

1 **STATE OF NEW HAMPSHIRE**
2 **PUBLIC UTILITIES COMMISSION**

3
4 **January 2, 2019** - 2:07 p.m.
5 Concord, New Hampshire

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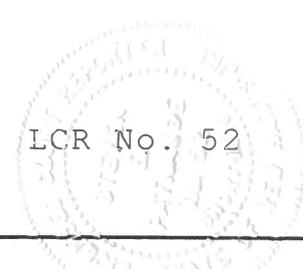
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7 **RE: DE 16-576**
8 **ELECTRIC DISTRIBUTION UTILITIES:**
9 **Development of New Alternative Net**
10 **Metering Tariffs and/or Other**
11 **Regulatory Mechanisms and Tariffs**
12 **for Customer-Generators.**
13 **(Hearing to receive public comment**
14 **on PUC Staff's Recommendation on**
15 **the Scope and Timeline of a**
16 **Locational Value of Distributed**
17 **Generation Study filed on**
18 **November 30, 2018)**

19 **PRESENT:** Chairman Martin P. Honigberg, Presiding
20 Commissioner Kathryn M. Bailey
21 Commissioner Michael S. Giaimo

22 Sandy Deno, Clerk

23 **APPEARANCES:** *(No appearances taken)*

24 Court Reporter: Steven E. Patnaude, LCR No. 52


**CERTIFIED
ORIGINAL TRANSCRIPT**

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I N D E X

PAGE NO.

Summary by Mr. Wiesner

3

PUBLIC COMMENT BY:

Pentti Aalto

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Melissa Birchard

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Matthew Fossum

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Brian Buckley

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QUESTIONS BY:

Commissioner Bailey

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P R O C E E D I N G

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2 CHAIRMAN HONIGBERG: We are here this
3 afternoon in Docket DE 16-576, the Alternative
4 Net Metering docket. We're here for a public
5 comment hearing on a Staff recommendation
6 regarding a cost of -- or, rather a scope of
7 the study on the Locational Value of
8 Distributed Net Generation. We issued a notice
9 on December 7th scheduling the public comment
10 hearing for today. We will also receive
11 written comments for another week, until
12 January 9th.

13 Mr. Wiesner, anything you want to say
14 to set the scene for us?

15 MR. WIESNER: I can just note that in
16 April of what is now last year the Commission
17 directed that parties work together to come up
18 with a scope and timeline for a Locational
19 Value of Distributed Generation Study, in lieu
20 of non-wires alternative pilot programs that
21 had originally been directed to be developed
22 and implemented in the original net metering
23 order back in June of 2017. We spent a number
24 of months working with stakeholders to develop

1 the proposal that you have in front of you,
2 which is essentially the scope and timeline for
3 a study that will be performed by a consultant
4 engaged by the Commission.

5 Today is the opportunity for parties
6 to speak to that before you, and then there's
7 an opportunity for written comments as well by
8 next Wednesday.

9 CHAIRMAN HONIGBERG: All right. From
10 the sign-up sheets, I have four names signed up
11 to speak: Pentti Aalto, Melissa Birchard,
12 Matthew Fossum, and Brian Buckley. And that's
13 the order that we'll go in, unless anyone has a
14 problem with that.

15 Mr. Aalto, why don't you start us
16 off.

17 MR. AALTO: May I speak from here?

18 CHAIRMAN HONIGBERG: You may. Just
19 make sure you have a microphone in front of you
20 that will --

21 MR. AALTO: We'll see if it works.
22 Does this work?

23 CHAIRMAN HONIGBERG: Beautifully.

24 MR. AALTO: Okay. Thank you very

1 much for the opportunity to speak. I hope to
2 expand on comments that I submitted back in
3 July, and to summarize them. I also would say
4 that I do have a great deal of difficulty
5 writing. So, if we can resolve any questions
6 today, that would be wonderful. If not, then I
7 will certainly endeavor to provide any written
8 amendment that's necessary.

9 In the paper, I proposed an
10 alternative pricing structure that would
11 identify locational price in real-time. So, it
12 does provide both for a time-based and a
13 location for pricing. The assumptions are that
14 it does cost different amounts to deliver power
15 at different locations, and it also costs --
16 the price changes with loading. The issue that
17 comes out of that deals with the concept of
18 avoided cost.

