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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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PJM Interconnection, L.L.C. : Docket No. ER11-3322-000
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TECHNICAL CONFERENCE
Performance Measurement of Demand Response
in the PJM Capacity Market

Commission Meeting Room
Federal Energy Regulatory Commission

888 First Street, NE
Washington, D.C.

Friday, July 29, 2011
9 a.m.

Reported by
Daniel W. Hawkins

1 COMMISSION MEMBERS:

2 JON WELLINGHOFF, Chairman

3 PHILIP D. MOELLER, Commissioner

4 MARC SPITZER, Commissioner

5 JOHN R. NORRIS, Commissioner

6 CHERYL A. LaFLEUR, Commissioner

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9 COMMISSION STAFF:

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11 TATYANA KRAMSKAYA, Energy Industry Analyst, OEPI

12 MICHAEL GOLDENBERG, Senior Attorney, OGC

13 VALERIE MARTIN, Energy Industry Analyst, OEMR

14 JASON FEURSTEIN, Electrical Engineer, Other

15 DAVID KATHAN, Economist, OEPI

16 KENT CARTER, Attorney-Advisor, OGC

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1 PROCEEDINGS

2 MR. TACKETT: If everyone could please take your
3 seats.

4 Good morning, everyone, and welcome to the FERC
5 Technical Conference on the Performance Measurement of
6 Demand Response in the PJM Capacity Market. My name is
7 Nicholas Tackett from the Office of Energy Market
8 Regulation, and I will be facilitating today's conference.

9 Other Commission Staff joining me at the table
10 include Tatyana Kramskaya and Valerie Martin from the Office
11 of Energy Market Regulation; Michael Goldenberg and Kent
12 Carter from the Office of the General Counsel, David Kathan
13 from the Office of Energy Policy and Innovation, and Jason
14 Feurstein from the Office of Electric Reliability.

15 Commissioners could be joining us throughout the
16 day, also.

17 The purpose of this conference is to provide
18 Staff and interested parties with further information in
19 order to supplement the record in Docket No. ER11-3322.
20 PJM's proposal in this proceeding requires that an end use
21 customer's actual load reduction results in a metered load
22 that is less the customer's peak load contribution, or PLC
23 in order for that load reduction to be recognized as
24 compliance towards a previous capacity commitment.

25 According to PJM, its current tariff allows

1 curtailment service providers, or CSPs, to use over-
2 performance from end use customers, an amount that exceeds
3 the customer's PLC, even though the PLC is the maximum limit
4 for nominations made in the capacity auctions.

5 PJM stated that its proposal is intended to
6 first, remove the incentive for aggregators to intentionally
7 register end use customers that have little or no ability to
8 curtail their loads; and second, to ensure system
9 reliability. However, in the June 3rd order in this
10 proceeding, the Commission found that protestor's concerns
11 raised disputed issues that couldn't be resolved based on
12 the existing record, and thus decided to more fully explore
13 these concerns at today's technical conference.

14 Commission Staff has developed four panels for
15 today's discussion, which focus on reliability issues,
16 capacity obligations, load reductions and incentives, and
17 the impact of PJM's proposal.

18 All discussions today should be focused on the
19 scope of this proceeding and the topics listed in the June
20 21st and July 22nd notices. Please remember that Staff does
21 not speak for the Commission; we are only here to gather
22 information and to discuss parties' concerns and suggestions
23 going forward.

24 For each panel we will first allow an
25 introduction and presentation from PJM on each of the

1 questions. Afterwards, each panelist will be able to
2 introduce themselves and to provide their position on the
3 questions as they see fit. Please attempt to limit these
4 initial presentations to five minutes. We've included a
5 timer; we won't use it at first, but if needed, later we'll
6 get it going.

7 After each panelist has discussed their position,
8 Commission Staff will be asked if they have any questions
9 regarding the presentations; and then after these questions,
10 participants will be free to respond to one another's
11 presentations and comments, and should signal their intent
12 to respond by placing name tent cards upright.

13 At this time, I would ask all attendees to turn
14 off the electronic devices, if possible.

15 We'll begin the conference with a discussion on
16 reliability issues. I'd like to begin by welcoming our
17 first set of panelists; thank you for joining us today. Our
18 main objective in this panel is to discuss the potential
19 liability issues surrounding the performance measurement of
20 demand response in the capacity market, as currently
21 provided for in the PJM tariff and as explained in the PJM's
22 filing.

23 In its data response, PJM explains that when load
24 management resources do not reduce their consumption to less
25 than PLC during emergency dispatch, there's less capacity

1 available to meet other customer's loads and the amount PJM
2 acquired in the capacity auction for that deliver year.
3 According to PJM, it must then rely on reserves upon which
4 it would otherwise not have had to call; which then reduces
5 the system reserve margin at the time of peak demand and
6 reduces system reliability.

7 In this panel we hope to distinguish the validity
8 and the extent of these reliability problems by discussion
9 of potential ramifications of the business practices
10 discussed in PJM's filing.

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1 Discussion on Reliability Issues

2 PANEL ONE:

3 FREDERICK BRESLER, Vice President-Market
4 Operations and Demand Resources, PJM Interconnection, L.L.C.

5 CHRIS NORTON, Director of Regulatory Affairs,
6 American Municipal Power, Inc.

7 FRANK LACEY, Vice President Regulatory, Markets
8 and Government Relations, Converge, Inc.

9 BRUCE CAMPBELL, Director of Regulatory Affairs,
10 Demand Response Service, Johnson Controls, Inc.

11 MARIE PIENIZAEK, Chief Operating Officer, Energy
12 Curtailment Specialists.

13 DONALD J. SIPE, Attorney, Preti Flaherty Beliveau
14 & Pachios LLP, representing EnerNOC, Inc.

15 DR. JOSEPH E. BOWRING, Market Monitor,
16 Independent Market Monitor for PJM.

17 MR. TACKETT: I now welcome introductions
18 presentations on the question for this panel, beginning with
19 PJM.

20 MR. BRESLER: Thank you and good morning. My
21 name is Stu Bresler, and I am the Vice President of Market
22 Operations and Demand Resources at PJM. It's a pleasure to
23 be with you this morning.

24 Demand resources have been participating in PJM
25 electricity markets for many years, in varying forms. The

1 forms by which these resources provide value to the markets
2 include both the energy market and the capacity market.
3 This case is not about the energy market, it is about
4 capacity. And specifically about establishing the value of
5 demand resources in the PJM RPM capacity market.

6 PJM establishes the quantity of capacity
7 resources required to maintain reliability based on its load
8 forecast. This required quantity of resources is referred
9 to as the reliability requirement, and the load forecast
10 that determines the reliability requirement is developed
11 from the actual loads historically consumed on peak days.

12 Therefore, the actual loads on those historic
13 peak days contribute directly to the reliability requirement
14 that PJM commits capacity resources to meet. Capacity
15 resources can be either generation resources or demand
16 resources. A generation capacity resource contributes to
17 meeting the reliability requirement by virtue of its defined
18 value, the capability of its generating unit.

19 A demand resource similarly has a defined value
20 of capacity for which it can receive credit from meeting the
21 PJM reliability requirement. The defined value of a demand
22 resource is its ability to reduce consumption from the level
23 that contributed to the reliability requirement. If PJM had
24 no demand resources available to provide capacity, then PJM
25 would commit generation resources all the way up to the

1 reliability requirement.

2 When a demand resource displaces a generation
3 resource to provide capacity, if it does not serve to reduce
4 the demand to a level below the reliability requirement, PJM
5 will not have sufficient resources to meet the expected peak
6 load.

7 If we could bring the PowerPoints up on the TV
8 screens, I'd like to talk through two diagrams that PJM has
9 provided to illustrate this point.

10 On this first chart, the lower horizontal line
11 represents the reliability requirement PJM must fulfill with
12 capacity resources. The left hand orange including that
13 hatched box at the top represents the actual load that
14 contributed to establishing that reliability requirement.
15 The right hand green bar represents the generation resources
16 committed to meet that that reliability requirement.

17 The orange and green hatched box at the top of
18 the orange bar represents the demand resources committed to
19 meet the reliability requirement; and the empty box at the
20 top of the green bar represents the generation that was
21 displaced by the committed demand resources. Note that the
22 sum of the solid part of the green bar and the orange and
23 green hatched box equal the reliability requirement.

24 The higher horizontal line, up towards the top,
25 represents a potential energy consumption by the load on the

1 peak day. The top orange block in the dotted box represents
2 measurement of apparent capacity compliance for committed
3 demand resources if it is measured from the energy baseline,
4 as is proposed by others in this case.

5 You can clearly see that if measurement from
6 energy baseline is adopted, PJM will no longer have
7 sufficient resources available to meet its reliability
8 requirement. The green bar does not even make it all the
9 way to the lower horizontal line, let alone up to the energy
10 actually needed to be served on that peak day.

11 The second chart that PJM prepared for today
12 contains an example that further illustrates the reliability
13 consequences of adopting such a measurement methodology. In
14 this example, PJM has 40 megawatts of total load to serve.
15 There are 10 megawatts each from two sets of responsive
16 load, and 20 megawatts of nonparticipating load.

17 If we add 15 percent reserves to determine the
18 reliability requirement, this yields 46 megawatts of total
19 capacity of resources required. Assuming that 5 megawatts
20 of capacity are procured from each of the responsive loads
21 for a total of 10 megawatts, that leaves 36 megawatts of
22 capacity required to be procured from generation resources.

23 If on the peak day the two responsive loads
24 respond from some higher level of energy consumption down to
25 10 megawatts, represented by the empty dotted boxes, and the

1 20 megawatts nonparticipating load consumes its 20
2 megawatts, then PJM would have a total of 40 megawatts of
3 load to serve on that day, but only 36 megawatts of
4 generation with which to serve it. PJM would be required to
5 shed 4 megawatts of load.

6 Conversely, if the two responsive loads instead
7 reduced down to 5 megawatts of consumption each, thereby
8 fulfilling their capacity commitment of 5 megawatts below
9 their peak load contribution, then together with the 20
10 megawatts of nonparticipating load, there will be 30
11 megawatts of load to serve, with 36 megawatts of generation
12 resources and PJM's reserve margin would be maintained.

13 We'll leave these charts up here throughout the
14 day to the extent possible, in case we need to refer to them
15 later in the discussion; and I hope they will serve to
16 illustrate really what is the central issue in this case.

17 That concludes my opening remarks. I look
18 forward to the continuing discussion this morning. Thank
19 you.

20 MR. TACKETT: Thank you.

21 Mr. Norton, if you'd like to proceed.

22 MR. NORTON: Good morning. I'm Chris Norton from
23 American Municipal Power. I would like to thank you on
24 behalf of American Municipal Power for letting us speak this
25 morning.

1 This is, at least from my perspective, a
2 complicated and complex issue; and up front I'll apologize
3 if I stray into topics that are into other panels later day,
4 but a lot of these questions are intertwined.

5 AMP's position on this, has generally been, we
6 recognize what PJM has said, that there is a potential
7 problem, a reliability problem with the way some of the load
8 reductions are being accounted for. Our position on it had
9 been, though, that by limiting to the PLC -- or not limiting
10 to the PLC, we see two different things. One is limiting
11 the amount of the reduction to PLC, and the other is where
12 do you start counting from? Also being posed as the PLC in
13 this case.

14 And our position in this had been that we can see
15 limiting to the PLC as a reduction amount, but that you
16 might be allowed to start counting from a higher position.
17 The reason that we saw that is we see cases where load will
18 grow over time, especially between when the PLC is set and
19 the actual event or test measurement period. That basically
20 sums up our position.

21 MR. TACKETT: Thank you.

22 Mr. Lacey?

23 MR. LACEY: Thank you. Good morning.

24 My name is Frank Lacey, I'm the Vice President of
25 Regulatory Markets and Government Relations for Comverge.

1 Comverge is one of the nation's leading demand response
2 service providers. We manage load response programs in 21
3 states and the District of Columbia.

4 Specifically, we have an extensive business in
5 the PJM footprint, and more specifically we're a participant
6 in the RPM capacity auctions and PJM's GLD programs. I want
7 to thank you this morning for allowing us to speak on behalf
8 of Comverge and our customers.

9 Comverge believes that reliability is the bedrock
10 upon which our electric system is based, and Comverge fully
11 supports regulatory commitment to reliability. We believe
12 that you must consider the reliability impact of this
13 proposal that PJM has in front of you, and all other
14 decisions as well.

15 But as you're making that consideration, think of
16 the following: Demand response offers thousands of
17 megawatts of dispatchable load every year to ensure
18 reliability. Effective measurement of the response piece of
19 demand response is critical to ensuring the integrity of
20 demand response and ensuring the reliability function demand
21 response provides.

22 PJM's proposal completely distorts the
23 measurement process, and we believe will impair reliability.
24 Quickly, just to think back to last Friday; if you recall,
25 last Friday was in the 90s and 100 degree mark, with heat

1 indexes about 10 to 15 degrees above that, all throughout
2 the MidAtlantic and Northeast regions. Last Friday, PJM
3 called a curtailment in at least six different utility
4 zones. Demand response load curtailed, and system
5 reliability was maintained.

6 But think about a hypothetical customer last
7 Friday. Is it reasonable to believe that last Friday
8 customers were consuming at their PLC? I don't think so.
9 It was 105 degrees, 115 degree heat indexes last Friday.
10 That's why you have an emergency. Imagine a manufacturing
11 facility with a 4 megawatt PLC, and just assume for
12 argument's sake that it was consuming at 6 megawatts last
13 Friday. If it was curtailed -- and say it had a curtailment
14 commitment of 1 megawatt. Last Friday it might have been
15 easy for it to curtail 1 megawatt, but under PJM's proposal
16 it would actually have to curtail 3 megawatts to be given
17 credit for that 1 megawatt of curtailment that it committed.

18 That creates financial disincentives for that
19 customer to participate in the demand response program. So
20 under PJM's proposal, the 6 megawatt facility, the 4
21 megawatt PLC facility, likely won't continue to participate
22 in the GLD programs.

23 We believe PJM's plan actually reduces demand for
24 demand response and increases demand for electricity. And
25 if your goal is reliability, we do not think that's a good

1 outcome.

2 You hear lots of stories and examples on both
3 sides of this argument today, I am sure. PJM, in the Market
4 Monitor said the PLC is the amount of capacity that
5 customers procure. The slides presented this morning I
6 think alluded to that fact as well; that wasn't explicitly
7 said.

8 I believe that that argument is somewhat of a red
9 herring. This is what customers procure out of the RPM
10 auction; that is true. It's what they pay for out of the
11 RPM auction. But if a customer's demand increases above
12 PLC, they're still paying for that demand. They continue to
13 pay for electricity, and that includes capacity components,
14 energy components and ancillary service components.

15 Capacity charges don't end once a PLC cap is
16 reached. Imagine a customer with a demand meter. That
17 demand meter is not capped at the PLC; that demand meter
18 keeps rising until the customer's demand stops increasing.
19 Stated another way: If the PLC commitment in the market was
20 1,000 megawatts and say demand on a day like last Friday was
21 1500 megawatts. Generators sell that 500 megawatts of
22 capacity into the market. I'm not saying that's a bad
23 thing; that's a good thing, that helps ensure reliability.
24 We're only asking that demand response be treated the same
25 way, and if a customer can provide five or ten, or in that

1 example two or three megawatts of capacity into the market,
2 that customer should be able to compete on a level basis
3 with generation resources.

4 In a period of system stress, it is important for
5 customers to reduce consumption from their current operating
6 allowance, not from their PLC. PLC is really irrelevant.
7 In fact, if anyone consumed at their PLC, there would never
8 be a demand-based emergency. There might be an emergency,
9 but there wouldn't be a demand-based emergency if everyone
10 consumed at their PLC.

11 In the event of an emergency, what happens? PJM
12 operators turn to Comverge and our peer companies and direct
13 us to curtail. They don't work directly with customers, and
14 they're certainly not looking at customer's PLCs and
15 targeting those customers that are operating above PLCs.
16 They work with us and our peer companies, and we deliver
17 from a diversified portfolio of customers.

18 Diversification is a good thing; it's not a bad
19 thing. Filings in this case implicate diversification as
20 gaming. Diversification is not gaming; it ensures
21 reliability. Our customer base allows us to target
22 curtailment under a different set of circumstances.

23 Mr. Rossi from Comverge is on a panel later this
24 afternoon, and he will talk about some specific customer
25 relationships that we have that are targeted for very

1 specific curtailment needs.

2 Diversification allows us to meet our obligations
3 under a variety of different circumstances. That enhances
4 reliability. PJM's proposal is a direct threat to the GLD
5 program, and as a result it affects overall system
6 reliability. It creates incentives for customers not to
7 participate in a program. It increases demand for
8 electricity, it leads to higher costs for customers, higher
9 emissions and, we believe, lower reliability. Thank you for
10 your time, and I'll be available for questions.

11 MR. CAMPBELL: Good morning. I'm Bruce Campbell,
12 I'm Director of Regulatory Affairs for Energy Connect by
13 Johnson Controls. I'd like to thank you for the opportunity
14 to share the views of Energy Connect and Johnson Controls on
15 the issues under consideration in this proceeding.

16 I've been involved in the electric business for
17 more than 35 years, and have developed expertise in capacity
18 requirements for multiparty regions over nearly 20 years
19 going back to the PJM power pool days of shared reserves and
20 capacity obligations. Energy Connect has been an active
21 participant in the stakeholder processes leading to this
22 proceeding.

23 We were initially open to a range of options in
24 the GLD treatment, as suggested by both PJM and other
25 stakeholders; but ultimately, Energy Connect concluded that

1 the solution offered by PJM and approved by stakeholders is
2 most suited to sustaining reliability and market integrity.

3 I have several points that I'd like to make
4 today. First, consideration of the PLC is appropriate when
5 assessing and perhaps limiting the capacity credit available
6 for attribution to any specific demand response resources.
7 PJM rules provide that the registrations of demand response
8 sites cannot exceed the PLC, and Energy Connect has always
9 taken that as an affirmation that actual deliveries for
10 compliance in excess of the registration amount are
11 inconsistent with both PJM rules and their intent.

12 As PJM has pointed out, when a gross load drop
13 measurement methodology does not take into account the PLC
14 of the specific resource, reliability could be adversely
15 affected.

16 Conceptually, use of a gross load drop mechanism
17 that fails to account for the PLC can create an artificially
18 high baseline which inflates the effective performance of
19 the portfolio, as measured for reliability purposes.

20 Second, a portfolio of demand response resources
21 should not be permitted to claim performance as a capacity
22 resource if the portfolio's demand is greater than its
23 capacity obligation. This is because, to the extent a
24 portfolio's unrestricted demand exceeds the peak road
25 contribution, that portfolio has not contributed to

1 reliability. In other words, if the actual portfolio load
2 plus the credited portfolio curtailment exceeds peak load
3 contribution, then the resources planned for the load have
4 not been delivered, and reliability is harmed. Use of a
5 guaranteed load drop in excess of the PLC allows this result
6 to occur.

7 And third, the varied participant treatments of
8 guaranteed load drop methods means that some demand response
9 resources are measured for RPM compliance on the basis of a
10 peak load contribution based on the prior summer's peak
11 demand, while others are measured on the basis of a few days
12 of demand before or after the peak load days in the current
13 summer. And Energy Connect believes that this is an
14 unreasonable outcome; all resource should be considering the
15 same year's baseline, same year data in the baseline.

16 This inconsistency should be resolved, and we
17 would believe that the required use of an energy type CBL
18 for determination of performance, as has been suggested by
19 some participants, would preclude the use of firm service
20 level mechanisms.

21 And we further note that firm service level
22 mechanisms are not at issue in this docket. And this
23 suggests that a proper consistent resolution of the
24 measurement and verification rules lay with the measurement
25 and verification mechanisms that take PLCs into account.

1 I look forward to responding to any questions
2 that you have on these comments or other issues under
3 consideration today. Thank you. That concludes my remarks.

4 MS. PIENIAZEK: Good morning. My name is Marie
5 Pieniazek; I'm Chief Operating Officer for Energy
6 Curtailment Specialists. I'd like to thank the Commission
7 and Staff for the opportunity to participate in this
8 technical conference today.

9 I had the opportunity to talk to you this morning
10 about three of the four reliability issues you have posed to
11 this panel. In my opinion, PJM has decided to advocate for
12 a market design that appears to reject load aggregation in
13 favor of a far more granular view of reliability than PJM
14 assumes in planning their operations.

15 Rather than looking at load within a zone to meet
16 the reliability needs of the region, PJM has suggested it
17 needs to look at the load of individual retail customers
18 with whom it has no relationship.

19 I confess I'm not an operator, but in my years in
20 the industry, I am not aware of any circumstances in which
21 an ISO plans or operates on the basis of loads of each
22 individual user. Rather, I've always understood that it
23 looks at the loads within a zone in the aggregate and plans
24 operations for those loads.

25 In the brief time I have this morning, I would

1 like to explain why I think departing from this approach to
2 focus on individual end use customer load does not make
3 sense and will most certainly reverse the great strides that
4 we have made in expanding load response for the benefit of
5 the market and consumers.

6 PJM appears to have concerns that CSPs, or
7 curtailment service providers, are somehow signing up
8 customers they know cannot reduce to their committed levels
9 in order to facilitate aggregation. This view of over-
10 performance by an individual end use customer as compared to
11 its cap on a nominated value, based on the customer's peak
12 load contribution ignores the fact that should there
13 therefore be indifference on how much performance is
14 aggregated as long as the reductions are accurately
15 measured.

16 While CSP should not be enrolling customers they
17 intentionally know will not reduce during emergency events,
18 it is important to recognize that some customers, no matter
19 what the CSP does to ensure pre-identified customer
20 interruptions, may nevertheless reduce more or less than the
21 expected amount, and potentially may be unable to reduce at
22 all during an event.

23 This risk is borne by the CSP and is an important
24 consideration during PJM's DR registration process.

25 Fundamental to the aggregation principle is an

1 acknowledgment that not every customer within the CSP's
2 portfolio will achieve 100 percent performance when called
3 upon. By aggregating customers into portfolios that are
4 designed zonally in a way that corresponds with the planning
5 and operational needs identified by PJM, CSPs are able to
6 manage under- and over-performance of individual customers
7 within their portfolio to ensure PJM receives the load
8 interruption in the zone it is counting on while at the same
9 time mitigating the risk to the CSP.

10 In doing so, the CSP is able to enter into
11 contracts with its customers without requiring a penalty to
12 individual customers for non- or under-performance, and
13 still capturing the value of full performance for the
14 benefit of customers.

15 ECS is certain, based on our experiences in this
16 business, that many customers are willing to undertake load
17 interruptions, but are not willing to accept financial risk
18 associated with non- or under-performance, and would not
19 participate in PJM's demand response program if they were
20 required to accept this risk.

21 Eliminating a CSP's ability to use aggregation to
22 mitigate this risk for all of their customers will certainly
23 dampen participation for CSPs and their customers.

24 In our experience, there are many factors that
25 may affect a demand response customer's load consumption

1 during an emergency event. Some of these include a
2 customer's individual business needs, its operations at the
3 time of the event, the type of equipment the customer
4 utilizes, the economic conditions at the time of events, and
5 weather conditions, but the PLC is not one of them. Rather,
6 PLC is a cap that may have little or no relationship to the
7 amount a customer can reduce during a PJM system emergency.

8 With regard to whether the customer's baseline
9 load or the PLC is a more accurate capacity market
10 performance measurement, it is ECS's opinion that the PLC is
11 at its core a variable design for use by the EDCs to spread
12 the cost of capacity allocated to them across their retail
13 customers.

14 ECS submits that PLC is not a definitive basis
15 for defining whether PJM, during an actual event, has
16 received the load interruption on which it has relied. In
17 certain cases the PLC may represent the appropriate baseline
18 for customers that have selected the firm service level
19 baseline; however, the PLC, which is based on an averaging
20 methodology of the five peak hours in the prior year that
21 are likely to be different than the hours in which a
22 curtailment event occurs should not be mandated as the only
23 baseline to determine what a demand response customer would
24 have consumed absent that particular event.

25 It is ultimately load reduction from expected

1 levels during the event, not the PLC, that should be looked
2 at for reliability purposes. Should the CBL or the GLD
3 method be eliminated and the PLC be the only measurement for
4 capacity market performance, this will essentially eliminate
5 a down-from baseline approach and place all demand response
6 customers participating in the capacity market into a down-
7 to methodology. Individual customer loads may exceed
8 forward forecasts, and therefore recognizing that individual
9 customer loads vary from year to year, utilizing only the
10 PLC method will eliminate the ability for customers to
11 choose between a down-to or a down-from baseline approach.

12 I'd like to turn now to the question of whether
13 PJM's add-back process accurately reflects over-performing
14 customers ability to compensate for under-performing
15 customers within a portfolio aggregation to meet capacity
16 commitments.

17 If the Commission finds it necessary to tie
18 capacity obligations and PLC, then ECS suggests using a
19 total aggregate PLC of the customers in a CSP's portfolio by
20 EDC as a performance measurement. It is ECS's opinion that
21 as long as the total aggregate performance of a portfolio
22 does not exceed its total aggregate PLC by EDC, then the
23 total aggregate capacity delivered at the EDC level will
24 match up with the capacity that has been procured for the
25 aggregate portfolio of customers.

1 ECS would like to thank the Commission and Staff
2 for the opportunity to participate in today's discussions,
3 and I look forward to your questions. Thank you.

4 MR. SIPE: Good morning. My name is Don Sipe,
5 and I'm here today representing EnerNOC.

6 Since this is the Reliability panel, I'm going to
7 limit my opening remarks to what it takes to meet
8 reliability. Reliability is based on being able to meet the
9 challenges of physical reality. System peaks and
10 emergencies are not planning events; they are real events
11 that happen in real time and require real time action.
12 Action is response. It is not response to what happened
13 last year, or what you expect to happen next week; it is
14 response to what's happening now, is the only thing that
15 will assure reliability.

16 Capacity is the ability to deliver either energy
17 or load reduction, in response to a dispatch instruction.
18 That's all it is. It's clear that that's all it is, if you
19 think about why we de-rate generators for E4D. E4D is
20 nothing but the measure of the probability that a generator
21 will not be there to deliver energy when you need it,
22 whenever 'now' happens to be.

23 If capacity were anything other than the ability
24 to deliver energy when called upon, or load reduction when
25 called upon, then derating generators for E4D would make no

1 logical sense whatsoever. We would simply take the name
2 plate rating of the generator or we would sample some random
3 five hours, perhaps, in some prior period and simply say
4 "That's the capacity, we don't care what your availability
5 is."

6 The reason availabilities matter is because
7 capacity is the ability to deliver energy when called upon.
8 Now, demand response resources have abilities, too. And
9 it's important to think about what the availability of a
10 demand response resource amounts to.

11 If you want to ensure reliability, you want to be
12 measuring and you want to be compensating people who are
13 available when you need them. If you need a load reduction
14 -- this is going to be really obvious -- if you need a load
15 reduction, the only thing available is load, and it has to
16 be there, on the system in order for it to be reduced.

17 If you assume that the only thing that you have
18 available to reduce load is the load that's actually on the
19 system. That means the only available resources, potential
20 resources, are the actual usage of the customers at the time
21 that you need the response; that's it. That's physical
22 reality. There's nothing else for you to rely on if you
23 need response, and that's what you need. No one else can
24 deliver you a load reduction.

25 Now assuming a good contemporaneous baseline,

1 meaning one that reflects fairly accurately what customers
2 are doing at the time, the only thing available for you is
3 for someone to move from that contemporaneous baseline down.
4 There is nothing else available to the system.

5 What this means operationally is that if you are
6 measuring capacity performance or available capacity by
7 anything other than a reasonably accurate contemporaneous
8 baseline, you are incorrectly measuring available capacity
9 and performance; because from a reliability perspective,
10 there is nothing else that you've got; it's not like you've
11 got some other choice, it's not like you can call on someone
12 who's not on the system now and say "Good." That isn't how
13 it works in the real physical world where reliability events
14 happen.

15 It also means that if paying for demand response
16 on some other basis as a capacity resource, then that
17 ability to move in real time from a CBL, you are either not
18 paying for capacity that is actually available there to
19 serve you, and by not paying for it you are increasing the
20 likelihood almost to a certainty that you will not get it
21 when you need it.

22 Or, alternatively, you are paying for stuff that
23 isn't available anyway. The only thing that you can use is
24 what's actually on the system. That's the facts of
25 reliability.

1 Now, the availability of capacity is not a fixed
2 quantity. At least from a demand resource; that's known.
3 PJM makes a big deal about how it plans for capacity. Its
4 actual planning process acknowledges and incorporates the
5 fact that customer usage changes. It incorporates because
6 it has to, because it uses historical load, the variability
7 of customer usage over time. In fact, it uses ten years of
8 load data, not just last year's data. It takes ten years of
9 data and then it takes 35 years of weather adjustments.

10 It does this in the aggregate. It would be
11 totally useless to go back and try to sum up all the
12 different loads and figure out what their variability is;
13 they don't do it. It's baked in. It's baked in because
14 actual customer loads have been variable, and so it's in the
15 forecast.

16 If you want to know what that forecast is trying
17 to predict, the best thing to look at it is to look at what
18 the parameter of validation would be, which is a fancy way
19 of saying "How would you know if you got this thing wrong?"

20 It's pretty obvious with your forecast that you
21 would know you got it wrong if the actual loads on your
22 system didn't meet your forecast. Now if that happened
23 often enough, I think PJM's approach would be to ask, "Gee,
24 what's wrong with all these loads on the system? They're
25 not obeying our forecast." But usually what a forecaster

1 does is they go back and they look at their model and they
2 try to figure out what they haven't included, and then they
3 make the forecast, include that until we get a better
4 estimate of what the actual load is going to be.

5 Now when you've done that, what you've predicted
6 is actual loads on the system, if you do it right. If
7 you've predicted actual loads on the system, then you have
8 just predicted what I defined earlier as the only thing
9 that's available to you; and those are the CBLs of
10 individual customers. There is nothing else on the system.
11 The load forecast is designed to predict the expected usage
12 of customers at peak and at other times. The CBL is a
13 measure of contemporaneous usage at the time of peak and all
14 other times.

15 The distinction that's trying to be made here
16 between PJM's planning and operational requirements is
17 simply untenable. If you are not planning to meet
18 operational reality, you are not planning to operate.

19 PLC is a statistically insignificant sample of
20 five hours from a single year, which in that year has 8,760
21 data points. If capacity is the ability to deliver energy
22 when called upon and it is nothing but that in physical
23 reality terms as to what's available to the system. If you
24 would not trust this baseline to measure energy performance,
25 you had better not trust it for capacity performance.

1 We have a statistically insignificant sample of a
2 peak hour. We have 60 percent or more of emergencies or
3 more that do not occur on a peak hour. PLC is a bad
4 measure, from the empirical evidence we have put in the
5 record, from people like Mr. Belbot, of what a customer is
6 actually likely to be using at the time of system peak.

7 It is even a worse measure of the 60 percent of
8 the time when people are off peak. It is a static measure,
9 and we know what the problems are with static baselines, and
10 we have gone through great efforts to correct them. That
11 doesn't mean that capacity and energy are the same thing.

12 I mean, energy is kind of like dating, right? We
13 hope you show up at the bar and we hope you're attractive,
14 and you know, we'll have a good time when you're there.
15 Capacity is like marriage, you've made a commitment. You've
16 got to be there the whole time; but essentially you've still
17 got to deliver a charge or you're not doing your job.

18 I look forward to the rest of the discussion.

19 DR. BOWRING: Good morning, I'm Joe Bowring,
20 Market Monitor for PJM. Thank you for the opportunity to
21 talk to you today.

22 I want to try to just briefly clarify, in my
23 opening remarks, two key elements that underlie this entire
24 discussion. I think we've heard those two elements from
25 various perspectives from the speakers so far.

1 First is, what's the definition of capacity that
2 demand side resources are selling; and the second is, what's
3 the difference between energy and capacity that Don was just
4 talking about?

5 End use customers that sell demand resources in
6 the PJM capacity market are selling interruptibility.
7 They're not generators; they're selling interruptibility,
8 and the PJM load management program provides a mechanism for
9 end use customers to avoid paying capacity market clearing
10 prices for a defined amount of capacity, which they would
11 otherwise pay for, and have a right to use in return for
12 agreeing to not use that capacity when it's need by the
13 other customers who have agreed to pay for it.

14 This is a logical, reasonable and valuable
15 product. However, in order to implement this product, the
16 level of interruption must be quantifiable, because it's the
17 basis on which end use customers are paid for
18 interruptibility, or DR in the capacity market.

19 In particular, the amount of capacity the
20 customer would otherwise have to pay for must be
21 quantifiable. Put another way, the amount of such capacity
22 that the customer chooses to not pay for and to not use when
23 called must be quantifiable; and that's really all we're
24 talking about today.

25 A customer cannot offer to not pay for a level of

1 capacity for which it has no level of obligation to pay. If
2 you're not obligated to pay for it, you can't very well give
3 up the obligation to pay for it. Such an offer would be
4 meaningless and without value.

5 I agree with Don that energy and capacity are
6 clearly distinct and different products -- well, actually I
7 don't agree because I say they are different products and
8 Don says they're all the same thing, I guess. PJM
9 administers distinct and different markets for these
10 products, different metrics appropriately apply to the
11 measurement and verification of energy and capacity
12 products.

13 A demand side resource may provide either; it may
14 provide either energy or capacity and receive compensation
15 for both in an hour, depending on how it performs. If both
16 products are delivered in the same hour, the resource is
17 entitled to compensation for both products. If either
18 product or both products are not delivered, the resource is
19 not entitled to compensation for the product not delivered.

20 The PJM tariff defines capacity from demand
21 resources and specifies the means, the measure, and verified
22 delivery of that capacity. As I said, the sale of capacity
23 by demand side resource is an agreement to be interruptible.
24 The reduction, when called on, is mandatory. It's not a
25 voluntary; it's a mandatory. And if PLC is the metric, that

1 means that the current level of usage, while relevant to the
2 market, is not relevant to the level to which the customer
3 has agreed to reduce. And that's the essential point.

4 Clearly it matters how much power is being used
5 in real time, and it also matters, the level to which that
6 customer has agreed to reduce also matters. The sale of
7 energy by a demand side customer in the energy market is a
8 measurable reduction by a customer in energy usage in
9 response to market prices, in return for not paying the
10 market price for that energy. The reduction in the energy
11 market is voluntary. A reduction in energy usage from a
12 level that the customer would otherwise abuse at that time,
13 based on the customer's actual circumstances, can and does
14 receive demand-side compensation. It receives an energy
15 payment. That's the appropriate payment.

16 So for Don's customer that's reducing from a
17 particular level in real time, they are paid to reduce, if
18 they receive an energy payment, if they're enrolled in that
19 program; but that's not the metric which defines the amount
20 of capacity that they have agreed to not use, or the amount
21 of capacity for which they have agree to pay.

22 One final comment on aggregation, as aggregation
23 was discussed at some length. In my view, this is not about
24 aggregation. Aggregation is a perfectly reasonable way to
25 approach business; perfectly reasonable way, is a perfectly

1 reasonable way to approach the business of providing demand
2 side. What matters is the metric which is used to define
3 compliance. If you use the wrong metric, then putting
4 together a portfolio based on the wrong metric will give you
5 the wrong answer. If you put together a portfolio based on
6 the correct metric, then you'll get the right answer.

7 So this is not fundamentally about whether you
8 can do portfolios or not. Clearly either metric permits a
9 portfolio. It's a question about what the right metric is.
10 Thank you, and I look forward to the discussion.

11 MR. TACKETT: Thank you for your comments.

12 Before opening up the floor for others to provide
13 questions and responses to what you've heard this morning,
14 I'd like to first welcome Chairman Wellinghoff.

15 First on the definition of capacity that's been
16 discussed this morning, Mr. Sipe states that capacity is the
17 ability to provide energy when called upon. Dr. Bowring
18 states that when you sell capacity, you're selling
19 interruptability.

20 I'd like to, if possible, further develop th is
21 discussion under the second panel. Before opening up the
22 panel to other staff's questions, I'd like to first ask PJM
23 a question to further develop Discussion Topic 4, which
24 focuses on whether any load in PJM can be at load levels in
25 excess of PLC during an emergency. Afterwards, I invite

1 other panelists to opine on the issue, if possible.

2 PJM has stated that the reliability issue stems
3 from a decrease in the system reserve margin. I'm wondering
4 whether this factor comes into play and causes a reliability
5 concern during real-time emergency operations. And if it
6 does cause a real-time emergency operation from PJM's
7 perspective, would you credit this real-time issue to load
8 management resources specifically, or rather to any type of
9 load that can be consuming more demand real-time?

10 MR. BRESLER: Yes, the basic question is whether
11 loads in general may exceed their PLC value in real-time.
12 And the answer in general to that question is yes. Again,
13 what we are trying to do here is define the requirements
14 that are accepted by a demand resource when it commits
15 itself to provide capacity to the system.

16 A demand resource that is committed as a capacity
17 resource must meet the defined value that is established for
18 that resource as a capacity resource. So can some roads on
19 the system exceed their PLC values during real-time
20 operations? Yes. And that is one reason why we have an
21 established reserve margin, because those can be consuming
22 more than was initially planned for. It's also because some
23 generation may not be performing at the levels at which they
24 were expected.

25 But the demand resources have been committed as

1 capacity resources, and therefore we have to establish the
2 benchmark from which those resources must reduce in order to
3 meet their capacity obligation. And again, PJM believes
4 that the appropriate benchmark to which or by which we
5 should value demand resources for that capacity commitment
6 is that PLC value.

7 MR. TACKETT: Just to follow up quickly, on the
8 first part of the question, an erosion, as PJM spoke about
9 in the data response, an erosion of the system reserve
10 margin, could that come into play in real-time operations?

11 MR. BRESLER: If the measurement mechanism that
12 has been proposed by others in this case, of utilizing an
13 energy base line to measure capacity performance, if that is
14 allowed, then yes. The reserve margin would be eroded. PJM
15 could not live with that erosion of the reserve margin, we
16 would need to commit more capacity in order to account for
17 that, if that measurement mechanism was allowed.

18 MR. TACKETT: Thank you. Would other panelists
19 like to discuss this issue also?

20 Mr. Sipe.

21 MR. SIPE: First, I mean the statement about, you
22 should do what you're committed to do is not really
23 relevant. There isn't anyone here who is saying that a
24 resource shouldn't do what it's committed to do; the
25 question is what's the appropriate thing to commit you to

1 do.

2 It's not an argument for either side to say that
3 if resources don't meet their commitments, we going to have
4 problems. The question is, what should those commitments
5 be?

6 Now, the idea that you need more reserves or some
7 other amount of capacity if you use an energy baseline; you
8 know in ISO New England they use the exact same baseline to
9 measure performance; and in fact they insist upon using
10 those same baselines and making those as close as possible,
11 for capacity and energy for the very reasons I've been
12 discussing.

13 They don't seem to think that that is going to
14 create a vast reliability problem, but there's other reasons
15 for thinking that it won't, either. The variability of load
16 is not just built into the reserve margin. The variability
17 of load built into the reserve margin is largely the chance
18 that your load forecasting methodology is bad and is in
19 error. The variability in load is actually built into the
20 base forecast, and it's inevitable that it's built into the
21 base forecast. There is no way around it, it is ten years
22 of historic data. If you can tell me how there could not
23 include the variability of loads in ten years of historic
24 data, how you would back that out, I don't see it. It's in
25 there. It is part of the statistical probability that's in

1 the base load forecast.

2 The fact that you're using an appropriate measure
3 for delivering energy in response to a capacity call has
4 nothing to do with how much capacity you need to meet the
5 peak loads predicted, absent demand response, which means
6 you need an accurate mechanism; and we'll talk about that
7 further in this panel.

8 But statements such as, "If people don't meet
9 their commitments we have a problem" do not further the
10 debate. The issue is, what should the commitment be and
11 why?

12 MR. TACKETT: Mr. Campbell?

13 MR. CAMPBELL: Thank you. This is Bruce Campbell
14 with Energy Connect.

15 I agree with Mr. Sipe that certainly what we're
16 talking about, what should the commitment be, and what
17 should it be based on? PJM has made, I think, a compelling
18 case that it should take the PLC into account. Mr. Sipe
19 earlier remarked that the PLC is insignificant; yet our
20 company and I believe his client, and I think other
21 providers as well, offered to help customers manage PLCs,
22 manage them downwards, so they can reduce their costs of
23 capacity.

24 That's significant. It sends a clear message to
25 PJM about what demand is out there. And when individual

1 customers say 'I'm going to curtail my demand in order to
2 limit my cost,' and then ignore that in actual operation,
3 there is a very inconsistent message going to PJM and any
4 planner about what load is actually going to be.

5 And I'm not suggesting here that every customer
6 that uses the GLD methodology is managing their baseline or
7 managing their PLC downward, many customers don't. But I'm
8 a little uncomfortable with the idea that the capability is
9 there and PJM, that it can't be seen by PJM, and shouldn't
10 be; yet they need to account for it in some way. So the way
11 it's done today is they account for it by limiting
12 registration amounts, the amount that you can commit to PJM
13 to the PLC level. And to be consistent with that, that PLC
14 level needs to be accounted for in the actual measurements.

15 MR. TACKETT: Mr. Norton.

16 MR. NORTON: I think one of the things to keep in
17 mind here, we're talking about the variability of the
18 individual loads going into the load forecast and, you know,
19 taking any kind of demand response out of it. PJM could
20 look at it and kind of, because it's using a long historical
21 outlook, it kind of skews those because one load goes up,
22 one load goes down.

23 Where the problem comes in and what PJM has
24 identified here is, at least as I understand it, there is a
25 set of loads that are not randomly going up and down; they

1 are intentionally peak shaving, and they're always doing it
2 every year; so there is no baked-in variability from year to
3 year; it's a cost in a peak shave. And then that load comes
4 back into the market, into this capacity market and says
5 "Oh, I've got this excess that I can provide you."

6 So I think you have to be careful when you talk
7 about the variability. To me I see it more as a randomness,
8 though, because we're going from a large system down to a
9 bunch of small systems, the actual retail customers. And I
10 think that we probably wouldn't even be looking at this as a
11 problem if it was truly a variable or random, you know, the
12 aggregation up to the large; but here we do have a set of
13 retail customers or whoever that are always skewing it one
14 way, which is down. And that's impacting the forecast going
15 forward, which is what PJM uses to buy that capacity.

16 MR. TACKETT: Dr. Bowring.

17 DR. BOWRING: This is not, as far as I'm
18 concerned, a criticism of or evaluation of the PJM
19 forecasting method. It is what it is, and it's the basis
20 for forecasting reliability needs, which in turn result in
21 capacity requirements, capacity obligations and payments for
22 capacity. It's not about whether load is variable; of
23 course it is. But when load varies, and that load is also
24 paid for or chosen not to pay for a certain level of
25 capacity. And the point of PLC is to ensure that customers

1 who have chosen not to pay for level of capacity reduce
2 their load to the level consistent with the amount they pay
3 for, not simply reducing it at all. Clearly, some reduction
4 is good; but that has nothing to do with the level of
5 capacity that's being paid for.

6 Ultimately what this is about is the capacity
7 market, how many resources are being sold in the capacity
8 market, what the price is of capacity and, finally what does
9 it mean to actually have sold that capacity; what does it
10 mean to comply with your sale of capacity. What does it
11 mean have agreed to be interruptible at a specific level?
12 In my view, the PLC measures appropriately the level from
13 which you must interrupt based on the amount of capacity you
14 purchased?

15 MR. SIPE: Throughout this discussion, we
16 continue to mix two things: The amount that someone's
17 obligated to pay, and the amount of performance. They
18 aren't the same thing. You can measure the amount that
19 someone's able to pay by any means you want. I can take
20 every customer on the system and give them an average charge
21 for capacity. I can allocate my costs that way. That
22 doesn't answer the question of what they're going to be able
23 to provide as a service.

24 It is a misstatement that PLC is insignificant.
25 It's certainly significant in terms of what you're going to

1 be charged. It's a long term marginal price signal that is
2 intended to get people to try to take their usage off the
3 peak. It's an allocation mechanism that occurs after you've
4 abused, and we hope that it sends the correct price signal
5 going forward.

6 That doesn't have anything to do with whether or
7 not you're available now to provide a service. The service
8 is not not buying something. The service is moving from
9 where you are because that's physical reality, that's the
10 only thing you can do in response to an emergency; and if
11 you're not doing it, you're providing nothing. And your
12 agreement not to pay for something that you're already not
13 using is doing the system no good, period. None, zero, zip.

14 You have an emergency, you've got to move.
15 There's nothing else that responds except response.

16 The other thing is if you have an accurate
17 baseline, peak shaving activity is going to be reflected in
18 your baseline. There's not some sneaky way to get around,
19 doing a whole bunch of peak shaving and then not having it
20 show up in your baseline.

21 Now I suppose it could happen. There could be
22 some truly brilliant person who manages to clip just those
23 five hours and doesn't affect the consumption on any other
24 day, and so they have a CBL that magically just averages
25 out, and they just manage to guess that perfect hour, that

1 is now how real peak shaving works.

2 Peak shaving has to be a persistent effort over a
3 length of time in order to hit those five hours. If it's
4 persistent level over a bunch of time, that shows up in a
5 contemporaneous baseline. Where it's not going to show up,
6 if you're worried about that, is in something you did a year
7 ago.

8 The fact that you used something a year ago is no
9 indication of what you're doing now. You could be peak
10 shaving right now because you decided you didn't like your
11 bill from last year. Under PJM's system, you're going to
12 pay every penny of that peak shaving, for no good reason.
13 If you had a contemporaneous baseline, you would see the
14 peak shaving activity, or at least you'd have a lot better
15 chance of seeing it unless, as I said, you've got a
16 brilliant person who can actually pick that one perfect hour
17 and not affect their load in other hours or other days.

18 I mean, there used to be an argument that you
19 shouldn't pay people for DR if they're on an LNP rate,
20 because they're already responding. And our response has
21 always been, if they're already responding, it's in their
22 baseline. So all's you're getting is what's left after
23 they've already responded to price. If you've got people
24 peak shaving, you have a contemporaneous baseline. The only
25 thing you're paying for is what they're willing to give you

1 after they've done their peak shaving. And if there's a
2 problem with the baseline, if for instance we've got to go
3 to a tighter window -- for instance, the two hour adjustment
4 that they use in ISO New England, that can be discussed.
5 We're all for having very good baselines that represent, as
6 closely as possible, what people would be doing other than
7 for a demand response call. And that should include the
8 peak shaving activity which they're doing other than a
9 demand response call. But you're going to catch it if you
10 have a good baseline.

11 You're never going to catch it using the five
12 hours from the previous year; you don't know what a person
13 is doing actually this year, for peak shaving or not.

14 MR. TACKETT: Thank you.

15 Frank Lacey.

16 MR. LACEY: Thank you, Frank Lacey from Comverge.

17 I've got a couple of points. Don just made
18 several of the points I was going to make on peak shaving,
19 so I won't repeat them. However, there is one more that I
20 think is largely overlooked.

21 PJM and others on the panel talk about peak
22 shaving as if it is an evil thing to do. There are states
23 in the PJM footprint that have statutory obligations on
24 their LSEs to reduce the peak. So at some level, customers
25 are obeying the law or helping the LSEs facilitate

1 compliance with the law by peak shaving. And that should
2 not be overlooked.

3 Another point on the variability of load, it's
4 very convenient to put a two customer grid up on a
5 whiteboard like that and talk about that as reality.
6 Reality is, in PJM there are millions of customers, and all
7 of them behave differently. And an example like that does
8 not get anywhere near close to representing the variability
9 of load, what actually goes on in the market in real time.
10 Thank you.

11 MR. TACKETT: Ms. Pieniazek.

12 MS. PIENIAZEK: Thank you.

13 I think Dr. Bowring, I believe he got to the
14 heart of the real issue; and it's really the cost allocation
15 issue that he spoke about, how customers are paying for
16 capacity based on the PLC. And if that's the real issue,
17 then we need to look at fixing the cap on the PLC for
18 customers that are over-performing during events.

19 The PLC essentially will not be reset for those
20 customers that over-perform, and therefore they're not
21 paying for the capacity, if that's the real issue, while
22 under-performers, PLCs, are adjusted.

23 Again, as my opening comment stated, the PLC is a
24 cost allocation. It's not a planning tool. Thank you.

25 MR. TACKETT: Mr. Bresler.

1 MR. BRESLER: Thank you. I wanted to go back to
2 the peak shaving discussion that was current a few moments
3 ago. Mr. Sipe was correct, I think, that typically when
4 somebody peak shaves they can't magically pick the exact
5 hour they need to or the exact five hours they need to.

6 Typically when somebody engages in peak shaving,
7 it's done on a relatively consistent basis, as Mr. Norton
8 had alluded to in his comments as well. But that is
9 specifically why that is the load that actually gets into
10 the forecasting process the PJM does. The actual loads on
11 the system during peak hours are what drives PJM on forward
12 load forecast, and there's been some disparagement of the
13 use of PLC as an appropriate benchmark for whether a demand
14 resource has met its capacity commitment or not.

15 But the fact of the matter is that PLC is not
16 calculated based on a random five hours from a previous
17 year, it's based on the five peak hours of the previous
18 year. And so it is the most recent and most relevant
19 measurement of what a demand resource consumed during the
20 peaks on a previous year; and that is why PJM believes it's
21 the best benchmark for establishing whether a demand
22 resource has met its capacity commitment.

23 The one thing, a potential misconception I also
24 wanted to clear up is the idea that PJM somehow thinks that
25 peak shaving is an evil thing or a bad thing. Nothing could

1 be further from the truth. The ability of an end use
2 customer to manage its capacity costs, by managing its
3 consumption on peak days, is an integral part of what
4 happens. And we believe it's a good thing for customers to
5 take that initiative.

6 What we think is problematic is for customers to
7 engage in peak shaving activity, but then utilize some
8 higher energy baseline value to establish their capacity
9 performance on a peak day. And people have referred to it
10 as mixing the two concepts during this panel discussion, and
11 I agree 100 percent, as mixing two concepts. There is
12 capacity performance and there is energy performance.

13 And we believe the energy performance, measured
14 from an energy baseline, is also a good thing and should be
15 compensated accordingly through the energy market. But
16 capacity performance must have a benchmark that is based on
17 what the customer has historically consumed, on peak days,
18 and that appropriate benchmark is the PLC, in PJM's opinion.

19 MR. TACKETT: There was one comment earlier about
20 the PLC not being reset as a result of over-performance.
21 Could you address whether it is or is not, and explain how
22 that process works?

23 MR. BRESLER: I'm sorry, that question was
24 directed at me?

25 MR. TACKETT: Yes.

1 MR. BRESLER: I assume by 'resetting the PLC'
2 you're referring to maybe the add-back process?

3 And the current add-back process is not
4 consistent with measurement of capacity performance from an
5 energy baseline, because the current add-back process will
6 not add back to a load value more than the nominated demand
7 response capacity quantity.

8 So if there's energy performance that is measured
9 from an energy baseline that is larger than the nominated
10 capacity amount, that will not be added back. So the two
11 right now are inconsistent because of this measurement of
12 capacity value from an energy baseline.

13 MR. TACKETT: One additional response from Mr.
14 Sipe, and then we'll open it up to other staff questions.

15 MR. SIPE: I want to start with the assertion
16 that PLC is the best measure of what a customer historically
17 used.

18 And those five hours, you know, I think the
19 answer is "duh" -- yes. That's what they historically used.
20 That doesn't answer the question of whether that's the best
21 measure of what's available at the time of the system
22 emergency. I can grant that it's a perfect measure of what
23 I used last year. That doesn't mean that it meets the
24 reliability requirements of telling the system operator what
25 is available at the actual time next year that there is a

1 call.

2 Simply saying that the requirement must be based
3 on historical usage is not an answer to whether or not the
4 capacity is actually available than whether you're measuring
5 it correctly. The issue here is whether last year's peak is
6 an accurate measure of what's available now. For all the
7 reasons it's not an accurate measure of what's available in
8 the energy market, it is not an accurate measure of the
9 energy response available on the system when you call. The
10 energy response available on the system when you call is the
11 only thing that satisfies your reliability requirement and
12 your capacity requirement. There is not some other way to
13 deliver capacity. You don't send it in an envelope, you
14 don't pay for it or not pay for it by sending a check. You
15 reduce or you deliver. Those are the only two things you
16 do.

17 If the baseline is in the past, it's a good
18 measure of what you could have done in the past. It is not
19 a good measure of what you can do now, or particularly what
20 you can do in the 60 percent of emergencies that aren't peak
21 hours.

22 Finally, we got into a little bit of how the add-
23 back mechanism works and whether people's loads needed to be
24 adjusted. An add-back mechanism is only meant to correct
25 your load forecast, to make sure that people you've paid for

1 being off and induced to be off are added back in. It has
2 nothing to do with how you allocate the cost for that; and
3 in fact the allocation of those costs will have no bearing
4 on whether or not you've got your load forecast right.

5 So those are two completely separate issues, of
6 whether or not you've got the right amount added back in to
7 reflect the amount you paid for and actually induced to get
8 off with a capacity payment, and how that gets allocated.

9 Allocating it to individual customers is pretty
10 much irrelevant. We'd have to talk about the requirements
11 of 745 to see if they apply to capacity, and whether or not
12 we want to do the equivalent of LNP minus G here.

13 All you need for reliability is to get the
14 correct amount and add it in to the aggregate forecast;
15 that's it. Thanks.

16 MR. TACKETT: Dr. Bowring, briefly.

17 DR. BOWRING: I actually agree with part of what
18 Don said, which is that PLC is not a forecasting tool. What
19 it's about is how much capacity did you buy and what level
20 of interruptability did you agree to? So it's not about
21 forecasting a load, but it is about how much you agreed to
22 pay for, how much you agreed to use, when the system needs
23 the capacity you agreed not to pay for. And that is the
24 fundamental point; of course it's not a forecasting tool, of
25 course load varies.

1 And what Mr. Sipe is also failing to mention is
2 that using PLC as the correct baseline will result in
3 larger reductions in real time taking kind of real loads
4 than would the method he's proposing, in fact results in the
5 appropriate incentive to reduce to that level. And the
6 incentive is clear and strong to reduce to that level of
7 capacity which is actually paid for.

8 And one last comment on the add-back. The add-
9 back does in fact affect PLCs in addition to affecting the
10 forecast. Thanks.

11 MR. TACKETT: At this time I'd like to ask
12 Commission Staff at the table if you have any other
13 questions.

14 MR. GOLDENBERG: I had one question. There was a
15 mention of using E4D as a reduction based on historic levels
16 for generation. Is there any comparable reduction for
17 failure to perform for demand response to reflect their
18 actual performance so that when you go forward, you're not
19 buying something that you're not getting?

20 MR. BRESLER: This is Stu Bresler.

21 The basic answer to your question is no, there is
22 not a directly analogous de-rating for demand resources that
23 would be directly analogous to E4D. E4D is utilized for
24 generation because once it's committed as a capacity
25 resource, it must be available essentially all the time, has

1 a day-ahead offer commitment everyday, into the day-ahead
2 energy market, and therefore the E4D is utilized to measure
3 the probability that it will be available, to the extent
4 that it is committed to be available in coming years.

5 Demand response, on the other hand, has a
6 requirement to reduce right now on the maximum of ten events
7 per year, six hours per event. And therefore there is a
8 penalty applied to demand response that does not meet the
9 commitment when it is called on those events or for those
10 hours. But because it's not required to be available all
11 year, there is not an analogous E4D rating for demand
12 response resources.

13 MR. CAMPBELL: I would just add a couple things.
14 First of all, E4D, the use of E4D to reduce the amount of
15 capacity you sell into the market as a generator is
16 voluntary. You can sell 100 percent of your capacity if you
17 choose to take that risk. It's actually designed to enforce
18 the must-offer requirement in the RPM, so that your must
19 offer requirement is limited to the maximum of your full
20 ICAP reduced by your E4D. But there's no limit on how much
21 you can sell; you can sell the full megawatt capability of
22 the unit, your full ICAP, should you choose to.

23 While it was not literally a direct analogy to an
24 E4D in DR, I think the appropriate analogy is again the PLC;
25 that is, it's the level of demand which customers agree, to

1 reduce to agree not to pay for. So it's simply, they are
2 both ways of thinking about the metric of deliverability.
3 Thanks.

4 MR. TACKETT: Mr. Sipe.

5 MR. SIPE: I want to address the idea of, we're
6 going to get larger reductions in real time if we require
7 people to reduce for free down to their PLC and then start
8 counting.

9 In a snapshot, if you can get people to do it,
10 provide service for free, yes, you get more service. The
11 notion that you are going to get people who are willing to
12 do that, to take on that additional risk and that additional
13 exposure and not charge you for it, not increase the price,
14 or simply not respond if you make it too onerous is the
15 disconnect here.

16 Customers who have to move significantly from
17 somewhere above a PLC are available to the system. They are
18 there. You could call on them. You are limiting the amount
19 of available capacity that you have for reliability purposes
20 if you send the signal that you are not going to pay for
21 that reduction. People simply are not going to offer it;
22 that's just economic reality.

23 You are not going to get larger reductions; you
24 may not get any reductions. And what you're going to have
25 is a huge self-selection problem, because now you're sending

1 me an economic signal that this is a market for people who
2 know they aren't going to be there at their PLC level in the
3 first place. That's the economic signal you're sending me.
4 Because all I've got to do is sit below my PLC and I get
5 paid, even if that's where I would have been anyway; it
6 creates the self-selection problem, and people above that
7 say this was way too expensive a program for me, I'm not in
8 it. You are not going to get more reductions, you are going
9 to get fewer reductions; and people like Ron Belbot, who put
10 in an affidavit, is really the only evidence in this case --
11 and it's unrefuted -- that customers will look at it that
12 way and will respond and say, you know, "This program is too
13 rich for us. We can't predict where we're going to be on
14 the PLC."

15 MR. TACKETT: Mr. Bresler.

16 MR. BRESLER: Thank you. I need to respond to
17 this concept of reducing for free.

18 As we have said earlier, on multiple occasions,
19 there is energy value associated with real-time reductions
20 from an energy CBL. That energy value is compensated.
21 Thanks to the recent issuance of Order 745, under certain
22 conditions, that energy reduction is compensated at full
23 LNP; and I think we expect that those conditions will be met
24 the vast majority of the time. It is not reducing for free,
25 it is not uncompensated.

1 The question here is, what is the appropriate
2 benchmark for ensuring that a demand resource has met its
3 capacity commitment. And that's what we keep coming back
4 to.

5 The resource has obviously demonstrated, if it
6 has a low PLC, that it has reduced to that lower level
7 historically. In fact, on multiple occasions. In fact,
8 routinely, because there is a 5 CP methodology associated
9 with the PLC.

10 So we're not asking the resource to reduce to a
11 level that it has not reduced to before. All we're asking
12 or requiring from the standpoint of verifying capacity
13 performance is that that benchmark, that historic benchmark
14 is the one that it is utilized in order to verify capacity
15 performance.

16 MR. TACKETT: Dr. Bowring.

17 DR. BOWRING: Thanks. I just want to concur with
18 what Stu said, which is clearly there is a payment for the
19 reduction, it's called the energy payment and it's, as he
20 also pointed out, full LNP.

21 But in addition, Don was suggesting we might get
22 less of this product if we define it properly. That doesn't
23 strike me as being a problem. First of all, I don't agree
24 that that's necessarily the case, but the object should be
25 to define the product properly, to price it properly, and

1 then let the market work. If you mis-define the product and
2 overpay for it or pay for it twice, clearly you're going to
3 get more apparent supply than you would otherwise get.

4 But the point that Stu made at the outset is
5 apparent supply is not only not helpful, it's actually
6 harmful to the reliability of the system. So the point in
7 all these exercises, thinking about markets and market
8 design and product definition should be to define the
9 product properly, price it properly, and then let the market
10 work.

11 MR. TACKETT: Mr. Sipe, if you'd like to respond
12 directly to those questions.

13 MR. SIPE: Yes. This is interesting that, you
14 know, Joe and I can be in complete agreement on what he just
15 said. You've got to design the product properly. You know,
16 saying that as many times as you like is not an argument for
17 how it should be designed. So Joe and I can be in unanimous
18 agreement about, we have to design it properly, let the
19 market work, and that imaginary reductions are not valuable;
20 but it doesn't advance the argument about how you should
21 measure actual reductions.

22 So I want to second everything Joe said and say
23 that it supports my position.

24 MR. TACKETT: Apologies, but I'm going to open it
25 up to the next question.

1 MR. GOLDENBERG: I guess for Mr. Bresler.

2 You mentioned an erosion in reserves as a result
3 of this method of measuring demand response. Does that
4 problem not persist if you theoretically replace that demand
5 response with an equivalent amount of actual generation?

6 MR. BRESLER: No, it doesn't, and I'll try to
7 explain why. I think the first chart we utilized -- I don't
8 know if you want to bring the PowerPoint back up; it's the
9 first chart we utilized, was an effort for us to graphically
10 show this.

11 But think about the way we commit capacity
12 resources, almost being the same thing as what we have to do
13 in the energy market every day, we have to maintain power
14 balance, right? You have to have the same generation on
15 line as you have load being consumed, and you have to match
16 that, second by second, 24/7, 365, right?

17 In the capacity market, we have a capacity
18 requirement, a reliability requirement. And we have to
19 commit resources up to the level to meet that requirement.
20 For a generation resource, its value in meeting that
21 requirement is its generating capability, and that's
22 measured from going from zero up to a megawatt quantity.

23 For a demand resource, the value of that resource
24 is measured instead from a benchmark down. And again, the
25 question before us, as has been said before is, what is the

1 appropriate benchmark? If we committed all generation to
2 meet that reliability requirement, again with E4Ds included
3 and all that sort of thing, we would commit with the
4 reliability requirement that includes the reserve margin,
5 and that reserve margin would be for all these variability
6 of loads and all that sort of thing.

7 When a demand resource displaces a generation
8 resource, it has to take on that same commitment and reduce
9 from the level at which we established that balance of
10 resources against the reliability requirement.

11 So the answer is no, if you had all generation
12 resources, the erosion really couldn't exist. The erosion
13 exists because there is the proposal to measure capacity
14 compliance based on a higher energy baseline than the
15 reliability requirement was established based on. And that
16 reliability requirement again was established based on a
17 load forecast that utilized the historic consumption of the
18 loads that contributed to it. And that must establish the
19 appropriate baseline for capacity compliance.

20 MR. TACKETT: Mr. Sipe.

21 MR. SIPE: I can't decide whether Joe agrees with
22 Stu or not. I mean, I hear from Joe that the planning
23 process is not at issue, and I hear over here that the
24 planning process is at issue, and it's what you plan for.

25 It's absolutely established that what the system

1 has planned for is to meet the actual loads on the system;
2 which means that that is the correct basis from which the
3 baseline should be set. That is a contemporaneous baseline
4 based on the people consuming at the time on the system;
5 that's what the system is planned for, we've been through
6 it.

7 It is not planned based on a stack of PLCs from
8 last year. Costs were allocated based on that stack, but
9 that never comes into the planning process, ever, in any
10 way, anywhere. Zip, nada. That's not how the system is
11 planned.

12 So when you say what is the appropriate level to
13 which the system is planned, that is the combined customer
14 baselines of the people actually on the system at the time
15 of system peak. That's what you're shooting for. You
16 aren't shooting for individual customer levels somewhere
17 else; you know there's going to be noise and variability.
18 That's where you get your response. If we're going to
19 base our response and the baseline on how the system is
20 planned, then that's the only answer. If we're going to
21 base it on what people bought last year, then we have to
22 have an allocation mechanism that matches exactly what they
23 used this year, and we don't. We have an allocation
24 mechanism that is a long ways from that; and in most hours
25 where emergencies occur, those peak levels are not what

1 you're going to see; anyway, they're not even a good
2 indicator of what they were in nonemergency levels last
3 year.

4 MR. TACKETT: Dr. Bowring.

5 DR. BOWRING: Peak loads, as I think Don just
6 agreed, are obviously used in forecasting. Peak loads are
7 the basis for PLC. So I don't think there's any dispute
8 there. But what's at issue here is, and so far I haven't
9 heard a response to it, is that the PLC is in fact used to
10 define your obligation to pay for capacity. And after all,
11 this is a market, and demand side customers are, as we've
12 pointed out, agreeing to not use capacity at times when it's
13 needed by others in the system, and therefore not to pay for
14 it.

15 So clearly, the only metric by which one can
16 judge how much you're not paying is the price of that
17 capacity and the amount you otherwise had to pay for.
18 That's what the PLC is and does.

19 MR. TACKETT: Mr. Campbell.

20 MR. CAMPBELL: Thank you. This is Bruce
21 Campbell.

22 I'm going to echo I think what Joe, Dr. Bowring
23 just said, that PRCs are used in the forecast; and to the
24 extent that add-backs are incorporated into the PLCs and the
25 forecast mechanism, they're important. And we're looking at

1 10,000, 10 percent, almost 10 percent of the load in PJM
2 being supplied by demand response resources, and how we
3 treat those is, and how we treat the add-backs, and that is
4 a part of this discussion. How we treat the add-backs is
5 very important to the reliability that these resources will
6 provide. And it's not insignificant, it's important.

7 MR. TACKETT: Mr. Sipe.

8 MR. SIPE: PLCs aren't used in the forecast,
9 period. Never. They're never looked at, period. You never
10 look at a customer's PLC in any of these forecasts. You
11 don't even really look at the aggregate PLCs in any of these
12 forecasts. Your actual system is planned on a single
13 coincident system peak, not on the average. Now you use a
14 lot of statistical methods to figure out how many hours you
15 need to count, to figure out whether that new peak is going
16 to be.

17 So if the position is that if they're not in the
18 forecast, they're not important, then they're unimportant.
19 Now, I don't know how many other ways I can answer the
20 question about whether allocations should drive how we
21 measure availability. I don't know what part of the
22 response hasn't been heard by Dr. Bowring, but I'll try
23 again.

24 You can allocate your costs any way you like; you
25 don't perform by agreeing not to pay. You perform and you

1 are variable based on the physical reality and the needs of
2 the system when performance is called for. That is not a
3 financial transaction. That is a physical movement, a
4 reduction in load from the only thing you have to reduce
5 load. If you can find where in here allocating costs
6 affects that measure of availability, someone else will have
7 to explain it to me.

8 You can say that agreeing not to pay for
9 something is equivalent to that availability response; that
10 doesn't mean it's true. The physical reality is that you've
11 got to move from where you are when called, or you shouldn't
12 be being paid for anything. And the allocation should
13 follow that; if anything, we were trying to do it with
14 allocations.

15 MR. TACKETT: One additional response and then
16 we're going to go on to the next question. Mr. Bresler.

17 MR. BRESLER: Thank you, and I hope I don't sound
18 too repetitive here, but I think it needs to be said sort of
19 a different way.

20 PFCs peak load contributions should not be
21 thought of nearly as a cost allocator. They reveal what
22 individual demand resources contributions were to the peak
23 loads that drive the PJM load forecasts, and therefore the
24 determination of the reliability requirement.

25 The exact same loads that go into the load

1 forecasting go into the calculation of PLCs. The PLC is
2 merely the most recent, and therefore we believe the best
3 calculation that reveals what demand resources contributions
4 were to the system peak and therefore to the reliability
5 requirement, and that's why we believe they are the
6 appropriate benchmark for whether a demand resource has met
7 its capacity commitment.

8 MS. PIENIAZEK: I would like to somewhat change
9 the tone or maybe the direction of the conversation by
10 asking a hypothetical question. What if there was no
11 aggregation? Would the performance metrics be the same, or
12 would they be different? And if different, how would they be
13 different. Or should they be different?

14 MR. TACKETT: Mr. Sipe?

15 MR. SIPE: The question of aggregation doesn't
16 affect what's available on the system or how it's available.
17 If every individual customer had to meet their own
18 obligation without aggregation, you still can't measure
19 their availability differently, and there's no difference in
20 the physical reality of what you've got to get out of them
21 in order to have a reliable system.

22 So the physics doesn't change. The only thing
23 that aggregation changes is the ability to get people who
24 may have what's the equivalent of a high E4D. Essentially,
25 a lot of people who have some ability to respond but can't

1 guarantee that they're going to respond in every hour
2 because they've got load shapes that go all over the place;
3 and ISO New England has done some interesting load analysis
4 of how people's loads actually vary over a whole set of
5 hours.

6 If you have an aggregator, what it can do is it
7 can guarantee a certain amount, but that amount can be
8 available 24/7, 365 because it counts on that diversity. A
9 single customer saddled with that requirement, even though
10 you'd want to measure their contribution in the same way,
11 they can't make that same long term commitment; and I think
12 Mr. Schisler in a later panel is going to talk about this
13 much more thoroughly.

14 But the physical reality of what you're looking
15 for doesn't change whether there's aggregation or not.
16 Aggregation is a commercial way of making it -- and actually
17 a physical way of making it reasonable to be able to
18 guarantee that that response will be there by relying on the
19 diversity of loads.

20 But what you want out of those loads is exactly
21 the same thing, and you've got to get somebody to move from
22 where they are to where you want them. From where they are
23 to somewhere lower, and that's your measure of what the
24 performance is. And it doesn't really matter who moves, if
25 you're within the same zone, if you can deliver.

1 So the commercial realities of aggregation don't
2 affect the physical realities of what you need out of the
3 resources; they just make it more reliable to deliver.

4 MR. TACKETT: Apologies, I missed the initial
5 card raise. I'll start from my left with Mr. Lacey.

6 MR. LACEY: Thank you. I just want to make a
7 simple point, hoping FERC staff is not going that way, okay.

8 MS. KRAMSKAYA: It was meant only as a
9 hypothetical.

10 MR. LACEY: In the hypothetical I talked about a
11 4 megawatt PLC customer that was consuming 6 megawatts last
12 Friday. Today that facility might be on a forced vacation.
13 A lot of facilities have a week off in August, mandatory
14 vacation time for everyone. They just shut down the
15 facilities.

16 That is the benefit of diversification.
17 Diversification is very important to a portfolio, any
18 portfolio, including a demand response portfolio.

19 MR. TACKETT: Mr. Campbell.

20 MR. CAMPBELL: Thank you. This is Bruce Campbell
21 with Energy Connect.

22 I think that the answer to your question, and I
23 agree with Mr. Sipe in a lot of elements of what he says,
24 customers -- the idea is to incent responsive customers, and
25 in general they will respond, but from our perspective we

1 know that there are customers who are unable to respond
2 fully. We know that generally there are customers who
3 respond more than they are committed for, and so our
4 challenge is to balance that aggregation.

5 Now to the extent that we can't balance those
6 responses, then it places a greater risk on us and we have
7 to figure out to manage that, either through our customers
8 or on our own books. I'm not sure how we would look at
9 that, let that sit there.

10 I want to take an opportunity, though, to comment
11 that Energy Connect actually manages its portfolio in
12 contracts with customers on the basis of the PJM proposal
13 today. We find that we can aggregate customers, that we
14 have a diverse portfolio. About 40 percent of our customers
15 use a guaranteed low drop methodology. And we generally
16 find that our customers within zones overprescribing.

17 So we have diverse portfolios, we implement what
18 PJM has proposed, and our portfolio performs, as PJM I
19 believe expects it will perform. And we were unable to do
20 that with aggregation. But it isn't necessary that we don't
21 utilize a real-time CBL methodology for the customers we
22 don't -- our customers using that are always curtailed below
23 their PLC.

24 MR. TACKETT: Dr. Bowring.

25 DR. BOWRING: Just a brief point, which is that

1 portfolio management makes sense, but what really matters
2 equally much is what the metric for performance is. We
3 don't want to have a system that creates an incentive to
4 mismeasure performance and then allow that to be washed
5 against under-performing and non-performing assets. At the
6 same time, portfolio management does make sense, as I said -
7 - clearly there's going to be some variability in actual
8 performance, and there's nothing inconsistent with using PLC
9 as the metric and using that as the basis for managing a
10 portfolio.

11 MR. TACKETT: Ms. Pieniazek.

12 DR. BOWRING: I'm sorry, could I just add one
13 more thing?

14 MR. TACKETT: Go ahead.

15 DR. BOWRING: But one of the causes of some
16 distress is that when we look at the actual performance of
17 assets, what we see is the tendency of a very bimodal
18 distribution, as we see some assets which are performing,
19 some sites which are performing very well, and some which
20 don't simply perform at all. And that's certainly a cause
21 of concern for what the incentive structure is producing.

22 MS. PIENIAZEK: I'd like to address the
23 aggregation issue in regards to either individual customers
24 or aggregation. And ECS firmly believes that within an EDC
25 zone, if I have ten customers and they each have a PLC of 1,

1 that if in aggregate I commit to 10 megawatts in the market
2 and I deliver those 10 megawatts be each of those ten
3 customers that have a PLC of 1, that aggregate group of
4 customers has bought that capacity, and I've delivered it.

5 From our perspective, it shouldn't matter if it
6 comes from Customer One or Customer Ten. Our commitment is
7 to the market. We've committed to provide PJM by any DC
8 zone with 10 megawatts. If I have my very first customer
9 that has a PLC of one, but at the time I call them during an
10 event, they just can't shut down that day, it shouldn't
11 matter that Customer Ten over-delivers, because in the
12 aggregate we've met that capacity, that PLC that's been
13 bought for that aggregate of customers.

14 So aggregation for us is critical. It's an
15 essential business tool; it's a way for us to cover our
16 risk, it's a way to shield the customer from individual
17 penalty and to cover their risk.

18 MR. TACKETT: Mr. Campbell? Okay.

19 Mr. Sipe.

20 MR. SIPE: This idea of under-performing based on
21 individual sites I find somewhat interesting, because I
22 think it goes to -- it goes to the question of how
23 widespread and how much market penetration does the
24 Commission want to get for DR in any of these markets?

25 If the only people that you want to contact and

1 the only people that you want to have on are people that are
2 around 24/7 and then can guarantee you that they're always
3 going to be there, you're going to have a very small market.
4 It's not realistic for most customers. And the Commission's
5 objective of increasing demand response participation is
6 really going to run into some just practical realities that
7 aren't going to allow you to do it.

8 Now I find it very interesting that it matters at
9 all what my percentage of performing is to non-performing
10 sites is. If I have a 10 megawatt commitment and I sign up
11 an air conditioning load in the summer, and I've got a ski
12 resort in the winter, and they both can give me 10 megawatts
13 and I say I'm going to deliver 10 megawatts, in the summer I
14 shut off the air conditioner load; I've contributed 100
15 percent of what I've committed to do, and you can count on
16 it. In the winter, I shut down the snowmaking. I've
17 contributed 100 percent of what I told you and what you
18 should have been planning for.

19 Now PJM would look at that and say, "Geez, 50
20 percent of the time, 50 percent of your customers aren't
21 performing." Why is that a relevant metric when what I said
22 I'm going to perform is 10 megawatts, and I deliver it every
23 time you call me?

24 Now suppose I divide that up between three
25 customers, so that one's available in spring, one's

1 available in fall, one's available in winter. But every
2 single time you call me, one of those customers gives you 10
3 megawatts, and PJM looks at it and says "Yeah, but 60
4 percent of -- or 66 percent of your customers never perform
5 when we call an event." Why does that matter?

6 Do we not want the ski slope to be in our mix?
7 Do we not want to have those people interrupt when they can
8 interrupt? Do we not want the air conditioning load in the
9 summer because they can't do it in the winter? Do we not
10 want one of those three customers to be involved in the
11 program? If they're not going to be allowed to be in the
12 program, they're not going to be able to participate because
13 they're not going to be performing when you want them.
14 Performance has to meet your commitment, but your commitment
15 is based on a portfolio approach, and it doesn't matter what
16 your percentage of performance is as long as every time
17 you're called you deliver from those resources what you've
18 committed to the system.

19 MR. TACKETT: Mr. Bresler.

20 MR. BRESLER: Thank you. I don't necessarily
21 think of this in terms of end use customer sites, but rather
22 demand response resources, because a resource in and of
23 itself can be an aggregated set of end us customer sites.

24 But as I said early on this panel, PJM also
25 agrees that aggregation on the part of curtailment service

1 providers is an important tool in order to allow them to
2 manage their portfolio. The issue again here is what
3 defines adequate capacity performance for an individual
4 demand response resource such that if it performs beyond
5 that committed value, then the additional response can then
6 be utilized to compensate for other resources in a portfolio
7 that could not respond.

8 And reductions from a higher energy base line
9 that are utilized to substantiate capacity performance and
10 then beyond that substantiate performance for other
11 resources in a portfolio that don't respond is what directly
12 leads to the erosion of the reliability requirements, the
13 erosion of the reserves that PJM has. Because again, if the
14 reduction is not down below the value that was utilized to
15 establish that reliability requirement, it is not meeting
16 its capacity requirement, its capacity commitment in the
17 first place.

18 So aggregation again is great, it is a needed
19 tool on the part of CSPs. But in order to utilize
20 aggregation, response needs to meet the capacity requirement
21 as defined by the appropriate benchmark, and then exceed
22 that in order to utilize -- to cure others in the same
23 portfolio.

24 MR. TACKETT: Dr. Bowring.

25 DR. BOWRING: So one question that needs to be

1 asked is whether the payment structure is creating an
2 incentive by over-measuring apparent demand side to create a
3 portfolio which includes non-performing assets. Not what
4 Don talked about with some performing at different times of
5 the years, performing some of the time.

6 The question is if half of your resources
7 literally never perform at all, would that cause a concern?
8 I think it would.

9 MR. TACKETT: One additional response from Mr.
10 Sipe, and then we'll go on to the next question.

11 MR. SIPE: I just feel it's incumbent upon me to
12 continue to repeat that saying that you have to respond
13 based on the value the system was planned for. PLCs are not
14 what the system was planned for, period. That's been
15 established in this case. That's not how the load
16 forecasting works.

17 They don't establish a reliability requirement.
18 Your reliability requirement is established based on
19 predicted CBLs of customers at the time of peak; that's what
20 establishes your reliability requirement, that's what you
21 plan for. I still can't find what the argument is; or I can
22 see the incentive, don't get me wrong and I think we should
23 get rid of it by getting rid of the PLC cap, but I fail to
24 see the harm in an incentive that says "We're going to sign
25 up a whole bunch of people who we hope can respond," or even

1 what the arm is in signing up people that you didn't think
2 were going to respond.

3 Now I'm not talking about moral harm, I'm talking
4 about, what are we worried about on a system if every single
5 time you call that resource and they deliver you the amount
6 they committed that you were planning on, and I say deliver
7 in the sense of delivery of real response, not this
8 imaginary stuff, people who already below their PLC who are
9 pretending they're responding to a dispatch instruction, but
10 real response.

11 Now we may or may not want people out signing up
12 people who have a marginal ability to respond. I tend to
13 think we want to get as many customers as we possibly can,
14 thinking about how they can respond to these prices, and the
15 more aggregation, even with people who may be able to
16 respond only in 15 minutes out of the year, is a better
17 thing for society and for the system to get more and more
18 people thinking about, can I respond? But the harm of not
19 having them respond because we thought they could and they
20 didn't is beyond me, as long as what you committed to
21 deliver in an actual sense of availability of a physical
22 resource at the time you're called is equivalent to what you
23 deliver.

24 So I can see an incentive and I can see an
25 argument that we'd rather have fewer people and less

1 marginal people signed up as resources, and so we'd be
2 concerned about it. I'm actually on the other side, I think
3 we want more people signed up. I think we want more people
4 thinking about, "Is there something I could do? Maybe if I
5 sign up for a program and I get a call, maybe I would
6 respond." And you know what, you might get some of those
7 people to start thinking about it, and that's how you build
8 a market. That's how you build on people who aren't used to
9 being able to respond. That's how all this started, with
10 people who had to change, had to do something different that
11 wasn't expected, wasn't sure whether they could do it. You
12 want that net broader, you want more people included, and
13 then your safety valve is, you've got to hold the CSP to
14 account for the amount they committed.

15 And other than that, I'd say let them market it
16 to anybody, see how many people we can get involved in this.
17 That's what's good for both the economy, for the
18 environment, and for what we're trying to do in the market.

19 MR. TACKETT: I had a follow up question on Mr.
20 Sipe's example that, maybe it's just that this is such a
21 confusing topic and I'm totally lost, but I thought the
22 problem here was that if you had an air conditioning load in
23 the summer with a PLC of 10, and a ski resort in the winter
24 with a PLC of 10, that the problem was not that they would
25 bid in 10 apiece, but that they would bid in a total of 20

1 at any time in the market; and then if the air conditioner
2 actually reduced from a GLD of 20 to 0, that that would
3 satisfy the capacity obligation.

4 Maybe I'm missing the whole point, but I thought
5 the issue was, was limiting the amount of capacity you bid
6 in to the 10 for the summer and the 10 for the winter and
7 not letting you add them together? I throw that open to
8 everybody.

9 MR. NORTON: This is Chris from AMP.

10 I'd say that that's exactly what the problem is,
11 that has brought up and started this whole thing.

12 MR. TACKETT: I think you got it right.

13 MS. PIENIAZEK: Well, I think the better example
14 of that is, you'd have an air conditioning load with 10 in
15 the summertime, because that's when the five PLC days are
16 set. And your ski resort, which doesn't operate at full
17 capacity in the summertime would have say a 5 megawatt PLC.
18 So your rate in the wintertime has the ability to respond at
19 a greater level but not in the summertime, and vice-versa
20 for your air conditioning load.

21 So it's essentially utilizing both PLCs to
22 account for summer and winter demand.

23 MR. TACKETT: Mr. Bresler.

24 MR. BRESLER: I was I think going down the same
25 route as Marie, except I was going to try to take an even

1 starker way to sort of adjust your example a little bit,
2 where the air conditioner load would have a PLC of 10, the
3 ski slope would have a PLC of 0 because it simply doesn't
4 operate in the summertime when the peaks typically occur and
5 therefore the PLCs are established.

6 I would agree with Chris, though; given that
7 framing of the example, you have hit on the problem exactly.
8 If they're allowed to bid in 20 megawatts, we have a
9 problem. If they're allowed to bid in 10, and in the
10 summertime the air conditioner load goes down from 10 to 0,
11 meets its commitment, great. In the wintertime the ski
12 slope is a 10, it goes down from 10 to 0, it meets its
13 commitment, great.

14 The problem is the 20 megawatts being countered
15 from both resources.

16 MR. TACKETT: Mr. Sipe.

17 MR. SIPE: There's not going to be any counting
18 of 20 megawatts in that case; you're only going to count the
19 10. That was the response. There's no counting in his
20 example.

21 But I was actually trying to be responsive to the
22 example. In my example, you would nominate each of those
23 resources, in my three example -- for, you know, three and a
24 third megawatts. So that would be your count. But you knew
25 that at any time one of those could quote, "perform more

1 than that" and deliver to the system more than that PLC, but
2 you always knew you could deliver 10.

3 You're meeting your capacity commitment in every
4 hour. There is no harm from system planning, we've been
5 over this six ways to Sunday. There is no difference in
6 what you're delivering; you are delivering that 10
7 megawatts. So you are using, quote "over-performance" which
8 is actually a misnomer. You are using performance.
9 Performance is the ability to deliver a load reduction when
10 you want it; that's performance. There's no over-
11 performance if you're delivering 10 megawatts, but this cap
12 is irrational, but there's no harm to the system to have
13 two-thirds of your customers not perform, or to use 10
14 megawatt from one to safe a commitment. Remember, you've
15 made a commitment for 10 megawatts. That's what they're
16 planning on; that's all you're going to get. You're going
17 to get your commitment.

18 MR. TACKETT: Mr. Lacey.

19 MR. LACEY: Thank you. I'd just like to point
20 out, Mr. Bresler's example is exactly why this harms demand
21 response. He gave an example of a ski slope that has a zero
22 PLC, because the PLCs are typically counted in the summer
23 months, and the ski slope's not working. So if there's a
24 winter emergency, you've taken a customer that consumes 10
25 in real time, because they're blowing snow, they're making

1 snow, and you've eliminated them from responding to an
2 emergency. Because under PJM's proposal, they would have to
3 get below zero; they'd have to put power back on the grid to
4 qualify for a load reduction.

5 MR. TACKETT: Mr. Bresler, I was wondering if
6 you'd like to respond to Mr. Sipe's comment that there was
7 no problem to the system if only one customer is responding
8 and the other two aren't?

9 MR. BRESLER: Well, Mr. Sipe continues to say
10 that as long as the customer met its commitment, there isn't
11 an issue. And I think we both said that. But what needs to
12 be said there is what constitutes meeting its commitment;
13 and PJM's view is that the customer must be able to respond,
14 the resource must be able to respond below the value that
15 was the contributor to the reliability requirement in order
16 to meet its capacity commitment.

17 The issue we have here, and this is what we tried
18 to articulate in the very simplified example, where
19 customers that respond from some higher baseline value that
20 is obviously not reflective of what they have historically
21 consumed on the peak days or else the PLC would reflect
22 that, that respond from that higher value down to what
23 actually drove the reliability requirement are not yet
24 meeting their commitment.

25 And so utilizing that response to not only meet

1 their commitment but then meet other resources commitments
2 that did not respond is what leads to the conclusion that
3 PJM now does not have enough resources on the system to meet
4 that reliability requirement, because they didn't do
5 anything to reduce the reliability requirement. And that
6 is what would erode the reserve margin and would require PJM
7 to commit more capacity to account for that.

8 So if we allow that measurement mechanism, if we
9 allow response from an energy baseline to satisfy a capacity
10 commitment, PJM will be required to commit more capacity to
11 account for that, and there will be a cost for that
12 additional commitment for the remainder of the customers
13 that are still on the system.

14 MR. TACKETT: Mr. Campbell?

15 MR. CAMPBELL: Thank you. This is Bruce Campbell
16 with Energy Connect.

17 And if I could take the example Mr. Goldenberg
18 proposed one more step and suggest that, suppose that 1
19 megawatt air conditioning or 10 megawatt air conditioning
20 load also had a 10 megawatt industrial load associated with
21 it. And suppose, then, that it established an energy
22 baseline of 20 megawatts. and curtailed down to 10
23 megawatts, and by a CBL methodology, that customer would
24 have met his performance obligation. There would have been a
25 reduction with that customer of 10 megawatts. Yet there's

1 still 10 megawatts of load remaining on the system just for
2 that one customer.

3 And I think that's the sort of example that PJM
4 is trying to address. In terms of PLCs, and I think we get
5 the terminology, or we talk perhaps too freely about it, but
6 in that circumstance, if the customer's PLC were 10
7 megawatts, there would be no add-back incurred. No add-back
8 would be assigned for that customer, to that customer
9 specifically.

10 I'm not sure, actually, if there would be an add-
11 back assigned collectively to the larger zonal load; but
12 what you have then is a reduction without the appropriate
13 add-back associated with it that leaves the next year's
14 forecast from a PJM perspective: "Okay, should we count on a
15 10 megawatt load or a 20 megawatt load there?"

16 By today's rules, in the kind of scenario that
17 we're looking at, they basically count on 10 megawatts.
18 Whereas, suppose that reduction doesn't occur? Well,
19 there's a 10 megawatt additional load there that just isn't
20 planned for. But I think that's perhaps a better example of
21 what we're trying to deal with here. Thank you.

22 MR. TACKETT: At this time we're going to proceed
23 to the next question.

24 MR. GOLDENBERG: This is for Steve Bresler, and
25 it's more in line with probably post-technical conference

1 comments.

2 In your comments, responding to our inquiries,
3 you made a comment that in registration as a measurement of
4 management resources, end user facilities that will not in
5 fact provide any capacity which will not consume less than
6 the PLC during peak demand hours. CSP is at clear bids of
7 load management capacity and RPM on the premise that they
8 will meet their load, meet their obligation by offsetting
9 expected under- or non-performance of some end users with
10 allegedly excess performance? You talk about how this would
11 displace potential other resources, you're talking about
12 generation, other demand resources that actually could have
13 cleared?

14 I just wanted to know what the potential was for
15 that. I didn't see that in your response.

16 MR. BRESLER: When you say potential, you mean
17 the quantity of megawatts?

18 STAFF: Right.

19 MR. BRESLER: Yes, I think what we actually had
20 in those comments I think was our estimation. If all
21 curtailment service providers measured capacity response
22 from an energy baseline the way, and then attributed that
23 response to other customers that did not respond in their
24 portfolio the way some CSPs have done in the past. The
25 potential exposure would be in excess of 4300 megawatts.

1 Now, that is not the limit of the universe of
2 customers or resources that could be utilized to engage in
3 that behavior. PJM has estimated in the past that up to 25
4 percent of our aggregate load on the system is industrial
5 load that could in theory manage their PLCs on a year-by-
6 year basis, and be utilized to do the same thing; that is,
7 utilize an energy baseline to measure capacity reductions
8 and then utilize that response to cure other non-responders.

9 So the universe could be much larger than the
10 4300 megawatts we estimated would be the case if the current
11 CSP rate of doing so existed on all CSPs in PJM. But then
12 we extended that 4300 megawatt estimate and said if we
13 needed to, based on that estimate, procure 4300 megawatts
14 more capacity in order to account for that, in the 1415 base
15 residual auction we just ran, it would have cost load \$1.8
16 billion more.

17 Is that responsive to your question?

18 STAFF: Yes, it does. There's one other question
19 I have. In your example, you talk about shedding load for 4
20 megawatts. Are you talking about firm load shedding?

21 MR. BRESLER: Yes. Involuntary load shedding
22 yes, rolling blackouts.

23 MR. TACKETT: Mr. Sipe?

24 MR. SIPE: There's several aspects to what Mr.
25 Bresler said that I think I want to address.

1 The first is, there was apparently a lot of other
2 available demand response out there, by PJM's estimate, that
3 their current system is excluding from participating.
4 They're estimating it's at 4,300 megawatts. They're
5 pretending this is a good thing that these people are not
6 participating, that they are not providing real demand
7 reductions when called upon in an emergency. This is not a
8 good thing.

9 These are people who should be going out and
10 getting. Shaving your PLC will show up in your baseline.
11 The only thing you are going to get from these customers is
12 what they can do in addition to their shaved level of
13 consumption when you call them. You want all of that you
14 can get. The notion that you would have to go buy 4,300
15 more megawatts of capacity because you have 4,300 megawatts
16 of more actual load reduction available at system peak that
17 is actually going to reduce and be measured by a CBL is --
18 ludicrous is not too strong a word.

19 Nothing about that 4300 megawatts of actual
20 available operating capacity at the time of system peak
21 should inspire anyone to go out and buy more capacity. What
22 you want to do is you want to buy that capacity. It's out
23 there, it's available on the system, and their system is not
24 letting you use it. What they're citing is a problem is in
25 fact the potential that they are overlooking by having a

1 system that discourages people from offering real demand
2 reductions to the system at the time of system peak or at
3 the time of system emergencies.

4 It's not going to cost you more to take advantage
5 of that demand response; it's going to cost the system less.
6 And you can do all sorts of silly things, I suppose; you can
7 assume that that's a problem, that having actual demand
8 response at the time of peak, actual load reductions at the
9 time of peak that you can count on -- apparently they can
10 count on them enough that they can measure it. How do you
11 get to 4300 if you can't measure it?

12 You can say that's a problem, but saying it
13 doesn't make it so. That's not a problem. That's the
14 untapped potential of this market that is not now available
15 under these current rules. And it should be made available
16 and we should be able to get to those people and say, "Give
17 us what you got." That's what we want.

18 MR. TACKETT: Mr. Bresler.

19 MR. BRESLER: Thank you for allowing me to
20 respond.

21 Mr. Sipe simply continues to confuse energy
22 response with capacity commitment. If we allow response
23 from an energy baseline to constitute the satisfaction of a
24 capacity commitment, then again we will be systemically
25 under-procuring. The fact of the matter is that the same

1 resources that Mr. Sipe would like to say reduction from
2 their energy baseline satisfies their capacity commitment,
3 PJM would require to reduce more to meet its capacity
4 requirement.

5 The fact that it is not reducing enough and then
6 utilizing that reduction to satisfy other customers means
7 that I have to procure more capacity resources to satisfy
8 the load that still remains on the system. We need them to
9 get down further; doing what they have done historically on
10 an energy basis, and that is proven by their PLC
11 calculations, that is their historic consumption in previous
12 years. Doing what they have done anyway does not help to
13 meet the capacity requirement of the system.

14 What PJM is saying is meeting your capacity
15 commitment means getting down below what you have
16 historically done, and therefore drove PJM's planning for
17 the capacity requirement. Mr. Sipe continues to say that
18 the PLC doesn't drive capacity planning. The same loads
19 drive capacity planning because they drive the load
20 forecast, as are revealed by the PLC.

21 So to meet a capacity commitment you must get
22 down below the contribution you made to the forecast that
23 drove the reliability requirement. Utilizing reductions
24 from energy baselines to satisfy capacity commitments will
25 require PJM to buy more capacity. There is no way around

1 it.

2 MR. TACKETT: Dr. Bowring.

3 DR. BOWRING: Peak shaving, which is part of what
4 we're talking about here, was the original demand response.
5 It was customers responding to price, didn't need a program;
6 they were responding to price in order to manage their
7 payments. That's what you want in a working market. So
8 peak shaving is clearly a good thing, not a bad thing.

9 But what apparently what Mr. Sipe would have us
10 believe is that, from an 100 megawatt unrestricted customer
11 who has historically shaved my peak load of 20 megawatts,
12 that represents an opportunity to provide new savings to the
13 system of that 80 megawatts. Well, it does not. Those 80
14 megawatts have already been saved; they've already been the
15 result of a response to the market price without any
16 program; and the notion that that's an additional 80
17 megawatts, which is what the GLD approach would suggest, is
18 simply wrong. It's not an additional resource; those
19 customers do not need additional encouragement to
20 participate in the demand side program, they're already
21 providing demand side, and they're providing it in a very
22 substantial way.

23 MR. TACKETT: Mr. Sipe, a brief response if
24 possible.

25 MR. SIPE: Once again, we're getting back to what

1 are essentially baseline integrity issues. If you're peak
2 shaving, it's going to show up in your contemporaneous
3 baseline. Nobody's that good at peak shaving that you do it
4 just for that one hour, just doesn't happen. It's going to
5 show up on your hot days, it's going to be in your mix.

6 You have not already saved the capacity by not
7 consuming it previously; you just haven't. If you're on at
8 the system peak, regardless of what you did in the past,
9 that capacity hasn't been saved, period. You're not
10 obligated to be below your PLC; no customer is.

11 The idea of what you should compensate a customer
12 for doing -- I mean, there's this idea that customers are
13 nefariously consuming above their PLC, as if that was an
14 inappropriate activity because of what they did in the past.
15 We want the economy to be able to respond by using this
16 product and respond to its prices. If you're responding to
17 prices in the market, it's going to be in your CBL. Your
18 customer baseline is going to reflect that activity, and
19 you're already going to pay in demand response what you do
20 after you've responded to prices, after you've done your
21 peak shaving.

22 Their system would guarantee that to the extent
23 the customer didn't peak shave last year, they get to peak
24 shave this year and have it count as if that was new
25 capacity and that they wouldn't have otherwise done. And

1 the reason that's true is because even if they intended,
2 because they didn't like their capacity bill last year, this
3 year it would be below their PLC.

4 Even if they went out of business this year, you
5 are going to pay them for a response that you would
6 otherwise already get. That's not capacity, that's not the
7 ability to deliver energy or load in response to a dispatch
8 instruction. The only product that reflects that is the
9 ability to move from where you are to where they want you.
10 If you're peak shaving, that will show up in where you are,
11 and you'll have to move from there down.

12 MR. TACKETT: Dr. Bowring and then Mr. Bresler,
13 and then I'm going to try to squeeze in one more question.

14 DR. BOWRING: I think Mr. Sipe has it exactly
15 wrong. If you're a peak shaving customer and have peak
16 shaved and intend to continue to do that, you will respond
17 to a price signal, you were using the amount of capacity
18 you're paying for, the system forecast will incorporate your
19 load and everything works fine.

20 The question is, what happens if you have peak
21 shaved historically, stop in the current year because you've
22 been signed up by a CSP when you otherwise would have
23 continued to peak shave because there's more compensation
24 available. Suddenly there's an additional 80 megawatts of
25 alleged demand side resource available there, when of course

1 there is nothing additional available.

2 So the problem is that the measurement technique
3 would have us believe that an additional 80 megawatts exists
4 for such a peak shaving customer when in fact nothing has
5 changed about their behavior.

6 MR. TACKETT: Mr. Bresler.

7 MR. BRESLER: Just very quickly, I need to point
8 out that I don't understand why MRI contends that if a
9 customer is peak shaving it will show up in the energy
10 baseline, which is I assume what he's referring to as the
11 contemporaneous baseline.

12 And I won't say any more about that now. Mr.
13 Ott, actually, in one of this afternoon's panels, will
14 provide real life examples of customers who have PLCs in the
15 single digit megawatts consumed day after day surrounding a
16 demand response event in the single digit megawatts, and
17 then put in capacity compliance reduction values of 28
18 megawatts.

19 So I don't understand why Mr. Sipe again contends
20 that the contemporaneous baseline will somehow show peak
21 shaving has historically occurred. That has not been our
22 actual experience.

23 MR. TACKETT: And as a final question; in her
24 opening remarks, Ms. Pieniazek mentioned that reliability
25 should be viewed zonally, and that PJM's process was too

1 granular. And PJM's process focuses on the end use
2 customer, on an individual customer basis.

3 I was wondering if any participants would be
4 willing to address that disparity.

5 MR. BRESLER: Again, PJM is not opposed to
6 aggregation. PJM believes that aggregation is a necessary
7 tool in a CSP's tool kit. However, if a CSP is allowed to
8 aggregate energy reductions and submit them as long as the
9 total reduction does not exceed the total value of PLC for
10 an entire portfolio in a zone, we have the same problem.

11 However, if each resource -- I want to
12 differentiate customer from resource, because customers can
13 be aggregated to form resources as well; but if each
14 resource reduces below its committed capacity value and then
15 goes even further, certainly that additional response can
16 then be utilized on a portfolio basis with other resources
17 within the same CSP portfolio, but it must be response over
18 and above what that CSP has committed as capacity on the
19 behalf of that resource.

20 MR. TACKETT: Thank you. Dr. Bowring.

21 DR. BOWRING: I just wanted to make a narrow
22 point about location; that is that we have to be careful in
23 thinking that there's something magical about a zone.
24 Getting demand response and much more narrow locations
25 depending on what's happening on the system matters, and the

1 payments for capacity also have to match up with the
2 locational nature of the response; so it's possible to have
3 an LDA which is less than a zone, which may have a higher
4 price for capacity, so it's important not to lose sight of
5 that when we're thinking about defining a response zonally.
6 Location matters for both capacity and energy.

7 MR. TACKETT: Mr. Lacey.

8 MR. LACEY: Thank you. Comverge would be
9 supportive of a zonal approach, and understand the need for
10 subzonal approaches to aggregation and compliance. Just
11 urge not to make rapid changes. For example, we have a
12 portfolio built around this summer, today, and if all of a
13 sudden you say we've got to go from a zonal approach to a
14 customer approach, or a subzonal approach, that might not be
15 in anyone's best interest. So a measured change would be
16 helpful.

17 MR. TACKETT: And Mr. Sipe.

18 MR. SIPE: I believe the original question was
19 about the granularity of planning. And it is certainly
20 something we've addressed. You know, planning and resource
21 requirement is not based on a granular look at individual
22 customer loads, and I think that was Marie's point.

23 And because your resource requirement isn't based
24 on that, it bakes in the diversity that you have in
25 customers; that's expected. And that's a realistic

1 assessment of what customers can do, and again we put in
2 evidence, through an affidavit from Mr. Belbot, that
3 explains that that's a realistic assessment of what
4 customers do.

5 I mean, you want to procure resources on the same
6 basis that you plan, and you don't plan on individual
7 granular measures of customer usage, and for very good
8 reason; they'd be unreliable, and you don't accept last
9 year's PLC.

10 Finally, I do want to comment on the issue about
11 the activity of jacking your baseline around immediately
12 before you think there's going to be an emergency. If
13 you're good enough to do that, you're probably pretty good
14 at predicting emergencies, I guess. But there are simple
15 fixes to that, and one of the simple fixes to the baseline
16 that they use in ISO New England is to have a two and a half
17 hour window before event that's used to adjust your baseline
18 performance. So that to the extent you're really trying to
19 jump things around and not do your normal peak shaving.

20 Now if you assume, as Joe does, that people are
21 going to stop peak shaving because they're counting on you
22 calling them on all of those five hours for emergency
23 response, that is a very expensive gamble for someone to
24 take. That is not a cheap gamble. You're going to have to
25 be willing, I mean, most of these emergencies are not in the

1 peak hours, and certainly all those five peak hours are not
2 emergency hours. You're going to have to be willing to sit
3 there and pay for capacity in those hours, hoping there's an
4 emergency call.

5 You know, all these hypotheticals, you have to
6 think in realistic economic terms about what people are
7 doing. If you're shaving your capacity, that's a good thing
8 to do. If you're shaving your peak, that's a good thing to
9 do, and you have economic reasons for doing it. You don't
10 give up that practice in the hope that in all five of those
11 peaks we're going to get an emergency call. Makes no sense.

12 The probabilities of that happening are next to
13 nil. Every single one of those five hours is not going to
14 be an emergency call, you're not going to get paid for
15 demand response during each of those five hours.

16 MR. TACKETT: Okay, we've now cut in slightly to
17 the break, but if Mr. Campbell wants to provide a brief
18 response, I'll enable that.

19 MR. CAMPBELL: This is Bruce Campbell.

20 I just wanted to offer a clarification. Mr. Sipe
21 has correctly said that PJM does not look at individual
22 customer loads for planning purposes, but they do look at
23 individual customer curtailments for add-backs as part of
24 their load forecast. And when we use -- when the current
25 mechanism which allows an energy baseline, it is used --

1 what happens is, that curtailment isn't added back. And
2 that creates a flaw, if you will, in the planning process.
3 That's the fundamental part of this issue that you need to
4 consider. Thank you.

5 MR. TACKETT: Thank you. And thank you all for
6 participating. At this point we'll take a break until
7 11:30, and then we'll reconvene.

8 (Break.)

9 MR. TACKETT: Welcome back, everyone. Hope it
10 was nice to stand up for a few.

11 Our second panel focuses on capacity obligations
12 that arise from committing demand resources in the capacity
13 market.

14 I'd like to first welcome the panelists once
15 again. Thank you for coming. And as in the first panel,
16 opening introductions and presentations will be limited to
17 five minutes, if possible.

18 Following these presentations, as before,
19 Commission staff will ask questions and panelists will be
20 able to respond to one another's remarks.

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1 Discussion on Capacity Obligations

2 PANEL TWO:

3 FREDERICK BRESLER, Vice President-Market
4 Operations and Demand Resources, PJM Interconnection, L.L.C.

5 DR. JOSEPH E. BOWRING, Market Monitor,
6 Independent Market Monitor for PJM.

7 CHRIS NORTON, Director of Regulatory Affairs,
8 American Municipal Power, Inc.

9 DONALD J. SIPE, Attorney, Preti Flaherty Beliveau
10 & Pachios LLP, representing EnerNOC, Inc.

11 ROBERT A. WEISHAAR, JR., Counsel to PJM
12 Industrial Customer Coalition, McNeese, Wallace & Nurick,
13 L.L.C.

14 AUDREY ZIBELMAN, President, Chief Executive
15 Officer, and Founder, Viridity Energy, Inc.

16 MR. TACKETT: At this point I'll turn once again
17 to Mr. Bresler to lead us off with a description of the
18 capacity obligations of end use customers from PJM's
19 perspective.

20 MR. BRESLER: Thank you and again good morning,
21 everyone.

22 Capacity obligations can be utilized in two
23 different ways; obligations can be utilized in the sense of
24 obligations to purchase capacity, but they can also be
25 utilized in the sense of the obligation a resource takes on

1 when it commits itself as a capacity resource.

2 Obligations to purchase capacity from the PJM
3 perspective are not assigned to end use customers but rather
4 to their wholesale load-serving entities. Obligations of
5 wholesale load-serving entities, obligations to purchase
6 capacity, are based upon the aggregate contribution of their
7 customers' loads to the system peak for which PJM procures
8 capacity.

9 These contributions to the system peak for which
10 PJM plans reveal themselves in those calculated PLC values.
11 This case, however, is not about the use of the PLC values
12 to allocate obligations to purchase capacity to end use
13 customers. Rather, it is about how the same historic
14 metered loads that go into the calculation of those PLC
15 values are also the historic loads on peak days that
16 constitute the load forecast on which PJM bases its capacity
17 procurement.

18 The assignment of obligations and the
19 contribution to peak load forecasts are therefore
20 inextricably linked and must be symmetrical to properly
21 define the capacity value of demand resources. The capacity
22 value a demand resource can provide must be based on that
23 resource's contribution to PJM's forecast of the load for
24 which capacity is procured.

25 Again, as we said this morning, PLC should not be

1 viewed merely as a cost allocator; it is a reflection of
2 each load's contribution to the load forecast on which the
3 capacity procurement is based. The relevance of PLC values
4 can be demonstrated by what happens in RPM between the base
5 residual auction and the actual delivery year. Within that
6 three year period, PJM executes three incremental auctions.
7 Prior to each of those incremental auctions, PJM updates the
8 load forecast, and can either procure more capacity if the
9 load forecast goes up, or release previously procured
10 capacity if the load forecast goes down.

11 The final load forecast update that is utilized
12 for the third incremental auction, the last one before the
13 delivery year starts, is based, together with some other
14 factors, on exactly the same values that are utilized in the
15 calculation of PLCs.

16 When referring to the amount of supply a demand
17 resource is providing -- as Staff did in the question -- by
18 virtue of its curtailment, we must differentiate between its
19 energy value and its capacity value of that curtailment.
20 The energy value of a curtailment is properly calculated in
21 reference to the load's energy baseline. The value of
22 energy curtailments on the system is real and was recently
23 recognized, as we said this morning, by Order 745, that
24 requires compensation at full LNP for those energy
25 curtailments.

1 The capacity value of a curtailment, though,
2 while also valuable, can only be calculated in reference to
3 that load's historic contribution to the system peak. And
4 again, this is because a historic level of consumption on
5 the peak days of the year is what drives a PJM load forecast
6 and therefore the quantity of capacity that must be acquired
7 in the first place.

8 Recall from this morning's discussion that demand
9 resources that take on a capacity commitment or obligation,
10 this last question, are displacing generation resources. If
11 the curtailment provided by the demand resource does not
12 result in a reduction below the level that drove the
13 reliability requirement, PJM will be short the resources
14 necessary to maintain reliability.

15 Therefore the magnitude of reduction calculated
16 in reference to an energy baseline, while valuable, is not
17 relevant to determining whether it delivered on its capacity
18 commitment.

19 Think about a generator, for example, that is not
20 a PJM capacity resource; could be external to the PJM system
21 or even internal to PJM but not a capacity resource. When
22 that generation resource delivers energy into the PJM on a
23 peak day, we don't all of a sudden say that it had a
24 capacity commitment and compensate it for any capacity. It
25 is compensated for the energy. And demand resources need to

1 be looked at similarly.

2 The PLC value is the best calculation we have
3 today of a demand resources contribution to the system peak
4 load on which PJM's reliability requirement is based. It is
5 therefore the best reference we have for determining
6 capacity value.

7 The PLC limitation on demand response nomin
8 issues is again tightly linked to the measurement reference,
9 because the PLC is the maximum amount of capacity a demand
10 resource can possibly provide. This is not about having to
11 buy something before you can sell it from the standpoint of
12 reliability and capacity obligations; this is about
13 balancing the system's requirement for capacity with the
14 quantity of resources committed to provide that capacity and
15 the resources committed to provide that capacity and the
16 resources that provide it.

17 As we demonstrated earlier this morning, that
18 balance cannot be achieved unless demand resources capacity
19 performance is measured against the correct benchmark, and
20 the best benchmark we have is the PLC.

21 That concludes my opening statement, and again I
22 look forward to the discussion. Thank you.

23 DR. BOWRING: Thank you, I'll be very brief.
24 You've heard some of what I had to say already today.

25 If I understand the question, the capacity

1 obligation of end use customers is a direct function of
2 their PLC; and as Stu indicated, that is the max amount.
3 Not that they're buying and selling back, and I agree that's
4 not what's happening; no one's buying it and selling it
5 back. But customers are determining that they don't want to
6 incur the charge for capacity, and therefore are not buying
7 it. So it's not buying and selling it back; it's simply
8 avoiding paying for it in the first place. And that's a
9 central part of what's going on.

10 But given that the PLC does define the amount of
11 capacity that customers would have to pay for, that is a
12 good place to start in thinking about what the capacity
13 obligation is. In fact, I think that defines the capacity
14 obligation from the perspective of what one would have had
15 to pay for had one not made the decision to be interrupt, or
16 had one not made the decision to be a demand side resource.

17 Therefore, not surprisingly, the obligation of a
18 resource who is determined to be a DR resource or to be
19 interruptible, the obligation of such a customer is to
20 reduce their use of capacity to below the PLC.

21 Thank you, and I'll reserve the rest of my time
22 for the questions and discussion. Thanks.

23 MR. NORTON: Good morning, Chris Norton with
24 American Municipal Power.

25 AMP does agree that the PLC is at least a

1 starting point for determining what a customer can be relied
2 as far as demand response is concerned, but we do think
3 there are further considerations, especially as talked about
4 in the earlier panel. You do have customers that are
5 experiencing load growth, and I think there's a clear, or
6 should be a distinction between a customer that is on a
7 variable basis experiencing load growth versus somebody who
8 happens to be peak shaving, and therefore decreasing the
9 amount of capacity that PJM is buying on a very consistent
10 basis.

11 So we think that while the PLC is a good starting
12 place there does need to be an accounting for loads that may
13 experience load growth from year-to-year.

14 MR. SIPE: You know, I feel like deja vu all over
15 again; I feel like I'm on the first panel.

16 I guess Stu and I could discuss again how the
17 forecast is actually done. All of those incremental
18 forecasts are done on an aggregate basis; they don't look at
19 individual customer PLCs.

20 But thinking about what a capacity resource
21 commits to, what an RSP aggregator commits to when it
22 commits to the forward auction, there's absolutely no way
23 that that provider can know three years in advance what the
24 PLCs of any set of customers are going to be, because they
25 aren't set until two years later.

1 So to begin with, the obligation undertaken is
2 commensurate with what's in the rules. If you change the
3 rules, you're going to change their obligations; and they
4 might have made a different calculation if the rules had
5 been different. But currently it is incorrect if Joe meant
6 to say that you are now required to be below your PLC as
7 proposed that you want to be. You are not in fact required
8 to be below your PLC, for each one of these in an
9 aggregation.

10 The current rules do not require that someone
11 like EnerNOC sign up customers who are committing only to be
12 below a PLC. They are allowed to aggregate under the
13 current rules; they are allowed to use the real performance,
14 not the over-performance, the actual delivery of capacity
15 from one customer to deliver the entire portfolio if they've
16 got somebody that can do it, or any combination of customers
17 delivering actual performance.

18 So the actual obligation that's undertaken that's
19 undertaken right now in the forward market contains an
20 actual delivery option, and it's not a requirement that
21 people be below their PLC. Now the timing is important.
22 Again, you don't know what the PLC's customers are going to
23 be before you have to make that forward commitment.

24 What you're doing is you're committing to deliver
25 a certain amount of system response. Now you're going to do

1 that by collecting a portfolio of customers with a PLC that
2 is at least equal to the amount you have committed to
3 deliver. That is a mechanism that you need to aggregate
4 because of the PLC cap.

5 So that is what you're committing. Where you
6 change the rules and tell people "I committed three years in
7 the past" that they now have to deliver something different
8 with that same portfolio, then I've got to measure from a
9 different baseline, you would be changing the rules and that
10 would have consequences of how many people could participate
11 and whether you could cover those obligations.

12 Now the next question on the panel is about
13 getting below PLC during an emergency. For all the reasons
14 I stated on the first panel, that requirement is going to
15 unreasonably limit the amount of actual response you will
16 get. It is not going to be consistent with measuring the
17 actual available response on the system available in the
18 real world sense of response that can respond to an
19 emergency.

20 So let's assume you are actually willing, in
21 light of that, to pay for someone to drop from their CBL;
22 you were going to pay full amount, but only if they got
23 below that level. Essentially, by being willing to pay for
24 that whole amount, you've pointed out that your floor is in
25 fact short of arbitrary, because what you want to pay for

1 and the value you want to recognize is the drop.

2 But there's another reason why you don't want to
3 have people cover that risk before they're allowed to be
4 paid. It is economically inefficient to pay for the same
5 risk twice. You are asking that customer who assumes that
6 obligation to not get paid until they're below their PLC, to
7 assume all the risks of load variability, all the risks of
8 their own unavailability in their own load shape, all the
9 risks of weather and other things that occur. You're asking
10 them to assume that risk, and risk is not free; it comes at
11 a price. You may get demand response under those
12 circumstances, but it would be more expensive and there will
13 be less of it.

14 Now why is it not wise to make customers raise
15 their price to cover that risk? The reason is because
16 ratepayers are already paying to cover that risk. The load
17 forecast includes exactly those risks. It includes the
18 variability of customer loads. It includes the variability
19 of weather. It includes all the statistical things that
20 make it unrealistic for a customer to be able to predict
21 exactly where their PLC is going to be at a certain time.
22 It is baked into the forecast, and we have assumed that risk
23 and bought capacity to cover it.

24 Now you're asking an individual customer, who was
25 not planned for on an individual basis, to cover the

1 variability that you've already had ratepayers pay for in
2 setting your capacity requirement. That's inefficient.
3 There is no way to go back and take that risk out of the
4 load forecast so you don't pay for it twice, because it's
5 baked in. That variability is there. The weather is there.
6 You're never going to have a load forecast that doesn't take
7 those risks into account.

8 It is economically efficient to raise the price
9 of this product to cover a risk that you've already covered
10 in a load forecast. What you want is the availability of
11 that energy at the price that you can get it that's lowest,
12 and having this risk incorporated in the price is just a
13 double ding on ratepayers; it doesn't make any sense
14 economically.

15 Finally, the last question is about whether the
16 PLC limit ought to serve as the basis for requiring load
17 reductions below it. Well, the PLC limit doesn't make
18 sense, for all the reasons we've been discussing; but that's
19 not really what the question asks. Let's assume there was
20 some reason that we wanted to place some limit on the amount
21 you can nominate; didn't have to be PLC, it could be
22 anything. That limit would not change the value proposition
23 or the reality of the reliability proposition of what you
24 want delivered to the system and when.

25 If for some reason you presume you need an

1 arbitrary cap or a non-arbitrary cap, it has nothing to do
2 with the availability metrics we've been discussing earlier.
3 It has nothing to do with what the system needs when an
4 emergency occurs. It would be unrelated to what you need
5 out of these resources; you will still need reductions from
6 where you are to meet your system requirements, that's still
7 going to be what you need.

8 So the two are actually unrelated; the one
9 doesn't actually serve to buttress the other. The fact that
10 we have a PLC cap is a bit illogical, for the reasons we've
11 been discussing. But even if we had a cap for any reason,
12 it doesn't change what you want to pay for and why you want
13 to pay for it, and the economic reasons and reliability
14 reasons you want to do it. And I look forward to the rest
15 of the discussion with the panel.

16 MR. WEISHAAR: Good morning. I'm speaking today
17 as counsel to the PJM Industrial Customer Coalition, which
18 is comprised of 28 companies with facilities throughout the
19 PJM footprint. Many of these facilities actively engage in
20 peak shaving or demand response or both, either as their own
21 curtailment service provider or through a third party CSP.
22 All of these facilities consume electricity, all of these
23 facilities pay for capacity.

24 My comments today address three aspects of the
25 pending proceeding. I close by offering a solution that may

1 address the concerns of PJM in part, and may address the
2 concerns of certain curtailment service providers in part;
3 it is designed to provide a solution that would satisfy this
4 Commission's obligation to ensure just and reasonable rates.

5 Lurking beneath the surface of this proceed is
6 the issue of whether the 5 CP methodology is appropriate for
7 calculating PLCs. PJM ICC's position is that the 5 CP
8 methodology does remain appropriate for calculating PLCs,
9 and that PLCs remain the appropriate determinant of capacity
10 cost responsibility.

11 When the 5 CP methodology was implemented
12 approximately a decade ago, many PJM ICC members undertook
13 operational changes and some made substantial technological
14 investments to minimize consumption during the 5 CP hours.
15 These efforts have resulted in consumption patterns that
16 helped minimize stress on the grid during peak hours,
17 directly reduce the peak shaving customer's capacity costs,
18 and indirectly reduce all other customers' capacity costs
19 and other wholesale market costs by reducing peak demands
20 and effectively shifting the demand curve to the left.

21 Deviating from a 5 CP methodology would impair
22 these operational changes in investments.

23 Second point, PJM is concerned that efforts to
24 calculate CBLs or comparison loads at levels higher than
25 PLCs will lead to the use of hypothetical load values to

1 determine individual customer capacity obligations. PJM ICC
2 firmly opposes going down a path that assessed what load a
3 customer would have placed or could have placed on the
4 system. The Commission and PJM should not engage in
5 speculation by looking beyond the industrial customers or
6 large commercial customers' meter in surveying what
7 machinery and equipment could have been running during
8 certain hours.

9 The relevant, appropriate, just and reasonable
10 approach is to assess what load the customer actually placed
11 on the system during the relevant hours. In the case of PJM
12 capacity obligations, those relevant hours are the 5 CP
13 hours.

14 Third point. This is a comparison load
15 measurement matter, nothing more. The fundamental issue and
16 perhaps the only issue in this proceeding is the conflict
17 between PJM tariff and operating agreement language on one
18 hand, and the language in Attachment A of PJM Manual 19 that
19 governs the calculation of comparison loads -- and that's a
20 term that's used in the manuals -- for purposes of measuring
21 certain types of demand response performance for capacity
22 purposes.

23 The customer baseline load used for measuring
24 demand response performance in the day-ahead and real-time
25 energy markets is irrelevant to the discussion. The

1 baseline loads used for measuring demand response
2 performance in the ancillary service markets, including the
3 synchronized reserve markets, is irrelevant to the
4 discussion.

5 Admittedly, the PJM rules governing the
6 calculation of capacity-related comparison loads are
7 susceptible to multiple interpretations; ambiguity does
8 exist as evidenced by the number and diversity of the
9 pleadings in this proceeding. The objective of this
10 proceeding should be to remove the ambiguity, so that
11 customers, PJM, the IMM and other PJM stakeholders operate
12 from a single, clear definition of what demand response
13 entails with respect to capacity.

14 The relevant question is, what is the best
15 estimate of what a customer's load would have been for
16 capacity purposes absent any actual demand response that
17 occurs as a result of participation in a PJM or utility-
18 sponsored demand response program.

19 Conveniently, that same question arises in the
20 context of assigning individual customer responsibility for
21 capacity costs, and in that context the answer has been and
22 continues to be, the individual customer's 5 CP loads, as
23 calculated from actual metered amounts with add-backs only
24 for actual demand response that occurs as a result of
25 participation in a PJM or utility-sponsored demand response

1 program. No other proxy exists that recognizes the forward-
2 looking nature of capacity procurement, or synchronizes with
3 PJM load forecasting. Unless and until another proxy is
4 developed, the 5 CP approach should be used for PLC
5 calculations and for calculating comparison loads to assess
6 demand response performance for capacity purposes.

7 Which brings me to a proposed solution: The
8 Commission should take steps to eliminate the ambiguity that
9 exists in the PJM rules, and to clearly define the
10 obligations that exist for demand resources that clear in
11 the RPM auctions. As mentioned above, PJM ICC supports
12 using the same approach, the 5 CP approach, for calculating
13 both PLCs and comparison loads.

14 The challenge is implementing the clarification
15 in a manner that preserves existing commercial arrangements
16 as much as possible without adversely impacting reliability
17 or system operations. The challenge exists because demand
18 response resources cleared in the May 2011 base residual
19 auction and earlier BRAs, which means that demand response
20 resources have been committed through and including the
21 2014, 2015 delivery year. The obligations of those demand
22 response resources are not entirely clear, given the
23 ambiguity in PJM's rules.

24 Accordingly, we suggest a two-phase approach to
25 rectify any ambiguity. Beginning with the 2015, 2016

1 delivery year, and what we'll refer to as the permanent
2 solution, for that delivery year and beyond, the calculation
3 of comparison loads and PLC should be identical, and both
4 should be calculated based on individual customer's actual
5 metered loads during the relevant 5 CP hours with add-backs
6 only for actual demand response that occurred during the 5
7 CP hours as a direct result of PJM orders to reduce loads.

8 For example, beginning June 1, 2015, a customer
9 with a PLC of 50 megawatts would not be allowed to specify a
10 guaranteed load drop amount of more than 50 megawatts and
11 could not use a comparison load of greater than 50
12 megawatts.

13 For the period prior to 2015, which I think would
14 begin at the end of the five months' suspension period on
15 November 7th of this year, and end May 31, 2015, demand
16 response resources should be permitted to use the comparison
17 load measurement options that currently exist under PJM
18 rules; most notably attachment A to manual 19, with the
19 caveat that a customer's GLD curtailment cannot exceed the
20 customer's PLC.

