1 STATE OF NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION 3 February 8, 2011 - 9:14 a.m. DAY 5 4 MORNING SESSION ONLY Concord, New Hampshire PUBLIC HEARING 5 **MHPUC FEB21'11** pm 1:13 DE 10-195 RE: 6 PUBLIC SERVICE CO. OF NEW HAMPSHIRE: Petition for Approval of Power Purchase 7 Agreement between PSNH and Laidlaw Berlin Biopower, LLC. 8 9 Chairman Thomas B. Getz, Presiding PRESENT: 10 Commissioner Clifton C. Below Commissioner Amy L. Ignatius 11 Sandy Deno, Clerk 12 APPEARANCES: Reptg. Public Service Co. of N.H.: 13 Robert A. Bersak, Esq. 14 Reptg. City of Berlin: Christopher Boldt, Esq. (Donahue, Tucker...) 15 Keriann Roman, Esq. (Donahue, Tucker...) 16 Reptg. Bridgewater Power, Pinetree Power, Pinetree Power-Tamworth, DG Whitefield 17 Power, Springfield Power, and Indeck Energy-Alexanderia: 18 David J. Shulock, Esq. (Brown, Olson...) David K. Wiesner, Esq. (Brown, Olson...) 19 Reptg. Clean Power Development: 20 James T. Rodier, Esq. 21 Reptg. Edrest Properties, LLC: Jonathan Edwards 2.2 23 Susan J. Robidas, LCR NO. 44 COURT REPORTER: 24

		3
1	INDEX	
2		
3	WITNESS PANEL: George McCluskey	
4	Thomas Frantz	
5		
6	DIRECT EXAMINATION (cont'd) PAGE	
7	By Ms. Amidon 5	
8	CROSS-EXAMINATION	
9	By Ms. Hatfield 12	
10	By Mr. Shulock 39	
11	By Mr. Edwards 46	
12	By Mr. Boldt 74	
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		

PROCEEDINGS

CHAIRMAN GETZ: Okay. Good morning, everyone. We'll resume the hearings in Docket DE 10-195 concerning the Laidlaw purchase power agreement with Public Service Company of New Hampshire. I think we were about to hear the direct testimony of Mr. Frantz and then move on to cross-examination.

But before we do that, are there any issues we need to address this morning? I know that at one point there was some discussion of trying to reach some agreement on briefing, which we could get on the record now or do at the end of the day. So is there any preference among the parties? Are there any other issues? Ms. Hatfield.

MS. HATFIELD: Thank you, Mr. Chairman. It wasn't until yesterday that I was able to reach out to the other parties to inquire about interest in briefs, so it probably would be best if we dealt with that at the end of the day.

CHAIRMAN GETZ: Okay. Anything else?

MS. HATFIELD: One other thing. I had raised the issue of a legislative hearing today, and the OCA does not need to have the hearing stop for

 $\{DE 10-195\}[DAY 5 - MORNING SESSION ONLY]\{02-08-11\}$

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that period. So we'll be able to just move forward with the hearing today. Thank you.
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3 CHAIRMAN GETZ: Okay. And that reminds me of one other issue.

5 Mr. Bersak, rebuttal witnesses? Is there --

MR. BERSAK: We have to wait and see.

CHAIRMAN GETZ: All right. Then we

shall wait and see.

Ms. Amidon.

MS. AMIDON: Thank you.

DIRECT EXAMINATION (cont'd)

13 BY MS. AMIDON:

- 14 Q. Good morning, Mr. Frantz.
- 15 A. (Mr. Frantz) Good morning.
- Q. When we last met, we were -- I had just finished
 examining Mr. McCluskey regarding his testimony and
 the rebuttal testimony that PSNH filed. And in its
 rebuttal testimony, PSNH included rebuttal of Dr.
 Shapiro. Did you review that rebuttal testimony?
- 21 A. (Mr. Frantz) Yes, I did.
- Q. Do you agree with Dr. Shapiro, that your testimony contains three critically flawed assumptions?
- 24 A. (Mr. Frantz) No, I do not, though I do agree with Dr.

- Shapiro that, if the net economic impact of the project is positive from a ratepayer perspective, something that would be quite different from the results contained in Mr. McCluskey's testimony, or that of Mr. Traum, my conclusion of net economic harm would indeed change.
- Q. Thank you. In her rebuttal testimony, Dr. Shapiro states that, even if the PPA results in over-market costs of \$26 million per year, the economic development benefits of the project would still be positive. Do you agree?
- A. (Mr. Frantz) Well, her conclusions depend on a number of assumptions, including that the information provided by Laidlaw in the SEC filing is reasonably accurate and represents the direct effects of the project, because they form the basis for the construction and biomass shocks that are used in the RIMS II multiplier effect. To the extent those numbers are less than she modeled, the results will similarly be reduced. The model assumes no substitution effects and that the output can be increased to whatever level's needed without affecting other industries, such as other biomass facilities. If other plants can't get the wood, or

[WITNESS PANEL: McCLUSKEY|FRANTZ]

the prices increase to those facilities, affecting their operations, then some of those positive effects that are included in her testimony and rebuttal testimony would be reduced. One should keep in mind that multiplier effects work in both directions.

Her analysis also includes all three -- direct, indirect and induced effects in the RIMS II model.

And one should be very cautious of using induced effects, as they depend highly on household income and its distribution of savings and expenditures.

- Q. Thank you. Did you review the article that PSNH provided as an exhibit, and it was in the Berlin newspaper, about a new company that had tentative agreements to locate with Laidlaw, or co-locate?
- A. (Mr. Frantz) I did look at it.