19 I have to say, as a person that spent
20 a good part of the 1970s and '80s arguing
21 before various state and federal agencies for
22 avoided cost, that was a mistake. The concept
23 is first very difficult to use, as we saw in
24 the early years with trying to figure out what

1 avoided cost was for distributed generation.
2 That got resolved by essentially separating out
3 the generation component of that. And for the
4 smaller generators, we assumed a different
5 structure, and that was the net metering type
6 of process.

7 In both cases, we went to a more
8 market-oriented structure. In the case of
9 large generation, the wholesale markets have
10 worked reasonably well. In the case of
11 distributed generation, we have a bit of a
12 problem in that we don't really have a market,
13 in the usual sense of the word. And one of the
14 things that has changed since the early years
15 is that the level of load has not been
16 increasing at five percent, as it was back
17 then. Today, load is increasing very little,
18 in some cases going down, and that, of course,
19 gives us our fixed price problem.

20 What that intends to imply is that,
21 if this were a market with excess capacity, now
22 I'm talking about the wires part of the
23 business, in a market with lots of excess
24 capacity, the value of that eventually goes to

1 zero. Yet, our pricing doesn't, because we're
2 not in the market.

3 My suggestion is to structure the
4 pricing of existing investment as if it were a
5 market, and by that I mean something that
6 follows the hockey stick character of fixed
7 investment in a market, essentially zero value,
8 zero price, at zero loading, and infinity at
9 the other extreme, so to speak, when the wire
10 is melting. And the shape of the curve
11 connecting them is a hockey stick type of
12 shape. Most of the time the price varies a
13 little bit as load changes a little bit. When
14 congestion is there, it changes very rapidly,
15 as its importance in the chain becomes
16 apparent.

17 The issue is that customers are in a
18 retail market. The price they pay is, in fact,
19 the value of that power at that point in time.
20 More generally, in a clearing market, price
21 discovery is produced by that market, and value
22 discovery is simultaneously produced by that
23 market. We don't need to try to invent a value
24 there for the simple part of the activity that

1 the market deals with. It's there, as a price
2 and a value simultaneously.

3 The issue, of course, here is that we
4 do need to have something that looks like a
5 market for it to work. And simultaneously,
6 again, we need to provide revenue to the
7 utility to provide -- to meet the revenue
8 requirements. Access to market is not a
9 subsidy. We have plenty of subsidies in this
10 activity, but access to market is not a
11 subsidy.

12 What I would propose, to get a little
13 bit on to the method of calculating what I
14 propose in this system. What I suggested was
15 that we look at the major components of the
16 distribution and transmission system, identify
17 cost -- revenue requirements for each of those
18 major sections, and they could be perhaps
19 differentiated by voltage class, major devices
20 in the system, a substation, feeder at high
21 voltage, voltage reduction transformer
22 somewhere, a branch to a feeder, might be
23 locations for identifying nodes, pricing nodes.
24 We identify, across the system as a whole, the

1 revenue requirement for that component of the
2 system as a whole. And then we look at each of
3 those components and its capacity, and look at
4 what, in real-time, what that usage of that
5 investment is.

6 So, if a feeder has a capacity of,
7 say, 60 megawatts, and we're using it at 30
8 megawatts, that gives us a ratio to start with.
9 And what I proposed in the paper was an
10 artificial hockey stick type of adjustment,
11 that I just used a tangent curve as a way of
12 saying that. So that, at 50 percent, the
13 multiplier is one; at zero, it's zero; at the
14 other end, it's infinity. Multiply each of
15 those loads by that, add them all up for the
16 system as a whole for that component, and then
17 divide that by the -- divide the revenue
18 requirement by that, and that gives us a number
19 that we apply per kilowatt-hour in real-time to
20 the price that that component adds to the
21 system. All of this would be done
22 automatically as you go down the system.

23 All you need to do that is metering
24 and communication at each of the major nodes.

1 We already have that in the larger ones. The
2 example that I used was the system at the
3 feeder -- or, rather the substation at Webster,
4 in New Hampshire. Now, I don't know what the
5 capacity of that is, but I made some
6 assumptions about it, and I assumed a similar
7 system, and looked at the total. I assumed
8 that they were being met by today's rates, and
9 the revenue requirement, and then worked up
10 something that looked at a heavily loaded
11 version of it and a lightly loaded version.
12 The prices on those systems would be different
13 based on loading.

14 The locational part then comes from
15 adding up all of these as you go down the
16 system, from substation through the feeders and
17 any branches.

18 The intent would be to provide a
19 system that emulates a market price for a fixed
20 asset in real-time, gives customers the
21 opportunity, if they choose to, to accept a
22 pricing structure like this, and let's them
23 respond through any technology that they choose
24 to to shift load, make different choices about

1 sources. In a heavily loaded line, my heat
2 pump might not be appropriate. I might do
3 better with a small cogen unit. In a lightly
4 loaded system, the heat pump would be
5 preferable to generation. Since these are
6 fairly long investments in the system itself,
7 that provides reasonable signals to customers
8 as to how they might respond where they are.
9 Gives them flexibility and the ability to
10 control their costs.

11 Ultimately, the price would be
12 something of a real-time price, with adders for
13 each of the phases of the distribution and
14 transmission system described as somewhat like
15 as I presented.

16 I should point out that, since we
17 still have a lot of discussion about how
18 difficult is it to provide real-time pricing to
19 customers, I would suggest taking a look at
20 ComEdison in the Chicago area. They have now
21 for 15 years had residential hourly pricing.
22 In the early years, it was day-ahead pricing;
23 today, it's hourly real-time price. And they
24 offer systems to allow customers to help manage

1 their loads to go with it. The structure is
2 the locational marginal price as a customer,
3 with the addition of a capacity component that
4 is structured to meet their capacity
5 obligation, in a way similar to our capacity
6 obligation here. I would take issue with some
7 of that, but structurally it works. It's not a
8 heavily used system, because there is the
9 exposure to highly variable prices. But, for
10 customers that can deal with that, it provides
11 benefits to them and benefits to the system as
12 a whole. So, I would urge exploring further in
13 that area.

14 I think that covers most of the
15 thoughts that I had in that paper. The intent,
16 again, of the pricing structure is to recover
17 the revenues required, shape the pricing in a
18 way that helps customers control their loads,
19 and to make decisions based on the actual state
20 of their locational price, which could be
21 higher in some areas and lower in others. And
22 I would argue that, at this point in time, it
23 is voluntary, since most of our customers have
24 100 years of fixed pricing, with no

1 requirement -- no understanding of how to
2 respond to load. I believe that will grow in
3 time.

4 It should be clear that this is not
5 necessarily supportive of solar or other
6 functions like that, not directly. So, for
7 example, today, if we look at the pricing on
8 the system today, right now it's at about 2
9 cents. And that's about what it was last
10 night. A credit to a solar producer right now,
11 under my stream of payments, would be about 2
12 cents. It would dramatically change the
13 process of investment, but it would also change
14 the arguments about "what is this stuff worth?"
15 "What it is doing?" And it would provide the
16 proper price signals going forward for storage,
17 and also to identify the values of other
18 systems that would come directly out of the
19 market, not out of the necessity to do some
20 type of prescribed valuation as we seem to be
21 doing today.

22 I would end there, and gladly accept
23 any questions.

24 CHAIRMAN HONIGBERG: Thank you,

1 Mr. Aalto.

2 (Chairman and Commissioners
3 conferring.)

4 CHAIRMAN HONIGBERG: Ms. Birchard,
5 you're up.

6 MS. BIRCHARD: Good afternoon. Is
7 this working? All right.

8 My name is Melissa Birchard, and I
9 represent Conservation Law Foundation, as you
10 know. My comments today will be limited and
11 brief.

12 CLF would like to thank the very
13 hard-working Staff of this Commission for their
14 recommendations on the scope of the upcoming
15 Locational Value of Distributed Generation
16 Study.

17 CLF supports non-wires and non-pipes
18 alternatives, because they can be highly
19 effective -- highly cost-effective solutions,
20 particularly highly cost-effective. However,
21 these cost-effective solutions are currently
22 underutilized tools in the energy regulatory
23 toolbox.

24 These types of solutions will be

1 increasingly important as electrification of
2 the transportation and heating sectors
3 proceeds. And we cannot afford to continue to
4 overlook them.

5 CLF has recently advocated in favor
6 of considering non-wires solutions in multiple
7 contexts, including the recent energy
8 efficiency docket and the Liberty battery
9 storage docket, Dockets DE 17-136 and DE
10 17-189.

11 The docket that is the subject of
12 today's hearing, Docket DE 16-576, arises from
13 the net metering case below. Despite this
14 fact, CLF urges the Commissioners not to overly
15 constrain the present study. Distributed
16 generation combined with other low-cost energy
17 resources, like energy efficiency, can create
18 the most cost-effective and the most practical
19 solutions to a given engineering challenge.
20 The Commission would be fully within its
21 authority to combine this study with a broader
22 initiative that includes other energy
23 resources.

24 The Commission Staff proposed that

1 the consultant for this study examine a high
2 load growth scenario as a sensitivity. CLF
3 supports the need for the sensitivity analysis.
4 We are generally concerned that relying heavily
5 on past consumption patterns, including recent
6 years' load and investment data point will be
7 inaccurate as to current and anticipated trends
8 toward electrification of the transportation
9 sector, as well as electrification of the
10 heating sector.

11 In 2018, around 345,000 electric cars
12 were sold in the United States, up from under
13 200,000 in 2017. The numbers of electric cars
14 sold in the United States are expected to rise
15 sharply over the next year and in coming years.
16 Historical figures cannot reflect this type of
17 rapid transition and the demands that it will
18 place on our electric system. Those demands
19 can be allayed if we take sensible steps now to
20 control demand and also to develop methods to
21 reduce system costs.

22 In order to ensure the success of the
23 locational value study we are discussing today,
24 CLF recommends that stakeholders and

1 stakeholder input be incorporated into each
2 stage of the preparation of the study, the
3 analysis, and the study itself. One option
4 would be to formalize this input in the form of
5 an advisory council. The advisory council, or
6 all stakeholders in general, should be treated
7 as full participants in the process.

8 CLF additionally recommends that this
9 study be conducted in conjunction with
10 locational value demonstration projects, as
11 provided for in the Commission's June 23rd,
12 2017 order in this docket. CLF recommends that
13 the Commission combine these demonstration
14 projects with initial grid modernization
15 efforts, so that the state can begin to move
16 forward in a logical manner on these related
17 and important initiatives. Combining these
18 efforts will allow the Commission to more
19 accurately assess the value of non-wires
20 solutions, including distributed generation, as
21 well as energy efficiency, and to test the
22 real-life cost benefits of technologies such as
23 smart meters.

24 The risk to consumers of not testing

1 and studying these benefits, of the benefits of
2 these technologies, is that the energy
3 transition will overtake our coping mechanisms.
4 So, we have regulatory coping mechanisms that
5 may be overtaken, and the effect will be a rise
6 in consumer costs.

7 Thank you for the opportunity to
8 speak today, and also for the opportunity to
9 provide written comments on the 9th. Thank you
10 very much.

11 CHAIRMAN HONIGBERG: Thank you,
12 Ms. Birchard. Mr. Fossum.

13 MR. FOSSUM: Thank you. And good
14 afternoon.

15 Thank you this afternoon for the
16 opportunity to comment on the proposed
17 recommendation for this scope of the locational
18 value study. Eversource does not have any
19 specific comments on the scoping document
20 itself. We believe that the document fairly
21 captures our understanding of the proposed
22 study.

23 Eversource does, however, have a
24 comment on the issue raised in the Staff's

1 letter regarding discovery on its marginal cost
2 of service study. And really, it amounts to
3 two suggestions as alternative recommendations.

4 First, as the Commission is aware,
5 Eversource has committed to filing a rate
6 review in 2019, based upon a 2018 calendar year
7 test year. To prepare for that, Eversource is
8 presently completing or updating numerous
9 documents and studies, including its cost of
10 service study.

11 Based on the Staff's proposed
12 timeline for the locational value study, the
13 consultant would begin its work in the second
14 quarter of 2019, at which time Eversource may
15 have filed or may be just about to file that
16 updated cost study.

17 Further, in that the study consultant
18 has not yet been selected, it's not entirely
19 clear what information that consultant may need
20 or want or believes to be relevant for
21 conducting its work.

22 The proposed study scope presupposes
23 that the consultant will work with utility
24 employees to understand utility systems and

1 methods, and we welcome that discussion as the
2 best way to establish the needs of the
3 consultant --

4 *[Court reporter interruption.]*

5 MR. FOSSUM: -- and the most
6 efficient means of providing necessary
7 information.

8 So, in light of those issues,
9 Eversource would propose that any discovery on
10 the cost of service study be conducted as part
11 of the rate case filing itself, instead of
12 having one round of discovery now on a
13 soon-to-be-updated document that may or may not
14 give the consultant what it seeks, and then a
15 second round later on once the case has been
16 filed. For Eversource, that seems to be the
17 most reasonable and efficient means to proceed.

18 Alternatively, if the Commission
19 believes the discovery on the cost of service
20 study should be done more promptly, then
21 Eversource would request that the Commission
22 establish an appropriate scope and timeframe
23 for that discovery. If the intent of the
24 discovery is to inform the locational value

1 consultant's work, which is what is suggested
2 by the Staff's letter, then the discovery
3 should be directed to that specific purpose,
4 rather than as a general search for
5 information. And also, the discovery should be
6 restricted in time to ensure that it is
7 complete before the locational value consultant
8 begins its work, and so that it does not
9 overlap with the rate case filing, where
10 discovery on two different studies at the same
11 time would lead to confusion.

12 Eversource will work diligently to
13 assure that the locational value consultant
14 receives all the information it needs to
15 conduct its study, and anticipates working
16 collaboratively with that consultant to achieve
17 the results that are robust and meaningful.

18 Thank you. That's all I have.

19 CHAIRMAN HONIGBERG: Thank you,
20 Mr. Fossum. Mr. Buckley.

21 Oh, wait. Commissioner Bailey has a
22 question.

23 CMSR. BAILEY: Mr. Fossum, when does
24 the Company expect to file its updated cost of

1 service study?

2 MR. FOSSUM: The update would be
3 filed when the rate case itself is filed.

4 CMSR. BAILEY: Is it finished now?

5 MR. FOSSUM: To my knowledge, no, it
6 isn't. No, the updated version is not yet
7 finished.

8 CMSR. BAILEY: Okay. Thank you.

9 CHAIRMAN HONIGBERG: Now,
10 Mr. Buckley.

11 MR. BUCKLEY: Thank you. And good
12 afternoon, Mr. Chairman and Commissioners.

13 The Office of the Consumer Advocate
14 appreciates the opportunity to offer oral
15 comments today on the draft locational value
16 study scope and timeline, and appreciates the
17 time, effort, and collaboration that have gone
18 into this work product thus far. We also plan
19 to submit written comments by January 9th, in
20 keeping with the timeline set out by the
21 Commission in its secretarial letter. As such,
22 today's comments will be high level, and
23 primarily address load forecasting, the
24 planning horizon, and the application of the

1 analysis itself.

2 We were very pleased to see some
3 changes based on our informal comments
4 incorporated into the final work product,
5 including providing the consultant with a
6 greater degree of flexibility relative to
7 adoption of utility load forecasts and
8 anticipated grid needs. We were also pleased
9 to see Staff reiterate in their cover letter
10 that the proceeding participants will be
11 afforded an opportunity for discovery on
12 Eversource's Marginal Cost of Service Study.

13 Maybe I'll address Mr. Fossum's
14 comments at the end of my comments here related
15 to that study.

16 More importantly, we are pleased to
17 see the framework set out in Steps 1 and 2 of
18 the study, and suggest that this type of
19 distribution system planning is something that
20 the regulated electric distribution utilities
21 should be doing, and filing with the Commission
22 for review by non-utility stakeholders on an
23 annual basis.

24 To that end, we would ask the

1 Commission to clarify that any work product
2 relating to Steps 1 and 2 be clearly included
3 within the overall study in a manner which is
4 separate and apart from the end conclusions
5 relating to locational value, maybe in the form
6 of an interim report deliverable or a detailed
7 appendix.

8 We would also suggest that the load
9 forecasting methodologies and time horizon
10 which the consultant uses to assess locational
11 value should be closer to what Eversource
12 utilized in its last Least Cost Integrated
13 Resource Plan, rather than what the Company
14 appears to have used in its last Marginal Cost
15 of Service Study. I use the phrase "appear",
16 because to date we have not seen the various
17 inputs of that study.

18 More specifically, we believe load
19 forecasting should (1) occur at a level that is
20 more granule -- granular than systemwide, for
21 example, subregional or even
22 substation-specific, based on previous years'
23 worth of load growth; (2) should include both a
24 high and a low load growth sensitivity; and (3)

1 that the appropriate time horizon should also
2 include ten years' worth of forward-looking
3 projections, rather than only five.

4 We share the concern expressed by
5 some stakeholders regarding uncertainties
6 associated with a ten year forecast, but
7 suggest that the ten year horizon would provide
8 the requisite information for use in planning
9 and deployment of DERs or portfolios of DERs
10 intended to defer or eliminate an otherwise
11 necessary grid investment. This is primarily
12 because it may take several years of planning
13 and DER deployment ramp-up to achieve the
14 desired outcome. This justification for a ten
15 year horizon is further amplified if the
16 analysis of grid needs is not conducted on an
17 annual basis.

18 The third step in the analysis
19 suggests -- suggested by the study scope is to
20 match the load profile of various net-metered
21 DERs to the demand reduction needs of various
22 capacity constrained areas of the distribution
23 system. The Office of the Consumer Advocate
24 cautions the Commission that tariff-based

1 compensation for locational value, the
2 compensation methodology which appears to be
3 envisioned by Step 3 of the study, is an
4 approach which has been falling out of favor in
5 leading jurisdictions, including New York,
6 California, possibly Rhode Island, and is
7 instead being replaced by a procurement-based
8 non-wire alternative approach. This trend will
9 be further detailed in our comments. We
10 suggest that the Commission should give the
11 appropriate weight to this trend as it
12 considers how to compensate for locational
13 value moving forward.

14 One last item of note we will raise
15 is that the methodology proposed in the study
16 ties compensation in load-constrained locations
17 to how well the average profile of a certain
18 DER matches the load profile of the
19 capacity-related need. The OCA envisions a
20 future for net metering which compensates mass
21 market projects on an ex-post basis for how
22 they actually perform during the peak hours of
23 the previous year, similar to the compensation
24 afforded as part of the DRV portion of New

1 York's value stack. To the extent that the
2 study scope's description of Step 3 might help
3 lay the groundwork for such a compensation
4 model, if not reaching directly for it, we are
5 supportive of it.

6 In closing, the Office of the
7 Consumer Advocate appreciates the opportunity
8 for comment on the locational value study scope
9 and timeline. We suggest minor revisions to
10 the scope relating to load forecasting and time
11 horizons, and that the Commission take a hard
12 look at trends away from tariff-based
13 locational value compensation in neighboring
14 jurisdictions.

15 And just a follow-up on something
16 that Mr. Fossum had expressed, regarding the
17 appropriate avenue through which discovery on
18 the marginal cost of service study might occur.
19 It feels a little bit to me like -- the OCA is
20 very much in favor of updated values. But I
21 think there is some concern that we're allowing
22 for something of two bites at the apple here.
23 There is one marginal cost of service study
24 that was completed for the purposes of net

1 metering, and a separate one which appears now
2 to be being completed for the purposes of the
3 rate case, less than a year later, really. And
4 that is somewhat concerning to us.

5 And we would appreciate the
6 opportunity to perform discovery on both of
7 these studies. The one that was prepared for
8 net metering within this docket, and the one
9 that is prepared for the Eversource rate case
10 within the rate case.

11 And more specifically, I am somewhat
12 concerned about limiting the opportunity for
13 discovery in this docket to a timeline prior to
14 when the consultant was brought onboard. I
15 don't know that we see that as necessary. I
16 could understand the concern about timing, but
17 I think that that is not a requirement that we
18 see as necessary.

19 I think that's all I have to offer.
20 Thank you very much for your time.

21 CHAIRMAN HONIGBERG: All right.
22 Thank you, Mr. Buckley.

23 There are other people who are here
24 who signed in, but none indicated they wished

1 to speak. Would anyone who is here, who hasn't
2 spoken, like to say anything?

3 *[No verbal response.]*

4 CHAIRMAN HONIGBERG: All right. With
5 that, we will close the public comment hearing,
6 and await written comments by close of business
7 on January 9th.

8 If there's nothing else, we will
9 adjourn. Thank you all.

10 ***(Whereupon the hearing was***
11 ***adjourned at 2:40 p.m.)***