21 For example, a customer with a 20 megawatt PLC
22 and a 10 megawatt GLD commitment should be able to use an
23 actual comparison load of 25 megawatts if consistent with
24 the comparison load measurement options that currently exist
25 under PJM rules.

1 By contrast, a customer with a 5 megawatt PLC
2 cannot claim more than 5 megawatts of GLD curtailment, even
3 if the customer's properly calculated comparison load is
4 greater than 5 megawatts.

5 This approach for the interim period should help
6 balance CSP's objective of preserving existing commercial
7 arrangements with PJM's objective of ensuring reliable
8 system operations.

9 Finally, I close by noting that some parties have
10 alleged that commercial arrangements exist in which demand
11 response resources are being compensated for anticipated
12 performance, when those resources have no intention or
13 contractual obligation to perform. PJM ICC firmly opposes
14 these types of commercial arrangements, and recommends that
15 they be investigated by the Office of Enforcement and
16 subject to appropriate action by the Commission. Such
17 illegitimate arrangements should not be permitted to detract
18 from or undermine the value that is being provided by
19 legitimate demand response resources.

20 Thank you again for the opportunity to address
21 this important issue.

22 MS. ZIBELMAN: Good morning and thank you. I'm
23 Audrey Zibelman, President and CEO of Viridity Energy. Like
24 everyone else, I appreciate the opportunity to address this
25 Commission on what I believe is a very important issue

1 relative to the value and future of how we use demand
2 response in the capacity markets of PJM.

3 In certain ways I think that we're trying to find
4 six different ways to say the same thing, but I'll do my
5 version of it. And I also agree about the use of PLC as the
6 base measure. But let me go through exactly how we've
7 gotten there.

8 We filed some testimony, and this would be in
9 addition to what I filed for, and I'll try not to repeat
10 myself, but there are certain observations I would make
11 listening to the dialogue this morning.

12 The first is, I think in looking at this issue, I
13 believe everybody who is testifying here today would agree
14 that the most important issue for us is to make certain that
15 the rules are designed to allow for the maximum allowable
16 demand response in the capacity markets that's consistent
17 with reliability and efficiency. Point being simply this:
18 If we set the rules up that there are unreasonable barriers
19 to entry and we undervalue of demand response and don't have
20 sufficient, we're going to be driving up capacity prices and
21 increasing reliability concerns because the value of demand
22 response is a very good tool to help manage reliability and
23 the fact that it's a quick responding tool.

24 Conversely, as PJM said, if the rules are
25 established such to artificially inflate the amount of

1 demand response, we're going to be not only potentially
2 reducing the amount of RPM below which it should be, but
3 we're also going to be compromising reliability. So it's
4 important that we do both.

5 The second is, and this is in response to the
6 dialogue with respect to aggregation, I think in determining
7 how you value capacity, we have to adhere to a very simple
8 principle; that we should not allow players to do indirectly
9 through aggregation what they couldn't do directly as
10 individual producers. In other words, if someone was not
11 part of the CSP and we wouldn't count what their behavior is
12 as providing a capacity resource, the fact that they're part
13 of an aggregated load shouldn't change that. And so we
14 have to be consistent on how we apply the rules.

15 With respect to that also, I would say in terms
16 of equity, one of the things we always try to look at when
17 we're designing the market is to recognize that we want
18 consistency between demand response and generation, to the
19 extent that it's reasonable. So to the extent we're going
20 to depart and treat demand response differently, then we
21 would treat the generation resource; it has to be a reason
22 for that, simply not because we value one resource versus
23 another. In other words, the market should be indifferent.

24 The third piece that we -- and the most important
25 question is how, in respect to your questions, how did we

1 calculate what's the capacity when it comes to demand
2 response? And in that context, I think it is very critical,
3 and it's somewhat of a repetition; but I think it's
4 important to stress that we have to distinguish between
5 capacity and energy.

6 As I was thinking about this, I was remarking
7 that when EnerNOC in their initial filing noted that the
8 Commission has done a very nice definition of what is demand
9 response; and the definition you've used is the demand
10 response is the reduction below expected consumption that
11 you would otherwise expect a load to have.

12 And what we're really debating here is the
13 measurement of the expected consumption when it comes to a
14 capacity resource. And that's different than the expected
15 consumption of load when we're talking about energy. When
16 you're really talking about the expected consumption for
17 capacity, it is what the RTO would reasonably assume the
18 load to be at during system peak; because when it comes to
19 capacity, what we're valuing is the ability of load to be
20 reduced during system peak so it provides a resource back to
21 the grid.

22 In that context, it's very different than what
23 you're expecting for energy value. For energy, you're
24 really measuring what you would expect the load of it to be
25 during a particular hour, regardless whether it's system

1 peak or not. That's the CBL methodology.

2 And so if you use the classic definition and say
3 what is the expected load? The issue we're dealing with
4 here is expected load at system peak, that's what we're
5 planning for. That's why we use PLC, because PLC is the
6 best representation of what we expect an individual's load
7 to be during the system peak period. It's what was, they
8 were consuming during the last years, during the 5 CPs, and
9 I agree with Mr. Weishaar.

10 I haven't heard, and I can't conceive of any
11 different measurement that we can use as a base, because
12 that's what you're balancing everything against, on a
13 planning basis as opposed to an operational basis.

14 So with respect to that then, the only question
15 then is when valuing capacity as a demand response resource,
16 should there be variations from the PLC? In other words,
17 when looking at performance would you allow for some
18 variations. And I think you've heard in the discussion
19 today that strict adherence to an individual's PLC may not
20 be the right thing to do; that there could be rational,
21 pragmatic variations.

22 One variation that we talked about is the
23 difference between what a base load, the non-curtailed load
24 is for a particular customer in the given delivery year as
25 opposed to what its PLC was in the prior year. We have

1 customers, I'm certain every CSP in this room has customers
2 who, between a particular year like last summer, 2010 and
3 this summer, 2011 added a building, added a factory, added
4 another engine. All of that increased their base load. To
5 not account for that is ridiculous, because as actually Mr.
6 Sipe said, that's exactly why we've reserves.

7 We recognize as a planning tool that load is
8 going to increase and decrease. Just like in test years, we
9 recognize some things will increase and some things will
10 decrease. And that's why somewhat we have reserves is that
11 variability; but there's always that expectation. So to
12 penalize a demand response customer because their load has
13 grown, their base load, is somewhat absurd, and what is
14 really contrast to PJM's theory is that we have a market
15 based on incentives, not penalties.

16 So one adjustment should be made for actually
17 demonstrated load changes, because you've added a building
18 or a resource, et cetera. The second adjustment to PLC
19 could be made based on weather conditions, if we had a
20 super-peak condition like we had the other day, that's
21 different than what conditions were when the PLC was
22 measured in the prior year; that's a rationale distinction
23 to be made when you have load that is very weather-
24 dependent.

25 The third question is, what do we do in those

1 circumstances -- and they do occur -- where PJM calls a
2 system emergency and it's not a peak day. For example, it's
3 May. A lot of generators are off-system for planned
4 maintenance and they call an event because the weather
5 popped up, and suddenly where people were expecting to have
6 the ability to reduce below their peak -- they're not a peak
7 day, they may not even have their cooling load on. In those
8 instances, I think there's a very pragmatic solution, which
9 is to say let's use best efforts; because the whole point of
10 this is meeting peak demand needs. If we have emergencies
11 that occur outside of these peak circumstances, a best
12 effort seems to be a rational solution.

13 The fourth exception I think that we can talk
14 about is the example that was provided in EnerNOC's
15 testimony of those particular customers that don't manage
16 their peak, but actually their operational peaks will vary
17 even inter-year -- or intra-year, not only inter-year. For
18 example, the Sparrows Point. Where it will be based on
19 what's happening in the production that week or what's
20 happening on the economic situations.

21 In those instances, I do think there could be an
22 allowance where it's very clear that the customer's not
23 managing down to a particular PLC, but really it's just what
24 it is to say that there is a difference. And if they can
25 very consistently do a load drop, a guaranteed load drop,

1 and that is year-over-year the same regardless of what their
2 PLC is, that there should be a rule that allows for those
3 customers to actually perform based on a guaranteed load
4 drop that has no connection to their PLC.

5 So for example, if you have a particular
6 industrial load that in 2008 was at 5 megawatts, at 2009 was
7 at 30 megawatts, at 2010 was at 10 megawatts, but regardless
8 of what was going on, they had a generator they put on and
9 they dropped 3 megawatts, year after year after year, that
10 would be an example where I could see the exception would be
11 the PLC and the GLD should be unrelated.

12 The other question that was raised is, what do
13 you do about those customers such as the ski resort that
14 have no load in the summer? And so when you were looking at
15 it you would say their PLC was zero in the summer, but on
16 the other hand if there was a winter event, they could drop
17 load. Should we use their zero PLC as the basis when we
18 know you can't drop below your PLC, a zero PLC.

19 And I think in that instance, very pragmatically
20 -- we used to do this when I was at Excel, is you have a
21 winter peaking and you have a summer peaking product. And
22 PJM has a limited capacity product, so those kind of loads
23 could be participants in a capacity product that's very
24 different that's dealing with these events of a winter
25 event.

1 So I think that we can deal with the exceptions,
2 deal with it in a very pragmatic way; but the base issue
3 here is this: What is PJM expecting for a customer's load
4 to be at during a system peak, for that's what the basis is
5 of the capacity payments; and therefore what is the
6 reduction from? And it really then goes back to this one
7 question: It could only be reduced from the PLC.

8 Then the next question which is I think the heart
9 of the differentiation between EnerNOC and Viridity is: What
10 do you do about those customers who can manage their PLC?
11 So for example, the example we've been giving is a customer
12 of a PLC of 5 megawatts but may have an operational load of
13 20, and during an event actually drops more than their PLC;
14 and is that a capacity product?

15 The analogy here, and you've heard a couple
16 versions; I'll give mine. What if you have a generator who
17 has an 100 megawatt capacity, and for some reason during a
18 peak condition is producing 105 megawatts? We don't give
19 them 5 megawatts of capacity; that extra 5 megawatts is
20 energy.

21 Similarly, if you have a generator that's sitting
22 in Midwest ISO and PJM has a system peak, and that generator
23 suddenly is importing energy into PJM, we don't give them a
24 capacity payment, we give them an energy payment. Same
25 situation. The customer is performing above their capacity

1 commitment, they're providing energy. Not capacity; they
2 should be paid for it, it's of value, but we can't confuse
3 the two.

4 Thank you.

5 MR. TACKETT: Thank you all for your comments.

6 We'll now proceed to Commission Staff questions.
7 And to begin, I would like to ask how, from the
8 participant's standpoints, how would DR's obligation as a
9 capacity resource that, as PJM has said, maintains system
10 reserve margins; interacts with its requirement to solve
11 real-time emergencies?

12 This I believe goes to the measurement question,
13 directly. Should measurement be based on its value in terms
14 of maintaining the system reliability from the system
15 reserve margin standpoint, or should measurement be based on
16 its value in responding during a real-time emergency?

17 Mr. Sipe.

18 MR. SIPE: Our position is that those are the
19 same thing. Is that what the system is planned for, if it's
20 planned accurately, is for actual usage on peak, not of
21 particular customers but actual usage, and that is what the
22 system is planned for.

23 We've heard a lot of talk about expectations.
24 Expectations don't cause peaks. You can expect all you want
25 out of customers; if they aren't there, they aren't there,

1 they're not available. You can expect that they'll be
2 lower. You can expect whatever you want, based on cost.
3 What the system is planned for is what they're actually
4 doing.

5 So there isn't a distinction between what you're
6 doing in terms of planning and what you're doing in terms of
7 real-time response.

8 We keep talking about the reserve margin; and
9 this is not just a question about the reserve margin. The
10 actual load forecast is not just a question of calculating
11 the reserve margin; the actual forecast takes into account
12 all the uncertainties that Audrey is telling us she's
13 willing to grant exceptions to look at.

14 I like Audrey's exceptions, because they pretty
15 much swallow the rule. I mean, people that have added
16 consumption, people that maybe can demonstrate that they're
17 all over the place, all these things. If you had a general
18 rule that allowed for exceptions, you'd be treating people
19 on the basis of their CBLs.

20 But the two things are not separate. The system
21 is planned to meet what you're doing; and if you change what
22 you're doing, you're meeting the system requirements.

23 MR. TACKETT: Thank you.

24 We'll now proceed from my right to the left,
25 starting with Ms. Zibelman.

1 MS. ZIBELMAN: To me, the question you've asked
2 is, gets back to really the heart of what we're talking
3 about. And it's really recognizing again the distinction
4 between capacity and energy. I don't know how we can get
5 past this.

6 From the standpoint of emergency and what we pay
7 for customers when they agree to participate, involuntarily
8 in the capacity market; in other words not based on price
9 but because PJM has called on it; it's because these
10 customers have said that they have the ability and the
11 willingness to drop load when requested.

12 The question is, drop load from where? And the
13 only thing that it could be from where is what their load
14 would have otherwise been at system peak, because that's
15 what we base the capacity payment on is that allocation of
16 what the requirements are at system peak.

17 The only way to measure what a customer's load
18 would have been at system peak is the PLC, which is the only
19 practical way we can look at it. And so with respect to
20 that, that is what their obligation is, and when they
21 perform, they've met their obligation.

22 The real dispute that I have with EnerNOC, and
23 where I don't think the exceptions we've done swallow the
24 rule, is to deal with the real life concern of customers who
25 are able to manage their peak load contribution, and they do

1 that, and that's a good thing; they're doing it voluntarily
2 to reduce their demand to avoid capacity charges. That
3 becomes their PLC and it's what PJM plans against.

4 If they're performing more than that, then that
5 is not capacity, it's energy. They're simply not providing
6 the capacity value. That doesn't mean they're not helping
7 meet balancing and the emergency load conditions; they're no
8 different, as I said, than the generator that's sitting in
9 the Midwest ISO, importing energy in to keep the grid in
10 balance. It's simply the difference between capacity and
11 energy, real time operations, and a planning commitment; and
12 the planning commitment in this case has to be based on
13 reduction from what would otherwise have been the assumed
14 peak load.

15 MR. TACKETT: Mr. Weishaar, Mr. Bresler, and then
16 we'll go on to the next question.

17 MR. WEISHAAR: I agree with everything that
18 Audrey just said, but I do want to emphasize the point that
19 from a customer perspective we do not want to go down a path
20 where if generators are performing at levels higher than
21 their capacity obligation during a peak event, that we
22 somehow go back and add additional capacity dollars to that
23 generator. That would be sort of a worst-case outcome from
24 a customer perspective.

25 MS. ZIBELMAN: Agree.

1 MR. TACKETT: Mr. Bresler.

2 MR. BRESLER: Thank you. Clearly, I agree with
3 what Ms. Zibelman and Mr. Weishaar have said; I'm not going
4 to repeat it yet again. What I thought I might do is try to
5 crystallize for you the impact of a PJM change to do load
6 forecasting the way Mr. Sipe suggests we do load
7 forecasting.

8 As I have said repeatedly, PJM's load forecast is
9 based on the actual loads experienced historically. What
10 Mr. Sipe seems to be suggesting is that PJM forecast its
11 load not based on the actual loads experienced but rather
12 what the load would be if those who had not reduced their
13 demand in order to manage their PLC, but rather had consumed
14 everything they could.

15 That is what PJM is saying we would need to do if
16 capacity commitment were evaluated based on reductions from
17 the energy CBL. That is why our capacity requirement would
18 go up. Again, we currently forecast based on actual
19 experienced loads; they drive the load forecast and they
20 drive the PLC calculation.

21 If I were to allow capacity verification to be
22 done by energy reduction, I would need to forecast my load
23 as if those resources were actually consuming at that higher
24 energy level. My load forecast would have to go up.

25 I hope that crystallizes what the impact would be

1 if I were to need to forecast my load on that basis; my
2 capacity requirement would necessarily increase.

3 MR. TACKETT: Thank you, and I apologize, but
4 given the brevity of the panel, we'll have to move to the
5 next question.

6 MR. GOLDENBERG: I have a fundamental question
7 about capacity commitments of the customers. In PJM filing
8 and in answers to our questions, and mention several times
9 during the course of the day thus far, it was referred to a
10 customer commitment.

11 And my question is, who is committing to PJM in
12 the capacity market? Is it directly the customer or is it
13 the CSP? And if it is, the CSP was committing, aggregating
14 its capacity reductions from the customers, does that change
15 PJM's argument or the issue here?

16 MR. TACKETT: That's fine. We'll now proceed
17 from the left to the right. Go ahead.

18 MR. BRESLER: I think that's what he was
19 suggesting. Thank you.

20 Really, just very briefly, and I think I tried to
21 make this distinction earlier this morning is well, the
22 commitments PJM received to be capacity resources are on a
23 resource basis. Resources themselves can be aggregations of
24 end use customers; the rules permit aggregation on that
25 basis in order to make up what we call registration, what

1 really is a demand resource.

2 A CSP, a curtailment service provider obviously
3 has a portfolio of resources that it registers with PJM to
4 be capacity resources. And those resources can be
5 aggregated together on a portfolio basis. All they are
6 saying is that for each resource in a portfolio, measurement
7 of whether it has achieved its capacity commitment must be
8 done on the correct benchmark. I won't repeat anything said
9 about what the correct benchmark is; I think it's clear we
10 think it's PLC.

11 And then, response over and above that committed
12 capacity value can be utilized to satisfy other resources
13 shortfalls within the same portfolio.

14 MR. TACKETT: Dr. Bowring.

15 DR. BOWRING: The commitment can be either from
16 the CSP or the individual customer; that is, individual
17 customers can in fact serve as their own CSPs and make
18 offers directly. There are contractual arrangements,
19 obviously; and even when it's a CSP who has the obligation
20 to PJM, that ultimately rests on individual customers.

21 But to answer the question directly, no; I don't
22 think it changes anything about the fundamentals about how
23 you measure and verify whether capacity has been provided.

24 MR. TACKETT: Thank you. Are there any other
25 comments from this panel? Mr. Sipe.

1 MR. SIPE: In EnerNOC's case, it's the CSP that
2 has the obligation. But it is an obligation, and I think
3 that's what distinguishes it from the examples of the
4 generator that simply puts out more energy.

5 If that generator were willing to say, "Every
6 time you call me, I'll give you 105" you pay him for 105.
7 He's not willing to say that, and he's only going to deliver
8 the 5 when you don't call for it, as all these examples use,
9 and he doesn't get a capacity credit.

10 It's not a difference in what you deliver, it's a
11 difference in your commitment. The commitment that the CSP
12 makes is to deliver a certain amount of capacity; and the
13 best measure of where a customer otherwise would have been
14 is a contemporaneous customer baseline. That's where they
15 actually would have been when you called them. It's not
16 where they were a year ago.

17 But the CSP takes the commitment, the commitment
18 is based on delivery of a product at the time. Any
19 generator that took that commitment should be paid for
20 capacity. If it's 105, it's 105. The important thing, it's
21 a commitment to deliver when you're called, every time
22 you're called; that's what distinguishes it from energy.
23 It's not the question of whether or not you happen to put
24 out more.

25 If we put out more than what we've committed to

1 as a portfolio, as a resource, we're not going to get
2 capacity credit for it, we're going to get the credit for
3 what we got. We'll get an energy payment if we want it, but
4 if we were going to do it for energy, you would have already
5 had it.

6 MR. TACKETT: Does Commission Staff have other
7 questions?

8 MS. KRAMSKAYA: I wanted to go back to Mr.
9 Weishaar's proposal for an interim solution for the auctions
10 that have already occurred, and just to ask if possible to
11 restate the example that you gave; and also, I would like to
12 ask other panelists to comment on applicability of this
13 solution. Thank you.

14 MR. WEISHAAR: Sure. What PJM ICC is proposing
15 as an interim solution -- and again, this is in recognition
16 that many CSPs have entered into commercial arrangements
17 based on certain expectations, and customers have entered
18 into contracts with CSPs based on certain expectations or
19 certain interpretations.

20 But for the delivery years, and ostensibly
21 beginning November 7th with the end of the suspension
22 period, and continuing through May 31, 2015, the demand
23 response resources should be permitted to use the comparison
24 load measurement options that currently exist in Attachment
25 A to Manual 19, with the caveat that a customer's GLD

1 curtailment cannot exceed the customer's PLC.

2 And the numerical examples we gave are, a
3 customer with a 30 megawatt PLC and a 10 megawatt GLD
4 commitment should be able to use an actual comparison load
5 of 25 megawatts, if that 25 megawatts is consistent with the
6 comparison load measurement options that exist in Manual 19.

7 By contrast, a customer with a 5 megawatt PLC
8 cannot claim more than 5 megawatts of GLD curtailment even
9 if the customer's properly calculated comparison load is
10 greater than 5 megawatts.

11 Essentially, you're assuring that the total of
12 the GLD for a particular customer does not exceed the PLC or
13 the expectation of what that customer would have placed on
14 the system. But it does get to the issue of how you
15 calculate comparison loads, and it would allow continuation
16 of the five options that exist in Attachment A of Manual 19.

17 MR. TACKETT: Mr. Bresler.

18 MR. BRESLER: I'd probably be remiss if I didn't
19 provide that PJM reaction to that proposal.

20 First of all, PJM always appreciates constructive
21 proposals in our stakeholder process, and I think it's
22 equally constructive here; so PJM appreciates the Industrial
23 Customer Coalition coming forward with a proposal.

24 Certainly for the intervening delivery years, the
25 proposal, because it caps the amount that could be submitted

1 for verification to the PLC value would reduce the magnitude
2 of the problem; it would not completely eliminate the
3 problem, to refer back to our charts; you'd still have this
4 issue of what's in between here. But you wouldn't have
5 additional response that would then credited toward other
6 customers beyond what, to other resources beyond what one
7 resource's PLC value was.

8 So it wouldn't minimize, it would reduce the
9 magnitude of the problem; it wouldn't eliminate it. PJM's
10 feeling would be that by virtue of the Commission's deferral
11 of the effective date of our filing to November, we've
12 already taken the current delivery year off the table.
13 There's at least one incremental auction RPM, if not
14 multiple incremental auctions that precede the upcoming
15 delivery years through which CSPs could adjust their
16 positions based on the rule change that is actually adopted.
17 And so PJM's preferred option I think would be to go with
18 the end state proposal as soon as possible. Although like I
19 said, the ICC proposal does serve to reduce the magnitude of
20 the problem for the intervening years.

21 MR. TACKETT: Dr. Bowring.

22 DR. BOWRING: Very briefly, I agree with what Stu
23 said. Again, I appreciate what Bob and the ICC is proposing
24 as a constructive step, but nonetheless, it does not address
25 the problem completely, while it would truncate it somewhat.

1 In addition, the problem has been going on for
2 quite sometime; everyone's been aware of it for quite some
3 time. I don't think there's really any reason, given all
4 that, to continue with the problem. I think it should be
5 resolved promptly, and going forward from the effective date
6 that the Commission determines be solved in the way we've
7 suggested. Thanks.

8 MR. TACKETT: Mr. Norton.

9 MR. NORTON: AMP would support the proposal. We
10 do think that there still should be a going-forward solution
11 even beyond the, out into the 2015, 16 year and beyond to
12 account for the issues we talked about such as load growth
13 from year-and-a-half. But we do think this is a good
14 proposal and that it does deal with commitments people have
15 already made; and I don't think it would be appropriate to
16 force people back into an auction to try to buy back a
17 capacity commitment that they made because we're making a
18 rules change in midstream.

19 MR. TACKETT: Mr. Sipe.

20 MR. SIPE: Well, let me preface my remarks by
21 saying that we'd be transitioning to the wrong end state if
22 we took the proposal.

23 But having said that, if we are going to
24 transition to any different end state or the wrong end state
25 or the right end state, the settled expectations of people

1 in the market should not be disappointed. So to the extent
2 that some proposal has to be adopted that reasonably
3 protects the settled expectations including the fact that
4 you're going to be able to deliver your portfolio the way
5 you had it planned, I think that would be necessary,
6 provided we were going to transition, albeit to the wrong
7 state.

8 I have not heard before now or really seen and
9 evaluated, nor do I know that EnerNOC has a position on the
10 particular transition mechanism that would be appropriate,
11 and I don't know if someone on a later panel today will
12 offer an opinion on that, but I would say that to the extent
13 you're going to avoid what would essentially be retroactive
14 ratemaking on people who've made commitments to a capacity
15 auction, that some reasonable transition to not upset those
16 settled expectations would have to be made.

17 MR. TACKETT: Thank you.

18 Final, Ms. Zibelman.

19 MS. ZIBELMAN: I think that the ICC
20 recommendation is very constructive. We had suggested an
21 alternative, which would be to allow companies to, had bid
22 in under one set of expectations, to modify it in the next
23 incremental auction. But if in fact that is disruptive, I
24 think the ICC compromise is a good one; and I would also
25 caveat what we ought to do if we're going to do that is also

1 very quickly look at how we will do things going forward, in
2 particular with some of the recommendations that we've made
3 about how to adjust for PLC so that it does become a
4 realistic number that can be used and relied on.

5 And the other area that I know is beyond today's
6 dialogue but I think we should do a fundamental look at, may
7 be part of the problem is the requirement that customers bid
8 three years forward on a resource that is fundamentally a
9 near-term resource, and that is actually part of the problem
10 that's been created here.

11 MR. TACKETT: Just a quick clarification question
12 for Mr. Bresler.

13 Given the projections that you've done through
14 the I think what would be the 2014-15 delivery year, would
15 the proposal reduce the reliability problems from your
16 perspective sufficiently to handle the problems.

17 MR. BRESLER: Like I said earlier, it certainly
18 would reduce them. I don't honestly know without going back
19 into an evaluation, whether it would sufficiently reduce
20 them such that we would not need to adjust the reliability
21 requirements for those intervening years; I don't know that
22 sitting here.

23 MR. TACKETT: Okay. Thank you.

24 And thank you all for your comments. Oh, my
25 apologies.

1 MR. KATHAN: I had a question that may be
2 clarification, but there's been a lot of reference in the
3 first panel and this panel to managing loads down or
4 managing down to your PLC or reducing your PLC. And I was
5 curious as to whether those customers who actually do that,
6 who I assume get directly billed one way or another for
7 their capacity payments, can you identify those customers?
8 Are they direct customers of PJM? Do you know who they are?

9 It's a little unclear what the mechanism of
10 billing is, I guess between LSEs and the DR load, and how
11 this management of PLC down actually works.

12 MR. TACKETT: Okay, I believe everybody has a
13 response this time. A round; please keep them brief, and we
14 will start on the right with Ms. Zibelman.

15 MS. ZIBELMAN: I think that most of the customers
16 who are participating in load response programs today are
17 looking at how to reduce their peak load contribution from a
18 retail perspective. So that's why I think a lot of folks
19 have said, this is not pejorative, it's really good
20 economics. It's just a question of when you look at the
21 economics for yourself and you make a determination that,
22 rather than pay a higher capacity charge to my distribution
23 company, I'd rather pay a lower capacity charge, which means
24 I have a lot less left to actually participate in the PJM
25 capacity market. That's just a rational economic decision.

1 And most CSPs, in fact probably everyone in this room,
2 offers a service to their customers that they will help them
3 reduce their peak load contribution to reduce capacity
4 charges that they would otherwise get from the distribution
5 utility.

6 So my perspective is that it's actually many
7 entities, and it's not a negative thing; it's actually a
8 just good, pragmatic way of people conducting their
9 business.

10 MR. GOLDENBERG: I wasn't really asking whether
11 it was a good way of doing it; I was trying to understand,
12 for example, if I was going to do it for my house, I can't
13 imagine that somehow I get a direct capacity bill that I
14 could then reduce.

15 What I was trying to understand is, which
16 customers can you work with to do that, and how do you
17 identify the people and how do they get billed for capacity
18 either at the retail level or directly?

19 MS. ZIBELMAN: I'm sorry, I didn't understand.
20 The customers that we're talking about are customers,
21 usually CNI customers who pay a demand ratchet based on
22 their peak load contribution, and they will get a reduction
23 in their bill from their EDC based on their ability to
24 reduce demand. So it's not your residential customers,
25 moreso; it's your CNI customers.

1 MR. WEISHAAR: The methodologies for determining
2 how the PLCs flow down to retail customers is set forth for
3 most of the EDCs in various attachments and appendices to
4 the PJM tariff.

5 Generally speaking, residential customers have
6 profiled measurements, and they are allocated some amount of
7 capacity charge, either as a direct line item on a bill or
8 through the total charges that their load-serving entity
9 picks up for them; that's done on a profiled basis.

10 For demand metered customers, and this is true in
11 all of the retail access states and in many of the non-
12 retail access states, those customers pay directly for their
13 capacity obligation based on their PLCs.

14 What we see in a lot of retail contracts, power
15 supply retail contracts and retail access states is that the
16 energy prices agreed to by contract, in most of those
17 contracts the capacity charge is a flow-through element. So
18 whatever the customer's PLC is in a given year, that's
19 multiplied by the capacity charge that is set via RPM and it
20 flows through to the customer automatically.

21 So the short answer is, for residential customers
22 it tends to be bundled; for a lot of the CMI customers,
23 commercial-industrial customers, that's very transparent and
24 they see it in their retail bill irrespective of whether the
25 bill comes from a retail access supplier or a regulated

1 utility.

2 MR. SIPE: I only want to add one link to this,
3 which is that the EDC at first gets its bill not on a 5 CP
4 basis at all; it gets allocated its cost base on a 1 CP.
5 And that's in the manual.

6 So the first thing you do is you allocate these
7 costs to zones based on the contribution of the single CP.
8 There are a variety of retail pricing arrangements that
9 people use to pass through those costs. The 5 CPs in the
10 tariff are not mandatory; there are utilities and EDCs that
11 don't use them, and we cited one of those in our filing, and
12 I unfortunately cannot remember who it is.

13 But there are a variety of obligations and ways
14 that those costs are passed through depending upon the
15 particular retail arrangement you're under. They're not all
16 5 CP, but the original allocation is not a 5 CP allocation;
17 it is allocated to the EDCs on the basis of a single CP from
18 the system, and then from there, those costs which are
19 actually incurred on the basis of 1 CP are then allocated in
20 a variety of ways downstream, when we do use the 5 CP, but
21 it's not a requirement; and there are some that don't.

22 DR. BOWRING: So one part of the question is, is
23 it transparent to customers? And clearly peak shavers
24 engage in that activity because it is, because they save
25 directly from it, and I think Bob correctly and accurately

1 summarized the way the rate design works.

2 Then the final part of the question that I heard,
3 I thought was whether we, or PJM could identify who peak
4 shaving customers are. Without a survey, you can't know
5 exactly who they are, but the data makes it quite clear who
6 peak shaving customers are, when you look at the
7 relationship between their peak loads and their average
8 loads it's possible to define a screen that would pick out
9 most significant peak shaving customers.

10 MR. TACKETT: Thank you.

11 MR. BRESLER: I just want to object real quickly;
12 it's probably not worth splitting hairs, but the only 1 CP
13 cost allocation PJM does is transmission cost allocation.
14 Capacity allocations are all done based on the 5 CP. Like I
15 said, I'm not sure if it's splitting hairs, 5 CP, 1 CP. But
16 I just needed to interject that there. The only place a 1
17 CP cost allocation is used is with respect to transmission
18 cost.

19 MR. TACKETT: Thank you all for your comments
20 during this panel. We'll not convene for lunch, and if
21 possible, please reconvene by 1:15.

22 (Whereupon, the luncheon recess was taken.)

23

24

25

1 Afterwards, Commission Staff will have questions
2 as before, and panelists will be given a chance to those
3 questions and to one another.

4 Mr. Ott, I invite you to start with a brief
5 description of PJM's position.

6 MR. OTT: Thank you. Good afternoon. My name is
7 Andrew Ott, I'm a Senior Vice President of Markets at PJM,
8 and again I appreciate the opportunity to be here, to
9 participate in this discussion.

10 To address the first question, a peak shaving
11 customer provides significant value to PJM and to regional
12 reliability by reducing actual loads that PJM experiences on
13 high load days. PJM recognizes this value in our load
14 forecast. And the established reliability requirement
15 reflects this curtailment, so that the PJM procures less
16 capacity in the RPM auction because we account for the peak
17 shaving activity and depend upon it being there.

18 Peak shaving provides direct benefit to
19 customers, not only the customer who does the peak shaving
20 but customers as a whole benefit from the reduced capacity
21 obligation, because we are procuring less capacity, which
22 lowers overall cost.

23 But since the load forecast already accounts for
24 this reduction, in direct response to the question, the PJM
25 rules expressly limit registration of DR to no greater than

1 that customer's peak load contribution or contribution to
2 the peak. Which again is lower because of the peak shaving
3 activity, again which is a good thing.

4 However, if a customer who does engage in peak
5 shaving and has managed their peak load contribution in a
6 downward direction, if they're able to do further
7 curtailment; for instance, they're able to come in and
8 reduce below their PLC, then certainly they should be
9 eligible to monetize that additional reduction and take
10 advantage of the fact that they can fully bring that
11 additional reduction in and participate in the capacity
12 market. In fact, the PJM rules explicitly limit DR
13 registrations, as I said, to no greater than the customer's
14 PLC, and that rule has been in place in PJM for many years.
15 This question of ambiguity around how you can report
16 compliance has come up, but the issue of limiting to PLC has
17 not been a discussion within the PJM stakeholder process.

18 If I could turn to the aggregation of DR
19 resources, of course as mentioned earlier today by Mr.
20 Bresler, aggregation of DR resources to manage compliance
21 risk is beneficial, not only to the DR providers themselves,
22 but also to the market as a whole, because it allows the DR
23 providers to hedge performance risk and reduce their overall
24 cost, which means they can bring higher value services to
25 the market as a whole.

1 Again, if I can explain aggregation on that
2 chart, the type of aggregation methodology you'd see is, for
3 instance, the customers who are committed to the 5 megawatt
4 DR reductions, which are the green and orange hash. Those
5 customers again, one customer day may have curtailed 8
6 megawatts. The other customer may only have been able to
7 curtail 2 megawatts. The fact that when they bring those
8 two together in aggregate, that portfolio has satisfied the
9 10 megawatt reduction that was committed to; that's a
10 beneficial aggregation and certainly that is supported.

11 However, the interpretation of market rules by
12 some CSPs who use the DLD method has created concern,
13 because they're reporting reductions based on an energy
14 reference rather than on a capacity reference. If you again
15 go back to the example, if a customer would be above the 10
16 megawatts curtailed from 15 megawatts down to 10, and want
17 to use that curtailment as a way to hedge risking the rest
18 of the aggregation, that wouldn't be beneficial.

19 So for instance if you had a customer, where on
20 one side the customer reduced from the higher, say 15
21 megawatts down to 8, so they were 2 megawatts below their
22 PLC but they reported to us they reduced 7, and then they
23 try to use that additional 5 megawatts of performance to
24 hedge the risks, the performance of the other resource,
25 that's when we have a concern.

1 So it's not the aggregation, it's actually the
2 reference point that you're basing the performance on.

3 As Mr. Bresler explained this morning, this trend
4 of using the energy reference instead of the capacity
5 reference would create concern for PJM, because again we
6 base the expectation of performance on the customer's
7 contribution to the peak load.

8 Again, we are expecting a customer to reduce
9 below that level in our capacity procurement, and as Stu had
10 mentioned earlier today, I won't re- go through all that.
11 However, I do want to show an example of an actual event
12 day. I had distributed, and it's on the screen if you could
13 bring up the -- I have a PowerPoint if it's possible to
14 bring that up on the screens; I don't know if it is nor not,
15 but if not, that's fine.

16 So if you go to one with the four colorful arrows
17 across the top, what this is is from last summer, this is a
18 capacity event day in July. So underneath the red arrow,
19 the red arrow is the day before the event day. The green
20 arrow is the event day, and you have the purple and the blue
21 hours, which are the days following the event day. And what
22 you have here are, these are actual metered loads from this
23 customer site.

24 What you see is the day before the load was
25 between -- I think it was 1.8 and 2.4 megawatts. On the day

1 of the event, as one would hope, the customer actually
2 responded, and you can see the load reduced during the peak
3 hours from 2.4 megawatts down to near zero. The day after,
4 of course the load is up. Now the customer did actually
5 curtail 2.4 megawatts. However, CSP reported a 28.8
6 megawatt reduction.

7 This morning there was a lot of discussion about
8 contemporaneous reduction, meaning you're reducing in the
9 day and you're providing value. What we're actually seeing
10 here is not that. What we're seeing is people referencing
11 back to an energy reference point they've calculated; may
12 have happened in May of that year. These aren't
13 curtailments that are -- curtailing from an energy value
14 that day. They're actually referencing back to some other
15 value.

16 Again, the peak load contribution for this
17 customer is on this order of 2 megawatts, 3 megawatts,
18 something like that. It is not 28 megawatts. So the point
19 is, the customer is reporting a very large reduction that's
20 simply not there.

21 If you flip your page over to another example,
22 here's another actual example. Metered load in a reported
23 curtailment. What we see here is on the day before the
24 event, the day of the event, and the day after the event the
25 load's pretty constant; it's right around I think .3 of a

1 megawatt, perhaps.

2 There was really no change in the load throughout
3 this period; and in fact the weeks before and the weeks
4 after, really not much there. The CSP reported a 10
5 megawatt reduction, 10.2. Again, the energy reference that
6 they're calculating apparently is referencing back to some
7 time of the year when that customer was consuming 10.2
8 megawatts, but this is not a demand reduction in the
9 capacity market, and we're seeing -- this is disturbing to
10 me. This is the kind of interpretation that we're seeing in
11 these kind of compliance where they're not being limited to
12 -- they're not limiting themselves to their PLC; they're
13 actually using some kind of other reference.

14 So I think you may have gotten the impression
15 this morning that some of these reductions are actually
16 contemporaneous and during the day -- not seeing that. And
17 if you actually look at the days before and after these
18 events, these customers are peak shavers. And by necessity,
19 the peak shaving customers are going to be managing their
20 peak load consumption so the days around, they're not going
21 to do that just on five days; they may do it on 10, 20, 30
22 days because they want to make sure they lower their
23 contribution to the peak.

24 Therefore, our expectation of a customer's
25 consumption during peak load days, which is what the

1 capacity market is measuring, is their PLC. It's not some
2 other number. So hopefully that example helps you
3 understand.

4 But again, I just want to make sure that the GLD
5 method per se is not the issue. Certainly the GLD is an
6 appropriate reference; there are certain customer types who
7 may lend themselves more to a certain block of curtailment,
8 and that is a dependable block or curtailment, and that can
9 still be used; there may be other customers who are more
10 suited to getting down to a certain level, which is firm
11 service.

12 So it's not the GLD issue, it's actually what is
13 the reference, and are you using the appropriate reference
14 based on what your expectation of consumption on a peak load
15 day is, which is PLC. Thank you. Looking forward to the
16 discussion.

17 DR. BOWRING: Thank you. Good afternoon. Thanks
18 for the opportunity to participate in panel number three. I
19 will address the questions 8 and 9.

20 The answer to Question No. 8 is no. The answer
21 to Question '99, no -- No.

22 (Laughter)

23 So the answer to Question No. 8 is no. But my
24 broader point is these are not incentives in the abstract.
25 The question is not whether there should be incentives to do

1 this, whether we should pay people for some abstract and
2 nonspecific good that they're doing for the system. There's
3 a capacity market price that reflects the value of capacity,
4 and that's the framework we're operating in. We have a
5 market, we have a capacity market, it has a price. That
6 price also establishes the value of not purchasing capacity,
7 which is what DR is. It's not providing anything, it's not
8 selling anything, it is agreeing not to purchase capacity.
9 And the only way to value not purchasing capacity is the
10 price of that product.

11 The customer, and this is in direct answer to the
12 question; a customer cannot not purchase the same capacity
13 twice. I know that was a lot of 'nots.' You cannot avoid
14 buying, not purchase the same capacity more than once. If
15 you don't buy it, you've not bought it, and that's the end
16 of the story. You can't do that twice, you can't do it
17 three times; you can only do it once.

18 However, I agree with Andy's point, which is that
19 if you have additional curtailments on top of what you did
20 for peak shaving, of course it makes sense to pay for that.
21 But the question was, should you be paid or should you get
22 an additional incentive for the same megawatts, and my
23 answer to that is no.

24 In connection with this issue, we've heard today
25 that some on the panel assert that peak shaving customers

1 reduce load generally or all the time so that their energy
2 CBL is also reduced. My question for my fellow panelists,
3 should they choose to answer it is, whether they would agree
4 that for -- just to take a hypothetical -- an 100 megawatt
5 customer with an 100 megawatt unconstrained peak load, that
6 peak shaves at 20 megawatts, would they agree that the CBL
7 should not exceed 20 megawatts? And if it does exceed 20
8 megawatts, should not be, that such a customer should not be
9 paid for capacity based on the higher CBL.

10 If it's true that the CBL really reflects that
11 peak shaving for a much broader period of time, then we
12 shouldn't see it reflected in the calculation of a
13 reduction. So my question is, would people agree with that
14 or not agree with it?

15 Answer to Question No. 9 is about the current GLD
16 option. I think both the PLC and the GLD options provide
17 incentives to aggregate. I think that the way the GLD
18 option is being interpreted now by some, I think
19 incorrectly, provides an inappropriate incentive to
20 aggregate, since it's a mismeasurement of performance.
21 Therefore it's not an appropriate incentive.

22 The use of PLC would provide an appropriate
23 incentive and does provide an appropriate incentive to
24 aggregation, which is consistent with the economic
25 fundamentals. And as Andy pointed out, if there are

1 customers who can use GLD and comply with the basic
2 measurement verification rules, then that would also provide
3 an incentive for aggregators to create portfolios from such
4 assets.

5 But the point is that aggregation does make
6 sense, portfolios make sense, but they have to be grounded
7 in the correct basic measurement verification. Thanks.

8 MR. NORTON: Good afternoon, I'm Chris Norton
9 from American Municipal Power.

10 To very simply answer your questions, no, we do
11 not think that a load should be able to use both peak
12 shaving and the demand response program for the same
13 megawatt or the same portion of a load; it should be a
14 choice, one or the other. Again, as an increment of load.

15 With respect to the second question, I don't
16 think it's a problem; it seems as though the GLD is being
17 used for that, but it's not -- it is not only the GLD, it's
18 more of the aggregation that provides the issue that we're
19 running into here with the ability to have one load peak
20 shave and then come along and use the GLD afterwards to
21 offset another load.

22 MR. EVANS: Good afternoon. I'm Kevin Evans,
23 Vice President and Good morning for Energy Connect, the
24 demand response business unit for Johnson Controls. To my
25 knowledge, Energy Connect was the first and remains the only

1 market based rate authorized curtailment service provider.

2 I'd like to thank you for the opportunity to
3 share my views of Energy Connect on the issues under
4 consideration for this proceeding. I have a few points to
5 make. First and foremost, demand response customers should
6 be informed and motivated to voluntarily manage their use of
7 electricity like peak shaving or load shifting in response
8 to market prices, regional or system-wide peaks, or power
9 shortages.

10 They should receive information that would allow
11 them to anticipate critical peak periods and be motivated to
12 reduce their loads in order to lower the PLC for retain
13 access purposes. They should also be motivated to receive
14 the economic benefit for the load reduction as called for
15 under the Commission's order 745. They should not, however,
16 then be penalized for this curtailment by adding it back to
17 their PLC for capacity purposes. Customers should be
18 informed and motivated to curtail their load, both to
19 maintain low PLCs for retail access purposes and
20 compensation for energy curtailments at full LNP.

21 I would also like to, I think it's important for
22 customers to be informed of their PLCs in a timely fashion.
23 Under the current PJM practices, the utilities are supposed
24 to provide customers with their PLCs by January 1st. In the
25 most recent year, a number of utilities did not provide PLCs

1 until after the registration window had closed. Customers
2 need their PLC ideally within 30 days of the end of the
3 measurement period, but under no circumstance later than
4 January 1st.

5 My second point is that the current GLD option
6 encourages CSPs to register under-performing or non-
7 performing customers. If left in place, other CSPs will be
8 forced, for competitive reasons, to encourage customers to
9 contract for guaranteed load drops far in excess of their
10 operating capabilities, and potentially put the reliability
11 of the system and the market integrity at risk.

12 At Johnson Controls, no customer is offered or
13 contracted for guaranteed load drops in excess of their
14 customer's PLC. It's our view that if there is to be any
15 transition that it should be limited to existing resources
16 and therefore prevent this continuous competitive pressure
17 to compete, and therefore all CSPs would be forced only to
18 have this transition apply to existing resources.

19 This concludes my prepared remarks. Thank you.

20 MR. FALK: Good afternoon; I'm Jonathan Falk from
21 NERA Economic Consulting, representing EnerNOC today. And I
22 thank you for the opportunity to be here.

23 I listened all morning and I threw out all my
24 prepared remarks, because now I really am confused. Let's
25 start this way. If I offered to bring supply and demand

1 closer into balance from whatever it happens to be, by 100
2 megawatts, 24/7, 365, or at least 16 times or for six hours
3 or whatever the promises are. But I promise to deliver 100
4 megawatts, and I make that promise to you. And I suffer
5 penalties for failure to meet that promise.

6 Haven't I offered you capacity? If you'd asked
7 me that question six months ago, my answer -- in fact, my
8 answer still is yes. What I've learned today is, PJM's
9 answer to that question is "Well, maybe. Maybe you have,
10 maybe you haven't. It doesn't even matter whether you bring
11 supply and demand 100 megawatts closer into balance or not,
12 doesn't matter to us. What we care about is how much you
13 happen to be consuming at the time you brought the load and
14 supply 100 megawatts closer into balance."

15 Now that's odd. It's just odd to think about,
16 and so I've been listening this morning to try and figure
17 out what their reasons for that are, and I've sort of heard
18 two of them. One of them is "Well, in the peak it's what we
19 planned for, so it's what we figured you'd be consuming, so
20 that's all we're going to let you -- you know, we've got to
21 get you down to there before we're getting something."

22 Well, whatever sense that makes, it certainly
23 makes sense maybe in the peak, but what sense does it make
24 off-peak? What possible reason is there to get you down to
25 your PLC on some day that's only a three-quarters of system

1 peak, or some hour that's at three-quarters of system peak?
2 What did that have to do with that planning criteria?

3 And if the answer is nothing, and it is, then
4 it's unclear what the point of this thing is. The promise
5 is the promise, and I can't say it any clearer than Don said
6 it this morning: Capacity is the ability on demand to
7 supply energy. That's what it is. And that's exactly what
8 going against your baseline, which is our best measure of
9 what you could have provided, that's exactly what it is.

10 Now I'm going to talk about And Ott's examples in
11 a second, because I think actually they help make our point;
12 but let me just finish down the line I was talking about,
13 because they give me a second reason.

14 The second reason was, in the past you've been
15 the sort of guy who once consumed X at the peak; and so we
16 know you can do that, so we're not going to count you until
17 you get below that. Again, what does that have to do with
18 off-peak? Whatever its merits in the peak, it doesn't have
19 anything to do with the off-peak. It just doesn't seem to
20 be a relevant criterion at all.

21 Aren't both those reasons wrong, simply for the
22 reason that there's no connect between a capacity product
23 that I offered 24/7 this year and the amount I consumed in
24 five particular hours last year? That's the link they're
25 trying to make for you. And there's just no link there.

1 There might be; I mean, it's not like those two are going to
2 be completely unrelated in any possible set of circumstances
3 I can name.

4 But what you're offering is capacity, and what
5 capacity is is the offer to bring supply and demand closer
6 in on demand. And your demand -- that demand includes your
7 demand. It's not some demand down at PLC, which was some
8 number you used last year. Suppose you had no PLC, a zero
9 PLC, because your plant happened to be shut down in the five
10 peak hours last year.

11 So we got your bill -- it wasn't anything you
12 did. Your PLC is zero because your plant was just dead shut
13 down, and that happened to be the high five hours. I happen
14 to know that my plant was shut down for a reason, it was
15 shut down by a strike. I've now got my labor contracts back
16 in place, I'm going to be up and running at my 100
17 megawatts. I'm going to be there all year. I'm absolutely
18 going to be there all year; I can give you 100 megawatts all
19 year long.

20 The zero, which will be your capacity
21 responsibility for last year in this cost allocation doesn't
22 have anything to do with what you're going to deliver in the
23 next year. And to treat it as if it is and to say "We don't
24 want your stinking capacity product, because you had a zero
25 PLC last year" is to simply say "We don't want you in this

1 market." If we don't want people with zero PLCs in the
2 market, why don't we just take them all out? Why don't we
3 take out the ski resorts?

4 If we don't want people providing capacity in
5 this market, and we're perfectly capable of doing it, and
6 for whom the aggregator is taking the risk of
7 nonperformance. The aggregator is taking that risk because
8 it's the aggregator who is, Dave Kathan pointed out, is
9 making the promise. It's the aggregator who took on all
10 that risk. They're the ones who said "I promise you 100
11 megawatts." And why you need to compare that to some number
12 that that person happened to consume last year and say
13 "Well, that's the best measure we have."

14 That gets to the other point: No, it's not the
15 best measure you have, and that gets directly to the
16 questions that we're addressing here. CBL is a much better
17 measure. Why? Because the measure of what you can give is
18 the measure of what you're using. And CBL is the measure of
19 what you're using.

20 Let's with that turn to the Ott example. These
21 are two -- and as soon as I saw it, I said "Well, these must
22 be two peak shaving customers, because how in the world
23 could they have demands at some low level for a number of
24 days and be able to claim a high number of megawatt
25 response?"

1 In this case, CBL has I admit somewhat let us
2 down, right? It's let us down. Because the measure of what
3 this guy could actually give you is in this example, since
4 he was making some voluntary reduction, in these examples
5 odd. And I'm perfectly willing to grant that. But let's
6 now talk about two things.

7 Number one, are these typical examples of peak
8 shaving customers in typical events? First of all, what
9 about events that don't come anywhere near peak shaving
10 events? Right? There the 28 megawatts you would have
11 claimed you would have gotten in a very direct sense, by the
12 customer dropping from 28 down to whatever it is. So there
13 you've gotten it in a direct sense.

14 But number two, if you think this is bad, wait
15 until you see the examples that Mr. Schisler is going to
16 bring up in the next panel. Because PLC suffers from
17 exactly this problem.

18 Suppose this customer, this one on the second
19 page, who doesn't seem to have done anything at all, he says
20 "Well, look, they claimed 10.2 megawatt reduction because
21 that was their CBL." Does he know that their PLC wasn't 30?
22 Could have been. Right? Maybe they've been consuming a lot
23 around that period. If their PLC was 30, now they'll be
24 credited with 20 megawatts of reduction, but they still
25 didn't do anything.

1 The problem of measuring the baseline reduction
2 is having a good baseline. The only measure of what you do
3 in the answer to a request is a but-for question: What did
4 you provide to the system but for the request to cut back?

5 If you think that there's some different answer
6 to the question of what you would have provided less what
7 you did provide, I respectfully submit you don't understand
8 the meaning of the word response. Response is the
9 difference between what you would have done and what you did
10 do, period. And so we need to use the best baseline we
11 could of what you would have in fact done on the system as
12 observed.

13 Are there ways to fix that? To take the other
14 example, going back to the first example, the doctor I
15 talked about, there Don this morning gave you the answer to
16 that question. If you don't like this, you can do what
17 Maryland does, and adjust the CBL for the two hour window
18 around the event. If that had been done in this case of
19 course they couldn't have claimed the 28.8 megawatt
20 reduction.

21 And I talked to my client extensively about this;
22 EnerNOC has no objection whatsoever to more accurately
23 representing what the customer would have done but for the
24 request to lower their consumption. No problem at all with
25 that. Anything that makes that more accurate, they're happy

1 with.

2 What they're not happy with is setting up as a
3 baseline a baseline that's ridiculous. And the PLC baseline
4 for this point is ridiculous. What they're providing is a
5 product. The product doesn't bear any relation to the
6 capacity they use at the last system peak, it just doesn't.

7 And for that reason, it's the wrong baseline to
8 use. Should we use a better CBL? All for it. EnerNOC's
9 all for it. But the CBL is the only reasonable measure that
10 we have right now to measure what those reductions are.

11 I think that's probably about five minutes.

12 MS. ZIBELMAN: Thank you, Audrey Zibelman from
13 Viridity Energy.

14 Just in response to the two questions the
15 Commission Staff has posed for this panel, one is the
16 difference in terms of what's voluntarily made versus what's
17 committed to. And it is really a but-for question. The
18 question is what did you commit to? And that's why it's a
19 measurement issue.

20 And in this case, what we're talking about is the
21 commitment that a load has made to what their load would
22 have otherwise been on peak, to what they're reducing from.
23 It has to be their peak load; that's what the capacity
24 product is all about, is meeting system peak.

25 If in fact then you have a situation where the

1 customer has committed to what their load would have been at
2 system peak, and their load is higher than on a going-
3 forward basis, one would assume that that's going to result
4 in a higher need for generation resources.

5 The issue here is that if you have a customer who
6 voluntarily, from the standpoint and I think that becomes
7 the issue, is that someone has said "Look, I'm going to
8 reduce my load to make certain I don't have a higher peak in
9 order to not get an assignment of the capacity charge at
10 retail." Their commitment then to PJM has to be off of
11 that, because otherwise PJM has to procure generation
12 capacity for them. I think we've been over this a hundred
13 times; it's hard to figure out another way to say it.

14 But the point is, the question is what happens if
15 in these cases the situation of the customer represented in
16 Example No. 2, their PLC was 30 megawatts. I think the
17 answer to that is if their PLC was 30 megawatts and then PJM
18 measured them at somewhat less than 1 megawatt, they would
19 have been credited for over-performance of 29 megawatts. Is
20 that correct? I'm thinking that's correct. In which case
21 those additional megawatts could have been used under the
22 example, to answer your Question 2, to address the folks who
23 might have under-performed. In other words, they were less
24 than their PLC minus their commitment.

25 So that, I don't think anyone here has ever

1 objected to that as the context of over-performance. What
2 folks are worried about is the situation where the
3 customer's PLC is maybe 3 megawatts and they've under-
4 performed in the sense -- and they committed to a load drop
5 of 1 megawatt and they've only produced half a megawatt.
6 What do we do about that? Because in that instance, they've
7 under-performed.

8 And so to me it's quite simply, in both of these
9 instances, you keep coming back to the but-for, and the but-
10 for is what would have my load have been? And the
11 measurement gets back to be "Well, what would it have been
12 at peak?" And using an operational construct suggests then
13 a wholly different way of planning for the peak, which then
14 again gets us into the situation of, if you're not certain
15 because there's no commitment, then you have to have a
16 higher reserve requirement. Thank you. Now I wait for your
17 questions.

18 MR. TACKETT: Thank you all for your comments.

19 Mr. Ott, I'd like to give you an opportunity to
20 respond to some of the discussion on your example.

21 MR. OTT: Thank you. I appreciate that. To
22 clear up the mystery, the PLC for the customer that is
23 flatlined there is actually 2 megawatts. So the point --
24 and again, the point here is that the, both in our load
25 forecast and in the assignment again of the portion of that

1 load forecast for this customer, we depended upon that
2 customer to have capacity performance consistent with what
3 they've historically done; that's essentially as was well
4 discussed this morning.

5 And in this instance, what we have is of course
6 the customer is peak shaving again this summer, just like it
7 was the summer before and probably the summer before that.
8 If you actually look at the continuum of days in this span
9 of time, I just happened to pick three for you. What you
10 see as customer's consumption is consistent with that.

11 So when we get a 10.2 megawatt reduction reported
12 here on a 2 megawatt PLC, what we're seeing again is, this
13 is not a contemporaneous reduction where they just happen to
14 be at a higher energy value, they're actually reporting
15 based on an energy reference some distance away from this,
16 and I think -- so I just wanted to point out this is not --
17 again, we have the majority of the CSPs operating in the PJM
18 market. Do not report compliance above PLC. As Mr. Evans
19 has indicated, the majority do not; some do. Some have
20 interpreted the rules that way. My opinion is I thought the
21 rules were very clear before, that that type of reporting is
22 not consistent with the rules, because why would we have the
23 registration limited to PLC?

24 However, we certainly do need clarification, and
25 we are in need of clarification. This unfortunately is not

1 a rare event. As I look through the numbers, PJM doesn't
2 actually get metered load; we've actually gone out and
3 gotten metered load for some of these periods, because that
4 obviously is retained by the EC, and as I look at these
5 metered loads, some of these types of things, these are two
6 examples of quite a few I could have brought today. And the
7 point is, I just wanted to make sure you all understood that
8 we are not talking here about contemporaneous reductions; we
9 are talking about reductions that simply don't seem to be
10 there during the operating day for which we are calling the
11 events.

12 MR. EVANS: Andy, can I follow up on that?

13 I'm wondering, you know, what Jonathan was saying
14 about the calculation of the CBL. The problem here is the
15 CBL is maybe not contemporaneous, and perhaps a CBL
16 calculation that is closer or perhaps as mentioned by both
17 Jonathan and Don this morning, is more adjusted to within
18 Dave, would that take care of a lot of this problem?

19 For example, if I'm remembering what the proposed
20 tariff changes are for the one with the flatline, isn't the
21 baseline going to be the PLC or the CBL, whatever's lower?
22 So wouldn't that mean that the payment would be lower under
23 the flatline case, you know, and the PLC would not be the
24 basis of the reduction.

25 MR. OTT: Well again, it depends on how the CBL

1 is calculated. Again, the point though I think here is the
2 PLC itself here is to -- so I think the reduction could be
3 there. You're speculating that the CBL calculation would be
4 zero, somehow?

5 MR. EVANS: No, what I'm saying is that this
6 flatline like this, if this was reflecting adjustment an
7 adjustment to being near what this is, then the CBL would be
8 below 2, in this example.

9 MR. OTT: If in fact that extended -- depends on
10 how you calculate the CBL.

11 MR. EVANS: Right. Again, the key is that this,
12 the capacity product itself is not a 24/7 product. It is 10
13 calls per year, six hour duration. It does begin to start,
14 we have some -- as we look out into 2014, some time from
15 now, we did implement for the first time in this most recent
16 auction some of the expanded products.

17 But today and for the next three years, the
18 capacity product itself is 10 calls, six hour duration. The
19 expectation -- so this is not -- for instance, the
20 expectation of a generator is to be there all the time, to
21 offer into the market as Dr. Bowring testified.

22 The expectation for demand response is to be
23 there to respond during peak load emergencies. This is not
24 -- again, we are expecting them to get down to their
25 historic amount and then respond from there if they're

1 reporting DR compliance. They've already gotten reflected
2 in the reliability requirement by producing a load forecast
3 and also reducing their CBL, if they've done the peak
4 shaving. And as I said, peak shaving is very beneficial.

5 But the key here is for the 10 by 6 demand
6 responses, what we're paying here. They need to be
7 responding at time of peak. And that's what we're looking
8 for.

9 MR. TACKETT: Mr. Falk.

10 MR. FALK: First, I just want to ask Andy one
11 question. Going back to the guy who didn't do anything and
12 is down around zero, and he had a two point whatever it was,
13 you are going to credit him with 2.8 megawatts of response
14 in this case, right?

15 MR. OTT: Sure. Well, actually -- depending on
16 how you interpret -- yes.

17 MR. FALK: Under your proposal, you'll give him
18 2.8.

19 MR. OTT: Yes. Right.

20 MR. FALK: So you won't give him .2, but you will
21 give him 2.8. My question to you is, after his response,
22 how much closer was what the operators were trying to
23 procure, how much closer was the supply demand balance,
24 after he took this action, in point of actual fact?

25 MR. OTT: I'm not sure I understand your

1 question.

2 MR. FALK: Well, the operator's called an
3 emergency. They asked for people to supply things. They
4 asked for the demanders to supply things to bring supply and
5 demand closer into what they thought they needed to keep the
6 system in balance.

7 This guy did nothing, and you're paying him for
8 nothing.

9 MR. OTT: In this case, this guy if you will, he
10 had a 2 megawatt CBL.

11 MR. FALK: Right.

12 MR. OTT: I'm sorry, PLC. Forgive me, PLC. And
13 he essentially reduced down to near zero; let's say it's
14 close to zero there, so it's zero. Let's say he gave us
15 that response. Now obviously he didn't give us a response
16 that day, but he was down to his compliance amount.

17 MR. FALK: But that's not what you asked for.
18 You didn't ask for that. Right?

19 MR. OTT: But that's what they committed to.

20 MR. FALK: They committed --

21 MR. OTT: -- a time of peak to be down to this
22 level, and that's what they gave me.

23 MR. FALK: And I guess that's where the dispute
24 it. I mean, this is exactly what Don said this morning, and
25 I'm going to say it one more time.

1 I think what they committed to, and I think what
2 EnerNOC thinks they committed to, and I'll assure you what
3 the operators at PJM think they committed to, is to reduce
4 their load below what it is right now.

5 MR. OTT: Then why aren't they giving me that
6 right now? That's not what I'm getting here.

7 MR. FALK: Because the CBL is inaccurately
8 measured. If the CBL was accurately measured, that would be
9 a perfect measure of what they are giving you right now and
10 what they would give you; and then they would have to give
11 you a reduction from that.

12 MS. KRAMSKAYA: Mr. Ott, are there emergency-only
13 resources in PJM?

14 MR. OTT: You mean in demand response? Or
15 genera--

16 MS. KRAMSKAYA: Generator response.

17 MR. OTT: Yes, there are emergency-only
18 resources, absolutely.

19 MS. KRAMSKAYA: And if an emergency-only resource
20 responds, does it play the same role as a capacity response?

21 MR. OTT: The same role?

22 MS. KRAMSKAYA: The same role in balancing load
23 and supply.

24 MR. OTT: I'm not sure that --they play the same
25 role in the sense that they respond to an emergency just

1 like a generator does. For instance, a generator can have
2 segments of the generator to be emergency-only and segments
3 of the generator to be not designated as emergency-only.

4 The generator, again, in a real-time operating
5 sense, could load up beyond its established economic max
6 into the emergency range. Just like a demand response could
7 say "I'm emergency-only but I'll offer to, if you declare an
8 emergency I'll give you some energy." So both of those are
9 true. And so in actual system operations we have both of
10 those features, absolutely.

11 But again, they would of course all be paid for
12 their energy that they're providing in that circumstance.
13 The point is, what are they giving us as far as capacity?
14 And again, the capacity references have all been discussed,
15 I won't go back to that. But certainly if somebody is
16 giving us energy during the peak hours in addition to giving
17 us capacity, certainly they deserve and we've had many
18 discussions about providing that energy payment, and that's
19 key.

20 The question is, should you also be paid in the
21 capacity market? And again the reference point for what
22 you're providing is also very critical in the capacity
23 market. Does that help?

24 MS. KRAMSKAYA: Thank you, it does. So
25 essentially an emergency-only resource does not really

1 provide the same value as a capacity resource.

2 MR. OTT: No, it doesn't provide the capacity
3 value, because again the concept here is, we have -- the
4 capacity resources are procured based on the adequacy
5 constructs, and I won't go through all the details because
6 you've heard much of it today.

7 Again, that is not a voluntary -- once you are
8 committed to the capacity market, you are required to
9 respond. If you don't respond, you receive a penalty. An
10 emergency load response customer, it's voluntary. They may
11 or may not show up today. And that's the key and that's the
12 critical difference.

13 MS. KRAMSKAYA: It seems to me though what Mr.
14 Falk is describing sounds closer to an emergency-only
15 resource rather than a capacity resource, based on the
16 explanations that Mr. Ott had provided.

17 MR. EVANS: No, I agree with Mr. Ott; there's a
18 huge difference. The difference is voluntariness of the
19 transaction.

20 The fact that these people have agreed to do it
21 involuntarily -- and by the way, that gets to -- several
22 people commented today, "Well, but they get the energy
23 payment because 745 makes sure they get the energy payment."
24 That can't be enough. Why? Because they could have gotten
25 the energy payment voluntarily, and they chose not to take

1 it.

2 So we know by revealed preference, that wasn't
3 enough money to induce them to do it. So the only thing
4 that induced them to do it in fact was the fact that they
5 had been enrolled as a capacity resource and had received in
6 essence a capacity payment for that. That's the balance
7 that needs to be struck.

8 And if you try to make people reduces below PLC,
9 right, for people who otherwise would be in Audrey's list of
10 exceptions or whatever, you're going to raise the price of
11 doing it; you're going to double-count the costs of meeting
12 loading uncertainty, as Don talked about before, but the
13 thing you're going to do is cripple the market. You're just
14 going to drive people out of the market.

15 Because you're already telling them, "Here's
16 something you have to do. Sure, I'll make you the energy
17 payment, but we know that wasn't enough because you could
18 have done that anyway. You could have done it as an
19 emergency, a voluntary emergency response customer."

20 What we're offering -- not "we" -- what they are
21 offering the system is capacity they can rely on when they
22 ask for it. And the only measure of whether or not I
23 actually gave it to you is what you would have consumed but-
24 for. That's the only measure. And not but-for what I
25 happened to consume at the system peak a year ago. Because

1 that's not a but-for measure.

2 MR. OTT: I think what we're hearing as a
3 fundamental question of what is the capacity resource
4 supposed to provide? What's the role. I raised the
5 question earlier about the dichotomy and the fact that
6 emergency-only DR has to be both a capacity resource and an
7 emergency resource. I think that is one of the hearts of
8 the issue. So I'll let Ms. Zibelman continue with her
9 response.

10 MS. ZIBELMAN: I think that that is the heart of
11 the issue that we're debating, is what is what constitutes a
12 demand load that is a capacity resource as opposed to an
13 energy-only. And since the need to procure capacity in the
14 entire RPM construct is based on meeting system peak. I
15 don't see how you again get past that in determining whether
16 something's a capacity resource.

17 So in this factual situation that we're talking
18 about is it is of value, because what the consumer has
19 committed is saying, during system peak that is what my load
20 is going to be reduced to. What I think it's very dangerous
21 is that when we try to extrapolate that and look at examples
22 that are not what happens during system peak, such as in the
23 non-peak days. In those circumstances, and that's why I
24 suggested I would be interested to hear PJM's response, is
25 if you're measuring the capability of a resource and

1 measuring it PLC, or a load at system peak and it can't be
2 higher than PLC, what would be the response when you're not,
3 when you create an emergency event and it's not system peak?
4 And so that some of these load resources such as the
5 examples we posited, where you're expecting cooling load;
6 and it's not hot enough to have cooling load on so you don't
7 see the reduction, is that a problem if in fact you use best
8 efforts and you have alternate resources?

9 So I think one of the challenges that we have in
10 trying to decipher all this is to use exceptions to the norm
11 as a way to define the norm. The norm is really, what
12 you're measuring is the capacity of the load reduction at
13 system peak. The exceptions that we're talking about is the
14 ski resort or what happens when it's not a peak day. I
15 think there could be rules written around that, and that's
16 where we suggested a best efforts clause that makes sense so
17 you don't penalize the customers. Because in the end, I
18 think we all agree, you don't want folks to be penalized for
19 situations that you had not planned on; but what you need to
20 do is measure that people had achieved the right measurement
21 on the things that you had planned for them to do, to
22 accomplish.

23 MR. TACKETT: We'll make sure to further address
24 the off-peak nature of the system versus PJM's proposal in
25 the forth panel. We have a question focusing directly on

1 that.

2 Dr. Bowring.

3 DR. BOWRING: Mr. Falk would redefine what
4 capacity is. Capacity is actually not the willingness to
5 supply energy except in an abstract, very abstract sense.

6 In PJM we have a capacity market; it's a defined
7 product. We have an energy market, it's a defined product.

8 The value of moving the energy supply and demand balance
9 closer together is the value of energy. In an emergency
10 presumably that energy price is very high and reflects
11 appropriately the value to the market of not using that
12 energy or providing that energy, either on the demand side
13 or the supply side.

14 You can't simply arbitrarily redefine the product
15 in order to say that it should be paid something, because it
16 was providing some abstract value which can't be measured
17 very well. We're operating within a market framework.
18 These products are defined within markets and they have
19 value which is defined by the markets, and we can't forget
20 that.

21 The PLC is not just some amount of energy that
22 was used a year ago; it's actually the determinant of how
23 much you pay for capacity. Whether you like it or not, that
24 is the fact about how the capacity market works and how the
25 costs of paying for capacity are defined.

1 Again, if you don't want to pay for capacity
2 because you're willing not to use it, you can't expect to
3 avoid paying anything other than the capacity price. Does
4 not make sense again to attempt to redefine the product away
5 from the clear definitions that exist in the PJM market.

6 And on the question of CBL, I think it's fairly
7 widely recognized that CBL is not always a great measure. I
8 think that it's been demonstrated here. But even -- to go
9 to one of your earlier questions, even if CBL were perfect,
10 even if it really were measuring contemporaneous reduction,
11 there is still the issue that we discussed this morning;
12 it's still not the definition of capacity, it's still not
13 providing capacity if it's a reduction between a higher
14 number and the PLC. Thanks.

15 MR. TACKETT: Mr. Evans.

16 MR. EVANS: Thank you. I wanted to once again see
17 if we could put it back into the context of the customer who
18 actually is paying for all of this; I think it's
19 particularly important.

20 As I understand, and it's certainly the value
21 proposition as we put forward to our customer, is that any
22 participation in this program is in a sense a rebate of your
23 demand charge. That is, if you're a 10 megawatt customer
24 and you're willing to come off the system on demand for 2
25 megawatts, it's in effect a 2 megawatt rebate of your demand

1 charge.

2 So if I go back to the plant shutdown experience,
3 I don't have a demand charge for a plant shutdown; there is
4 no rebate to be achieved. So I get to enjoy a year of no
5 demand charge and only paying energy charges. The converse
6 can happen as well, but I think it's very important that we
7 try and understand how do we propose these markets to a
8 customer in a value proposition which makes sense and
9 doesn't in some way feel like there's a black box this all
10 happens within?

11 So as we try to explain to our customers, their
12 participation in this program is a rebate of their demand
13 charge if they're willing to come off the system. That
14 rebate is based upon their PLC. If they come off the system
15 on demand, then they're compensated for it. Thank you.

16 MR. TACKETT: Mr. Falk.

17 MR. FALK: Well, at the risk of being abstract,
18 I'll be concrete in my disagreement with Joe. Again, I want
19 to go back to where I started my opening statement today.

20 If I offered you 100 megawatts in some way, shape
21 or form -- forget how I offered it; I'm a generator, I'm a
22 load. All I'm doing, the only thing I'm doing in an
23 operational sense for PJM is bringing load and supply closer
24 together. And I may be doing that at the peak and I may be
25 doing it at the off-peak.

1 If I'm doing it at the off-peak, their measures
2 are irrelevant. If I'm doing it at the peak, there is an
3 arguable relevance to what they say. It's not a
4 particularly relevant notion because they didn't actually
5 plan for my PLC. We know that because that auction happened
6 three years ago, and the PLC was determined one year ago,
7 and this is now.

8 So we know, causality doesn't work backwards in
9 time. We didn't cause the system to buy X amount of
10 resources three years ago because of what I consumed last
11 year. Can't happen; it's impossible. Right? It's just
12 flat out impossible. So we know that didn't happen. It is
13 what I'm paying for, but there's no necessary relationship
14 between some capacity market and what I'm paying for and
15 capacity that I can offer the market back.

16 The reason there's no connection is exactly the
17 reasons we've described here. There's no connection because
18 that single of peak load, it is what you're being charged
19 for, no one is denying that. And I'm not even saying it's
20 necessarily a terrible way to charge for capacity; it's a
21 good one, it sends a nice long run signal, it encourages
22 peak shaving, it does a number of very good things. But
23 it's not a measure of what you're able to provide the
24 system, and that's what capacity is and it's not just at the
25 peak.

1 I guess that's the last thing I want to say about
2 this, which is: Everyone keeps saying "Well, okay, it's all
3 stacked up at the peak, and that's what PJM buys to, they
4 buy to the peak." But that's not the way they study this
5 problem; they don't only study the peak, they have to look
6 at the off-peak hours, too. They have to look at all the
7 hours and their possibility of being the peak, and they have
8 to look at, you know, large supply shortages from a couple
9 of nuclear plants going out, from a big transmission outage
10 somewhere. That's what they're looking at all the time, and
11 what you're providing in capacity is not nearly a peak
12 product. It's measured in peak terms, but do not confuse
13 something that's measured in peak terms with something that
14 is a peak product. It's a year around product that's simply
15 measured in peak terms.

16 MR. TACKETT: Mr. Ott.

17 MR. OTT: I just wanted to respond. I think
18 again the key here is, as Mr. Bresler explained this
19 morning, we certainly do forecast in the end out into the
20 future based on again the peak period, and certainly the
21 peak hour does the drive the way we forecast, absolutely.
22 And while yes there are frequency distributions around that,
23 it's a rather narrow set of hours we're looking at as far as
24 the load forecast.

25 I think the key here is that three years out we

1 do a load forecast, we do another load forecast two years
2 out, one year out, leading up to the delivery year. We have
3 incremental options. Those incremental options have
4 thousands of megawatts of participation where people adjust
5 their positions.

6 And certainly in fact the very last incremental
7 auction, the third one is where, the PLCs are set before
8 that and you can adjust your positions. So certainly the
9 load forecast does, is absolutely directly related to the
10 procurement.

11 The other thing I can't get -- I don't want to
12 continue to repeat myself -- the capacity product especially
13 from a demand response perspective. At least from now until
14 June 1st of 2014, the requirement for demand response is to
15 comply to give us 10 events per year with six hour duration;
16 and the expectation is that those will be there during the
17 peak hours to help us to manage the adequacy of the system.

18 So it's very critical to understand that. Now
19 certainly generation has a broader obligation when it takes
20 on the capacity to offer into the day-ahead market and do
21 other things; and certainly as we move into the future years
22 we are expanding demand response into these annual products.
23 But today where we sit is that that is not the case. And
24 obviously the rules may adapt as we move forward, as all
25 market rules adapt. But today, the rules today and the

1 reason we have the PLC restriction, and the reason why there
2 needs to be clarification; it is not permissible to report
3 compliance above PLCs because of that simple thing.

4 MR. TACKETT: Thank you.

5 Mr. Falk?

6 MR. FALK: Just one quick thing. If capacity is
7 only a peak product, why are we asking for demands the other
8 8,759 hours a year, right? If I came to you and I promised
9 you I would be at my PLC on that one hour, and that one hour
10 alone -- that's my promise. Okay, I'm going to be on there
11 for that hour.

12 According to what Dr. Ott just said, I provided
13 you absolutely everything. But we chose to tie it to this
14 other product. And we called it one market, and that
15 product is providing emergency response not only in that
16 hour, but in the other 8,759 hours.

17 And so for him to say, "Oh, no, this is only a
18 product about the peak demand" -- if it's a product only
19 about the peak demand, we'll talk about that one hour.
20 We'll talk about that one hour, and I'm sure some
21 accommodation could be reached about what the demand
22 response happens to be in an emergency that occurs in the
23 peak hour. Because frankly, it doesn't happen very often,
24 as we've got the numbers, only 30 to 40 of emergencies
25 happen during any of those five peak hours, much less the

1 single peak hour itself.

2 So if that's what the discussion is about we can
3 discuss that. But that's not the product that they're asking
4 for. They're asking for energy in lots of other hours; and
5 yes, they're not asking for 24/7, 365, they're asking for
6 six hours of delivery, 12 or 16, I can't remember the
7 number, times a year.

8 Why would you ask for such a thing if the only
9 thing you were concerned about is availability to meet the
10 system peak? That's only one hour.

11 MR. GOLDENBERG: I had a question based on --
12 maybe I'm lost because I came in a little late. But my
13 understanding of the current PJM tariff that is not subject
14 to this proceeding is that the resource that's represented,
15 I guess it's on the second page, is only allowed to offer
16 into the capacity market 2 megawatts of capacity, because
17 that's its PLC. And that's not at issue in this proceeding.

18 So I don't see how they could offer 10.2
19 megawatts into this market, as Mr. Falk is suggesting; they
20 can only offer 2 megawatts. If they were their own CSP,
21 they could only get energy payments for the difference
22 between the 2 megawatts and the 10.2. I guess I don't
23 understand why they should not be their own CSP and they
24 should be given an incentive to join some larger CSP who
25 might be able to guarantee them -- it's not their capacity

1 product, but the other CSP might pay them a little more,
2 because they can use that 10.2 megawatts to offset somebody
3 else, but it's not their capacity. They're not getting
4 anything from the capacity market as far as I understand the
5 way this works. Maybe I'm missing the whole thing, but
6 anyway.

7 MR. OTT: Could I respond? Thank you.

8 Again, I think you're exactly right; I think Ms.
9 Zibelman had said this before. I think the key here is that
10 absolutely the reduction here, that the customer has reduced
11 down -- obviously they offered or committed to the 2
12 megawatt PLC, and in this case they complied with that. And
13 were they their own CSP, that would be the end of it.

14 But the key here is that the reporting, the
15 incentive to report the higher number, again as we talk
16 about on the chart, if you report a number up in the dotted
17 boxes, that curtailment is actually used as part of an
18 aggregate performance; you never use that offset
19 nonperformance in another part of the portfolio; it creates
20 a very disturbing incentive.

21 And as you, in our submitted testimony for this
22 proceeding, we didn't talk about it today, but we had
23 actually had some frequency charts of various sites; and
24 some of the concerns we had with the overall trend we saw,
25 for those who would use this type of curtailment, over and

1 above the PLC to offset performance elsewhere.

2 So I agree with you, it does seem that that type
3 of reporting would not be helpful.

4 MR. TACKETT: We'll take one more response from
5 Mr. Falk, to end this panel.

6 MR. FALK: Just to point out, Andy's right,
7 exactly. That's where the extra. The extra went in essence
8 to other people within the aggregate. That's exactly what
9 happened. But of course that's exactly what we want to
10 happen, because the alternative in which everyone is
11 responsible for their own PLC now means unreliable people
12 can't bid in to the market.

13 If you were limited on your own to receive only
14 your own reductions, with penalties, aggregation is
15 completely undone. Since everyone grants that aggregation
16 is important -- I don't want to call it over-performance.
17 The difference between what the CSP has promised, and this
18 gets back to what Dr. Kathan said.

19 The CSP has the obligation. They have obliged
20 themselves to deliver in aggregate a given amount of energy
21 to meet load. That energy is capped under a nomination
22 process by customer to PLC. Frankly, we don't see a reason
23 for that, but we can get around that so it's not to discuss
24 here.

25 The point here is without that aggregation, this

1 all falls apart. And I reject emphatically the notion that
2 finding a distribution of people who performed and didn't
3 perform in any number of situations should matter to the ISO
4 even a tenth of a percent of a dollar. And the reason is,
5 they got what they asked for. And whether they got it from
6 two guys out of 10,000 performing, or 10,000 guys performing
7 a little bit, should not matter to them in the least.

8 MR. TACKETT: I apologize for the inconvenience,
9 but I'll have to ask you to file additional responses in the
10 post-technical conference comments.

11 At this time we'll take what will be a little
12 over a ten minute break and reconvene here at 2:30 for the
13 fourth panel.

14 Thank you.

15 (Break.)

16 MR. TACKETT: Okay, I think we're ready to begin
17 our fourth and final panel of the day. This panel discusses
18 the impact of PJM's proposal on current market options and
19 products.

20 I'd like to once again begin by welcoming the
21 participants, and thank you for being with us today. We'll
22 follow the same format we have previously, with five minute
23 opening introductions and discussions, and then followed by
24 Commission Staff questions, and a little bit of discussion
25 back and forth between the panelists.

1 Discussion on the Impact of PJM's Proposal

2 PANEL FOUR:

3 ANDREW L. OTT, Senior Vice President-Markets, PJM
4 Interconnection, L.L.C.

5 DR. JOSEPH E. BOWRING, Market Monitor,
6 Independent Market Monitor for PJM.

7 JOHN ROSSI, Senior Vice President of Business
8 Development, Converge, Inc.

9 JASON BARKER, Vice President of Energy Policy,
10 Constellation New Energy, Inc.

11 MARIE PIENIZAEK, Chief Operating Officer, Energy
12 Curtailment Specialists.

13 KENNETH D. SCHISLER, Vice President of Regulatory
14 Affairs, EnerNOC, Inc.

15 AUDREY ZIBELMAN, President, Chief Executive
16 Officer, and Founder, Viridity Energy, Inc.

17 MR. TACKETT: Mr. Ott, if you could begin.

18 MR. OTT: Thank you, good afternoon again. As of
19 five minutes ago I was still the Senior VP of Markets at
20 PJM.

21 Again as I address the questions, I think the
22 first question, PJM's proposal does not undermine the
23 guaranteed load drop construct; it simply requires customers
24 using GLD to conform to the same capacity market performance
25 standards as other resources.

1 PJM recognizes certain customers will utilize the
2 GLD alternative because their curtailment patterns
3 essentially are based on the ability to curtail a
4 predictable amount, such as shutting down a specific
5 industrial process that's a dependable reduction amount.

6 Other customers get curtailments down to a certain
7 minimum service level. Our solution does nothing to
8 eliminate that selection. Our clarification simply states
9 that the reference point for GLD must be consistent with the
10 expectation of the reduction from a capacity adequacy
11 reference point. Which is again, the expected peak load
12 consumption, PLC. Again, it is not the energy reference
13 point, which is CBL.

14 So again there's this -- the consistency in the
15 balance is that you need to have an expectation of what are
16 you reducing from, what value are you providing, what are
17 you bringing to PJM in the form of capacity advocacy.
18 Again, for a generator, you're turning on and providing
19 megawatts up to an amount that is predetermined based on how
20 your generator has performed. For the demand customer,
21 we're essentially looking at your contribution to our peak
22 load forecast, your contribution to the reliability
23 obligation, and that's your reference point. And again,
24 whether you use the GLD or the FSL, that's your --.

25 Again, the PLC is the reference point from which

1 we derive capacity, and if you remember the example, again
2 the demand response that we're depending upon is actually
3 displaced generation. So again we need the sum of the
4 demand response and the generation to add up to our forecast
5 load requirement, and again as we talked about before, that
6 includes a reserve margin which looks at the variability in
7 both generation performance and load. But the key is, the
8 sum of those two have to add up.

9 If suddenly I come in and the curtailment is
10 based on energy baseline, and that load is up to the line
11 and does not show up as a curtailment, I'm short. I don't
12 have enough resources to serve the expected load, and that's
13 the concern.

14 So again -- I think to go on to the next
15 question, though, I think the proposal that we have put
16 forth does not discriminate against resources on days other
17 than peak load days. Again, these resources are free to
18 monetize the value of their demand response; and in fact
19 their demand response is very valuable. It's very valuable
20 in the energy market.

21 Again, we have the capacity market which is a
22 capacity product which is providing us, PJM, the ability to
23 commit resources to serve the expected peak load, then you
24 have the energy market, which is actually more the near term
25 curtailment; you're curtailing in real-time and you're

1 providing a response to that. And the reason for Order 745
2 is actually, clarified for us what we'll pay for that. And
3 the customer recently put in a compliance filing, and the
4 customers will be paid based on, again, their ability to
5 monetize their demand reduction. So if they deliver the
6 demand reduction in terms of the energy market, they're
7 going to get payments for that; but that is not capacity,
8 that's energy.

9 The other thing I would point out is we looked at
10 some of the annual resources, I saw the question that
11 referred to the annual resources. Certainly as we move
12 forward in time, starting June 1st of 2014 we will have the
13 annual product defined. Today we don't have that, and we
14 won't have that for a few years. And certainly as we look
15 forward in time, the market will behavior teamed with that.
16 But again at this point if the market is procuring capacity
17 based on peak summer load, then that's the reference we need
18 to use for performance.

19 I thank you and I look forward to the discussion.

20 DR. BOWRING: Good afternoon. Thank you for the
21 opportunity to speak to this panel. The answer to Question
22 No. 10, I think Andy said it very succinctly; I don't think
23 the PJM proposal undermines the GLD methodology; it's simply
24 attempting to define interruptions properly, it's attempting
25 to define curtailments properly, and I think it does that.

1 To the extent that an actual PLC reduction is consistent
2 with an accurate measure of capacity reductions and it's not
3 undermining it. I think it does, and PJM's proposal would
4 prevent misuse of the GLD methodology; it would not
5 undermine it.

6 As for Question 11, I do not believe that PJM's
7 proposal either unduly or duly discriminates against
8 resources on days other than coincident peak days. If I'm
9 understanding it correctly, first of all, the demand side
10 resources are paid on any day that they're called by PJM
11 without regard to coincident peak days. But the PLC
12 definition, which is based on coincident peak days, is a
13 function of the definition of capacity, and more
14 specifically the definition of the way that customers pay
15 for capacity.

16 I know I've probably said this a hundred times
17 today, and I apologize for repeating it, but I think it's an
18 essential point; which is that the PJM markets define the
19 value of the products, the value of the capacity product is
20 defined by the price of capacity and all that you saw on the
21 demand side is the willingness not to put your load on the
22 system when other people need it. And that's primarily a
23 peak.

24 So when other people move to capacity, who will
25 pay for it? Everyone will pay for it, they get it. If you

1 don't pay for it, you don't get it; that's a fair bargain,
2 it's a valuable product. That is the way that the capacity
3 product is defined. It's essential, and it's a bit of
4 confusion that's run throughout the day to remember the
5 difference between energy and capacity. And some of the
6 comments in the earlier panel would have had me believe that
7 PJM was an all-energy market. In all-energy markets, some
8 of those comments would have been correct. At that point
9 what you're paying for, the value of energy would be the
10 difference between what you were using, correct measure and
11 what you used after it all. That's not the market design
12 we're in; we're in a market design with a separate capacity
13 market and a separate energy market.

14 So imagine when an emergency is called. When PJM
15 calls an emergency, calls on demand resources, capacity
16 demand resources, they give a multi-hour lead time. So they
17 call in those resources and they respond, and demand is
18 shifted down. But that's very different, and it happens--
19 as I said, it's very different than the instantaneous
20 balancing of supply and demand that actually occurs in the
21 energy market. And that's again part of the difference
22 between the two markets; the actual real-time balancing, the
23 increase in supply, the reduction of load in response to
24 price, increase in supply in response to price occur in the
25 energy market. And the energy market price values that; it

1 values as the price, the existing price values the increase
2 in supply, and tells you the value. That's a very different
3 thing than the capacity product. And even though, this
4 highlights in a sense the artificiality of the capacity
5 construct. Nevertheless, that is the way that the PJM
6 markets are designed.

7 Lots of opportunity to talk about whether that
8 design makes sense, but given that design, and given the
9 definition of those products, my answer is that it does not
10 discriminate against resources that curtail on coincident
11 days. Nor does it curtail for the same kinds of reasons
12 against energy demand products. Thank you.

13 MR. ROSSI: My name is John Rossi, and I am the
14 Senior Vice President of Corporate Strategy for Comverge.

15 I'd first like to thank the Commission for the
16 opportunity to speak today on this topic.

17 I disagree; I do believe that PJM's proposal does
18 undermine the credibility of the guaranteed load drop
19 program and unjustly biases customer participation in these
20 programs. Also, over the course of the morning, I've come
21 to the conclusion that if the PLC indeed accurately
22 reflected the actual use at the peak, this would have been a
23 much shorter meeting than it's been.

24 In fact, the only customers who are held harmless
25 by this proposal are those whose actual peak is exactly

1 coincident with the 5 CP hours. So if you had a customer
2 who used 5 megawatts during four of the critical peaks, but
3 four during the fifth hour, their PLC would be calculated at
4 4.8. But clearly, we've demonstrated that four out of five
5 times they were above that value. So it's not a very
6 accurate measure of peak demand.

7 Regarding the impact of the proposal on
8 aggregation, I would say that it's negative for individual
9 customers and is only amplified when one goes to an
10 aggregate. From the CSP perspective, the PJM proposal
11 shifts many uncontrollable risks to the CSP. Suppose a 5
12 megawatt customer can commit one megawatt of load reduction.
13 Converge accepts the liability to PJM on behalf of it's
14 customers' commitment. But if that company is growing, and
15 its actual consumption increases to 6 megawatts, that
16 customer will have to curtail 2 megawatts to get the 1
17 megawatt that it committed to.

18 The customer may still be able to reduce by that
19 1 megawatt, but Converge is on the hook for 2. In this
20 scenario, the CSP is providing a low-cost insurance policy
21 against load growth above PLC. This is clearly a risky
22 business proposition that will have to be factored into our
23 pricing.

24 Also, the legitimate averaging effect of a
25 portfolio where under-performance and over-performance

1 balance from two events. To illustrate this portfolio
2 balancing, Comverge has a bilateral contract with a utility
3 outside of PJM that requires weekend performance. To
4 fulfill this contract, we specifically recruited customers
5 who had a favorable load shape on the weekends. And in many
6 cases, we're actually paid these customers a premium,
7 because they have this capability.

8 The point is that the variability between
9 customers reduces risk in a portfolio; and to the extent
10 that we eliminate that risk to the CSP.

11 One of the key risk reducers of a portfolio is a
12 mix of load types within the portfolio. By load types, I
13 refer to process load versus thermal load. Process load in
14 general is reduced in blocks, often large blocks, when for
15 example a manufacturer shuts down alone. Thermal load is
16 more incremental in nature, rising and falling with the
17 temperature. These characteristics lead to thermal load
18 being highly correlated to PJM system peaks and process load
19 being largely uncorrelated.

20 However, since process load is uncorrelated to
21 temperature, a large industrial customer with some
22 scheduling flexibility can shift load rather easily to
23 attempt to minimize uses in the 5 CP hours. To be
24 successful in doing this, this load will be unlikely to
25 participate in the market because they've already received

1 compensation on the capacity side. Again, this adds risk to
2 the CSP portfolio.

3 So our bottom line is that we agree that there
4 may be some changes in PJM rules that may be appropriate,
5 but we are opposed to the methodology suggested by PJM and
6 we believe that alternate measures should be used to measure
7 DR performance. Thank you.

8 MR. BARKER: Thank you. My name is Jason Barker.
9 I'm here representing the Constellation merchant entities;
10 I'm not representing the opinions of my affiliate, Baltimore
11 Gas & Electric.

12 During my remarks, I will address both narrow
13 questions presented to this panel as well as provide an
14 overview of some of the principles that Constellation
15 suggests should underpin the proper measurement of capacity
16 commitments offered by demand resources.

17 As I'll discuss further in a moment, the
18 measurement of capacity commitments from demand resources
19 must respect at least three principles. First, the rules
20 must be unambiguous so the market participants can compete
21 for customers on a level playing field. Second, the rules
22 should result in equitable and efficient costs so that
23 consumers get the benefit of the capacity for which they pay
24 and that the costs reflect the actual capacity needs.

25 Third, the aggregate capacity map must work, to

1 assure that PJM's resource adequacy planning leads to
2 sufficient supply commitments during system peaks.

3 Now reflecting on the specific questions posed to
4 this panel, it's clear to us that PLC, not GLD, is the best
5 measure of a demand response site's contribution to system
6 capacity during the peak. GLD is a better measure for
7 energy market curtailments as you've heard testimony of
8 prior panels.

9 At the outset of PJM's demand response programs,
10 the customer capacity commitment was limited at the site
11 level to the customer PLC. Rule changes in the ensuing
12 years during which the DR programs had matured to
13 accommodate aggregations of customers have resulted in the
14 status quo in which curtailments of certain sites are
15 double-counted in the aggregate capacity map.

16 PJM's proposal before the Commission proposes a
17 nondiscriminatory method of measuring the capacity value of
18 demand resources that continues to allow for effective
19 aggregation. PJM's proposal eliminates a CSP's ability to
20 create capacity out of thin air by claiming capacity value
21 for load reductions that do nothing to lower PJM's peak load
22 expectation.

23 The only aspect of aggregation that PJM's
24 proposal modifies is the use of aggregation as a loophole to
25 evade the PLC limit on a site's capacity compensation. PJM

1 rules clearly state that no single demand response site may
2 earn more capacity credits than its PLC. The loophole in
3 the rules, the ambiguity that you've heard about, permits
4 this rule to be circumvented, creating a value for an
5 aggregator that no individual customer can obtain.
6 Aggregations are not intended to provide a business
7 opportunity for CSPs that individual customers do not have.

8 The tariff clarifications that PJM proposes also
9 effectively eliminate a CSP's incentive to aggregate
10 customers for which the CSP has an expectation of under-
11 performance. The double counting loophole motivates some
12 CSPs to aggressively enroll customer sites beyond the
13 expected ability of the site to curtail. I think this is
14 what Mr. Falk referred to in the last panel as the
15 'unreliable customers.'

16 Such CSPs can currently enroll large customer
17 sites that actively curtail during peak periods -- this is
18 peak shaving -- in an effort to reduce the large site's
19 capacity obligation. Such CSPs then aggregate the
20 aforementioned loads with the expectation that the large
21 site's real-time curtailment in excess of its PLC can be
22 claimed a capacity performance by the smaller sites.
23 Essentially, the large site's curtailment in excess of PLCs
24 laundered in the aggregation with the other sites that are
25 expected to under-perform.

1 The CSP must expect under-performance.
2 Otherwise, why would it pay the large site in excess of its
3 PLC? In fact, Constellation has experienced competitive
4 venues or engagements in which the customer has advised us
5 that a competing aggregator has offered to pay the demand
6 response resource for capacity value in excess of the site's
7 PLC. Similarly, we've also lost customers to competitors
8 from whom the customers reported that the competitors will
9 pay for performance in excess of the load's ability to
10 perform.

11 The Commission's response in this proceeding
12 should be faithful to the three principles that I set forth
13 earlier. The Commission should ensure a level playing field
14 by providing regulatory certainty. The evidence before the
15 Commission clearly reveals a wide divergence of opinions
16 about what PJM's rules really say. CSPs, PJM, the Market
17 Monitor, have all expressed divergent opinions of the
18 activity permitted by the tariff. CSPs have acted in
19 different ways based on these differing interpretations.

20 The Commission's good faith standard, expressed
21 in response to the PJM and IMM joint statement I believe in
22 February, merely perpetuated this regulatory uncertainty.
23 Second, the rule should be equitable and cost-efficient so
24 the consumer capacity costs are minimized and equitably
25 allocated. Mr. Weishaar in an earlier panel hit this topic

1 quite eloquently.

2 As PJM has testified today, to continue under the
3 current rules would require PJM to procure more capacity to
4 make up for incorrectly counted demand resources. These
5 extra costs would inevitably be passed on to consumers.

6 Further, the status quo can result in inequitable
7 capacity cost obligations between sites participating in a
8 DR aggregation and sites that are not. Certain customers
9 could at all times consume less power than a site
10 participating in a DR program yet still receive a larger
11 capacity bill. Such is not the case if PJM's tariff
12 provisions are instituted.

13 Now be clear: demand response can thrive in the
14 PJM markets under the tariff provisions advanced by PJM.
15 Both Constellation and CPower, an independent curtailment
16 service provider that we acquired back in October, both
17 independently interpreted the current rules in the manner
18 suggested by PJM. I think this is the only time I'll ask
19 for your indulgence to accept double counting, because these
20 two opinions came independently before the firms were even
21 merged together.

22 But the loopholes are significant, and serious.
23 By not explaining them we, Constellation, continue to forego
24 millions of dollars of revenue by doing what we think is the
25 right thing.

1 PJM's proposal does not foreclose aggregation.
2 Without double counting, Constellation productively
3 aggregates thousands of resources that will not be able to
4 individually participate in PJM's markets. Mr. Campbell,
5 who was on a panel before you earlier today testified to
6 very same type of business activity.

7 The only aspect of aggregation that PJM's
8 proposal stops is the practice of creating specious capacity
9 by adding non-performing sites to an aggregation with the
10 so-called over-performing sites.

11 Be clear, because you've heard testimony before,
12 real time curtailments are eligible for compensation in many
13 PJM programs. The economic load response program, which
14 shortly will be set for LNP, synchronized reserve marketing
15 and potentially the regulation market.

16 Capacity markets will compensate customers
17 consistent with the capacity obligations, capacity
18 commitments that they have undertaken; but it is axiomatic
19 that customers can't agree to forego a capacity obligation
20 that they have not undertaken.

21 Capacity is the ability to deliver load response
22 relative to the commitment. Notwithstanding the attempts in
23 myriad panels before you to redefine the capacity product.

24 Thank you very much. I look forward to your
25 questions.

1 MS. PIENIAZEK: Good afternoon. Marie Pieniazek
2 with ECS. Again, I'd like to thank the Commission and Staff
3 for the opportunity to participate in this important
4 technical conference.

5 The Commission has asked three questions of the
6 panel. The first is whether PJM's proposal will undermine
7 the GLD methodology; the second is whether PJM's proposal
8 will unduly discriminate against resources on days other
9 than the coincident peak days; and the third is whether
10 PJM's proposal will have a negative impact on demand
11 resource aggregations.

12 ECS is extremely concerned with all three of
13 these issues, to which the Commission seeks response from
14 the members of this panel. First, ECS believes PJM's
15 proposal severely limits if not completely eliminates the
16 GLD methodology. By limiting load drop nominations to the
17 customer's PLC, PJM has in essence eliminated the down-from
18 baseline methodology. Because any consumption, any concern
19 with load that happens to exceed its PSC during an event
20 will not receive compliance credit for reductions during
21 that event until their load levels drop below the PLC.

22 As a result, PJM's proposed tariff modifications
23 to the GLD methodology will effectively require customers,
24 during emergency events, to reduce their load to a preset
25 load level, with no load reductions counting for compliance

1 for purposes that are above the customer's PLC. There will
2 be no fundamental difference between the GLD and the FSL,
3 the firm service level methodology.

4 The end use consumer may be operating 20 to 30
5 percent higher during a curtailment event than it was the
6 previous year when the customer's PSC was established.
7 During a particular curtailment event, the end use customer
8 would have to reduce its consumption 20 to 30 percent before
9 even starting to achieve compliance performance, and without
10 the benefit of aggregations, allowing over-performance to
11 offset under-performance.

12 The CSP would be faced with a penalty for the
13 customer's potential under-compliance. Certainly that
14 customer would question its future participation in the
15 program, particularly if there's any adverse consequence for
16 its inability to reduce load below PLC during the specific
17 hour in question.

18 Even if the customer's unquestionably able to
19 contribute substantially to the load reduction during the
20 curtailment event, reducing the low PSC might be overly
21 problematic for the customer.

22 Again, ECS believes it is critical to have both
23 baseline methodologies; GLD and FSL, thereby allowing
24 consumers participating in load response programs to select
25 a baseline method that reflects their operational load

1 profiles. Our experience with consumers tells us that some
2 of them will opt to select a firm service level because of
3 their business operations, or the certainty such an approach
4 provides for them. While other consumers will opt for a
5 GLD, again because of the nature of their individual
6 businesses and understanding of how they can best
7 participate in the program.

8 Presumably, this is the reason PJM established
9 the demand response program with these multiple baseline
10 options. A redefinition of the GLD, which is what PJM's
11 proposed rule change will accomplish, removes that choice.
12 ECS believes that PJM's proposal will unreasonably single
13 out any of these consumers that operate at different load
14 levels on days other than the prior year's coincident peak
15 days.

16 There are a variety of reasons why a consumer, at
17 the time of the curtailment event, is operating at a level
18 above its load levels during the five peak days a year
19 earlier. For example, the consumer may have operational
20 limitations during the previous year that has since been
21 eliminated. Activity during the prior years that may have
22 been depressed due to economic downturn, and that has since
23 increased as a result of economic upward trends in business.

24 PJM recognizes this variability of load in its
25 response to the notice of topics for this technical

1 conference.

2 Finally, ECS fully expects that should PJM's
3 proposal move forward it will eliminate the GLD baseline
4 methodology. It will not only eliminate a CSP's ability to
5 effectively aggregate resources, but it will also eliminate
6 the willingness of consumers that have valuable and
7 desirable load curtailments to offer during curtailment
8 events, from participating in PJM's DR program altogether
9 because their business processes will not allow for a firm
10 service level baseline.

11 ECS would like to thank the Commission and Staff
12 for the opportunity here today. We look forward to your
13 questions.

14 MR. SCHISLER: Thank you. My name is Ken
15 Schisler from EnerNOC, and pleased to be here. I want to
16 thank you for this opportunity to testify.

17 [turning on microphone]

18 The questions today presented by the Commission
19 Staff frame some very real flaws in the PJM proposal; I'm
20 going to go through these. As I will point out, they not
21 only will undermine the guaranteed low drop methodology, but
22 they're going to result in price distortions, and may have
23 already resulted in price distortions to the PJM market and
24 compromised reliability.

25 I have a couple of simple slides that should be

1 at your desks, and I had some for the audience as well, to

1 describe how the GLD method will be undermined, customers
2 will be discriminated against.

3 What the PJM proposal does is exactly what PJM
4 doesn't want or shouldn't want. It adopts a measurement
5 tool that completely severs the linkage between operational
6 performance and M&D during system emergencies. Moreover, as
7 Marie was pointing out, it effectively eliminates the
8 baseline as an option for customers. This is so because
9 measuring performance under the guaranteed load drop method,
10 a customer cannot perform any better than if the customer
11 had selected from service level; but the customer can
12 perform worse. So no rational BARC would select the
13 guaranteed low drop method going forward. If there's risk
14 of using a guaranteed load drop method, additional risk, and
15 there's absolutely no upside gain, what rational BARC would
16 ever select the guaranteed load drop method going forward?

17 PJM has conceded this in its filing, so while Mr.
18 Ott today is technically correct that it is not getting rid
19 of it in the tariff; it effectively renders it a relic.

20 What we have depicted in the first graph, it's
21 the one on the left from the audience, are two hypothetical
22 customer's loads profiles during an emergency DR event. And
23 for simplicity's sake, in terms of customer behavior, both
24 of these customers are performing identically. But note the
25 dramatic difference in credits given depending upon where

1 the customer's PLC happens to be.

2 Now this is the PJM proposal as filed. The
3 customer on the left dropped 2 megawatts. Because of his
4 PLC, he gets credit for one. While the customer on the
5 right dropped 2 megawatts but will get credit for 3
6 megawatts. PJM cannot dispatch PLC, but yet PJM proposes --
7 it certainly cannot dispatch PLC during an emergency, but
8 yet PJM proposed to pay customers during emergencies on the
9 basis of PLC.

10 The point here is that during an emergency what
11 PJM operators want is a load reduction. But what PJM's
12 proposed approach would give them would be divorced from
13 load reductions at measure of actual load reductions.

14 The second charts illustrate the consequences of
15 the PJM M&D approach, and the serious problem that PJM is
16 creating for itself. In the graph on the left side, we have
17 a customer shut down or move his facility to another area.
18 The chart on the right depicts a customer who consumes
19 normally during the emergency and does not reduce load.

20 The PJM approach allows both of these customers
21 to get paid for doing nothing during the emergency. And
22 what makes this real dangerous, as I will explain in a
23 moment, is that PJM planners and operators and the PJM
24 capacity market are counting on these examples as real
25 operational response in the market, and they are not.

1 The final slide hopefully makes the problem
2 obvious. In the left graph, the customer actually reduces
3 by a megawatt during an emergency yet will not receive any
4 credit. On the right, a customer with identical load that
5 does nothing will get credit, will get paid for doing
6 nothing.

7 Another problem that the PJM proposal, and this
8 was shown earlier this morning, is that it creates a
9 selection bias for customers from whom the BARC can claim
10 incidental performance. Now what is incidental
11 performance? That is nothing more than double-speak for
12 doing nothing. It's the orange bar on top of the load
13 profile on the right. And to be clear, we are talking about
14 customers that do nothing during an emergency and yet are
15 getting credit and being relied upon by both system
16 operators and planners as delivering a real resource.

17 This is exactly the problem that leads into the
18 second of the two questions for this panel. PJM recently
19 obtained Commission approval, and we've conducted one
20 auction already for the three demand response capacity
21 products that are eligible to participate in the RPM
22 auction. The purpose of those changes, as Mr. Ott said, was
23 to leverage the capability of demand response outside of the
24 limited summer compliance period; and as a result of
25 increased participation we've seen in the markets, it is now

1 much more likely that events will be dispatched outside of
2 the peaks in the period. In fact, historically events and
3 the peak periods have been relatively well correlated; about
4 60 percent of the events of the last -- six of the last ten
5 events; that's actually assuming that last Friday's event
6 was a peak, occurred outside of the 5 CP days.

7 If you go back and review the docket in multiple
8 product proceeding, you will see that the studies that PJM
9 performed assumed full operational response from demand
10 response whenever it is dispatched. In other words, the
11 model does not assume incidental performance, or getting
12 paid for doing nothing or doing nothing. The model assumes
13 full operational performance. While we think that's
14 appropriate to assume the DR would perform, the M&D
15 approach, as it is depicted in those graphs, undermines that
16 assumption.

17 So let's take a look at what PJM is doing. The
18 average person on the street might be mistaken that no
19 reductions from seasonal loads such as air conditioning or
20 amusement parks that only operate in the summer, but they
21 can only perform in the summer. But in fact, those of us
22 that understand this proceeding know that PJM's M&D proposal
23 would credit performance for that summer-only resource as a
24 year-round resource.

25 An amusement park that is shut down, I think

1 perhaps energy could put the other side back up. It might
2 have a load profile in January or February like the graph on
3 the left, will get credit for full performance despite
4 having no operational ability whatsoever.

5 To get to the point about pricing distortion.
6 PJM has set up its market design to ensure that there are
7 sufficient annual DR and annual resources generally. The
8 RPM design creates a binding constraint in the market with
9 annual resources; and annual resources are demand response
10 that commits to be available annually, as well as generation
11 resources.

12 The RPM design creates this binding constraint
13 that will allow annual resources to clear out of economic
14 merit order, thereby raising the price for all customers.
15 And as I said previously, the level of the constraint, the
16 level of annual resources that are required, is based upon
17 an assumption of operational load reductions to cover the
18 peaks that are outside the summer peak.

19 PJM's proposal would allow an amusement park, a
20 water park, an air conditioning load, shut down facilities
21 that have no load reduction capability outside of the summer
22 to displace resources that can provide supply or actual load
23 reduction off peak.

24 Moreover, as is pointed out in that left graph on
25 the right side, these resources that don't have any ability

1 are shut down, they will be considered stellar performers
2 under the new PJM M&D. Because there is greater
3 compensation available to annual demand response, and
4 because the proposal allows it to get paid for doing
5 anything, the perverse consequence of the PJM proposal is
6 that the resources that can only offer relief in the summer
7 will not restrict themselves to being a summer resource.
8 They will be annual resource, and then the emergency
9 happens, they won't be able to do anything to help the
10 system.

11 PJM has not thought through the consequences of
12 relying upon a static baseline anchored to PLC to measure
13 the performance of year round demand response resources. It
14 actually strikes me as genuinely odd that PJM has not
15 admitted this problem with its approach. ISO New England --
16 and Don mentioned ISO New England -- I think it is an apt
17 model because it is a year round forward capacity market.
18 The only other example we have.

19 ISO New England has thought about this very
20 problem that I've been talking about. If an amusement park
21 wants to participate as a capacity resource in ISO New
22 England, it can do so; but if it can't deliver real load
23 reductions during parts of the year, it needs to submit as
24 part of a composite bid with a resource that can deliver
25 real load reduction the remainder of the year.

1 In other words, you cannot get away with
2 incidental phantom performance by being shut down and get
3 credit for being a resource year around; but you can under
4 the PJM proposal.

5 With that, I hope there will be perhaps an
6 opportunity to talk about the slide that was circulating;
7 but with that, I'm happy to take any questions.

8 MS. ZIBELMAN: In terms of the last panel, I
9 think what I have to start off with is this action and
10 observation. To hurry up and get through what I think is
11 the crux of the disagreement here, which is the difference
12 between capacity and energy.

13 And it occurred to me that one of the things that
14 we're struggling with is the recognition that when we talk
15 about an energy resource, that's where we were talking about
16 load balancing. We're talking about capacity again, it's a
17 planning concept.

18 So when you think about it in terms of load, and
19 maybe this helps address some of what looks like an
20 anomalous result, is when -- as a capacity resource it's
21 effectively saying to PJM, that going forward, in order to
22 avoid you having to buy a generation resource, we're
23 agreeing that our load at peak will be no higher than a
24 certain amount, which is the PLC.

25 When we're talking about an energy resource,

1 you're really measuring the difference between what the load
2 would be in that particular hour to what it drops to. So
3 there you're talking about performance.

4 And when I think about that and I think about how
5 this relates back to your questions, in terms of a capacity
6 resource the fact that you actually made at the time of the
7 events was happening,
8 the PLC doesn't mean that the load didn't perform; it
9 actually means that the load performed based on the capacity
10 commitment, which is that it was going to be below the PLC
11 during the time that the event was called. The fact that it
12 was already below that isn't a problem, because what the
13 raters agreed to is to says that the load would be no higher
14 during those periods of time.

15 For the load that looks like it over-performed
16 and the sense is that it was higher than the PSC and then
17 dropped down to the PSC? Again, that's exactly what the
18 performance had agreed to, from the capacity, and then you
19 would also get an energy amount for that.

20 So if a load doesn't move during an event because
21 it's already reduced, it will get the capacity payment for
22 energy, it gets an emergency energy payment. But it's not
23 really producing at that point, and yet what it's producing
24 that point is the promise of the not-to-exceed level, which
25 may confuse things; but it seems to me that we have to make

1 this distinction between actual energy which is dropping in
2 the hour versus a commitment not to exceed.

3 In terms of what this then leads back to the
4 questions with regard to the GLD issue, I think that in my
5 initial comments I mentioned, the fact is that if in fact we
6 reduce GLD to no higher than the PLC, it will make no
7 difference between an FSL measurement and the GLD
8 measurement; they do become equivalent. The problem is, and
9 this is a problem I think we have to trust going forward, is
10 there has to be an allowance for variations around PLC that
11 are legitimate variations.

12 And one of the things that PJM has proposed in
13 this year's is that there would be a statistical variation.
14 I think we can look at that, with -- going forward to get to
15 this measure, we need to recognize that that will happen
16 year over year within a year.

17 With respect to whether or not this is a penalty
18 against aggregators, whether it discriminates on coincident
19 peak days, I think that the issue here again is that if in
20 fact they mention PSC as the base, and have some non-
21 coincident day; and in fact the PLC is a variation; because
22 it's a non-coincident day there needs to be an allowance for
23 that.

24 One of the things that I think we need to be very
25 careful about is when we're talking about coincident peak as

1 opposed to the measurement, and whether or not PJM events
2 are doing emergency days; what I understand is that
3 generally they're doing the peak emergency days. Whether
4 they hit the particular hour is a different issue, but the
5 question is that for the most part when PJM is calling an
6 event, it's what we would call an emergency day, where they
7 expect to hit the peak, and they're running -- their
8 resources are being asked to run.

9 So that's what I have for my initial comments. I
10 look forward to your questions.

11 MR. TACKETT: Thank you all for providing those
12 initial presentations. I'd like to take this time to
13 recognize Commissioner Moeller, who has recently joined us.
14 And wondered if you had any questions.

15 COMMISSIONER MOELLER: No, but I want you to know
16 that I was watching on the webcast most of the day. So I
17 may have been out of sight, but not out of mind.

18 (Laughter)

19 MR. TACKETT: Thank you.

20 We're going to begin questions from Commission
21 Staff. Mr. Ott, can you provide an answer to Mr. Schisler,
22 his remark that, and I'll quote: "No rational ARC would
23 choose the GLD methodology going forward."

24 MR. OTT: Well, again I think -- you've had three
25 curtailment service providers today, and four if you let

1 Jason count himself twice -- who have actually said they are
2 in here, and have adhered to quote, "what the PJM changes
3 are." I would refer to the PJM clarifications of how, what
4 the expectation is.

5 So again I think that the key here is that you
6 certainly -- there is an expectation of performance from a
7 capacity perspective. And if you look at what the capacity
8 market does, the capacity market pays a demand per response
9 provider, a fixed payment. 365 days a year, they get a
10 payment. The same payment every day. We do weekly checks
11 so they get seven of them at once; but the point is they get
12 the same payment to provide capacity services.

13 There's also an energy compensation that provides
14 for energy performance, but the capacity performance has a
15 certain expectation. If an entity was depending upon a
16 certain methodology to try to change or reinterpret what the
17 expectation of performance was from capacity, things
18 certainly may change what they're looking at, and they may
19 need to adjust their processing going forward, should the
20 clarifications go through; and we certainly have the
21 incremental auctions to make that adjustment.

22 Fundamentally they were not allowed by the rule
23 today to commit more than their PLC, so they're already
24 saying "Here we're clarifying you can't report performance
25 over and above that." So I don't see where it's

1 fundamentally we're destroying the model; certainly is
2 clarifying, in not permitting it to be misused.

3 Again, how can others, in fact a majority of the
4 CSPs are doing business under this model?

5 If you take -- I don't know if you want to
6 further with these or do you want me to answer that and
7 stop? I could also go through some of the energy versus
8 capacity stuff.

9 MR. TACKETT: Yes, if you have further comments
10 or remarks in response to the presentation on the other
11 slide.

12 MR. OTT: Okay. Again, I just wanted to make
13 sure on the picture, the examples. Again, I think this is
14 very key, and it actually goes right back to the difference
15 between energy and capacity.

16 If you look at the first graphic where you have
17 the entity with a 2 megawatt load and they have a PLC of 1,
18 they reduce down to 0. Again in the energy market certainly
19 they're going to get paid, again for 785 they would pay for
20 LMP. Whether that comes in as emergency type demand
21 response or as economic demand response, both of which are
22 saying 'we work for energy.' They would get paid for the 2
23 megawatt reduction. But remember, they're paid every day a
24 certain amount for capacity.

25 And what we're saying is what are we expecting to

1 receive back as the market for that payment? And the answer
2 is, we're expecting them to reduce down below their PLC, the
3 amount committed in this case, one. And that's what the
4 gave us.

5 So I think it's simply, just don't mix the two
6 together. Think about a generator. A generator is committed
7 to 90 megawatts capacity. Today the generator is generating
8 110 megawatts. I've got to pay him 110 megawatts for the
9 energy, but their capacity payment remains unchanged. Every
10 day, 365 days a year, they get the same capacity payment.
11 All I'm measuring is, did they comply with what their
12 obligation was, which is giving me at least 90 megawatts.
13 And the answer was, absolutely, that's what the gave me.
14 Same thing; it's exactly comparable for the demand
15 responder. All I'm going to make sure is they gave me at
16 least what they committed to give me in the capacity market,
17 just like with the generator. If they gave me more, great,
18 they get a payment in energy and everybody's happy,
19 including us.

20 Thank you.

21 MR. TACKETT: As a follow up question, once again
22 to Mr. Ott: Can you explain the basis for not allowing
23 resources with peak performance outside of the summer period
24 to provide capacity up to that potential value that they
25 would have in the off-peak period?

1 MR. OTT: Again, the key here is that the
2 capacity product, again, is essentially acquiring adequate
3 resources to meet the system peak load. And as we have
4 described probably in many ways today, effectively what
5 we're procuring here again is performance at time of system
6 peak.

7 And again, what the capacity market is
8 essentially providing this fixed revenue stream for is that
9 commitment. If in fact a resource has a low load during
10 that period and has higher load at other times -- and again,
11 that's somewhat of a recent phenomenon for PJM, because we
12 just recently had the annual product come in; as far as
13 compliance with the annual product, that's quite a few years
14 away.

15 But the bottom line is the reason that we have
16 the peak, the summer compliance performance is that's
17 essentially what the capacity product is defined as. It's
18 defined that way for generation, where generation has
19 certain requirements to perform.

20 Again, I think the key here is if the demand
21 response can provide services outside that window, of course
22 they'll be paid in the energy market. There are some what
23 I'll call anomalous examples that are put out there, water
24 park versus ski resort, other things like that that evolve
25 into the annual product that was recently put in for the

1 forward, the future auctions. And as Audrey has said --
2 sorry, Ms. Zibelman said, there may be circumstances like
3 we've already started with the stakeholder process to
4 discuss potential ways to do exceptions. Other ways to look
5 at them, give it a rational, physical reason to do some type
6 of alteration, I'd certainly be open to that. And certainly
7 as we move forward in time, if there's a need to adapt the
8 rules around that.

9 But I don't think that changes the fundamental
10 issue in question here, the fundamental issue of measurement
11 of the curtailment clients is, what you're acquiring
12 capacity for, which is to meet peak load.

13 MR. TACKETT: Thank you.

14 If you'd like to go ahead, Mr. Schisler.

15 MR. SCHISLER: I just want to make one important
16 point or two, actually.

17 Mr. Ott referred to the annual auction, or annual
18 demand response resources as being something in the future;
19 and indeed the first delivery year under the new annual
20 product was not for two delivery years. One of those
21 auctions has already occurred, and any ARC that took on an
22 obligation in that auction has to execute contracts with
23 customers to deliver that resource. And yet we are in a
24 position now where the product definition is subject to
25 change in this proceeding for an auction that has already

1 procured, and may in fact, if I understood him correctly,
2 may be subject to even further product definition changes.

3 So this is not for an ARC that is actively trying
4 to promote the demand side of the market; this is not some
5 future problem; this is a problem that is already upon us
6 and was, when we were taking bidding in the last auction.

7 So I just wanted to make sure that -- oh, the
8 second point was, when a customer participates in a demand
9 response program or any retail customer, aside from some
10 special, unique retail arrangement, they do not make an
11 agreement to a demand limiter or to be always below a PLC at
12 certain times.

13 When a customer participates in a demand response
14 program as part of, as a portfolio aggregation, and as an
15 aggregation is willing to deliver a real load reduction, a
16 real and verifiable load reduction, the customer again isn't
17 making a commitment to be at a particular place, at a
18 particular demand level at a given time. That is really the
19 point of aggregation, because you do have customers with
20 varying load levels depending upon the nature of the
21 customer.

22 For example, a hospital may have different load
23 levels, but based upon the patient's census, which may have
24 nothing to do with whether there are other factors; but yet
25 that that hospital might have non-mission-critical

1 equipment. Say, for example, a water feature in front of
2 the hospital, that it knows it can curtail and knows what it
3 can drop by. Those types of customers, and many, many
4 examples of them, will be precluded from participation.
5 They will either find participation in demand response
6 simply too risky. And frankly, ARCs will not be able to
7 effectively aggregate them, so you will be lost from the
8 market.

9 MR. TACKETT: Ms. Zibelman.

10 MS. ZIBELMAN: With respect to those issues, I
11 think that the question as to what we're going to do with
12 the other resources, I would recommend that the Commission,
13 as we take a look at it both in terms of the responses to
14 the specific questions and I think there have been a couple
15 offers of how to change it; and if we do need to look at how
16 these rules could affect people who bid into the existing
17 auctions, I'm sure there would be some relief from that in
18 order to make certain that it be with the clarification, if
19 there's no relief, that that opportunity is provided.

20 Really going forward, I think we're going to
21 continue to get back to this issue, is what's the real
22 commitment? And the commitment is when someone commits, or
23 a CSP commits to 100 megawatts load drop, that commitment is
24 necessarily going to have to be comprised of the right
25 measurement, and so then we get back to the PLC issue. And

1 I think that where we've ended up in this proceeding we
2 continue to confuse as the difference between what someone
3 has made is a broad load commitment that their load is going
4 to be at a certain level, and what is an energy, which is
5 actually a real-time operational construct.

6 And unless we're very clear in separating these
7 two issues, it's going to be hopelessly confused, and then
8 the value of demand response as a capacity product as
9 opposed to an energy product will be lost. And I think it's
10 very, very important that we retain this separation so long
11 as we have a capacity market in PJM.

12 MR. TACKETT: Mr. Barker.

13 MR. BARKER: Thank you. We discussed the
14 potential for product definition changes, it's certainly
15 Constellation's opinion that we've been well apprised to
16 what the tariff says and what the product definition is. So
17 to the extent that the Commission aims to fashion the relief
18 going forward, it's certainly our position that you
19 shouldn't be rewarding firms that have offered, based on
20 what they wish the rules to be, when in fact that the rules
21 that they are and that we have operated under should be
22 respected. It otherwise discriminates against those that
23 have read the rules another way.

24 This really goes to the point of my three-legged
25 stool example, that we need some regulatory certainty; and

1 these competitive conditions are untenable if firms sitting
2 at this table have different interpretations of what the
3 rules say is. Best we can do is read the rules and ask PJM
4 and the Market Monitor how they operate to those rules and
5 how they enforce those rules, and live by that advice. Many
6 other firms have testified they've done that; many have
7 operated to aspirational conditions, and so to the extent
8 that relief is rewarded in any way, they should not
9 discriminate against other firms. Thank you.

10 MR. TACKETT: Dr. Bowring.

11 DR. BOWRING: Thanks. I just wanted to concur
12 with the last part of what Jason was saying, which is that
13 as I pointed out earlier in answer to your question, this
14 issue has been in front of the PJM membership for quite some
15 time, more than a year and a half. Even more than that.

16 So the idea that we should enshrine a practice
17 which we have said very clearly is not consistent with the
18 rules, going forward for some period of time, five years
19 does not make sense.

20 MR. TACKETT: Thank you. At this time I'd like
21 to ask other Commission Staff if they have any other
22 questions.

23 Okay. Well, overall I'd like to thank each of
24 the panelists for participating, and I'd also like to thank
25 each of the participants throughout the day. Parties are

1 free to file post-technical conference comments by Monday,
2 August 15th. Given that the 15-day deadline described in
3 the notice falls on a Saturday, August 13th.

4 So thanks again to all the attendees, and the
5 conference is now adjourned.

6 (Whereupon, at 3:29 p.m., the technical
7 conference adjourned.)

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