- 16 Q. You did? Do you have any comments about that article?
 - A. (Mr. Frantz) My first thought was: Good. To the extent that that facility locates there and creates new jobs, that's certainly something beneficial to Berlin. But we really don't know much about the project. We don't know who owns it. We don't really know what the agreement is between Laidlaw and that project and its developer. We don't know the effect

- the new company will have on Laidlaw's operations.
- 2 We don't know whether the facility would have located
- 3 elsewhere in New Hampshire. We don't know a lot of
- 4 facts about that facility and its location and the
- 5 relationship with Laidlaw, and those things would
- 6 have been useful in this proceeding.
- 7 Q. And did you hear Dr. Shapiro, in her testimony from
- 8 the stand, describe what she believed to be the
- 9 economic benefits associated with this unknown
- 10 entity?
- 11 A. (Mr. Frantz) I heard her mention them, yes.
- 12 Q. And did you hear Mr. Sansoucy say that he saw some of
- the work papers Dr. Shapiro used to develop her
- 14 estimates regarding the benefits associated with this
- 15 unidentified entity?
- 16 A. (Mr. Frantz) Yes.
- 17 Q. Have you had a chance to look at those work papers?
- 18 A. (Mr. Frantz) I haven't seen those work papers.
- 19 Q. Thank you.
- I want to ask an additional question with
- respect to the record request responses, or one of
- 22 them that was provided by PSNH. And do you have
- 23 those in front of you?
- 24 A. (Mr. Frantz) I don't have that one in front of me.

[WITNESS PANEL: McCLUSKEY|FRANTZ]

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         If you'd like to show it to me, I'd be happy to --
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         I'm specifically looking at record request, it says
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    Q.
         HD-02.
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                         MS. AMIDON:
                                      May I?
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                         CHAIRMAN GETZ:
                                         Please.
                         (Atty. Amidon hands document to the
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7
                    witness. Witness reviews document.)
    BY MS. AMIDON:
8
         And do you see that now?
9
    Q.
        (Mr. Frantz) Yes, I do.
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    Α.
         And is that a record request which I believe you
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    Q.
         requested in connection with statements made about
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         the effect of the contract on PSNH's financing or
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         credit worthiness?
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         (Mr. Frantz) Yes, it is.
    Α.
         And would you please comment on that response.
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    Q.
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    Α.
         (Mr. Frantz) Well, the response just states that the
         vice-president for investor relations for Northeast
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         Utilities, Jeffrey Kotkin, stated that the size and
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20
         nature of Laidlaw's PPA is not significant enough to
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         have any adverse effect on PSNH's debt rating.
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         does not state whether PSNH or Mr. Kotkin actually
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for their opinions and discussed it with them, or

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contacted any lenders or potential lenders and asked

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1		that we have anything in writing from those lenders
2		stating that they've reviewed the PPA and believe it
3		has no adverse effect on PSNH.
4	Q.	So, can you conclude anything from looking at that
5		response?
6	A.	(Mr. Frantz) Only that Mr. Kotkin stated that it's
7		not significant enough.
8	Q.	Okay. Thank you.
9		CHAIRMAN GETZ: Ms. Amidon, has that
10		already been marked as an exhibit by PSNH?
11		MR. BERSAK: Exhibit No. PSNH 14, Mr.
12		Chairman. There were two record requests on Hearing
13		Day 2. One was marked Record Request No. 4, which
14		was Exhibit 14, and one was No. 5, which was marked
15		as PSNH Exhibit 15.
16		CHAIRMAN GETZ: Thank you.
17		MS. AMIDON: May I ask, Mr. Chairman,
18		does the Commission not have copies of those record
19		request responses?
20		CHAIRMAN GETZ: Well, let's see. I
21		believe they were handed out. It's just a matter of
22		looking through the pile we've accumulated.
23		CMSR. IGNATIUS: Ms. Amidon or Mr.
24		Bersak, if someone could just hold it up and let me
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1	see what it looks like, then I know what I'm hunting
2	for. I don't recall seeing it. But it's probably my
3	fault.
4	MS. AMIDON: Attorney Hatfield
5	provided me this copy for you to take a look at.
6	(Atty. Amidon hands document to Cmsr.
7	Ignatius.)
8	CMSR. IGNATIUS: So these weren't
9	distributed during the hearing. They were since
10	then?
11	MS. AMIDON: They were provided by the
12	Company last Thursday or Friday.
13	CHAIRMAN GETZ: Let's just go off the
14	record for a second.
15	(Discussion off the record)
16	CHAIRMAN GETZ: All right. We'll go
17	back on the record and continue with the direct.
18	MS. AMIDON: And that concludes my
19	direct examination. Thank you, Mr. Chairman. The
20	witnesses are available for cross.
21	CHAIRMAN GETZ: Thank you. In terms
22	of order of cross, I was contemplating Ms. Hatfield,
23	Mr. Rodier, Mr. Shulock, Mr. Boldt, Mr. Bersak. Is
24	there any concern about that order of cross?

1 (No verbal response)

2 CHAIRMAN GETZ: Okay. Ms. Hatfield.

MS. HATFIELD: Thank you. Mr.

4 Chairman, I will have a few questions about the

5 record requests, but I will try to hold off on those

for a few moments so you can have copies before you.

CROSS-EXAMINATION

8 BY MS. HATFIELD:

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- 9 Q. Good morning, gentlemen.
- 10 A. (Mr. Frantz) Good morning.
- 11 A. (Mr. McCluskey) Good morning.
- 12 Q. Mr. Frantz, in your testimony that you filed, on
- 13 Page 2 you recommended that the Commission take
- 14 administrative notice of the Laidlaw proceeding at
- the Site Evaluation Committee. Do you recall that?
- 16 A. (Mr. Frantz) Yes.
- 17 Q. And do you recall that the Commission determined that
- 18 it was not going to take administrative notice of
- 19 that proceeding?
- 20 A. (Mr. Frantz) I vaguely recall that.
- 21 Q. And would you accept, subject to check, that in the
- 22 Commission's prehearing conference order, that it
- 23 said that it would not?
- 24 A. (Mr. Frantz) Yes.

- Q. Thank you. And Mr. Frantz, you just a few moments ago spoke about the economic benefit of the project.
- 3 Do you recall that?
- 4 A. (Mr. Frantz) Yes.
- Q. And is it true that 362-F, the RPS statute, in
- 6 Section 9, which is the PPA section, does discuss
- 7 economic benefits? Is that right?
- 8 A. (Mr. Frantz) That's correct.
- 9 Q. But is it your belief that potential economic
- benefits from an energy facility should be elevated
- 12 A. (Mr. Frantz) Well, I think it's a package. I think

over potential costs or risks to consumers?

- there's a number of criteria, and that is one of
- 14 them. And I think the most important part of this
- 15 cost-effective project, I think, all else equal, one
- should then look at the economic development effects.
- 17 But it's one of many criteria.
- 18 Q. Mr. McCluskey, do you have a copy of PSNH's rebuttal
- 19 testimony with you?
- 20 A. (Mr. McCluskey) Yes, I do.
- 21 Q. I wanted to ask you a few questions related to that
- 22 testimony.

- 23 A. (Mr. McCluskey) If you could just give me a moment so
- 24 I can locate it.

[WITNESS PANEL: McCLUSKEY|FRANTZ]

- 1 (Pause in proceedings)
- (Mr. McCluskey) Okay. 2 Α.
- If you would turn to Page 11, please. 3 Q.
- (Mr. McCluskey) Okay. 4 Α.
- And starting on Line 27 there's a question, and it 5 Q. states, "How does a company like PSNH meet the 6 7 State's renewable energy goals and statute which provides for long-term PPAs with in-state renewable 8 resources when the developer needs some form of price 9 assurance when future market prices are not known?"
- Do you see that question? 11

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- (Mr. McCluskey) Yes, I do. 12 Α.
- And is one response to that question, about how PSNH 13 Q. 14 meets the State's renewable energy goals, that the
- 15 Company can buy RECs on the market?
- 16 (Mr. McCluskey) Yes, it can buy in what we refer to Α. 17 as the short-term REC market.
- And could the Company also make payments to the 18 Q.
- 20 compliance payment price?
- 21 Α. (Mr. McCluskey) It could, if the REC price offers
- 22 that it received were equal to or higher than the
- 23 alternative compliance price, the Company has the
- option of simply deciding not to purchase from the 24

renewable energy fund, according to the alternative

- 1 market and pay the alternative compliance payment.
- Q. And when a utility makes that determination, do they need to factor in cost-effectiveness to customers?
- A. (Mr. McCluskey) Yes. Clearly, it would not be cost-effective to enter into a purchase with a REC provider at a price greater than the ACP. The legislature has introduced a cap on prices for that purpose of minimizing the cost on consumers associated with the RPS.
- 10 Q. Could you turn to Page 14, please, of PSNH's rebuttal.
- 12 A. (Mr. McCluskey) okay.
- Q. And on Lines 23 through 24 there's a statement that says, "In Mr. McCluskey's world, it is apparent that the cost to customers is number one." Do you see that?
- 17 A. (Mr. McCluskey) I do.
- 18 Q. Do you think that should also be number one for PSNH?
- A. (Mr. McCluskey) As Mr. Frantz said, there are several criteria in the section of the RPS law that deals with long-term contracts. It's really up to the Commission to provide what weight it considers appropriate to each of the criteria. I certainly believe that these projects, whether they -- the

- purchase of RECs, whether they are acquired through
 short-term market or long-term market, should be done
 in a cost-effective way. I personally think that the
 primary criteria should be cost-effectiveness, but
 serious consideration given to the local economic
 benefits associated with the particular project.
 - Q. Could you turn to Page 14, please.
- 8 A. (Mr. McCluskey) Yes.

- 9 Q. Sorry. That's where we are.
- Going on to Page 15, PSNH talks about an issue that you raised, that the cumulative reduction fund does not accrue interest. Do you recall that?
- 13 A. (Mr. McCluskey) Yes.
- Q. And at the top of Page 15, PSNH says, "These complaints about the lack of interest as relatively insignificant..." Do you see that?
- 17 A. (Mr. McCluskey) I do.
- Q. Is it possible that interest, just the interest, if
 there was interest on all portions of the cumulative
 reduction fund, that that could amount to a
 significant sum?
- A. (Mr. McCluskey) Yes. The amount of the interest
 obviously depends on what interest rate you use and
 also on the amount of the above-market payments. If

the above-market payments are significant, then, over a 20-year period, potentially you can accumulate a significant amount of interest on energy or on RECs, if it's going to be applied to RECs as well, and perhaps also on the customer. So if interest were accumulated, it could be significant at the end of the 20-year term.

- Q. Do you believe that accruing interest on the cumulative reduction fund addresses the underlying problems with the CRF?
- A. (Mr. McCluskey) Not on its own. In my testimony, I addressed two, what I considered to be two problems with the -- economic problems with the cumulative reduction account. One was the lack of interest.

 The other was the capping of the amount that customers could receive at the end of the 20-year term through a reduction in the market -- a reduction in the cost of purchasing the facility.

To me, you need to have interest and the lifting of the cap in order to ensure that customers are going to receive the value that they have paid to Laidlaw in the form of above-market payments.

Without lifting the cap, it could turn out that customers receive very little of those above-market

- 1 payments, depending on the market value of the plant at that time. And as I've said in my testimony, that 2 will depend on the conditions in the market. 3 also, the situation regarding the RPS, would it 4 exist? If so, what level of RPS payments would a 5 project of this kind receive? So there's some 6 7 considerable uncertainty as to what the value, the 8 market value of the plant is, and how big the cap will be when it comes to determining how much 9 ratepayers should receive at the end of the day. 10
 - Q. Do you recall hearing Mr. Sansoucy testify that it had been his estimate that the plant would be worth somewhere around \$130 million at the end of the PPA?
- 14 A. (Mr. McCluskey) Yes, I did.
- Q. And was this hearing the first time that you had heard that figure?
- 17 A. (Mr. McCluskey) Yes.

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- Q. And if that is an accurate estimate, does that cause you concern that there might be more than that amount in the CRF?
- A. (Mr. McCluskey) Yes. I think PSNH itself did an analysis of what could be the balance in the CRF at the end of 20 years, based on market prices that it developed in 2009. That figure, I recall, I think it

was \$143-, \$144 million. But importantly, it was based on market prices that are higher than if you were to redo the analysis that PSNH did, using more current NYMEX numbers. It would produce a lower forecast of market energy prices, which would have the effect of increasing the balance in the account. Then, if you add interest onto that account, and you also include interest from RECs, which has been suggested, you can imagine that it's quite possible that the balance in the account is significantly above the \$132 million estimate of Mr. Sansoucy. So it's highly likely that we could have a situation where a substantial sum of money paid in by consumers to Laidlaw will not be returned to customers through a reduction in the value of the plant -- or reduction in the purchase price of the plant, I should have said.

- Q. And I believe you also testified that the cumulative reduction fund violates the used and useful principle of rate-making; is that correct?
- 21 A. (Mr. McCluskey) That's correct.

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- Q. And can you just simply explain why you believe that's the case?
- 24 A. (Mr. McCluskey) Yes. I think it's best to consider

the following hypothetical: Assume that there is no Laidlaw contract and PSNH is purchasing energy it needs to meet customer demands from the wholesale power market. Further assume that PSNH approaches the Commission and asks for permission to charge customers. Not only do the market energy prices change at any hour, but they include in a 10-percent premium on those hourly market energy prices. And it does so for a 20-year period, with the reason being so that it can pre-fund the purchase of a renewable energy plant in 20 years' time.

So the question is: What do you think the
Commission would say with regard to that question? I
believe that the Commission will say that customers
are not in the business of pre-funding the
acquisition of power plants because it would violate
the used and useful principle. Used and useful
principle prohibits being included in rate base any
property that is both not in service and providing
useful service. Importantly, the effect of the
prohibition is to prevent the utility from receiving
a return on and of its investment until the plant is
in service.

In the hypothetical, customers would be required

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to pre-fund through rates the acquisition of a renewable plant, which I believe would violate the used and useful principle. And this is essentially what PSNH is proposing to do in the PPA. the 10-percent premium on market energy prices replaced with the above-market energy payments, the fund -- importantly, the fund at the end of the 20-year term in the PPA is used to pay for the acquisition of the Laidlaw power plant. And we have heard that the Company intends to place the plant in generation rate base once it is acquired. proposal to have customers pre-fund the purchase of the plant through above-market energy payments is a violation of the used and useful principle because customers will not begin to receive any useful service from the asset until the term of the contract has ended.

So we have a situation where they are looking to purchase a facility in order to obtain the rights to the services provided after the term of this contract ends, but to have customers partially pre-fund that purchase during the 20 years before -- during the 20 years of the term. So, to me, this provision in the PPA is a violation of the used and useful principle

1 or concept.

Q. On Page 20 of PSNH's rebuttal, at Lines 22 to 23,

PSNH writes, "The CRF only adds value per customers.

There is no scenario under which it will diminish value per customers."

It sounds like, from the testimony you've just given regarding the CRF, that you disagree with that statement.

- A. (Mr. McCluskey) I do disagree with it. To the extent customers have made payments over a 20-year period and they are not likely to receive in full those payments, including interest, then I think that clearly does diminish value to customers.
- Q. On Page 24 of PSNH's rebuttal, at Line 25, PSNH refers to a "bad policy-making choice." Do you see that?
- 17 A. (Mr. McCluskey) Yes, I do.
- Q. And do you think that this docket is about

 policy-making, or is it about the Commission applying

 the requirements of the PPA section of the RPS law?
- A. (Mr. McCluskey) It's the latter. The policy has been established through the RPS law. The Company has made a filing consistent with that law. And we now try to determine whether the filing is consistent

- 1 with the public interest.
- Q. On Page 25, at Line 18, PSNH states, "Financing is the developer's responsibility, not PSNH's." Do you agree with that?
- 5 A. (Mr. McCluskey) I do, yes.
- Q. And do you recall PSNH's testimony, that the project could not be financed if Staff's recommendations in your testimony were adopted by the Commission?
- 9 A. (Mr. McCluskey) Yes, I do.
- 10 Q. Do you agree with that?
- (Mr. McCluskey) No. I think the particular 11 Α. recommendation that Mr. Long was referring to was the 12 recommendation that the energy prices be based not on 13 cost of service but on market prices. And I believe 14 he said that if that were the case, the project can 15 be financed. And I attempted through cross to 16 17 demonstrate that in New York, where they have an RPS since 2004, the structure of the solicitation in New 18 York is they solicit RECs, and all of the energy 19 20 capacity has to be sold into the New York ISO. And 21 so any developer that wins the bid in a New York solicitation would receive, I believe, fixed REC 22 prices for a contract period, and they would receive 23 24 short-term energy payments and capacity payments from

- the New York ISO. And so that is the structure that
 works there. And they've developed many renewable
 projects in that state. And I think that example
 demonstrates that you don't have to have a
 fixed-price contract for each component of the output
 produced by the facility.
- 7 Q. Is the New York information that you're referring to, 8 is that contained in Staff Exhibit 10?
- 9 A. (Mr. McCluskey) It is.
- Q. And you were just discussing the use of RFPs. And if you look at PSNH's rebuttal testimony on Page 27, starting at Line 33, they discuss the drawbacks -- or one drawback of an RFP process. Do you see that?
- 14 A. (Mr. McCluskey) What was the line again?
- 15 Q. Thirty-three.

- 16 A. (Mr. McCluskey) Yes.
- Q. Could the Company use RFPs to seek to purchase particular products it needs, such as RECs or energy?
- A. (Mr. McCluskey) Well, if it was -- it would certainly
 have to -- the Company could have an RFP for any
 product that it needs in order to meet customer
 demands, energy capacity or RECs.
 - Q. On Page 36 of PSNH's rebuttal, at Line 23, PSNH states that the PPA essentially prices energy at the

day-ahead locational marginal price over a portion of the life of the facility. Do you agree that the PPA sessentially prices energy at the day-ahead LMP?

- A. (Mr. McCluskey) No. Absolutely not.
- Q. Why not?

A. (Mr. McCluskey) Well, first of all, the energy's priced at the energy prices in the PPA, which are designed to recover fuel costs and O&M estimated costs. So the actual price that PSNH pays and will recover from its customers has nothing to do with the market energy prices.

So the issue is: Will the cumulative reduction account have the effect of bringing back energy prices from a cost basis to a market basis at the end of the 20-year term? And certainly we attempted to address this issue through cross. Because there is no interest, and there's also the potential for significant capping going on, I contend that the claim is simply not correct. There's a far greater likelihood that customers will pay above-market energy prices once the 20-year term of the contract has ended.

Q. There are a few places in PSNH's rebuttal where they refer to a "Catch-22." One of those is on Page 15 at

- Line 31. And what the Company says, starting on

 Line 29, is that the testimonies filed by you and Mr.

 Traum would frustrate the legislative goal of the RPS

 law by creating a "Catch-22," where a PPA couldn't be
 approved. Do you see that?
- 6 A. (Mr. McCluskey) Yes.

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- Q. If there is a "Catch-22," do you think perhaps a legislative solution might be required?
- 9 (Mr. McCluskey) I'm not sure. I personally don't Α. agree that there is a "Catch-22". We've made 10 11 recommendations to change the PPA which we think will make -- has the potential to make the project in the 12 public interest. I don't understand this argument 13 that it's a "Catch-22." We're not trying to have the 14 contract not approved. We are supportive of a 15 renewable plant in the North Country developed 16 17 through a long-term PPA. We just feel that it has to be based on prices which are more in the public 18 19 interest than the Company's. So I don't agree there 20 is a "Catch-22". And I'm not sure how involving the 21 legislature would resolve that problem.
 - Q. Well, assuming that PSNH is correct, and if the changes that you propose are made, that the Company -- the project is not financeable, is it

- possible that perhaps the statute could be changed to expressly allow over-market PPAs, or something of that nature?
- (Mr. McCluskey) We actually have -- these power 4 Α. plants typically are not economic on a stand-alone 5 basis. They cannot compete with non-renewable 6 7 The RPS law is intended to provide an generators. additional revenue stream that will allow those 8 projects essentially to compete, to be dispatched in 9 the ISO-New England power market. All we're trying 10 to do is to ensure that customers are paying no more 11 than they need to in order to acquire those products. 12 I'm not sure whether that's responsive to your 13 14 question, but...
 - Q. Thank you. Do you recall PSNH's testimony about their understanding of the Schiller agreement that was the subject of Docket DE 03-166?
- 18 A. (Mr. McCluskey) Yes, I do.

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- Q. Do you agree that that requires that the Company must sell the RECs from Schiller without regard for the price that they would receive for those RECs, and also without regard for the price that the Company is paying to comply with New Hampshire RPS?
 - A. (Mr. McCluskey) I think there's two questions. One

is: Does the motion submitted by the parties in that proceeding require, under all circumstances, PSNH to sell the RECs in the short-term REC market, either in New Hampshire or elsewhere? And my reading of that motion and the Commission's order approving it is that that's not the case.

Now, when we get to the issue of the price of RECs, I believe I've said in testimony that it makes no economic sense for PSNH to sell RECs in the market at a price that is less than the price that it has to pay to Laidlaw for the RECs, when in fact they could actually use those RECs in order to avoid the high payment. And I think the example that I gave through cross was, if the contract price is \$50 and the market price is \$30, why would you want to sell the REC in the market to receive \$30 when that is required -- requires you to purchase \$50 RECs from Laidlaw? It makes more sense to forego the revenues from the sale and use that REC to reduce your obligation with regard to purchases from Laidlaw.

So, one, I don't believe the motion does require them to sell, and I didn't see anything in the Commission's order approving the motion that said that; and two, it makes no economic sense to do as

- 1 PSNH has suggested.
- Q. And is that why you believe that Schiller RECs need to be considered when trying to determine PSNH's need for RECs?
- 5 A. (Mr. McCluskey) Yes.

- Q. Do you know what PSNH's most recent migration percentage is?
 - A. (Mr. McCluskey) Yes. The calculations that I've done use the 31-percent migration rate that PSNH -- I'm not sure whether it referred to it in its testimony, but it certainly referred to it in discovery responses.

Yesterday we received, I believe it's a quarterly report that PSNH is required to file with the Commission, which showed the migration percentage for the months of October, November, and although it was listed as September, I believe the report should have said December. And those -- that report shows that migration rate was, in the first month of October, I believe it was close to 35 percent; in November, it was close to 34 percent; in December, it was close to 36 percent, I believe was the figure. Those are rounded numbers. So, clearly, what is happening out there is indicating that PSNH is more

- at risk of losing load rather than at less risk.

 I'll just leave it at that.
- 3 Q. And that would impact their need for RECs and energy?
 - A. (Mr. McCluskey) Yes. It has this effect in the calculations that I did. I was able to show that, if Schiller RECs were used to meet PSNH's RPS obligations, that PSNH would not have a need for all of the RECs produced by Laidlaw until 2023. What an increase in the migration rate does is to push out that date. I haven't done -- I haven't re-calculated the need analysis. But I suspect it's going to push out the year that PSNH would need all of the RECs from Laidlaw to well past 2023. So it increases what
- 16 Q. Mr. McCluskey, do you have a copy of your testimony 17 that you filed in this docket?

I call the excess RECs, which adds costs to

18 A. (Mr. McCluskey) Yes, I do.

consumers.

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- Q. Could you please turn to Bates Page 65, which is your Exhibit GRM-12.
- 21 A. (Mr. McCluskey) Yes, I've got that.
- Q. The third column from the left is titled "Adjusted Market Energy Price Projections." Do you see that?
- 24 A. (Mr. McCluskey) I do.

Q. Can you explain what you mean by "adjusted"?

A. (Mr. McCluskey) Okay. Earlier I was describing that in 2009, PSNH developed a forecast of the market energy prices, which is included -- developed a forecast of market energy prices, which it included in a discovery response issued by Staff. That forecast was based on NYMEX electricity price and natural gas price data. And it was based on a look at those NYMEX forwards in, I think August of 2009.

Since we've passed that date and there have been developments in the market, both for electricity in New England and also natural gas, what I did was to essentially use the very same model that PSNH used and simply updated the NYMEX electricity and natural gas prices, and the result is as shown in this column. I think it might have been better to label it "modified" or "updated" rather than "adjusted." But that's the intent. It's simply an update of the price developed by PSNH, taking into account more current NYMEX data.

MS. HATFIELD: Mr. Chairman, do the Commissioners have the record requests at this point?

CHAIRMAN GETZ: Yes.

MS. HATFIELD: Thank you.

- 1 BY MS. HATFIELD:
- Q. Mr. McCluskey, do you have the copy of the record
- 3 request that the Company filed on February 4th?
- 4 A. (Mr. McCluskey) I just have one, the rate-impact
- 5 analysis? That's the only one I have.
- 6 Q. And that one is numbered HD-02 Q-RR-005?
- 7 A. (Mr. McCluskey) That's correct.
- 8 Q. And it's dated January 26th, 2011?
- 9 A. (Mr. McCluskey) I don't have the cover page, so I
- 10 couldn't confirm that.
- 11 Q. Will you accept that, subject to check?
- 12 A. (Mr. McCluskey) Yes, I will.
- 13 Q. And the request that PSNH is answering is: Please
- 14 provide the assumed rate impact for 2015, using a
- 15 range of assumptions for market prices, wood prices
- and REC prices; is that correct?
- 17 A. (Mr. McCluskey) I believe that's what we asked, yeah.
- 18 Q. And if we look at Page 2 of 2, that's where PSNH
- 20 A. (Mr. McCluskey) That's correct.
- 21 Q. And if we look at this page, there are different
- scenarios that the Company has utilized; is that
- 23 right?
- 24 A. (Mr. McCluskey) Correct.

- Q. And the top line shows that in all scenarios they've used a facility size of 67.5 megawatts; is that right?
- 4 A. (Mr. McCluskey) Correct.
- Q. And that facility size relates to PSNH's revised
 Exhibit 9; is that right?
- 7 A. (Mr. McCluskey) Correct. Yes.
- Q. And if we look down in the left-hand column, which is labeling rows, under "Avoided Costs of Products," the second item is titled "REC Market, Percentage of ACP." Do you see that?
- 12 A. (Mr. McCluskey) Yes, I do.
- Q. Does that mean that in all their scenarios they utilized the PPA REC price?
- 15 A. (Mr. McCluskey) Well, under the -- if you look at the
 16 third column, "Case 1b," they've actually varied the
 17 percentage to 100 percent. So it doesn't quite match
 18 with the PPA.
- Q. And have you had a chance to review the analysis that the Company has provided?
- 21 A. (Mr. McCluskey) Yes, I have.
- Q. If the REC price in the market is lower than that,
 would that mean that there would actually be a higher
 monthly bill impact as a result of the PPA?

- (Mr. McCluskey) Yes. In fact, under the Avoided Α. Costs of Products section, we have prices for energy RECs and capacity. If any of those is lower than what's shown in this exhibit, then you would have a greater impact on customers as a result of the PPA. And conversely, if the prices are higher than what's shown in this particular column, then the impact would be less than what's shown.
 - Q. And have you tested these scenarios by using different figures to look at what the rate impact might be?

A. (Mr. McCluskey) Yes, I have. The Company actually provided Staff with the spreadsheet. So we had the ability to change the inputs to what we considered to be more reasonable than what the Company has, and which I did. And I've actually got two groups of numbers: One, what I call the Laidlaw proposed facility, which is at a capacity of 66 megawatts, and then I redo the analyses under what I call the Laidlaw expanded facility, which is the 67.5. And so, just focusing on the Laidlaw proposed facility of 63 megawatts, assuming it's got the capacity factor of 87.5, what I'm describing now is what I call base case. And I will vary the assumptions under the base

case to see what happens under what could be called, from a customer standpoint, worst-case and best-case scenarios.

But under the base case, we started with a 63-megawatt facility, added a capacity factor that Laidlaw recommended to SEC. And the first change we have is wood price, \$34 a ton. We think that is the appropriate wood price for the base case. Why?

Because Schiller wood costs over the last three years have averaged just under \$34 a ton. Now, it may be that in the future, fuel costs at Schiller are going to change. But historically, over a recent period, it's been very close to 34. And I suspect that's why the Company used 34 in its development of the energy prices.

So we start with a wood price of 34. The rest of the PPA prices are as calculated by the Company in its exhibit. Where we differ is with regard to the avoided costs of products. Now, I'm doing this for 2014, which I assume is the first year of the contract. And what I've done for energy is -- let me start with RECs.

The REC price is the Synapse price for 2014, which I have as just over \$32 a megawatt hour.

Capacity price we're using is the capacity price that the Company uses, 2.95. So we don't have a problem with that. The energy price is the energy price that I calculated for 2014 using PSNH's model, but updated for more current NYMEX numbers. That one is \$53, roughly. When you insert those numbers into the calculation, and the rest is as developed by PSNH, we get a monthly bill impact of \$3.50 a month. That is a significant impact in the first year of this contract, \$3.50 a month. That's a major rate impact. And that's for residential customers.

Then what I did was, I developed a scenario, what I call high fuel, low market, high capacity factor. Did the same type of analysis but varied the energy capacity and REC prices. And that analysis produces an impact of almost \$5.50. And then I have another scenario, which is what I call low fuel, high market, low capacity factor, and that produces a much smaller impact of 36 cents per month.

So we think our base case which resulted in a rate impact of \$3.50 a month is a reasonable outcome and significantly different from what the Company is getting, we think based on reasonable market prices.

Q. And when you say that's a reasonable outcome, are you

- talking about the numbers that you used and not that it shows that the PPA itself is reasonable?
 - A. (Mr. McCluskey) I'm talking about the market price inputs I think are reasonable as a base case.

If I could just add? That \$3.50 impact is based on migration rate of 31 percent. If we change the migration rate -- I haven't done this calculation.

But if we change the migration rate to 34, 35 and 36 percent, which has been shown in the Company's recent quarterly report, then we're going to push up that impact significantly, because what's happening is there's a smaller energy sales base in order to spread over the economic cost of the PPA. So the higher the migration rate, the greater the impact on the consumers. This \$3.50 is based on 31 percent.

- Q. Mr. McCluskey, do you have a copy of Mr. Sansoucy's rebuttal with you?
- 19 A. (Mr. McCluskey) I do.

- 20 Q. Would you please turn to Page 47.
- 21 A. (Mr. McCluskey) Okay.
- Q. At Line 1, Mr. Sansoucy is asked the following
 question: "On Page 45, Mr. McCluskey, starting at
 Line 9, talks about the conflict with least cost

- integrated resource planning. What is your opinion?"

 Do you see that?
- 3 A. (Mr. McCluskey) Yes.
- And then at Line 4, at the beginning of his answer he 4 Q. states, "Least cost planning and the development of 5 new Class I RECs are mutually exclusive." And then 6 7 at Line 7 he states, "To compare this" -- meaning, I 8 believe, the PPA -- "to least cost integrated resource planning and then condemn the PPA with 9 Laidlaw is misleading and should be ignored by the 10 Commission." Do you see that? 11
- 12 A. (Mr. McCluskey) I do.
- Q. Do you believe that the Commission should ignore the least cost planning statute?
- 15 A. (Mr. McCluskey) Absolutely not.
- Q. And do you agree with Mr. Sansoucy, that lease cost planning and the development of new Class I RECs are mutually exclusive?
- 19 A. (Mr. McCluskey) No.
- Q. And PSNH is complying with the RPS law right now; is that right?
- 22 A. (Mr. McCluskey) It is. It's required to purchase a
 23 certain quantity of RECs, and I believe it's doing
 24 that.

- Q. And would you believe that PSNH is trying to comply
 with the RPS law in a way that is consistent with
 both the least cost planning statute and with its own
 least cost plan?
- A. (Mr. McCluskey) Well, I'm not the analyst that
 reviews the Company's energy service filings. But
 I'd be very surprised if the Company were not trying
 to minimize the cost of making the RPS law by buying
 least cost RECs available, whatever class it's
 purchased in.
- 11 Q. And would you agree, in reviewing the PPA under the
 12 RPS law, the Commission must consider it in the
 13 context of RSA 378, the sections that include the
 14 least cost planning statute?
- 15 A. (Mr. McCluskey) Yes.
- 16 Q. Thank you. I have nothing further.
- 17 CHAIRMAN GETZ: Thank you.
- 18 Mr. Shulock.
- 19 CROSS-EXAMINATION
- 20 BY MR. SHULOCK:
- 21 Q. Good morning, Mr. McCluskey.
- 22 A. (Mr. McCluskey) Good morning.
- Q. I'd like to direct your attention back to Record
 Request No. 5 and then the analysis that you

- 1 conducted.
- 2 A. (Mr. McCluskey) Give me that? Which record request?
- 3 Q. It's Record Request No. 5.
- 4 A. (Mr. McCluskey) Is that the rate impact analysis?
- 5 Q. Yes, it is.
- 6 A. (Mr. McCluskey) Yeah.
- 7 Q. Now, PSNH developed a number of scenarios to
- 8 demonstrate the impacts of the PPA on energy service
- 9 rates in 2014. You subsequently revised that
- analysis using inputs you thought were more
- reasonable and came up with higher impacts; is that
- 12 right?
- 13 A. (Mr. McCluskey) Correct. I believe the year that
- 14 PSNH was using was 2015.
- 15 Q. I stand corrected.
- 16 What, if anything, does the impact on the energy
- service rates in 2015 tell us about the
- 18 reasonableness of the rates in the PPA over a 20-year
- 19 period?
- 20 A. (Mr. McCluskey) The cost-effectiveness of the rates?
- 21 Q. Yes.
- 22 A. (Mr. McCluskey) They don't tell us anything.
- 23 Q. Okay.
- 24 A. (Mr. McCluskey) Let me retract that.

The cost-effectiveness cannot be demonstrated through the rate impact analysis, which indicates little impact. The cost-effectiveness study essentially is comparing the cost of the products purchased with the, say the market price of those products. We can avoid doing that if we have competitive solicitation, and the bidders will determine what is the most appropriate price for a particular product. But absent that, we have to do this kind of analysis to determine whether it's cost-effective against using those standard tests.

Now, if when you do your rate impact analysis you include in -- you include in the avoided cost estimates, the market energy prices that you use in the cost-effectiveness study, I can say there's some connection. But the problem with a rate impact analysis is that the costs -- let's assume that it's -- that the particular project that's been analyzed is above market and there's a significant cost impact. What the rate impact analysis does is it spreads those costs over a much larger load, and it can have the effect of reducing what appears to be the impact of that on an economic project. So that's the danger in using the results of a rate impact

analysis to draw conclusions regarding cost-effectiveness.

Imagine we have a very, very small project, say 10 kilowatts, say a solar facility, that is shown to be extremely economical. Using the rate impact analysis, if you spread those economic costs over the total customer base of the company, you might find that there's a miniscule impact on rates. And the danger is that you would use that conclusion to say, well, it's something -- it's a project that maybe we should go ahead, when in fact the project could be two or three times more costly. So, that's the danger. I think that we should not use a rate impact analysis as the basis for determining cost-effectiveness.

- Q. Thank you. Now I'd like to direct your attention to IPP Exhibit 28.
- 18 A. (Mr. McCluskey) Okay.

- Q. In Subpart B of this data request, the IPPs asked you to calculate interest on above-market REC payments through 2025; correct?
- 22 A. (Mr. McCluskey) That's correct.
- Q. And your conclusion was that there would be \$74 million in additional interest on those

[WITNESS PANEL: McCLUSKEY|FRANTZ]

- above-market REC costs through 2025; is that right?
- 2 A. (Mr. McCluskey) That's what it says here.
- 3 Q. And do you remember what percentage -- what interest 4 rate you applied in calculating that?
- 5 A. (Mr. McCluskey) I believe I used 5 percent. I think
 6 it says in the second paragraph of the response,
 7 5 percent per annum.
- Q. And then we asked you to calculate interest on above-market REC payments through 2033; correct?
- 10 A. (Mr. McCluskey) Correct.
- 11 Q. And your conclusion was that, using a 5-percent

 12 interest rate, the above-market -- or the interest on

 13 the above-market cost of those RECs would be

 14 \$211 million; is that correct?
- 15 A. (Mr. McCluskey) That's correct.
- Q. And then you concluded that the total above-market
 REC payment with interest would be \$399 million; is
 that right?
- 19 A. (Mr. McCluskey) That's correct. I want to add this
 20 important assumption here. As I said earlier, the
 21 interest added to the cumulative reduction account is
 22 dependent not just on the interest rates but on the
 23 assumed market price for the product. Here I'm using
 24 the current price for Class I RECs, \$6.50, which is

- 1 just that; it's the current price. And it may not be 2 the price going forward. So, to the extent that RECs are priced above that level in the future, then the 3 amount of the above payment and the associated 4 interest from that payment would actually be smaller 5 than what's shown in this calculation. So I just 6 want to make it clear that this particular analysis 7 8 uses that assumption. And it's only an assumption.
- 9 Q. And just for point of clarification, I believe you
 10 said the current price that you used was \$6.50. And
 11 did you intend to say 16.50?
- 12 A. (Mr. McCluskey) I did. 16.50. That's correct.
- 13 Q. Okay. Thank you.
- 14 Now I'd like to draw your attention to IPP 30.
- 15 A. (Mr. McCluskey) Okay.
- Q. You're aware that in the Lempster Wind docket, the
 Commission permitted PSNH to purchase more RECs than
 were required for PSNH to meet its New Hampshire RPS
 requirements?
- 20 A. (Mr. McCluskey) I believe that's the case, yes.
- Q. Why is it your opinion that PSNH should not be permitted to do the same here and pass the cost of that acquisition on to its customers?
- 24 A. (Mr. McCluskey) It has to do with the difference in

prices. We believe that the prices in the PPA for RECs are well above market; whereas, in the Lempster agreement, it's my understanding that they were priced below the market. So it would actually make economic sense to sell RECs -- for PSNH to sell Lempster RECs, because they could get a higher price from some third party either in New Hampshire or Massachusetts. So, in that particular case, it made absolute economic sense to allow that to happen.

In this particular docket, where we have a different opinion from PSNH on whether the RECs are above market or below, we think it doesn't make economic sense to sell those RECs. It's much more economic to use them in order to meet PSNH's RPS obligation.

MR. SHULOCK: Thank you. I have no more questions.

CHAIRMAN GETZ: Thank you.

Mr. Rodier.

MR. RODIER: Mr. Chairman, I don't have any at this moment. But what I'd like to do is to leave the door slightly ajar, and maybe a little later this morning, ask maybe -- probably not any -- but maybe a few, at most, if that's okay.

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                         CHAIRMAN GETZ: Well, certainly the
         petitioner gets in this case --
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                         MR. RODIER: Okay. No questions.
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         That's okay. Thank you.
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                         CHAIRMAN GETZ: Okay. Thank you.
                         Mr. Edwards.
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                         MR. EDWARDS: Your Honor, I was a
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         little bit late in getting here this morning, and I'm
         assuming that Mr. McCluskey has had most of the
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         questions. But I assume Mr. Frantz is also up there
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         to inquire of him with any questions?
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                         CHAIRMAN GETZ: Yes.
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                         MR. EDWARDS: I'd like to start with
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         Mr. Frantz.
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                         CROSS-EXAMINATION
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    BY MR. EDWARDS:
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    Q.
         Were you aware that there were a couple of biomass
         plants in the U.S. that are 100 megawatts?
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         (Mr. Frantz) I don't have any particular knowledge of
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    Α.
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         those facilities, no.
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    Q.
         So you also probably wouldn't be aware that those
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         facilities don't just use forest-derived wood, then.
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         (Mr. Frantz) No.
    Α.
         They in fact use construction debris --
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    Q.
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[WITNESS PANEL: McCLUSKEY|FRANTZ]

1 MR. BERSAK: Objection, Mr. Chairman. Objection. He's already testified he doesn't know. 2 CHAIRMAN GETZ: Mr. Edwards, I mean, 3 this is verging from not cross-examination, but into 4 testimony on your part about what may or may not be 5 happening elsewhere. So I think you need to direct 6 7 your questions based on cross-examining Mr. Frantz on 8 his testimony. BY MR. EDWARDS: 9 Mr. Frantz, would you agree that the 67.5-megawatt 10 0. Laidlaw plant is probably the largest forest-driven 11

A. (Mr. Frantz) I'm aware it's the largest proposed facility for New Hampshire, and certainly one of the largest in New England. I can't say for sure whether it is the largest in New England.

plant in the U.S., or certainly in New England?

- Q. Would you agree that New Hampshire wood supply is tapped versus untapped -- in other words, there are other users?
- 20 A. (Mr. Frantz) There are certainly other users.

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Q. Would you agree that the 67.5-megawatt Laidlaw
project, the largest forest-derived biomass plant at
least in the state, will be located basically in the
middle of this tapped forest?

- 1 Α. (Mr. Frantz) Well, I don't quite understand what you mean by "tapped." But to the extent there are other 2 facilities, it's in an area where there are other 3 facilities nearby, depending how you define "near." 4
- Were you aware that liquidated harvesting is 5 Q. significantly happening in the Berlin area? 6
- 7 (Mr. Frantz) I'm not a forester, and my testimony Α. doesn't discuss liquidated forest practices. 8
- Are you aware of any sweeping legislative change that 9 Q. 10 has occurred in Maine as a result of liquidated harvesting? 11
- (Mr. Frantz) No, I'm not. I have a tough enough time 12 Α. keeping track of New Hampshire legislation. 13

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- Were you aware that one of these harvesters that can Q. no longer operate with this practice in Maine has 15 purchased and liquidated thousands of acres in close proximity to Berlin?
- (Mr. