrating. We in New  
19 England as I understand it I am not involved in the New  
20 England process but they are going to spend the extra cost,  
21 then they are going to have to buy their way out of that  
22 through some secondary market that I don't understand very  
23 well so it is the second time that they have to pay.

24           And then as a result they are going to get extra  
25 retirement so the prices go up overall so they have to pay

1 three times. This is how we reward people who are taking  
2 these extra environmental actions. So that's my objective.  
3 I don't think that we should make it more expensive to take  
4 these environmental decisions and strategies that some  
5 states have wanted to take.

6 MR. QUINN: Thank you, Robert then Sam.

7 MR. STODDARD: Thanks, as to the stakeholder  
8 profits I really wish I had the magic answer to that but I  
9 don't. I think the challenge of forces fundamentally  
10 everyone has the right to appeal to the courts and so  
11 getting their buy-in to a design before it comes to the  
12 Commission and then again I think the Commission's expert  
13 review and improvement of final tariffs you know a hard look  
14 at the final tariffs to make sure what is there is just and  
15 reasonable and not unduly discriminatory is the last check.

16 But the stakeholders will always be with us. To  
17 return to the question from Director Quinn though how should  
18 we accommodate? Sorry I am going to give the hard answer --  
19 minimally. States have taken some actions that are on the  
20 books already. We have to recognize that they are there so  
21 we should do what we can to make sure those disrupt the  
22 markets in as small a way.

23 And I would join with people from this morning  
24 saying that the Commission should require every RTO to file  
25 in short order a plan to do that.

1           But if we have to move past that -- if we built  
2 in permanent accommodations then we are going to have a  
3 death by a thousand cuts as Dr. Tierney described. We are  
4 going to eventually un-structuring the market and having  
5 more or less everything procured by rate payers through  
6 designs and lose all of the benefits of competition we have  
7 had.

8           The RTO markets will just become residual,  
9 marginal trading operation and that's not going to achieve  
10 the benefits that Order 888 and the subsequent orders  
11 anticipated. So I think what you should be focused on after  
12 you accommodate existing action is giving the states the  
13 market-based tools to achieve their policy goals within  
14 broader markets.

15           I don't think they have to be FERC jurisdictional  
16 markets. For instance I think it would be possible to build  
17 on RGGI as a way of -- and establish carbon pricing. When  
18 Chairman Vannoy said Maine doesn't want carbon pricing --  
19 Maine already has carbon pricing.

20           And we have a mechanism to do that. So it may be  
21 possible to re-work some existing things. It may be  
22 possible for regions to work collaborative if they don't  
23 like federal jurisdiction over their policies.

24           But let's give the states market based tools that  
25 then can be recognized as part of the market and not distort

1 the outcomes.

2 MR. QUINN: So I'll kind of ask a follow-up on  
3 that. Is that partly advice to call the bluff? I think  
4 what we heard in the morning panel was you know the harder  
5 we push to say you can do it within the markets, markets we  
6 regulate or some other market.

7 But if you don't do it that way we are not  
8 accommodating. The harder the states -- the more the states  
9 believe that the policies and objectives they are pursuing  
10 are integral to their mandate, then we start to ask them to  
11 make a decision.

12 Do you continue to pursue your policies that you  
13 believe strongly in, believe are a core part of your  
14 mandate? And then we heard yesterday kind of a reminder  
15 that often these policies are coming down from state  
16 legislatures. So are we asking them to choose between that  
17 and the wholesale market or is your belief that faced with  
18 that choice they will choose the wholesale market because  
19 that evidence suggests that it provides so many cost  
20 savings that we can call their bluff and they will come our  
21 way?

22 MR. STODDARD: Well first let me try to  
23 distinguish as I did in my first round of comments that I  
24 think there is a difference between the policies of the  
25 states we want to be carbonized and implementation methods

1 to achieve those policies.

2           What I meant in my statement is that if there is  
3 a method, the 2020 process is underway in the Tri-State RFP  
4 is underway. We have to figure how to put those into the  
5 markets in the least damaging way. But if we gave states  
6 the policy -- this market based mechanism to achieve the  
7 bigger policy goal of carbon reduction that many of the New  
8 England states have, or RPS standards that all of the New  
9 England states have -- then what we have heard in private  
10 discussions with regulators and legislatures, they would be  
11 happy to not have to administer complex RFP's and develop  
12 rules around that.

13           That's putting a cookie jar out that legislators  
14 are all too happy to you know, start moving particular funds  
15 around. Let's give them an efficient mechanism to achieve  
16 the goals. That's my position. So I think this calling the  
17 bluff maybe overly harsh.

18           Having said that like Dr. Shanker I was  
19 testifying in front of Maine about their decision about  
20 whether to leave ISO New England -- and the alternatives are  
21 really hard. You have to pull back the entire restructuring  
22 including putting everything back on rate base, everything  
23 back on rate base and now you are negotiating getting  
24 merchant plants back on rate base which is going to be a  
25 long and hard discussion.

1           So I think once you look at this you have the  
2 option of having a market and a quasi-market as one of the  
3 RTO's commented yesterday, the market is a better option but  
4 now we just need to make sure that what's happening in those  
5 markets does not result in unduly discriminatory rates and  
6 achieves the state policy goals.

7           I think by and large they are consistent.

8           MR. QUINN: Thanks for that clarification, Sam?

9           MR. NEWELL: Thanks Arnie. So first I would like  
10 to address Chair LeFleur's question about the stakeholder  
11 process. I have to tell you how impressed I have been by  
12 the stakeholder process as a model of democracy and how much  
13 we debate these small points that don't seem to be debated  
14 over much larger policies.

15           So democracy is hard -- I don't mean within FERC  
16 I mean nationally and I mean democracy is hard and  
17 inefficient but you know I think it is the best and I  
18 actually think this dialogue has already done quite a bit of  
19 good.

20           I'm hearing you know, having all the parties  
21 start to recognize all the needs of the other sides. I'm  
22 hearing suppliers that recognize the reality of state's  
23 needs and that the future will look very different from the  
24 present and NRG's filing that had this picture that looks  
25 very different from today of a clean energy future.

1           I think I'm hearing states start to move towards  
2 understanding and maybe this is hopeful thinking that the  
3 market already does solve what some of their objectives are  
4 and as for their other objectives like de-carbonization they  
5 probably have to do a better job sharpening what their  
6 objectives are and articulating them so maybe even a market  
7 approach could hear them.

8           Maybe that's wishful thinking. Maybe you need  
9 something a little more to compel faster action. You know I  
10 don't know about that but I urge not too much frustration  
11 with the stakeholder process just because it's somewhat  
12 slow.

13           And you know I hear a lot of words that it is  
14 dire. I agree it is very important with the challenges that  
15 we face to set up something that works better.

16           CHAIRMAN LA FLEUR: I wasn't really worried that  
17 it was slow I think that's inevitable with the number of  
18 parties, it was the comments made by a couple of your  
19 brethren and sister that the compromises then get built --  
20 some of the compromises make economic trade-offs that then  
21 get built-in and need other things to fix for them.

22           It was problems expressed with what comes out of  
23 the process in terms of you know, whatever, choose your  
24 cliché you know a camel is a horse, I'm a committee or  
25 whatever. Not the slow-ness I can accept that processes are

1 slow.

2 MR. NEWELL: And I too don't have a silver bullet  
3 for you on those. But I would like to come back to Arnie to  
4 your prior question on some principles around accommodate.  
5 The first thing I would say again re-emphasize that the sort  
6 of achieve idea and bringing some of these objectives into  
7 markets is the best and I hope where we are headed  
8 long-term.

9 But in the meantime those take longer to put in  
10 place so in the meantime we have and we will probably  
11 continue to have procurements and financial support  
12 sometimes that are outside of the market. And then what do  
13 you do about that and I think that's what you are asking  
14 what are the principles for that.

15 The first thing I would say is to recognize all  
16 of the value that those resources provide. So if they  
17 provide -- recognize the REC value and recognizing the ZEC  
18 value or some other equivalent -- because with that in mind  
19 and against Larry's benchmark of a carbon price they may be  
20 economic.

21 The second is to you know there may be resources  
22 that don't pass that test but even then not to ignore the  
23 value of capacity that they incidentally provide and  
24 therefore over-build I just think that's wasteful and it is  
25 not sustainable.

1           So to the extent that we have a lot of investment  
2 in clean energy resources you need less other -- other  
3 resources. There was a very important question that Chair  
4 LaFleur that you asked yesterday which is -- Is there going  
5 to be so much investment in clean energy and all of these  
6 special resources that there is just not going to be a need  
7 any more -- I don't remember if you called it in-market  
8 investment, but something to that effect.

9           CHAIRMAN LA FLEUR: Something that no one wants  
10 to subsidize.

11           MR. NEWELL: And I think that's a really key  
12 question and I think the answer to that is there will still  
13 be a need I'm quite sure and for that reason it's very  
14 important that you have good price formation and let's not  
15 that's in capacity, the energy markets, the ancillaries,  
16 that's really important.

17           I also think about the regulatory risk that  
18 investors perceive if you know if these other resources are  
19 able to come in you know, not just part of a long  
20 well-defined path towards de-carbonization but sort of  
21 haphazardly. I think it just creates huge regulatory risk  
22 that states might intentionally reduce the price that it is  
23 just you cannot predict the future price based on  
24 fundamentals.

25           So I do think you need some mechanism in place.

1 But again I think I hope for a future where we move more  
2 towards the in-market approaches and that becomes less  
3 important.

4 MR. QUINN: Thank you so we have Roy and then  
5 Sue.

6 MR. SHANKER: Yes I wanted to respond to the  
7 Chairman's question. Over 22 years I probably have averaged  
8 about two stakeholder meetings a week aside from having a  
9 real job. And so it's a given what you said about the time  
10 and process.

11 But it doesn't have to be and it should be of  
12 some concern because stalling is a business tactic within  
13 the stakeholder process it does not exist. If you said you  
14 had to do A, B, C, D and you knew it always was like that I  
15 would agree with you that's life.

16 But it isn't and it is able to be manipulated for  
17 better or worse. The ability to actually do something  
18 constructive when there is a winner or a loser or a transfer  
19 of funds in a zero sum game is almost impossible.

20 The voting structures are strange and I think you  
21 may have even had issues brought forward to you about voting  
22 structures so I don't want to get into that kind of level of  
23 issue. And then there are procedural objective functions on  
24 the parts of the RTOs which are to close some things out.

25 I have been amazed between this is right and this

1 is wrong and the RTO, at least in my view in general has  
2 come out on the right side, not always and said I'm pretty  
3 intractable about this and we are going to move forward and  
4 that's how we are going to push the process.

5 PJM probably has more of a voting process that  
6 prevents that than elsewhere. But I have also been amazed  
7 that there is also an institutional scorecard probably,  
8 maybe even down to how well you have done as a coordinator  
9 of committees as to whether something gets done which may  
10 lead to compromises in of itself that are bad.

11 And it is all over the product. I mean it really  
12 -- the spectrum is sort of shocking when you look back at it  
13 over time for both good and bad and I don't know if I can  
14 explain each piece. I know PJM as I look around is Vince  
15 Dwayne still here? Afterwards if he is he might -- somebody  
16 or actually Ed Tatum I know is one of the resident experts.

17 We are reviewing in PJM the enhancements on  
18 process again I think is up for consideration and that's  
19 more -- it gets it to you faster to then go forward with the  
20 process that Robert described and that would be a good  
21 thing.

22 CHAIRMAN LA FLEUR: So do you think we should set  
23 tighter deadlines for things?

24 MR. SHANKER: Yes unambiguously that's a no  
25 brainer.

1           MR. QUINN: Sue?

2           MS. TIERNEY: First comments on the stakeholder  
3 process. It shouldn't be a surprise that we have market  
4 rules that are not perfectly economically efficient because  
5 we use legislatures to come up with designs. And by that I  
6 mean stakeholder processes are weighted voting legislatures.

7           And of course the RTO can at the end of the day  
8 put in their own file and ignore so to speak, some of the  
9 stuff that comes out of the stakeholder process. But I  
10 don't know that you have a choice for all the reasons that  
11 people have said. It's an imperfect system. I do think  
12 setting deadlines would be really helpful.

13           I have often admired the SPP stakeholder process  
14 that carves out certain aspects of deference to states on  
15 things that are really political decisions. And they say  
16 okay these are really about allocation of goods in the  
17 system so that they don't have other weighted voting on  
18 there.

19           So there could be some process design issues but  
20 I think you have to have it. A tighter process would be  
21 helpful because then people have to get off the can. On the  
22 principles point I guess I would say a couple of things.  
23 Let me just start by recalling that we often talk about  
24 whether the states are going to leave the wholesale market  
25 -- FERC regulated wholesale market.

1           But I think there's an important distinction  
2 between leaving the resource adequacy portion of the  
3 wholesale market and the rest of the market. And we know  
4 that every other RTO deals with resource adequacy  
5 differently than these three RTOs.

6           So when we think about whether states might get  
7 so fed up with one or another of these paths that they would  
8 leave, then think about whether or not they are leaving  
9 resource adequacy or whether they are completely leaving the  
10 wholesale market and going back to full regulation.

11           California is virtually a contract market now and  
12 certainly the state has resource adequacy but they operate a  
13 security constrained economic dispatch. And so maybe I'm  
14 assuming that when states talk about what the like about  
15 wholesale markets it's that -- it's the operation issues and  
16 less excitement about the resource adequacy piece.

17           And if that's the case then I wonder if you could  
18 think about if states are going to leave then if they want  
19 the benefits of the economic efficiency of security  
20 constrained economic dispatch then you know they are either  
21 all in or all out.

22           I don't know if you can do that because otherwise  
23 they are just picking and choosing of things which they can  
24 do, which I think they can do. So on the principles I  
25 definitely think that you would want to have consistent

1 performance obligations that are technology neutral, that  
2 you just insist on that so that if somebody has to meet the  
3 test of being available on call or whatever it is that you  
4 don't care whether it is renewables or nuke or anything  
5 else.

6 I would really try hard to address this problem  
7 of minimizing artificial surpluses. I think that we really  
8 see that profoundly with many of the state bilateral  
9 contracts and I think the ISO New England is trying hard to  
10 figure out a way to make it more orderly to address that  
11 problem but I also think that the way it's proposed at least  
12 based on my understanding today is it could definitely -- it  
13 will surprise me if state legislatures and regulators will  
14 be patient for the orderly exit portion of that proposal.

15 So I think that that just needs more work to  
16 figure out how to dovetail that with state's imperatives  
17 from their own political point of view. And I thoroughly  
18 believe that the principal of allowing efficient price  
19 formation in the markets where there are market participants  
20 without a state backed contract or a state ordered contract  
21 is really important for various reasons.

22 MR. QUINN: Thank you. So I think I want to move  
23 on to one last question before we turn it over to the  
24 Commissioners. I think it follows up on the question that  
25 acting Chairman Lafleur asked about process and using the

1 stakeholder process and to think some of you talked a little  
2 bit about the time that it takes.

3           A number of other panels have talked about how  
4 urgent it is that the Commission provide guidance or take  
5 action or you know what deadline we set for that stakeholder  
6 process and I think we have heard a variety of answers from  
7 -- it's all going pretty well, you know we will get to it  
8 when we get to it to the town is burning down and you are a  
9 couple of minutes late.

10           So I would love to get your perspective on you  
11 know how much time we've got. Is the market burning down or  
12 do we have a little time? And maybe we can go a little bit  
13 to some of the discussion about accommodate versus move  
14 things within the market.

15           If the town is burning down accommodate becomes a  
16 more active priority. If we have plenty of time we can  
17 spend that time to find the within market solutions. So  
18 yeah and again appreciating this might not be the same  
19 answer in all three of the regions that we are addressing in  
20 this Conference, I would love to get your perspective on how  
21 fast the Commission or the ISOs need to move, Roy?

22           MR. SHANKER: I'll try a couple things for PJM.  
23 I think Andy spoke yesterday about 10,000 exit, 10,000 entry  
24 which might sound healthy but what if the distortion said we  
25 didn't need either, status quo would have been good enough

1 and we churned 10 billion dollars of capital for no reason.

2 I think part of Larry's comments about well you  
3 know we heard a lot of comment about Exelon and the payments  
4 and ZECs and I won't go into the details. But my  
5 observation is pretty much the same as his that with a  
6 rationale carbon pricing the issue would go away.

7 So however that plays itself out then those units  
8 would be economic is what I am saying. We are swinging  
9 either what may be going into the dollars of subsidy or if  
10 they are inappropriate then billions of dollars in new  
11 capital the system is going to balance out.

12 Somebody is going to take some action and don't  
13 -- I guess what I am trying to encourage you is to not look  
14 at power balance per se but look at efficiency of capital  
15 formation and whether or not some of the Joe Bowring's  
16 comments about under compensation, retirement of plants.

17 It doesn't mean there's not new entry,  
18 particularly with the way we have set up some of the  
19 incentives in the market even if they are not exactly right.  
20 But I use the expression and probably if you have searched  
21 through testimony I've given that we are artificially  
22 churning capital enormously and to me that's as big or  
23 bigger a concern of replacement.

24 The other thing that is a slight distortion that  
25 I will mentioned for PJM is gas supply situation is probably

1 bearing a multitude of sins. I get to see let's say a dozen  
2 new plants. I have a nice -- because I'm by myself I'm sort  
3 of neutral so I get to see what other people have done to  
4 advise them.

5           And obviously I can't talk about numbers per se  
6 but you know there's a lot of gas out there and there are  
7 some very attractive projects that are probably coming into  
8 the market not that there's anything wrong with it but the  
9 timing versus all of this other distortion is something that  
10 you shouldn't take for granted will always be there.

11           And you are already starting to see that go away.

12           MR. QUINN: Thank you, Larry?

13           MR. MAKOVICH: On this question of stakeholders I  
14 think that you have to recognize the fact that they tend to  
15 be very reactive, not proactive so that when problems are  
16 cropping up in the power markets they are not likely to be  
17 aggressive in trying to solve things and it takes crisis to  
18 actually force some movement.

19           So I think the example is you think of PJM went  
20 through a couple of different designs on its capacity market  
21 but it took the polar vortex to force them to finally define  
22 what exactly do they mean by capacity even though they had a  
23 market they had been trading it for over 10 years.

24           And so that's an example of the kind of problem  
25 you have got with the stakeholder process being very

1 reactive and with accommodation I think that right now it is  
2 tempting to think that you can accommodate, particularly by  
3 pricing resiliency or pricing flexibility and so forth.

4           But Thad Hill said California in his opinion is a  
5 market that has failed and when you look at California we  
6 are talking about a marketplace where the subsidized wind  
7 and solar make up about 12 to 15 percent of the annual  
8 supply.

9           And you have already got a market with the duck  
10 curve and so forth it's showing tremendous stress to  
11 function and to form prices that are efficient. And if we  
12 have got this kind of problem at 12 or 15% then we are going  
13 to have enormous problems when you have got markets like New  
14 York saying that we are going to get to 50% by 2030.

15           And so it may seem that you can accommodate now  
16 when these problems are small but they are going to rapidly  
17 expand and if the solutions don't get out in front of this I  
18 think it is going to be very hard to be effective in a  
19 reactive mode.

20           MR. QUINN: Thank you, Sue?

21           MS. TIERNEY: On this question of this trade-off  
22 of time I really agree with Roy. I think that the insights  
23 about whether the lights are going to stay on is not the  
24 problem. It's really about quarterly reports of publicly  
25 owned firms will cause them to make decisions about whether

1 or not to leave or to invest.

2           And so maybe that becomes then a "lights is on"  
3 problem eventually but I don't think keeping the lights on  
4 is yet urgent so addressing the financial considerations in  
5 the markets I think is a bigger driver.

6           MR. QUINN: Robert?

7           MR. STODDARD: Yes I think it is also critical to  
8 realize the markets are already looking way forward. You  
9 know we are in the capacity markets procuring three years  
10 ahead of need so any changes we make today are really not  
11 fully affecting the markets until the early 2020's.

12           And a lot of states have a lot of renewable goals  
13 and other policy goals to achieve in that time frame. So I  
14 think the urgency of putting in front of people a clear path  
15 to do something other than massive policy in state-directed  
16 bills is quite high.

17           To second Lawrence's point it doesn't take much  
18 to tip this over. If we look at the new stuff coming on  
19 board there's very little except renewables getting built  
20 and virtually all of those renewables are now coming in with  
21 some sort of baked in contract which immunizes them from the  
22 ISO markets energy ancillary services and so forth.

23           MR. QUINN: Thank you, Cliff?

24           MR. HAMAL: I guess in terms of urgency I see  
25 sort of two kinds of issues. One has to do with the nuclear

1 units. We certainly talked a lot about that this morning.  
2 I see value in having zero carbon-based load generation that  
3 is not valued by the marketplace.

4 I think it's a big deal. I know a lot about  
5 nuclear power plants and they are not replaceable as we are  
6 seeing evidence of with people trying to do that. It's just  
7 a one of a kind circumstance that I think deserves attention  
8 before bad decisions are made.

9 Now I say that without having looked at the  
10 numbers and not trying to pass judgments on who is paying  
11 for that and what the costs might be but I do think that  
12 those are unique resources.

13 With respect to the rest of the marketplace you  
14 know PJM with reserved margins of 22% I think of Yogi Berra  
15 my favorite economist. We have so much capacity we are  
16 going to run out and I think that gives us a little bit of  
17 time about dealing with the rest of it. I think we do need  
18 a long-term strategy that can incorporate these issues.

19 And you know nearing the end I want to make one  
20 last plug that's not directly on your point. But as we look  
21 at that and look at that long-term option -- competition is  
22 great, we need competition. We don't have perfectly  
23 competitive markets. The mere fact that this product unlike  
24 any other produce in the history of the world needs to have  
25 a centralized construct is being built to keep it around is

1 just proof that this is not a normal, efficient market with  
2 buyers and sellers and acting on it.

3           So what that means is when you look at options  
4 and we try to value what we are going to need to do over the  
5 long-term. You can't say well this looks like more  
6 competitive than the other, this is the land of second best.  
7 You have to look at the overall implications, look at  
8 competition, look at entry.

9           Thoughtfully come up with something that will  
10 work long-term for all of the goals that we have but not use  
11 -- you know we have to adopt this because it is the only  
12 competitive solution. We left that when we adopted capacity  
13 markets in the first place, just tying back into Bill  
14 Hogan's comments.

15           MR. QUINN: Thank you, Sam?

16           MR. NEWELL: Thanks Arnie. So I first of all  
17 agree with you Sue, that you know the lights aren't about to  
18 go out so it is not urgent in that sense. And I also think  
19 some of the urgency is overplayed by people who are  
20 demonizing renewables as if that were the entire cause --  
21 that the policies around renewables are the entire cause of  
22 other resources earning low revenues and it's not.

23           And so there is urgency about no we have to stop  
24 this or change how they are treated in the market. The fact  
25 is that you know low energy prices are much, much more

1 because of fundamentals -- gas prices are low.

2           You know in most places we don't see the negative  
3 prices were often. I mean that is a big consideration for  
4 the future, whether we are getting things right there. With  
5 capacity -- there too it's mostly fundamentals, low load  
6 growth and amazing I can't believe how much low cost new  
7 entry there has been even by a new gas-fired generation in  
8 these markets, all of these markets we are talking about.

9           And you know meanwhile renewables have fairly low  
10 capacity value so really some of the discussion and sense of  
11 urgency I think has been somewhat misplaced. I do think  
12 there are a couple of decisions -- a couple of elements here  
13 that are imminent and do need to be addressed.

14           So one is the nuclear plants -- and you know when  
15 a nuclear plant retires you lose the option value on years  
16 of generating vast amounts of clean energy. Now in some  
17 cases, maybe not all, in some cases that may be at a  
18 relatively low cost of carbon abatement -- and again I like  
19 the benchmark that you suggested Larry.

20           You know they would be in the money if you had a  
21 market with a carbon price. Some of the New England states  
22 -- well one in particular is about to embark on some very  
23 large renewable procurements which do have much higher  
24 capacity value and you know so there too I think how do  
25 accommodate in the capacity market becomes you know fairly

1 urgent -- that needs to be addressed pretty soon.

2 MR. QUINN: Thanks, Larry?

3 MR. MAKOVICH: Yeah just a quick clarification on  
4 this question of what's really going on right now. There  
5 are a lot of people that think that low natural gas prices  
6 are the reason why nuclear plants for example aren't able to  
7 make it in the marketplace.

8 And a lot of people think well this is just kind  
9 of the creative destruction that you have in a marketplace.  
10 People use the term uneconomic and so forth and I would  
11 agree with that if I saw evidence that with low natural gas  
12 prices the natural gas fired generators were making great  
13 profits because this unanticipated shale gas revolution has  
14 put these people in a really competitive vantage position  
15 and now they are able to become really profitable.

16 And what you see is, even when gas prices were  
17 hitting their historic lows over the past year, if you look  
18 at the peer group of natural gas-fired competitive  
19 generators so NRG and Calpine and so forth they lost 40% of  
20 their market valuation across the past year.

21 And you look at the market report from PJM and  
22 they are telling you most of the gas-fired merchants aren't  
23 profitable and they look over the long 7 year time frame  
24 they said you are not making it on your basic economics with  
25 the gas-fired generator.

1           So I think it is true that natural gas prices  
2 have fallen dramatically but what it has done is it created  
3 a missing money problem that was concentrated in gas-fired  
4 competitive generators and now it has expanded it to the  
5 whole rest of the marketplace.

6           So I think there's a danger in concluding that  
7 natural gas prices are creating this creative destruction  
8 that we see with these plant closures because I think  
9 instead we are seeing a distorted, uneconomic set of  
10 retirements.

11           MR. QUINN: I see that but I want to make sure  
12 that I get to the Commissioners, so Commissioners questions?

13           CHAIRMAN LA FLEUR: Thank you. I want to take  
14 the conversation a little further out in time and broader  
15 while I have my Genius Bar here. Because I have to say I  
16 have been very focused in the last day and a half and in the  
17 last since February 4th with the short-term.

18           What do I do the day we get quorum? What about  
19 the hundreds of backed up orders? What about the dozens of  
20 rule-makings? What do we do about this? What do we do that  
21 day? What do we put out? What do we do?

22           But these decisions are going to have long tails  
23 and just a few things -- I want to make sure that if we  
24 launch the RTOs and the stakeholders on a process you know,  
25 we think big enough. And a couple of the things that are

1 kind of swirling in my mind just to set up the question --  
2 the first is that all of the New England states, New York  
3 and four of the PJM states have carbon goals.

4           In most cases 80% by 2050 that could make a real  
5 long-term change in the profile. So you know, we are  
6 talking about gas or nuclear or whatever but there are other  
7 types of technologies here. I'm trying to figure out if the  
8 reason we hear about the renewables needing long-term  
9 contracts is that because they are new and fledgling or is  
10 it just something different about the whole way their  
11 structure of when you spend the money, you know, you spend  
12 it all up front and you don't have fuel.

13           And if so, does that mean we have to do something  
14 different with the ways the markets attract capital? And  
15 also, California I mean we moved past worrying about nukes  
16 in California which obviously they aren't but the gas plants  
17 are losing money because of the duck curve and the duck is  
18 getting deeper.

19           And so I just want to be sure we don't solve like  
20 today's problem here only just in time for pushing forward  
21 another problem. So you all have given a lot of thoughts  
22 and you know the trajectory of how we got here. What kind  
23 of challenge should we be giving to the markets for that  
24 longer term and I just want to say from the start I know  
25 that pricing carbon makes a lot of sense. I hectorated on

1 RGGI yesterday and had very little uptake on wanting to use  
2 that to solve the problem for various state reasons that are  
3 very real.

4           And so beyond just pricing carbon even though  
5 that might be the right thing, are there other  
6 accommodations we should be making in the markets?  
7 Capacity, energy, ancillary services that we need to start  
8 now to get to the future?

9           MR. SHANKER: Actually this sort of meshes in  
10 with the last -- what I was going to follow-up with before  
11 and Larry's comments, it's worth looking at. All of the  
12 market monitors have a good display using the levelized  
13 entry cost relative margin, net revenue analyses and I don't  
14 want to say anyone is rolling in money, we are seeing the  
15 gas units finally exceeding in the option revenues and net  
16 energy margins at the levelized cost of entry.

17           This has crept up a little bit. It used to be  
18 impossible and if you do indeed take a 10 or a 15 year view  
19 it's dismal. The last three or four years the margins are  
20 there even with the lower gas prices.

21           Part of the and the lead-in, that is a lead-in  
22 part of the security as a proxy for a plant is the  
23 investment community to some extent, there are no changes to  
24 that uniform and I'm sure you would find people that would  
25 disagree with this.

1           But the institutional stability of the market  
2 design is part of the asset that's being invested and if it  
3 is unpredictable, if it is being able to be manipulated to  
4 be biased, to be overturned by state action priced out by a  
5 whole variety of things then contracts probably are the only  
6 way you could form capital.

7           If you fix those things and part of it is the  
8 carbon fix, part of it is the sanctity of law in the rules,  
9 you know stability of the rules -- then when people are  
10 buying and we are starting to see a little of that and we  
11 saw that and I think it has actually gone up and down just  
12 in the three or four year window around gas -- then you may  
13 see real merchant activities and you may see it in the clean  
14 energy area, particularly given the incentives we have.

15           CHAIRMAN LA FLEUR: Is that better than reliable  
16 contracts? I conceptually think so but I don't --

17           MR. SHANKER: Well it depends on -- if it is a  
18 bilateral contract you knew and you have to clear the market  
19 and you have to have these attributes and then we are back  
20 to Nazarian and Solomon type issues in giving those  
21 attributes.

22           You are saying -- somebody says I want to buy "x"  
23 megawatts of the cheapest power I can get or the cheapest  
24 clean power I can get but it is not pulling on the  
25 externals. It is meeting our qualifications, then there is

1 no reason it wouldn't occur.

2 But the basic support mechanism is that the  
3 design itself is reasonable, stable and compensatory and we  
4 are starting to see that but for the environmental. We are  
5 starting to see some of that come into play within PJM.

6 CHAIRMAN LA FLEUR: You mean it is just starting  
7 to work?

8 MR. SHANKER: No, I think it's the environmental  
9 that has to catch up and think it.

10 CHAIRMAN LA FLEUR: Oh okay.

11 MR. SHANKER: We will go into that -- I'll give  
12 you a side story about California pricing and my home  
13 generator later but it will emphasize why you don't want to  
14 do some of these things.

15 MR. QUINN: I'll just go down the row, Sue?

16 MS. TIERNEY: Well I do have to say another joke.  
17 If you had hoped that you would get the vacancies filled on  
18 this Commission you have to hope nobody is watching that  
19 because they are going to get scared off about taking the  
20 job.

21 Okay so just roll back those tapes -- so a couple  
22 of things. I believe everything I have seen about  
23 renewables coming in through bilateral contracts is  
24 consistent with what Michael Polsky said.

25 You see that at various scales of renewables that

1 that's the case and in large part that is because financiers  
2 don't provide monetary value in the deal for RECS. So if  
3 you are basing it on long-term energy prices they may not  
4 support the initial capital investment.

5           So there is a lot of sound reason why renewables,  
6 except in a very large company with a very large balance  
7 sheet is going to be delving out some urgent ones. So fast  
8 forward -- how many years do we want to go out, 20?

9           CHAIRMAN LA FLEUR: Whatever you think made  
10 sense. These resources that we are trying to attract  
11 capital for are going to be around longer than me for sure,  
12 I mean decades.

13           MR. TIERNEY: Yeah, God, longer than me for sure  
14 then. So 10 to 20 years you see if states stay on the path  
15 that they have adopted and if we believe that climate change  
16 is actually real which I do then we are likely to see in  
17 this 10 to 20 years not very many carbon capture and  
18 sequestration projects, not very many advanced nukes however  
19 improved they may become with different business models and  
20 other things.

21           In that time frame it is unlikely from what I  
22 read. And that world will require a lot of capital  
23 intensive facilities, storage, renewable energy, zero  
24 variable costs for the most part, net grid to move delivery  
25 systems as well as long-distance transmission so it's

1 capital cost, no variable cost to associate with grid  
2 improvements.

3           And natural gas plants that will have very low  
4 capacity factors because of integrating renewables and so  
5 keeping those plants online without a lot of revenue flows  
6 from energy markets, to me that leads me to think that they  
7 are eventually going to need long-term -- some year  
8 contracts to stay online when they might otherwise excuse me  
9 and I still have this water here.

10           CHAIRMAN LA FLEUR: Do you think we will ever see  
11 method pricing in the markets for them like some kind of  
12 service like we do with tele-com?

13           MS. TIERNEY: Yes, especially focused on we are  
14 renting you right now to stay around so yes and I'll stop  
15 there.

16           MR. STODDARD: Let me pick up because I agree  
17 wholeheartedly and I would like to put some focus on that.  
18 And I'll take a page out of Professor Hogan's here -- this  
19 is about getting pricing right in the energy market. We  
20 have got to do that. Because we are moving to a future  
21 assuming that we see where we are going, we are by and large  
22 on a typical hour we will have nothing setting the clearing  
23 price above zero.

24           We will have a lot of renewable energy, maybe  
25 some nukes still left or a few new ones getting built in

1 some regions and so we have to have really good pricing so  
2 that storage units are able to know when to absorb energy  
3 and when to put it back in.

4           We need to have good pricing so that demand side  
5 can become an active participant. This is a weird market,  
6 it is one of the very few in the world where we take demand  
7 as given, that's going to be not for price responsive.  
8 That's not how markets work. Markets usually are two sides  
9 of the scissor not just one.

10           So we will do better by having good pricing and  
11 letting that get down into the retail rates. And maybe my  
12 nephew will work with your brethren at the states so that  
13 more customers can see where we are and use the internet of  
14 things so that smart, electric vehicle charging, other  
15 changes can really adapt to integrate renewables --  
16 intermittent renewables more effectively and improve grid  
17 reliability.

18           And that will solve the duck curve. The duck  
19 curve is a sign of pricing failures in California. Not to  
20 be that there are people -- roomfuls of people at Calpine  
21 trying to figure out how to waste electricity. That is --  
22 there ought to be a way of storing it or shifting demand to  
23 use more productively in the middle of the day.

24           The contracts are as correctly diagnosed symptom  
25 of lack of institutional confidence. It's also in many

1 states a lack of a bilateral contract party, restructured  
2 states, most of the load is served by standard offer which  
3 is a 6 month -- 1 year, sometimes 3 year product.

4           These people cannot write contracts that will  
5 cause a plant to come onboard. So the capacity market  
6 construct at least in New England was built with a long-term  
7 contract implicit in it to stand in for the fact that the  
8 New England states with the exception of Vermont have all  
9 restructured and the utilities who might write contracts  
10 don't have a load serving obligation any longer.

11           MR. NEWELL: Well I very, very much agree that in  
12 the long-term when you get to very high levels of renewable  
13 penetration that the Northeast markets are not close to the  
14 price formation is the most important for all of the reasons  
15 that Robert described and I'm sure Bill will tell you.

16           As for your specific question about what's  
17 different about renewables -- so they are different. I mean  
18 the nature of their costs it's all capital so compared to a  
19 gas plant, even if it has similar you know levelized cost of  
20 energy, a smaller amount of capital -- a lot of that is  
21 variable and variable that is correlated with the market  
22 prices so that makes it inherently less risky.

23           So that's one. The other is as you mentioned  
24 Robert with the lack of institutional confidence so if a  
25 large amount of their value is going to be captured from the

1 value of the clean energy attributes -- so for example if I  
2 have a \$20.00 REC that might be a third of their all in  
3 revenues or more.

4 And there's going to be perceived a huge amount  
5 of regulatory risk around that.

6 CHAIRMAN LA FLEUR: But I mean if they don't make  
7 a lot of -- if they don't have a lot of variable costs  
8 because the energy market -- I mean a lot of the markets  
9 were designed around that gas front on the margin whatever,  
10 if they don't have a lot of variable costs and it is all up  
11 front doesn't that mean you either need a really good  
12 capacity market that's actually going to pay them or  
13 contracts?

14 MR. NEWELL: And I'll be brief on this I'm sure  
15 Bill can say it better but it is not going to be true if the  
16 price is zero all of the time. If you really have price  
17 formation right both for energy and all of the other  
18 services, maybe you need a ramping product there will be a  
19 lot of other on zero value and especially again if storage  
20 and demand are in place.

21 Again that becomes an issue when you are at much  
22 higher levels of penetration. I mean California is already  
23 there but I don't think the Northeast is that close to that  
24 being fundamentally the issue. I do think but back to why  
25 renewables are different in terms of investing and you

1 mentioned long-term contracts.

2           That of course, is a way to deal with the  
3 regulatory stability but I would urge thinking about -- well  
4 that regulative storage stability is important. But also  
5 thinking about the product definition and market so you  
6 don't necessarily have to have a long-term contract, a PPA  
7 for the entire output -- it could be like in New York it's  
8 just a REC, so I think even more focused than that on the  
9 clean energy value if you had some way of locking in an  
10 effective carbon price that they get the value of.

11           You know and it is still nothing to say long-term  
12 contracts, you could have multi-lateral options that have  
13 longer term products. I mean so there is a lot of possible  
14 ways.

15           MR. MAKOVICH: So to answer the question about  
16 how will states tackle this challenge of meeting 40%  
17 reductions as I think somebody said about New York by 2030  
18 or greater kind of targets.

19           I think that if the market prices are correct I  
20 think and that is the importance as I mentioned of getting a  
21 good sense for what would be the least cost pathway if you  
22 had a charge on CO2 emissions and you did away with all of  
23 these subsidies and mandates and what you would find from  
24 the research I have done is that a large part of getting  
25 there would involve an increase in consumption efficiency

1 but is primary by incorporating that CO2 charge in the  
2 retail price and less so from rate-payer funded efficiency  
3 programs -- that you would get the incentive to continue to  
4 run the nuclear plants, to maintain a fairly large base load  
5 of non-CO2 emitting nuke and hydro.

6           There is an optimal market efficient amount of  
7 renewables that come about and the price signals will tell  
8 you if renewables make money or not. There is still room  
9 and a necessity for some fossil fuels to give you the load  
10 following capability you need to integrate those renewables.

11           And there would be actually fairly little storage  
12 given the cost and performance of existing storage. But  
13 again if storage is going to make it in the marketplace it  
14 has to beat the economics of meeting the ups and downs in  
15 load with peaking and cycling units.

16           And until the storage costs and performance can  
17 outperform that it is not going to be economic to  
18 incorporate into the marketplace. And so the price signals  
19 are there -- the same price signals that will pay for the  
20 flexibility on load following units are the price signals  
21 that will get you a sufficient amount of storage with the  
22 only observation that if storage does become very economic,  
23 it actually advantages high utilization of power plants more  
24 so than low utilization intermittent technologies if you are  
25 optimizing the whole system.

1           But having a sense of what that looks like is  
2 going to tip you off to when you see state policies that are  
3 trying to achieve those reductions with a very different  
4 prescription that's where you are going to have a lot of  
5 market distortions.

6           MR. HOGAN: The long run and then there's the  
7 really long run. The one thing we know about long, long run  
8 of this problem is that the efficient solution in theory and  
9 I think ultimately we will get there is we are going to have  
10 a common price of carbon in the globe, that's the ultimate  
11 for problem and the quantity reduction in every continent,  
12 nation, state, county, city will be different. So we are  
13 just characterizing it so it can't be true that the right  
14 way to formulate the problem is a 50% reduction or an 80%  
15 reduction unless you go all the way to 100% and you get an  
16 end point kind of story.

17           So as soon as people start coming along and  
18 proposing things you should always be translating this back  
19 into what does this mean in terms of the cost and the  
20 implicit cost of carbon and does this proposal make sense in  
21 that context or is it some aberration that is going to go  
22 away?

23           So in California we have now simultaneously  
24 regulations -- can we talk about California -- is that legal  
25 here? We have regulations in California for the Clean Fuel

1 Standard where they actually have a tradable item that you  
2 could go look up the price of carbon and the price of carbon  
3 backed, for carbon dioxide was over \$100.00 a ton the last  
4 time I looked which was a couple of weeks ago.

5           They have other cap and trade programs where the  
6 price of carbon is about \$12.00 per ton. This can't make  
7 sense, simultaneously that we are doing this kind of  
8 proposal so you should be evaluating it always in terms of  
9 that and then putting these things into the framework.

10           And then when people want you to accommodate if  
11 the answer is make the market more efficient and get the  
12 pricing to reflect the costs of it, this becomes economic in  
13 a way that's consistent with that then that's a good idea.

14           If the request is accommodate by doing something  
15 which decreases the efficiency of the markets I have  
16 responsibility for in order to make you happy that's a bad  
17 idea and so you should say no. And so the benchmark would  
18 always be the cost of carbon and as I understand the  
19 administration's position is that this is now your  
20 responsibility to figure out this number because they just  
21 got rid of the inner agency working group that was  
22 responsible for doing this but their work was quite good and  
23 you can use that you know, round numbers -- and the agencies  
24 are supposed to figure out this themselves when they are  
25 supposed to be guidance so you should accept this

1 opportunity and use that as your standard.

2           And when people come in to do things which sound  
3 like the Clean Fuel Standard in California you should say we  
4 are not going to accommodate that. You know if you want to  
5 do that I can't stop you but that's another thing -- but you  
6 should be very encouraging of things which are consistent  
7 with the social cost of carbon that you are now responsible  
8 for estimating.

9           MR. HAMAL: I always enjoy following Bill, thank  
10 you. I'm not going to look that far out into the future. I  
11 would like to look to 2021 at the Third Quadrennial Capacity  
12 Market Technical Conference.

13           CHAIRMAN LA FLEUR: And there still will be no  
14 quorum.

15           MR. HAMAL: Let's hope and there is a quorum.

16           COMMISSIONER HONORABLE: Cheryl will be Chair.

17           MR. HAMAL: I remember Commissioner Clark talking  
18 about how he said he spent a quarter of his time on this  
19 issue and I think that's going to continue. I mean not for  
20 him obviously. But I think that I don't hear a fundamental  
21 driver to an efficient price coming out of this market that  
22 is purely competitive that we can step back away from the  
23 rules.

24           I think this process itself is entirely dependent  
25 on decisions made at this Commission to do tweaks necessary

1 to get what we want. We know what we want -- we have to  
2 keep tweaking it to get there.

3 And I think as long as we continue with this  
4 market and this market process that's where we are going to  
5 be for the next 4 years. Now hopefully there are some  
6 changes, hopefully the Hogan is not here.

7 And hopefully it is because -- hopefully it is  
8 late in the day, it is because we have accepted his  
9 proposals and suggestions to price energy more efficiently.  
10 Scarcity pricing -- I think I am totally on board with that.  
11 I am not going to think that he needs to be honored by my  
12 support for that proposal but I think that makes a lot of  
13 sense.

14 I personally don't think that gets us all of the  
15 way there. I think as we think about a market that is going  
16 to be increasingly zero dispatchable cost resources, more  
17 things along those lines stress build on by not a special  
18 duck kind of things.

19 We are having multiple problems coming up. The  
20 job in maintaining reliable markets is getting more  
21 complicated. We just can't keep building a bunch of peakers  
22 to take care of whatever we need both in terms of  
23 responsiveness and rampability and then add the capacity  
24 that we want.

25 So I think we are going to see this Commission

1 struggle with how do you price storage and variability and  
2 things like that and I don't have an answer for all of those  
3 pieces but I think one thing that makes sense to me on a  
4 common sense standpoint is you don't layer on a layer of  
5 environmental rules that are run by these same markets at  
6 the same time, that just makes the problem more  
7 complicated.

8           People want to price carbon which would be great,  
9 you let them price carbon like RGGI outside of the FERC run  
10 markets. If states want to have decisions to do things  
11 along the lines that we have been talking about to the  
12 maximum extent you let them do that but you don't complicate  
13 the markets themselves.

14           You take what's left turn to capacity markets,  
15 energy markets to make them efficient. Capacity markets  
16 were originally designed -- to otherwise phrase the missing  
17 money -- it's what's left after everything else is taken  
18 care of.

19           We don't need higher prices if we have enough  
20 capacity. We need it only when we need that capacity. The  
21 other thing that I would like to see 4 years from now is  
22 some state or two step up and say what we need to do is  
23 integrate all of these choices into a more bilateral  
24 framework.

25           And what we need to do to do that right is create

1 competition on the buy side. What element can we do to  
2 create buyers within our states who would buy this pure  
3 capacity product? Who could think about carbon emissions,  
4 investments, technology, reliability issues in certain areas  
5 perhaps where it is not being served by the market  
6 themselves and create -- from the states.

7 I don't think you could do this here. I think  
8 the states could adopt that and then what this Commission  
9 will deal with is states who have decided to take the  
10 reliability targets put forward by the RTO's, but take  
11 responsibility for delivering those in a bilateral manner.

12 So that in 2021 we can see if we can get that  
13 adopted, expended at other places so that we are not here  
14 again in 2025.

15 CHAIRMAN LA FLEUR: I'd know that either the town  
16 is burning or the town is simmering or elements of the town  
17 are burning so there are faster things but it is good to  
18 have a sense of the long-term and that was very thought  
19 provoking, thank you.

20 COMMISSIONER HONORABLE: Thank you Genius Bar  
21 it's been great to be informed by you and more importantly I  
22 think in some ways we should have visited with you all first  
23 because you have really helped us get back to the basics. I  
24 think over the last course of this Technical Conference we  
25 have been really looking at where we are and how we need to

1 get to the next place.

2           And we probably need to step back a bit further  
3 to think about how markets operate in the purest sense and  
4 to make sure that we are honoring those core principles and  
5 I want to thank each of you for helping us recall those.

6           And you may have listened in on the last session  
7 -- session IV where we talk a lot about the paths and we  
8 talked quite a bit about attributes that sometimes may or  
9 may not, or should or should not be factored into markets in  
10 terms of pricing.

11           I thought it was an interesting discussion  
12 because in addition to carbon pricing I also heard someone  
13 say that they thought that maybe we should be taking into  
14 account reliability, resilience, fuel diversity and I also  
15 heard someone say no, the market should already be doing  
16 that.

17           So while we have you all and you are free for the  
18 moment I want to ask your thoughts about that. It seems  
19 like a fundamental question to some -- you may have  
20 differences of opinion but I would like to know that, that's  
21 important.

22           To me as a regulator as long as I am here with  
23 Cheryl, but more importantly we are building a record upon  
24 which our quorum of Commissioners can consider this issue  
25 and your opinions will be helpful, that's question number 1

1 and then I have another 4, yes Mr. Stoddard I have one for  
2 you after we get done with this one.

3 MR. SHANKER: FERC will very narrowly go to the  
4 reliability attribute. I think Andy Ott's answer was  
5 correct. If the security constraint dispatch and commitment  
6 those are constraints -- one of the things that strikes me  
7 as a little comical that maybe points this out is people  
8 talk about well we will build a whole bunch more  
9 transmission and become more reliable.

10 But that isn't really what happens. It expands  
11 the capacity of the system, it runs in the same reliability  
12 standards which is what I think Andy was trying to explain,  
13 we have more capacity to move things.

14 But we move them to the limit and we believe that  
15 the limit is appropriate. Okay now you may argue that the  
16 way we set the M minus 1 or M minus 1 minus 1 or the various  
17 contingency limits is wrong and they need to be more  
18 conservative.

19 But given those reliability attribute is fixed  
20 and everything we do is an adjustment to accommodate or  
21 state within those constraints. So if his example or maybe  
22 California is a good example here. California needs more  
23 ramping, I mean that's one of the flexible capacity issues  
24 that have been before the Commission.

25 You don't not have it and be unreliable. You

1 know that that is going to be a constraint that you have to  
2 keep the Ace at regulation within certain bounds and so they  
3 will commit more resources. And that may mean they buy them  
4 elsewhere or they adjust other operating procedures or over  
5 commit -- I have more units than minimum capacity to give  
6 themselves more upside ramp.

7 But they do it and those are because they are all  
8 structured as constraints.

9 MR. STODDARD: So recognizing we are here to talk  
10 about integrating state policy in the markets I think the  
11 challenge I have with resilience or other security goals --  
12 I don't think properly at least in the multi-state RTOs that  
13 states ought to be focused on those things.

14 I think those are the proper purview of the RTO,  
15 of the stakeholder process, of review by technical folk.  
16 When I see states within these multi-state RTOs talk about  
17 fuel diversity or et cetera it typically is a jobs program  
18 where they have a particular goal, a particular plant or  
19 something they want in their state and so they are going to  
20 push that.

21 I -- again I'll put on my reading glasses as  
22 someone said in the previous session and wonder whether the  
23 claim of resiliency at a state-level is actually a  
24 legitimate policy goal.

25 MR. QUINN: Sue?

1           MS. TIERNEY: I disagree with what my colleague  
2 just said. Resiliency is different than reliability in my  
3 view and I'm informed in making these remarks just now by  
4 many to many hours spend on the National Academy of Sciences  
5 Panel on resiliency of the grid.

6           And we will be finalizing our report so you will  
7 get to read all about it -- but resiliency is really being  
8 ready for an event, you know mutual assistance agreements.  
9 Making sure that you have got the hardware and software to  
10 identify where there is an outage.

11           Events would be in this case a terror attack, a  
12 physical hardware hit -- cyber-attacks, extreme weather  
13 events. So before the event do you have the capabilities to  
14 address it? During the event are you managing through it in  
15 a safe way? Is your system going to be ok?

16           And then after the event are you recovering the  
17 operation of the system as fast as you can to provide access  
18 to services?

19           States are extremely concerned about the  
20 assurance of critical services, hospitals, sewage, water  
21 treatment, and a variety of other things during events like  
22 Hurricane Sandy, Katrina.

23           So states, indeed are working a lot on resiliency  
24 issues, because of this problem of assuring that people  
25 don't die and are not harmed during all of that. So I do

1 think that there is going to be increasing attention because  
2 of cyber -- because of extreme weather events but I don't  
3 know how you monetize those things and I say that after  
4 spending all of those hours around the table on that.

5 I don't think we are -- we are just at the cusp  
6 of doing metrics to identify what is a resilient system.  
7 That's different than you know all the retail reliability  
8 things we have about outage, frequency and number of minutes  
9 you are out. These are really different things.

10 The resiliency I think is very hard, it would  
11 surprise me if early on you see markets for resiliency but I  
12 do think we are going to see a lot of resiliency but that  
13 will be -- that may involve a state ordering a micro-grid  
14 and turbine and a variety of other things in a particular  
15 place and it is out of market and for reasons that they  
16 want.

17 So I think it does come up as an issue that you  
18 will need to think about.

19 MR. QUINN: Thank you, Larry and then Cliff.

20 MR. MAKOVICH: Yes Susan makes a good point about  
21 defining resiliency because it is such a complex issue but  
22 to Colette's point I think we do see that we have got market  
23 distortions right now that are reducing the diversity in our  
24 supply portfolio.

25 And the idea here isn't to maximize diversity,

1 have equal shares of all of the different types of  
2 generating resources but the market tends to produce a nice  
3 mix of fuels and technologies and we have got a distortion  
4 now that seems to be moving us to too many CT's not enough  
5 base load and a really increasing reliance on natural gas  
6 and that's what has got people concerned.

7           Natural gas is a fuel that tends to have  
8 multi-year cycles, periodic extreme volatility and some  
9 deliverability problems when you have some weather events  
10 like the polar vortex and so forth.

11           We also have to worry about things like  
12 hurricanes and cyber-attacks and physical attacks on the gas  
13 infrastructure and if we get some disturbing seismic  
14 activity in Oklahoma that led to a year-long moratorium on  
15 fracking you could have a real pinch point on fuel supply to  
16 the power sector.

17           So I think this resilience issue is big. I think  
18 that it is getting triggered by the fact that people are  
19 just getting nervous that we seem to have all of our eggs  
20 increasingly in one basket which is natural gas.

21           MR. HAMAL: I thought I heard a slightly  
22 different question and maybe I got that wrong. But whether  
23 we should create a different product with a different  
24 attribute in the system -- resiliency might be mean ramping  
25 or some other quick start capability or something like that.

1           I don't have a full answer. I would like to put  
2 my thumb on the scale. I think as much as I think  
3 competition is great I think that we shouldn't rush to kind  
4 of create a competitive market and something new that we  
5 haven't need up until now.

6           I think if it is needed, it is truly needed the  
7 cost of service paradigm is a way to get it built and get it  
8 running for a while until we make sure we have enough  
9 understanding of the vibrancy of this extra attribute before  
10 we build that.

11           I also think that given the kind of stuff we  
12 talked about for two days now showing the different dynamics  
13 that are taking place in this market gives a little bit  
14 extra cover for cost of service of those or other  
15 attributes.

16           There's a lot going on here driven by different  
17 factors which would lean away from trying to create a  
18 special kind of physical characteristic market.

19           MR. NEWELL: Thanks, so I'll skip some of the  
20 ones -- attributes that others have already discussed a lot  
21 but one obvious one is resource adequacy aspect of  
22 reliability -- that is very much already covered by the  
23 market location and let's see, flexibility.

24           We may need new kinds of flexibility but that is  
25 very much a challenge for market design. At Brattle Group

1 we talk about developing what is market design 3.0 going to  
2 look like for a future that does have all of the zero  
3 variable cost and intermittent resources online and you may  
4 need new parts. That is a market design question not a  
5 state planning question -- they can't figure it out as well  
6 or do it as efficiently.

7           As for we are hearing a lot about base load  
8 lately -- that is not an intrinsic value and the energy  
9 market sorts out how much you need base load versus peaking,  
10 sure I will agree there is some distortions to the price for  
11 a lot of reasons and not just from renewables so it is not  
12 like we have that perfect but the energy market is the place  
13 to sort that out -- not with a different product.

14           And fuel diversity too I hear that a lot from  
15 states and sure that matters but it almost never very well  
16 defined and so I sometimes do wonder if it is being used as  
17 a proxy for other objectives.

18           And you hear this in places where the fuel  
19 diversity is improving and by the way I have worked for  
20 generators a lot evaluating investments or aspects of their  
21 portfolio. When you look at a non-gas generator they think  
22 a lot about the possible value if gas prices go up.

23           So economically the contrarian position is real  
24 and I am skeptical that the market -- I think the market  
25 does to a large degree if you are asking about fuel

1 diversity from an economic standpoint and from a reliability  
2 standpoint as well because and only to the extent that the  
3 markets have the right scarcity pricing and/or capacity  
4 performance which you know really puts the economic stakes  
5 of the value of lost load on the resource suppliers.

6           So you see for example a lot of back up oil  
7 generation.

8           MR. SHANKER: I'm not sure if this fits into the  
9 paradigm that we have been using so far. Excuse me I take  
10 some medication it makes me all hoarse. But there's an  
11 information transfer on pricing that is underneath some of  
12 this and Bill goes to get the price right.

13           Assume we have the price right in the wholesale  
14 market and we know there is a communication problem at  
15 retail. It's that lack of communication that is creating  
16 the demand for some of these attributes. It's the mismatch  
17 of now I can talk about my silly tariff in California.

18           I'm want something called smart rate which is a  
19 misnomer. At the low point of the duck curve where last  
20 year I was looking at LNPs around \$60.00 or something now  
21 probably make it into the negative. I will see \$1,000  
22 retail rate. I have a very inefficient generator it's about  
23 \$13,000 heat rate and I can run \$20.00 retail gas and make  
24 \$260.00 power dome that's dirty and it's not that dirty but  
25 it is a gas generator.

1           And I'm messing up the net load, I'm making it  
2 worse from the ISOs making the duck curve worse and so I  
3 don't know what the attribute -- we talked about getting the  
4 prices right but it is the communications link.

5           And I have never really thought about it until  
6 this discussion of how do you -- we always say the states  
7 have to get the prices right but is there an attribute that  
8 we consider at FERC that pushes that in the end to create a  
9 mandate? Because that mis-match is horrendous -- generating  
10 \$260.00 power, marginal costs varied load negative and  
11 retain at 1,000 tells you that you are going to force  
12 operating problems.

13           I mean it's just the exact kind of configuration  
14 of the whole bad price information that leads to bad  
15 dispatch and operations. So some of these little operating  
16 attributes that you are concerned about are derivative of  
17 the communications and pricing and as Bill says get the  
18 pricing right.

19           But this is a really macro one because it is an  
20 issue that is coming before you in terms of things like  
21 flexibility. If pricing was better in this context the need  
22 for flexibility would be way lower I mean much lower.

23           If the carbon pricing was transparent the level  
24 -- rather to Bill's comment about I don't need 80%, I don't  
25 need 50% or 100% I just need to see the pricing on the

1 carbon attribute and maybe that curve won't look like that.

2           So we may need another name for it and somebody  
3 else can suggest it but that information gap is an attribute  
4 that we need to fix more than this same transparent  
5 wholesale prices, it's the communication and pushing it  
6 through the system better.

7           COMMISSIONER HONORABLE: Thank you for mentioning  
8 that because that isn't something we have touched upon and  
9 it could also factor in an important level of coordination  
10 that is necessary between the wholesale and retail.

11           We sometimes do a bit of finger-pointing, but  
12 maybe if we were working more in tandem -- I understand the  
13 point you are trying to make.

14           In the interest of time I know everyone needs a  
15 break and I do too but I wanted to ask Mr. Stoddard because  
16 in your pre-filed comments you talked about forward markets  
17 and the clipper approach and someone else mentioned it in  
18 the course of our -- the presentations and also I recall  
19 that National Grid referenced a forward clean energy market.

20           And as we are thinking broadly about potential  
21 solutions and maybe what some of the keys might be I wanted  
22 to ask you to shed a little light on that for the record.  
23 And if anyone had thoughts about it, you are standing  
24 between Mr. Stoddard and me and a break but now is the time,  
25 thank you.

1           MR. STODDARD: I'll try to be brief but  
2 persuasive. We have spent a lot of time in New England in  
3 the IMAPP process and a lot of the questions sort of  
4 surfaced over the past day and a half have been surfaced  
5 there and discussed and I think some very useful thinking  
6 going on.

7           I originally walked in with the idea of we ought  
8 to put carbon in dispatch and that was all we needed. And  
9 as I worked with stakeholders and the states and you know  
10 many conversations with lots of people it became clear that  
11 there are some flaws in trying to implement the carbon, not  
12 least of which is the state's strong resistance to having a  
13 federal thumb on the scale of carbon.

14           But there was a real need for something so the  
15 other challenge again from the states is a very clear cost  
16 causation linkage. They wanted to make sure that if New  
17 Hampshire doesn't want to purchase any renewable -- more  
18 renewables, they are not getting any cost socialization.

19           Now there's an argument that says they ought to  
20 be bearing it because they are getting some of the benefits  
21 but again for the sake of trying to actually get something  
22 past through the stakeholder process, we were looking for  
23 ways of having a clean 1 to 1 allocation.

24           If you said you wanted to buy a product and we  
25 figured out what the cost of that product is and charge it

1 to you. So the product we developed over time and we I  
2 should mention was the core of the idea came from two  
3 economists Kathleen Spee's and Judy Chang -- I've been  
4 working on the edges to refine it and I took perhaps the  
5 opportunity prematurely to name it -- it needed a name.

6 But Flipper is a good old Yankee term so we  
7 settled on that for the moment. Something that mimics a  
8 carbon adder but only for the unit that have it -- now that  
9 produces its own inefficiencies that we don't get the  
10 benefits of dispatch but realistically ISO New England  
11 there's very little re-ordering of the dispatch merit of  
12 whether it will occur -- it's mostly a gas state.

13 The key property is that it is much like a REC  
14 but that the value in any hour is not fixed and flat but  
15 depends on the marginal carbon intensity in that hour  
16 relative to a benchmark that is established as part of the  
17 auction.

18 So when the marginal carbon intensity is zero it  
19 is worthless. So if you are running your windmill overnight  
20 and producing lots of power but you are not off-setting any  
21 carbon, you are not getting paid.

22 Likewise if you are a storage unit you have the  
23 opportunity of picking up those free variable incentives  
24 overnight with their energy and deploying them in the middle  
25 of the day when the carbon offset is very high.

1           So this creates a real value for storage or for  
2 hydro that can choose to vary its dispatch. It creates a  
3 carbon-like price but particularly for units that are able  
4 to respond to carbon and it helps sort out which units are  
5 actually doing the best in terms of off-setting.

6           We tend to think of a megawatt hour from a wind  
7 farm in Maine as being equivalent to a megawatt hour from a  
8 wind farm off Nantucket or a solar panel in Hartford and  
9 they are not -- in terms of the actual carbon offset there's  
10 a real difference.

11           And that gets priced into this clipper product.  
12 So it has some of the desirable attributes of the carbon  
13 adder but because the demand for these is set by state  
14 policies -- states bid in a quality price pair.

15           And ISO is acting in effect as an auctioneer and  
16 then as an administrator to calculate what the cost of it is  
17 and then they assign the cost back to the people whose bids  
18 cleared. So it keeps a very tight link between cost  
19 causation and cost allocation.

20           It achieves many of the benefits of the carbon  
21 adder in dispatch, particularly for units that are able to  
22 do it and it helps sort renewables into a sensible metric  
23 which is a carbon offset rather than just a megawatt hour.

24           MR. QUINN: Alright this has been a great  
25 conversation. We really appreciate all of the panelists we

1 will take a 10 minute break and try to be back here by about  
2 8 minutes to, thank you all.

3 (RECESS.)

4 PANEL 2

5 MR. QUINN: Alright we would like  
6 to get going. We have a couple of time constraints that we  
7 are managing for the end of the day so we would really like  
8 folks to allow us to get this last panel going.

9 Alright first off thanks to our panel for going  
10 last, staying around all day, having to listen actively  
11 because we might ask you about what you heard and following  
12 the Genius Bar is troublesome.

13 Think about how smart you must be that you are  
14 going after the geniuses. So again I very much appreciate  
15 all of you staying the whole time. I appreciate the folks  
16 that are still watching and for staying engaged.

17 We are at our last session of the day, last panel  
18 of the day, I'm very pleased to welcome Jeffrey Bentz, the  
19 Director of Analysis for the New England States Committee on  
20 Electricity.

21 Stu Bresler, Senior Vice President PJM, Rana  
22 Mukerji, Senior Vice President of Market Structure at New  
23 York ISO, Scott Weiner who is the Deputy of Markets and  
24 Innovation at the New York State Department of Public  
25 Service.

1                   Matthew White the Chief Economist at ISO New  
2 England and Vice Chairman Andrew Place from the Pennsylvania  
3 Public Utilities Commission.

4                   We had prepared as on a notice level a set of  
5 detailed questions and even contemplated asking you those  
6 set of detailed questions but we have had a lot of  
7 discussion today and thought it might be most productive to  
8 ask you all and especially since it is the last panel of the  
9 day and purposely selected so we are talking to our market  
10 operators and our companions and states to get a sense from  
11 you at a high level what you heard.

12                   You know one or two takeaways for you things that  
13 you heard and you want to make sure that we heard. Another  
14 go at timing, you know, how either what is your timing or  
15 what should our timing be and then last is there anything  
16 that we can do to help you know, I'll reference Ronald  
17 Reagan -- "We are from the government and we are here to  
18 help."

19                   So what is it that we the government can do for  
20 you to help move this process along? And you all can  
21 collect your thoughts it kind of looked like you were ready  
22 to kind of go first, please.

23                   MR. WEINER: Thank you and again thank you for  
24 the opportunity to participate. This has been a very  
25 important, very interesting couple of days.

1           Let me first respond to the question of timing.  
2   Go back to the construct of looking for a couple of  
3   principles and provide some thoughts around that and  
4   literally just a couple or three principles and then answer  
5   the question of how I think you might be able to help.

6           And much of this you have heard yesterday but I  
7   appreciate the opportunity to repeat it. In terms of timing  
8   we all recognize -- the panels recognize and I know you all  
9   recognize that things are happening as we speak and that's  
10  particularly the case in New York.

11           And in New York we in fact not only believe but  
12  think that we have demonstrated that we are addressing a  
13  number of the issues that were discussed today and  
14  yesterday, but particularly today.

15           REV represents we think one iteration of what the  
16  future paradigm is going to look like. There are many other  
17  states around the country that are taking pieces of what we  
18  are doing, they are approaching it differently. They are  
19  responding to their own unique jurisdictional situation.

20           But the fact of the matter or the three forces  
21  that brought REV together are going to bring other change  
22  fairly quickly -- change always occurs quicker than we think  
23  it is going to and that is a customer focused policy --  
24  number 1.

25           Number 2 -- concern about system efficiency and

1 improving system efficiency and the third -- the enabling  
2 aspect of emerging technology and those things bring us  
3 everything that allows us three or four years ago to start  
4 the REV initiative.

5           So we are looking at a system and we are taking  
6 steps to in fact implement a system that has a new utility  
7 business model as a different role for LSEs in general.

8           It activates load as a resource. It is building  
9 out a dynamic trans-active response of distribution grid --  
10 all of which is going to come into the operation of the  
11 marketplace as we thought about it in New York, and my  
12 colleague Rana will talk about that.

13           So principle number 1 -- it's not the same old  
14 grid. I used the phrase yesterday bolting on -- I think  
15 anything we do, anything this Commission directs the  
16 RTO/ISOs to do should take into cognizance that we are  
17 looking to the future -- not just because the life of the  
18 assets that are going to be placed but because of the local  
19 market designs and the state policies that are taking place  
20 today and that those are going to be there for the future.

21           Number 2 -- I want to echo Cliff's point about  
22 the multiplicity of markets. Sometimes the language that we  
23 all use tends to conflate concepts. So the term market can  
24 simultaneously mean the federally FERC administered markets.  
25 It might mean markets in general.

1           But as we think about markets as a whole there is  
2 obviously a multiplicity of them and some of them include  
3 state-level markets. They include RPS procedure which is a  
4 competitive procurement. It is going to involve a  
5 distribution level market.

6           I mentioned yesterday the Commission adopted a  
7 new methodology to replace net metering that is going to --  
8 in fact has already started valuing and compensating DER on  
9 a much different basis all centered on the focus of accuracy  
10 and accurate pricing all to the point of being able to get  
11 the bill down.

12           It is going to change the operation of the grid.  
13 It is going to change planning, and it is going to be its  
14 own market and we will talk a little bit more about that.  
15 So principle number 2 and I know I am swimming upstream on  
16 this, but I want to again suggest and I understand where the  
17 word accommodate comes from, I understand it has been  
18 institutionalized in some of the New England activities but  
19 I want to suggest that the more effective word is  
20 harmonize.

21           Frankly and I'll say this with my tongue partly  
22 in my cheek New York is not interested in being  
23 accommodated. We are interested in working together as  
24 partners to harmonize the market responsibilities.

25           And I think words can matter and I think if we

1 change the terminology from accommodate to harmonize that  
2 will be very important in terms of setting a tone.

3           So number 3 -- when thinking about state policies  
4 and this is one of the points I want to underscore that came  
5 out of the past two days, state policies are multi-faceted.  
6 They are interconnected.

7           In New York for example when we think about  
8 carbon -- carbon is not ZEC. Carbon is much more than that.  
9 Carbon and our strategy towards carbon as was pointed out  
10 yesterday starts with the state energy plan.

11           It involves the Clean Energy Standard, the Clean  
12 Energy Fund, the value of distributed energy resources. It  
13 involves all of those things. So as we commence later this  
14 week our collective work with the NYISO to look at the plan  
15 that they are developing we are going to be doing it  
16 collectively, collaboratively in the context of the state's  
17 entire carbon program and begin to see how do we harmonize  
18 it. We need to understand how these different programs and  
19 these different policies and these different markets are  
20 going to operate.

21           Right now DER including storage in New York is  
22 going to be compensated through a value stack. And one  
23 element of that value stack is an E-value and that E-value  
24 right now is the price of the REC in New York, the last  
25 public price of a REC in New York.

1           So there is interaction, there's interweaving,  
2 they are interconnected -- that doesn't mean we can't do  
3 things, it just means we have to be cautious about it and  
4 sometimes the focus on one aspect can lose the bigger  
5 picture.

6           Number 4 is federalism -- there's been a lot of  
7 talk about that, cooperative federalism, dual federalism. I  
8 raised it as a state official to say out loud that we  
9 recognize that there are boundaries. We recognize that  
10 there is an exclusive jurisdiction for this Commission and  
11 that it is important and has to be recognized and honored.

12           We too -- as I said in my earlier comments have  
13 our own jurisdiction and if we come at it together to  
14 harmonize there may be some accommodations along the way,  
15 there is going to be compromise along the way but I think it  
16 is an important distinction and that leads into sort of a  
17 related -- I don't know whether this is number 5 or number  
18 4A, but I can't pass up the opportunity to have the  
19 microphone even at this late hour and say one of the  
20 principles we would argue is to change the presumption  
21 around the application to MOPR.

22           Don't assume and put the burden on state policy  
23 to prove what it is not doing. If there's a concern that  
24 state policy is violating that boundary -- and I'm not going  
25 to pretend to define it right now but where that boundary

1 exists -- then establish it.

2 Show it. I sat here today and I heard lots of  
3 people talk about what New York's policies were, what our  
4 policy intentions were with our Clean Energy Standard and  
5 all I can tell you is for the most part everybody was wrong.

6 That matters in litigation, anybody who wants to  
7 know the facts as we assert them can take a look at the  
8 pleading but I think that this change of assumption becomes  
9 very important and sort of is something to consider.

10 And finally in terms of principles I would ask  
11 you to consider taking an approach that we took in our  
12 analysis of valuing DER and say what's at issue again is  
13 accurate pricing. And I think that there is sometimes a  
14 convergence between what a product is and what a market is.

15 There is lots of value that is being brought by  
16 generators into the marketplace. Much of that value is  
17 recognized in one way or another. Some of it is not  
18 recognized yet. Some of it may not even be known yet.

19 And even if it is known we may not know how to  
20 calculate it yet. We don't have the tools to do that. But  
21 the commitment to precise and accurate pricing which will  
22 get better and better and better over time I think will  
23 solve some of the issues that the last panel was talking  
24 about.

25 Lastly in terms of what the Commission can do now

1 I would like to renew my suggestion that the staff convene  
2 an ongoing discussion, not once every 3 years, not once  
3 every year and a half although you are always welcome to  
4 come back to Broadway.

5           But to convene a discussion among yourselves,  
6 among policy makers in the states, the leadership of the  
7 RTOs and ISOs and let's begin to talk about what are the  
8 principles. Undoubtedly the decisions that are made in New  
9 York are a little different than the other regional markets  
10 and we have the advantage and we talked about being a single  
11 state ISO.

12           But there would be enormous value if we can begin  
13 to talk and understand the implications of the policies just  
14 by hammering out the common principles that will be applied  
15 throughout the three regional markets. That we should be  
16 able to do and now we can do on our own today.

17           MR. QUINN: Thanks and I think it's a good idea  
18 to stay in New York Rana?

19           MR. MUKERJI: Thanks for having me and thanks  
20 Commissioners. I think one -- New York is in the forefront  
21 of de-carbonizing the grid and also transitioning to a  
22 distributive future with distributed resources and demand.

23           And the wholesale market is an integral part of  
24 achieving both of those goals which are de-carbonization and  
25 distributed resources. One of the principles and one

1 article is that preserving the revenue adequacy for  
2 resources which are capital at risk in wholesale markets is  
3 a very important principle we must strive for.

4           For the state to reach 50% by 2030 the ability to  
5 calculate it is approximately 9,000 megawatts of solar and  
6 5,000 megawatts of wind which has to come online between now  
7 and 2030.

8           To do that within the markets we have to still  
9 have a significant amount of conventional resources to  
10 balance this intermittent resource. It is not one for one.  
11 Wind has about 20 to 25% contribution to capacity at peak.  
12 Solar has 30 to 40. So if you have 15,000 megawatts -- 14  
13 or 15,000 megawatts of more intermittent resources you would  
14 assume the contribution to peak is about 5,000.

15           You would assume that about 5,000 megawatts or  
16 some amount of megawatts of conventional resources should  
17 and need to retire. But it still would have something to  
18 the tune of 30,000 megawatts of conventional resources which  
19 has capital at risk.

20           Our peak load is around 35,000 which depend on  
21 the market for market signals. So we have to preserve the  
22 revenue adequacy of conventional resources. And how we plan  
23 to do that -- again recognizing the fact that low gas prices  
24 are driving down in for marginal revenues and intermittent  
25 resources have zero marginal cost.

1           We have to look at Bill Hogan's pricing, scarcity  
2 pricing, new services like ramping, start up, load  
3 following. We have to also look at performance components  
4 in the capacity market. So you are going to look at revenue  
5 adequacy of the conventional fleet which has capital at  
6 risk.

7           So that is almost like a pre-requisite to reach  
8 the de-carbonization goal. It is not good enough because if  
9 the New York goal is 50% of energy through renewable  
10 resources if you would like we could inspire the market to  
11 not be a 50% market but 100% market and the market should  
12 drive resource additions which are for all of the resources,  
13 even the renewable ones.

14           So that's what we are working with the state to  
15 harmonize, if you can complement -- this is the study that  
16 we have asked Brattle to help us with which essentially  
17 looks at putting the social cost of carbon in the offer  
18 stack as an input under the offer and it looks very  
19 promising in terms of providing marginal revenues to the  
20 renewable resources, giving a fleet-wide signal, giving  
21 signals to even conventional resources having a better  
22 carbon footprint to perform better, give better locational  
23 signals.

24           And we have find an equitable way of returning  
25 the revenues from the carbon by taking the penalties of

1 carbon penalties back to LSEs. And all of that, it is a  
2 state policy that we are implementing so we have to work in  
3 partnership with the state and we tried to find a way to  
4 harmonize what our program is with the state programs.

5           And one of the things that I want to stress is  
6 that what we have asked Brattle to look at is not instead of  
7 what the state programs are doing it is in addition to. So  
8 if you put -- if you are investigating a social cost of  
9 carbon but we are not saying then you would have to have  
10 less money from REC's or ZEC's or whatever way.

11           For example if the social cost of carbon only  
12 incents inland wind and the state throughout their policy  
13 objectives want to build offshore wind they have to only pay  
14 that premium.

15           I mean we are not questioning what the legitimacy  
16 is of the policy but we are saying that this is the way to  
17 harmonize the de-carbonization goals into the markets. So  
18 there is a lot of work to be done. We want to preserve  
19 revenue adequacy of the cost of resources which have put  
20 capital at risk.

21           We want to make -- we don't want to run a 50%  
22 market, we want to run a 100% market. We want it to be the  
23 market that all resources depend on our market signals for  
24 entry decisions and we will work with the state to achieve  
25 those goals.

1           MR. QUINN: Is there anything that the Commission  
2 can do to help make that process more productive?

3           MR. MUKERJI: Absolutely. You have already you  
4 know started the price formation work. We also would not  
5 need guidance and deadlines it helps the stakeholder process  
6 as everybody noted is long and contentious.

7           Having deadlines works miracles and so it would  
8 -- that would and having clear directives that this is what  
9 you would want us to work on would help.

10           One other thing is that we are also working with  
11 price formation which is critical of some of the state  
12 programs like the REV resources need the locational prices  
13 to actually function to get the prices covered for storage  
14 in the REV resources.

15           So the state also very much applauds our efforts  
16 to give the group the right prices.

17           MR. QUINN: Thank you, Jeff?

18           MR. BENTZ: Thank you, Jeff Bentz from NESCOE as  
19 I'll just tick off a few items here in response and we can  
20 go from there. First of all I do want to clarify something  
21 that someone said -- I think it was Roy Shanker said in the  
22 last panel about Chair Vannoy expressing this opposition to  
23 carbon adder that Maine would consider leaving the grid.

24           He did express an opposition to carbon adder. I  
25 want to be clear that he did not express leaving ISO New

1 England. And on the carbon adder a lot of people in the  
2 last panel talked about Maine opposing it. I want to be  
3 clear that that was a 6 state collective view that's listed  
4 in our April 7th memo to NEPOOL.

5 We listed about 8 different reasons why the  
6 states had concerns with the carbon adder and so I just  
7 don't want all of the pressure going on for Maine. All 6  
8 states stand by those statements about the carbon adder.

9 On the urgency issue you know we see this issue  
10 coming. In New England I will say that about 5 years ago I  
11 was here talking about a renewable exemption. We saw this  
12 problem coming from the state's perspective when the MOPR  
13 was passed.

14 We came down, we tailored -- narrowing tailored a  
15 limited proposal that could accommodate or harmonize, maybe  
16 I'll use a new word here now in the IMAPP process and we  
17 went through a stakeholder process and ISO, NEPOOL, states,  
18 supported this mechanism.

19 Yes it was part of the compromise deal to  
20 implement a sloped demand curve in New England but we saw  
21 that as a mechanism and we still see that as a mechanism  
22 today that will accommodate state policies into competitive  
23 markets. And we can read all the pleadings about why we  
24 think it doesn't harm the market over the long-term et  
25 cetera but I did want to point out that you know that was an

1 agreed upon group stakeholder effort which I think speaks  
2 well to the stakeholder effort.

3           We have been able to even just recently working  
4 with Tom Kaslow in NEPCA to come to an agreement on a new  
5 demand curve that's being implemented. So to talk about the  
6 stakeholder process I think at times it can drive you crazy  
7 and get you frustrated and get you a little bit mad at the  
8 folks sitting on the other side of the room, but generally  
9 if you look at the IMAPP process NEPOOL took that on because  
10 they saw this state problem coming.

11           We have had a lot of talk about carbon pricing.  
12 We at the states have gotten a lot of education about  
13 different proposals. We -- ISO New England has now latched  
14 on to one of those it was originally aired retirements from  
15 First Light and that's now part of their CASPAR program.

16           So I think the stakeholder process and especially  
17 the IMAPP process has given a lot of discussion and I know  
18 we at the states just for both NESCOE collectively and  
19 individual states have spent a lot of time with individual  
20 participants.

21           In fact we are meeting with Robert next week to  
22 hear more about the clipper program. So this is not an easy  
23 answer, this is not an easy problem and I think that  
24 collaboration is probably been positive.

25           So when I go to the urgency though I look at it

1 and I certainly don't think the town is burning down around  
2 us. This renewable exemption has been in place for three  
3 options now. The procurements that are taking place have  
4 been known for a long time.

5           The three-state RFP was a 3 year process so it is  
6 very transparent. Participants could see those procurements  
7 way ahead of time. They knew the possibility of what they  
8 could be, but they have also turned out to be a little bit  
9 lower than what they were originally advertised for.

10           The Connecticut procurements those were also kind  
11 of a year-long plus process and are now in the contracting  
12 phase which is going to be another year. So when I hear  
13 that the town is burning down I have to look back and say  
14 well participants knew about the renewable exemption 5 years  
15 ago.

16           It was really tailored to these procurements that  
17 are happening right now and yet in the last 3 years we have  
18 had good responses to our options in New England. We have  
19 had new resources cleared in every option. We are long in  
20 New England, even with this renewable exemption and people  
21 knowing that these procurements were coming up.

22           So we take it with a little bit of a grain of  
23 salt when we hear the urgency. We don't -- we certainly  
24 agree and this is why we have been very active in the IMAPP  
25 process that with new state laws changing -- the

1 Massachusetts -- we see maybe bigger problems coming than  
2 what we originally saw when we developed the renewable  
3 exemption, but the town is not burning down at least from  
4 our perspective.

5           And then as to path 4 I think path 4 is an  
6 excellent path for us to try to go down. Again if you look  
7 in our April 7th letter to NEPOOL the states are supportive  
8 of a forward market design -- that's what we called it.

9           We recognized in our letter and I will say here  
10 that the states have some work to do. We have gotten some  
11 great information from the IMAPP process. We are taking it  
12 back, we are digesting it. We understand that we need to  
13 say what do we want to buy and when do we think we want to  
14 buy it and that will help in the forward market design.

15           But as far as principles go and goals -- we put  
16 out a goalpost docket about 8 months ago -- you could go  
17 online on the NESCOE website or the IMAPP website to set up  
18 some principles and priorities that we thought this forward  
19 market design should be shaped around.

20           And I think that's my response from what I have  
21 heard the last day, thanks.

22           MR. QUINN: Thank you I think we will stay in New  
23 England, Matt?

24           MR. WHITE: Good afternoon and let me second my  
25 panelists thanks to the Commission and Commission staff for

1 spending two what feels to me very long days with I'm sure  
2 of a lot of attention to the nuances and code with which we  
3 speak amongst each other and certainly very thoughtful  
4 questions from all of you to unpack it all I think are very  
5 helpful.

6           Dr. Quinn I would like to make a few points  
7 responding to your requests about takeaways, timing and what  
8 can FERC do to help linking to some other broader themes I  
9 have heard.

10           First as Jeff Bentz alluded we have been at this  
11 stuff in New England for some time. I hope that comes  
12 through clearly in the conversation of the last day and a  
13 half. We started a formal integrating markets and public  
14 policy process nearly a year ago now that has developed many  
15 proposals which we characterize broadly as falling into the  
16 achieve category -- that's our term or path 4 in the new  
17 FERC lexicon that we have all got to learn.

18           The other ones fall in what we have called  
19 accommodate so that could be called harmonize as you wish.  
20 It's really path 2 in the new FERC's lexicon. The first  
21 takeaway I have both from our experience in New England and  
22 I think I would suggest is consistent with what you heard in  
23 at least the New England panel yesterday and in many of the  
24 comments in this morning's panel is there is a common view  
25 -- though a caveat it is not a consensus that it is

1 important to move forward diligently on an accommodating  
2 track that makes sense, that is sustainable, that has some  
3 well design.

4           The house is not burning down so fast that we  
5 must make an exigent circumstance is fine with you within a  
6 week. Coming up with something that we can do and you will  
7 not be tweaking it again and again and again and again is  
8 probably worth 6 to 9 months of our time.

9           I think there is also -- rather I think there's  
10 not a common view on whether or how ISOs should take  
11 responsibility or have an active role in implementing  
12 achieve state-type objectives where the states articulate  
13 specific objectives and look to the ISO to implement them.

14           Not to say that that can't be done but rather  
15 there is really not yet a clear statement on what the  
16 specific objectives would be, what should be achieved and  
17 how so. That is something that will take a much longer  
18 period of time to reach some sort of a consensus in the  
19 region.

20           The second point in terms of what the ISO thinks  
21 is most productive as next steps and here I mean to point  
22 out that the in concrete matters because the market design  
23 details matter.

24           We have listened very carefully to the IMAPP  
25 proposal and as Jeff alluded to we took what we thought were

1 some of the most promising ideas in that process and  
2 developed a 35 page roughly paper going through many of the  
3 details.

4 I was pleased to be able to put in lots of  
5 different supply and demand diagrams for anyone who is  
6 interested. Rather than go through the details that of  
7 course are on the web I'll just note that we think this is a  
8 productive way to coordinate capacity options with  
9 subsidized policy resources.

10 We think it is based on sound principles, it's  
11 sustainable, the fundamental markets change over time and it  
12 will funnel itself to two of the core problems that came  
13 through all of the discussions in the last two days.

14 One is the possibility if you do nothing you can  
15 greatly depress capacity prices impairing the abilities of  
16 the capacity markets to function. At the same time if we  
17 choose to do nothing at least in New England the way the  
18 MOPR currently works we are quickly on a path to having far  
19 more capacity in our system than we need to reliably operate  
20 from the ISO standpoint. That would be in the words of the  
21 economists "terrible efficient highly costly to consumers."

22 So the status quo is not ideal to say the least.  
23 I have to take just a moment here since this panel was  
24 titled "Opportunities for Responses" to note two things that  
25 came up earlier that I think are not quite correct -- there

1 was a comment which I noted from Cliff Hamal on the last  
2 panel that he was concerned that these types of  
3 accommodating ideas emerging in New England might ultimately  
4 cost consumers more.

5 I think the phrase was used, pay it three times.  
6 I think that's not a correct reading of what either the ISO  
7 or the stakeholder or the states are looking to do. Really  
8 it's actually to quite do the opposite. The status quo is  
9 we will end up buying what we need to maintain a resource  
10 adequacy through the capacity market.

11 And most of the resources the states want to  
12 bring on will not clear because of the MOPR. The costs are  
13 simply too high. Those will get bought in addition but not  
14 paid through the ISO, those will get paid through the  
15 states. Those are expensive by definition that's why they  
16 are not clearing.

17 If we don't find a way to take those state  
18 resources -- state sponsored resources many of which will  
19 have very high capacity values. I give them credit for  
20 that. The process will cost consumers too much. What we  
21 are trying to do is of course not have such a costly  
22 solution and inefficient solution. So I think it will take  
23 more time for the region to fully understand these details  
24 and implications -- I want to set that straight.

25 Also on that there was a comment that doesn't

1 this set New England on a path towards the states really  
2 taking on resource adequacy and I hope what came through  
3 yesterday is we don't perceive that to be the case in New  
4 England.

5           To put some numbers on a comment that Jeff Bentz  
6 just alluded to, the sum of the procurements pending under  
7 the Massachusetts legislation that may procure hydro that  
8 Angie O'Connor noted yesterday plus things in the works  
9 under previously purchased -- previously enacted legislation  
10 might add up to as much as maybe 6% of total capacity on a  
11 capacity value.

12           But it is noting that things like wind have a  
13 very low capacity that's 6% of our system, the other 94% is  
14 still stuff that is not state subsidized directly at least  
15 into the generation fleet. So we do not see this as like on  
16 the slippery slopes. The state is taking resource adequacy  
17 and doing 80% of the procurements maybe after 2050 by then  
18 there will of course be a new Commission so that will solve  
19 that problem.

20           Last let me note on timing issues -- and this is  
21 back to the great communicator's admonition about be careful  
22 when you ask the government to help. I'm going to differ a  
23 little bit from what you have heard from the last panel  
24 yesterday and comments you have heard from some of the  
25 leadership in other regions.

1           And here I think this synchronizes well with what  
2 you heard from Jeff. In New England we have a very active  
3 stakeholder process that is deeply engaged on these issues.  
4 We have articulated to our stakeholders a timing that we  
5 think is appropriate.

6           That is to bring something to you by late this  
7 year or early the next. We have indicated the drivers for  
8 that -- it is really driven by the timing of the potential  
9 procurements in the region. You may not call that an  
10 economic fundamental but it is a big economic effect.

11           What I am pointing out is that I think for New  
12 England as a region having a FERC deadline to deliver  
13 something by a tangible date is not productive for our  
14 region. Our stakeholder process is on a good course, is  
15 actively engaged in these issues.

16           At best such a deadline would not be terribly  
17 helpful because you are going to get something for us. The  
18 governance process in New England is not the same as it is  
19 in other regions.

20           And in addition if those fundamentals were to  
21 change, something that Jeff was alluding to, the region may  
22 want the flexibility to adapt the timing accordingly and an  
23 artificial regulatory deadline to bring a filing by a  
24 specific date may not give us the flexibility as a region to  
25 deal with changes in the timing of some of those potential

1 procurements. That may make the region want to take more  
2 time with this.

3           So for those reasons I think -- and this is truly  
4 the highlight of a broad theme, the best steps forward in  
5 the near term may differ slightly across regions. We are  
6 all in slightly different places. In New England the  
7 primary issue we are concerned with is out of market, in  
8 with the new resources.

9           It's a very different issue on the issue front  
10 and center in Illinois. Accordingly, the near term  
11 solutions may appropriately be somewhat different in the two  
12 regions. I think the region in New England is on a good  
13 path to a productive resolution. There is a great deal of  
14 work to be done ahead but we look forward to that  
15 opportunity.

16           We look forward to the Commission's support and I  
17 would say what I look forward to mostly is that when we  
18 bring to you a filing and you have a quorum and you have by  
19 my estimation probably a backlog by then of some 800 to  
20 1,000 cases needing approval that you will humbly view --  
21 just doing the math on that while I was here.

22           That you will humbly view based on the urgency of  
23 everything that came up that the proposal we bring to you  
24 should be placed pretty much near the top.

25           MR. QUINN: So I guess we are going to move over

1 to PJM, Stu do you want to go first?

2 MR. BRESLER: Sure thanks Arnie and thank you  
3 Chairman LaFleur, Commissioner Honorable and the staff for  
4 having us these two days. I certainly agree with the other  
5 panels that I think it has been a really, really fantastic  
6 session, lots of great information and dialogue and ideas so  
7 kudos to you on putting this together and leading it.

8 I figure it's probably a really good way to start  
9 off your comments by repeating something back to the  
10 Chairman as said earlier. So given what we are here to  
11 examine which is interaction of state public policy and  
12 these wholesale markets I would agree wholeheartedly it  
13 doesn't make any sense to try to judge or evaluate the  
14 legitimacy of the state actions in any way, shape or form.

15 The second best way to start your comments is to  
16 repeat back something that your CEO said so for us  
17 litigation just is not a viable strategy here. And so sort  
18 of fighting these things as they come up we don't believe is  
19 a good long-term position for us to be in.

20 States have you know the rights to do things and  
21 sooner or later that way will be in a manner that survives  
22 scrutiny under the FPA and so we need to figure out a way to  
23 harmonize and work through these things along with our  
24 states since that's the position we find ourselves in.

25 Having said that, and I think this came through

1 in the last panel, we really think that a multi-faceted or  
2 multi-pronged approach here is required. And I don't think  
3 that those facets need to be accomplished sequentially. I  
4 think these things can move forward in parallel but I think  
5 there are several things that we need to do -- just to tick  
6 through them very briefly.

7           We need to offer our states a mechanism through  
8 which their desire to price attributes can flow through the  
9 markets. And we need to do that in a way where it is  
10 possible for not all of our states in the entire footprint  
11 -- I should say not all of our jurisdictions necessarily  
12 need to come together on that but rather a way it could work  
13 sub-regionally.

14           Carbon I think is the most obvious -- the poster  
15 child if you will of those attributes that could be priced.  
16 There may in fact be others that are possible as well  
17 frankly we haven't been able to think through how any others  
18 would work but certainly I think we need to leave the  
19 possibility open.

20           Earlier today we actually posted on our website a  
21 very brief document that was what was intended to get that  
22 conversation started and we sincerely hope that you know at  
23 least some of our states or jurisdictions will come to us  
24 and be willing to again engage in that discussion, how that  
25 could actually be done.

1           The second thing that I heard fairly directly  
2 during the last two days and I think Matt just sort of  
3 reinforced it for New England as well is we need to design a  
4 mechanism by which we can harmonize these state actions with  
5 the operation of in particular -- the capacity market.

6           And that needs to be done in a way that does not  
7 require load to pay twice for the capacity and also  
8 maintains the establishment of competitive price signals  
9 that are so critical to these markets being able to perform  
10 their long-term function which is to drive reliable and  
11 efficient operation and entry and exit of resources.

12           I think we can do that. We posted another  
13 document earlier today that actually is an update of an  
14 earlier one which was a straw sort of idea or proposal that  
15 PJM put forth along similar lines to what has been proposed  
16 in New England. I think it was referred to as a -- sort of  
17 a two-tier or re-pricing type approach to the capacity  
18 market that is intended again to achieve those goals.

19           I certainly heard a concern on the last panel --  
20 the genius panel if you will about you know heading too far  
21 down that path and sort of the trade-offs if you will and I  
22 would certainly concede that any kind of approach along  
23 those lines is intended to counter-act an external  
24 intervention into the markets and I think therefore almost  
25 by definition will have trade-offs, will have warts on it.

1           But that doesn't mean that it is not something  
2 that we should evaluate and pursue and so I think that's the  
3 second thing that we need to do. And as was also noted on  
4 your last panel we already have a stakeholder process  
5 engaged at the beginning of walking down that path and I'll  
6 get back to that later.

7           I would also point out that any kind of a  
8 proposal like that does require definition of what amounts  
9 to a subsidy. What amounts to an external intervention that  
10 needs to be addressed?

11           We don't quite have something we can put out  
12 publicly yet but we are somewhat close and we will be  
13 releasing somewhat in the near future anyway our thoughts on  
14 how we might be able to make that determination again with  
15 the idea of initiating that discussion and really continuing  
16 it again through the stakeholder process we already have  
17 underway in PJM.

18           So that's sort of the capacity market side. The  
19 first one I touched on was the pricing attributes again is  
20 an energy market issue. And I think we all need to realize  
21 while we typically start these conversations with the  
22 capacity market I think the implications are actually much  
23 more significant for the energy market than they are for the  
24 capacity markets and so I need to come back there.

25           Because I think the third thing that we need to

1 do and this is probably where we can use Commission guidance  
2 and help the most is we need to implement energy market  
3 pricing reform. I think I would like to refer to it as I  
4 know your father is energy market design but I was there  
5 when we put it in the first time so I can't do that.

6           But there are some components I think that need  
7 to be looked at as to exactly how they work. The negative  
8 offers I know Andy mentioned on his panel the eligibility of  
9 resources to set energy market prices, sort of an expansion  
10 of what was in the Commission's best pricing MOPR and to the  
11 extent we go down that path and we actually included this in  
12 our MOPR comments it is imperative that what goes along with  
13 that is a mechanism to provide the necessary incentives for  
14 resources to follow efficient ISO dispatch in the energy  
15 market.

16           To the extent we can actually increase those  
17 incentives we have seen multiple examples of how those  
18 incentives lead to innovation and more efficient provision  
19 of those types of services and so we think we need a serious  
20 look at how we incentivize resources to follow dispatch.

21           The last thing or the last item I'll note because  
22 it was brought up on multiple panels and so I think it bears  
23 being reinforced. And this one I think is really incumbent  
24 upon the RTO as the primary entity responsible for insuring  
25 reliable grid operations is we need to work resilience and

1 the concept of resilience into those operations.

2           To the extent we do so it needs to be done in a  
3 way that then flows through the markets so again there is  
4 the transparent opportunity for competition to provide  
5 what's necessary to maintain system resilience and again we  
6 have seen the benefits from the standpoint of innovation and  
7 entrance into the market when those incentives are made  
8 transparent through the markets.

9           So I think those are sort of my list of kind of  
10 the things I heard that we need to address. Let me circle  
11 all the way back to the stakeholder process because I did  
12 hear some discussion on the last panel about the stakeholder  
13 process and I always joke and sort of paraphrase Winston  
14 Churchill with respect to the stakeholder process and say  
15 it's the worst form of RTO governance on the face of the  
16 earth with the exception of every other form of RTO  
17 governance, but it is absolutely positive.

18           I say that in joking, it's absolutely positively  
19 necessary. And yes there are compromises that come out, yes  
20 it can lead to suboptimal if you will approaches, but I can  
21 say without reservation that almost universally what comes  
22 out of a detailed stakeholder vetting of an issue is better  
23 than what went into it from a standpoint of proposals.

24           And so I think the stakeholder process is  
25 invaluable to what we do as ISOs and RTOs. Having said that

1 I will agree with my colleague to my left, deadlines and  
2 guidance from the Commission are always helpful with respect  
3 to the efficiency of how that stakeholder process works in  
4 getting through issues in a timely manner.

5 So I hope that answers your questions as far as  
6 what will be helpful and where I think we need to go and  
7 again thank you very much for the opportunity to be here.  
8 I'll wind up there.

9 MR. QUINN: Thank you, Andrew? You're the last  
10 word.

11 MR. PLACE: Well thank you that puts a very heavy  
12 burden. I did want to express again as everyone as  
13 mentioned here a great gratitude for this session the last  
14 two days, a huge dedication from all of you. How much this  
15 got into the forethoughts, the questions that have been  
16 asked, the digestion of all of the material that has been  
17 before you, what an epic undertaking for that. I'm sure I  
18 speak for everyone in the room and the room is crowded too.

19 I may as well quote Churchill since it came up  
20 but my favorite quote is, "It is not the end, or the  
21 beginning of the end, but the end of the beginning." Maybe  
22 that's not relevant but it is entertaining.

23 And I'll also note my third maybe nonsensical  
24 rationale here is that wiser folks than me have said a lot  
25 of words today. I don't want to keep anybody from a

1 beautiful spring afternoon by being too repetitive.

2           That said what I have heard here I could not  
3 disagree with. There is a raw consensus on what are the  
4 issues before us, the challenge that is before us, the  
5 urgency points, maybe some slight differences of opinion but  
6 a general consensus that there is a stark need for  
7 addressing the questions here.

8           The heterogeneity point that not only between  
9 states and ISOs restructured, regulated, whether it is FERC  
10 or the ITOs or ISOs or what's happening with the states  
11 great need for internalizing that that heterogeneity exists  
12 and that it is likely to exist in the solutions we come up  
13 with.

14           I do have concerns about the accommodation  
15 routes. It always seems a bit like the square peg and the  
16 round hole that came up yesterday. But that said we can  
17 spill the milk, the cow is out of the barn mix -- pick  
18 whatever metaphor you want.

19           The -- and it was also said in the last panel we  
20 are living in the land of second best and perhaps that's  
21 good to keep in mind that we are not going to be looking for  
22 the perfect. And a good friend of mine in graduate school  
23 said, "Don't let the perfect get in the way of the good."

24           As Stu mentioned both the energy markets and the  
25 capacity markets -- the need to be attentive to the tools

1 and mechanisms, what FERC can be very helpful with in this  
2 collaborative process is insuring that all of this  
3 complexity comes into us from so many different directions  
4 we are attentive to how we mitigate that in clever,  
5 innovating and supportive ways.

6 Pennsylvania is not facing the issues that New  
7 England and New York are facing in many ways you are ahead  
8 of us but I don't begrudge you your efforts to make those  
9 work within the competitive setting.

10 And I meant to say -- note number 1 to myself was  
11 to note the value of the market that this is an  
12 extraordinary valuable piece and we would be remiss 5 years  
13 from now we may be regretful of resources that have left the  
14 market perhaps but I think we would be ultimately regretful  
15 if we lose sight of the value that market brings to us.

16 The only other part I would make -- Stu mentioned  
17 and it's been noted several times agnostic to legitimate or  
18 illegitimate state policy. I came in probably two days ago  
19 thinking that I could thread that needle between those two  
20 but A -- I think that's an impossibility and B -- I think it  
21 is not a necessity.

22 As long as we are attentive to mitigating the  
23 impacts of those that come in or litigating the challenges  
24 if it cannot be mitigated. I don't see any value in being  
25 moralistic in what legislatures bring before any of us in

1 any of our jurisdictions.

2 And finally perhaps the carbon question -- that's  
3 going to be challenging for any of us and any of your  
4 settings and the work we can do collaboratively through the  
5 state of call to process to see if embedding a carbon price  
6 in the energy market can mediate a lot of the concerns we  
7 have in our individual cases to me would be very fruitful  
8 work ahead of us. So with that I'll close, thank you.

9 MR. QUINN: Thank you very much. Commissioners  
10 do you have any comments?

11 CHAIRMAN LA FLEUR: Well thank you. I'll see if  
12 I can read these notes which I have been scribbling on for  
13 the last couple of hours. I want to start by thanking the  
14 team of folks at FERC who pulled together the last two days.

15 Certainly Arnie, Jamie, David and Amr but  
16 everybody on the large team who worked on this for the last  
17 couple of months or however long we have been working on it  
18 to make it valuable. And particularly the folks in the  
19 Office of External Affairs and all of the folks in the  
20 Office of the Executive Director who worked on logistics and  
21 security to pull it all together and I want to thank my own  
22 team for helping me lead the effort.

23 I want to thank all of the panelists who came on  
24 a Sunday and hung in with us for the last couple of days and  
25 all the folks who have been participating in the room, in

1 the overflow rooms or watching online for your interest in  
2 the topic.

3           We really appreciate the level of interest we had  
4 and how honest and straight-forward everybody was which I  
5 think made it a very good discussion. I especially  
6 appreciated how many of our state colleagues were able to  
7 come. You really can't have the discussion of state  
8 policies without states so that would have pretty much made  
9 it useless.

10           I also want to thank Colette and her team for all  
11 of your help, all that you contributed the last couple of  
12 days in leading this and I know this isn't goodbye, I hope  
13 it's not goodbye but I'm deeply appreciative of the  
14 opportunity to work with you not just the last two days but  
15 the last two years.

16           So what I thought I would try to do is with some  
17 temerity is reflect back what I thought I heard just like  
18 you all did and some of the lessons I thought I learned.

19           So the first thing I definitely thought is that  
20 there is a commitment on the part of very many people who  
21 were on all sides of this issue to really giving it  
22 concentrated thought and attention. Nobody poo-poo'd it as  
23 an issue or whatever and I think that's very important.

24           Definitely heard loud and clear that different  
25 regions are in different places for various reasons but they

1 are all committed to it for their own unique reasons. I  
2 just want to take a second and say that I don't want to  
3 spend the next two and a half years of my term defending my  
4 comment on the stakeholder process.

5 I value the stakeholder process but I did -- I  
6 thought, I think things like this are an opportunity to ask  
7 a question and where that came up if it puts a little heavy  
8 burden on us whichever one of the geniuses said, "Oh the  
9 stakeholder process is fine as long as you correct  
10 everything that comes up."

11 Well I'll just put on my 20/20 vision perfect  
12 judgment and do that because we have our own stakeholder  
13 process on the floor when we have the Commissioners.

14 In terms of the 3 doors that I started with so we  
15 will go in backwards order -- the 3rd door was  
16 re-regulation. I think the two most scary -- the most scary  
17 word I heard over the whole day was "un-restructuring" what  
18 a thought.

19 But nobody said they wanted re-regulation or  
20 taking back of resource adequacy. I would say New York with  
21 it's one state ISO came the closest by saying it depends but  
22 there just seemed to be a commitment to continue to use the  
23 wholesale markets for at least a piece of resource  
24 procurement.

25 In terms of the number 2 door litigation -- much

1 as it's nobody's favorite strategy, litigation is happening.  
2 It will be decided including litigation before the  
3 Commission is a part of this I just don't think that will  
4 leave us with some kind of like -- Oh everything's fine now,  
5 it's all over -- that's just a step on the path.

6           So that brings us to a design solution and so  
7 starting with ISO New England as I knew coming in and as was  
8 clear over the last two days because they have been at the  
9 stakeholder process since last summer.

10           I think ISO New England is the farthest along and  
11 with the ISO New England proposal -- because the situation  
12 in ISO New England, the primary problem you seem to be  
13 solving is the state's desire to buy their own new  
14 resources. That makes the accommodate or harmonized  
15 solution as you have put forward that kind of feathers that  
16 in adapted to new resources.

17           To the extent people come and want to choose  
18 existing resources to pay differently than in the market  
19 that will give a different problem but that has not yet  
20 happened and I must have said 100 times in the last several  
21 months well ISO New England doesn't have ex parte so I could  
22 talk about ISO New England and I am very happy for that.

23           ISO New York -- we heard the word preliminary a  
24 lot from Brad Jones, he was talking about it in terms of  
25 where you are in the process but I have a fair degree of

1 confidence that a one-state ISO and a state can work out  
2 policy. We will just still have to fulfill our  
3 responsibilities on the wholesale market as that goes  
4 forward.

5           In PJM I think I appreciate the proposals that  
6 were circulated last night and today. I think the problems  
7 in PJM are a little more thorny because the primary thing we  
8 are seeing in PJM so far is a desire to re-price existing  
9 resources because of attributes that the states want to  
10 price and so on accommodation or harmony, harmonization  
11 strategy if it involves repricing resources.

12           I mean I don't want to distance myself from the  
13 Minimum Offer Pricing Rule. I believe it is an important  
14 part of the market not just for market power but to make  
15 sure that you are actually setting a market price that  
16 represents market fundamentals.

17           But if what you are doing is re-pricing resources  
18 that a state re-priced and then you are re-pricing them  
19 back, it's neither accommodating nor will it lead to  
20 harmony. So it might be necessary but it is not a  
21 harmonious solution which means that I think for PJM if  
22 that's the problem you are trying to solve an achieve  
23 strategy of deciding what you want the market to buy is  
24 more likely to result in a -- it sounds like more likely to  
25 result in an actual resolution you know, and that is harder

1 I know.

2 But that's what I heard in the sessions I heard  
3 in terms of what people are looking for in PJM.

4 Longer term I think we have a clear message that  
5 we have to look beyond the capacity market, that price  
6 formation as we defined it in our dockets but other forms of  
7 energy market pricing reform, new ancillary products are  
8 very important -- I don't think the capacity market is going  
9 to solve everything I never have.

10 I do think as you get more low-marginal costs or  
11 zero marginal cost generation some of the non-zero cost  
12 traditional resources, conventional resources are going to  
13 need revenues from somewhere and it might be more from the  
14 capacity market than before as a higher percentage of their  
15 revenues, unless we really do something different with  
16 reserves or ancillary services.

17 So I don't think it's likely to go away without  
18 fundamental market redefinition.

19 So going forward I think there is a couple of  
20 basic work streams. So if FERC when we get back our quorum  
21 I think there will be a lot to do. I mean we heard from  
22 several people and I think myself that FERC has a role to  
23 play here, either as a forcing function with deadlines,  
24 resolving things that are before us, suggesting changes in  
25 the market, whatever that may be.

1           I'm extremely aware that I don't speak for the 3  
2 or maybe 4 new Commissioners we are going to get. I'm  
3 probably not going to be Chairman, I guess I would say I'm  
4 definitely not going to be Chairman and I certainly don't  
5 blithely assume that they will all see the world exactly as  
6 I do.

7           I'm not even sure that I will see the world  
8 exactly as I do but I know they won't because everyone is  
9 different. But I will work as hard as I can with our staff  
10 to frame transparent options so when the people come in as  
11 with all the other issues before the FERC it will be laid  
12 before them as well we can.

13           In the meantime though you all have a quorum and  
14 our lack of a quorum should not keep the work from going  
15 forward where these programs are really being developed.  
16 And if there are things that we can do as individuals to  
17 help I would certainly pledge my commitment to do that while  
18 we work through however long this period is and thank you  
19 very much.

20           COMMISSIONER HONORABLE: And I'll be limited by  
21 that clock because hopefully by 5 I will have said  
22 everything that I needed to say. Pardon me, I want to begin  
23 by thanking our very capable and very experienced senior  
24 staff. As you can see it wasn't just in theory they  
25 absolutely have led this effort.

1           It was absolutely a staff-led Technical  
2 Conference and I shared with a number of you in stakeholder  
3 meetings prior to the Tech Conference we are in the very  
4 best hands and you saw that over the last two days and I  
5 wanted to compliment them along with Amr wherever he is --  
6 there he is, and the entire team.

7           We have met with literally dozens of them over  
8 the course of months. I want to thank Cheryl and her team  
9 because we did a bit of horse trading in helping to offer  
10 suggestions to streamline it as best we could.

11           You really couldn't imagine how many of you  
12 offered to participate and who we wanted to participate and  
13 it was almost an unwieldy issue so I am very pleased to how  
14 well it was executed and that we really did accomplish the  
15 goals we set out to do.

16           We wanted to hear back the state of play right  
17 now in the markets in the Northeast where we are today,  
18 where we are headed and how on earth are we going to get  
19 there. And so many of you and I want to add a special thank  
20 you to our state colleagues and to the ISO staff and  
21 leadership and to all of you who work in the stakeholder  
22 processes each and every day.

23           I should also add when I was thanking staff to  
24 thank my personal staff and the staff here at FERC more  
25 broadly. And I can't leave out Mark Retlinsky and the

1 security team, thank you gentlemen. I don't recall the last  
2 time we have met for two whole days and have had the luxury  
3 of doing so, so thank you for your service.

4 I want to thank you for three C's -- your candor  
5 and your cooperative spirit even as we have seen differences  
6 among you and going forward, your commitment, because it is  
7 going to take all of that in order for us to move forward  
8 and to help our energy and capacity markets become what they  
9 need to be.

10 And it is very clear that we are all invested in  
11 that cause. I do see light at the end of the tunnel  
12 certainly in New York with your work, thank you for sitting  
13 back at the table after two very long days.

14 Brad's proposal -- I wish you well with that. It  
15 does seem hopeful and ISO New England with your substitute  
16 action and yes even with PJM with your recent proposals and  
17 your ability to really harness the potential in a very  
18 diverse region I'm grateful to all of you.

19 I want to ask you in your post-Technical  
20 Conference comments along with the direction that you will  
21 get from our staff to consider a couple of points. I would  
22 like to hear your thoughts about these two pathways that we  
23 have heard a lot about -- pathway 2 the accommodate pathway;  
24 pathway 4 -- the achieve pathway and some of you have said  
25 you are on board with one and not the other.

1           Some of you have said we can do both, I would  
2 like to hear your thoughts about that. I would like to hear  
3 from the states especially and Jeffrey I was very pleased to  
4 hear you mention that you are going to visit with Robert  
5 about the clipper concept. I wanted to highlight that here  
6 in the record because we are very respectful of the states  
7 that come from the states in understanding the  
8 jurisdictional boundaries and the skepticism about giving  
9 FERC the ability to say grace or bless your work.

10           But I see that as a glimmer of hope too, as a way  
11 to move forward to aid and something I heard so many of you  
12 talk about the way that we can incorporate carbon pricing  
13 and the fact that we really think it's the key but that  
14 practically is it achievable -- so I'm looking forward to  
15 hearing from you all when the time is right about your  
16 thoughts states, about a forward market concept -- pardon  
17 me.

18           And I too would like to hear from you. A number  
19 of you have said you need guidance except for one of you, I  
20 think ISO New England. I think Matt said, "No we don't need  
21 any deadlines, we don't need your help."

22           But some of you have and you have said it a  
23 number of times. What is it that you need to hear from us?  
24 Again we are creating a record. What is the guidance that  
25 you need? How long do you need to act? We have heard that

1 3 years is too long.

2           So with that and if I might take a point of  
3 personal privilege to thank each of you -- I've been an  
4 Energy Regulator now almost 10 years, I'm a little long in  
5 the tooth for an Energy Regulator but I loved every minute  
6 of it and I hoped that you sensed that I've come here each  
7 and every day to work as hard as I could for the work that  
8 we collectively undertake.

9           I want to thank Cheryl who's been a true  
10 colleague long before I came to FERC and her team, there  
11 have been a number of them that have popped in and out over  
12 the years. Curt -- he was kind of one of my first advisers  
13 along with Jack. Cheryl let me kind of use them until I set  
14 up my staff here, there are so many -- there are so many  
15 beautiful things that you don't see about this agency that  
16 really lend to how wonderful it is to be a part of this  
17 place, more than the rankings and more than the survey  
18 results it is the people and how committed they are.

19           So on a personal note I want to thank you for  
20 indulging me and it's been an incredible opportunity and I'm  
21 not going anywhere so I hope to be here when the  
22 post-Technical Conference comments file and thank you again  
23 to our staff.

24           MR. QUINN: Thank you Commissioners. I have two  
25 or three logistical comments before we all say goodbye. As

1 the Commissioners have noted staff will be issuing a Notice  
2 requesting post-Technical Conference comments.

3           Along the way we have been talking about  
4 pre-Technical Conference statements. Some folks have  
5 mentioned those are not all entirely on E-library but they  
6 should all be on the calendar page for the Conference to the  
7 extent that you heard something particularly interesting and  
8 you can't find it start looking at that calendar page.

9           Eventually that will all get to E-library. And  
10 then finally our security staff has asked that I remind you  
11 all to turn in your security badge on the way out the door,  
12 that helps them greatly and so they have been a great help  
13 here so I would ask you to be a great help on the way out  
14 and with that I'll thank you all and close the Conference.

15 (Whereupon the meeting was adjourned at 4:45 p.m.)

16

17

18

19

20

21

22

23

24

25

## 1 CERTIFICATE OF OFFICIAL REPORTER

2

3 This is to certify that the attached proceeding  
4 before the FEDERAL ENERGY REGULATORY COMMISSION in the  
5 Matter of:

6 Name of Proceeding:

7

8 State Policies and Wholesale Markets Operated by  
9 ISO New England Inc., New York Independent System Operator,  
10 Inc., and PJM Interconnection, L.L.C.

11

12

13

14

15

16 Docket No.:

17 Place: Washington, D.C.

18 Date: Monday, May 1, 2017

19 were held as herein appears, and that this is the original  
20 transcript thereof for the file of the Federal Energy  
21 Regulatory Commission, and is a full correct transcription  
22 of the proceedings.

23

24 Gaynell Catherine

25 Official Reporter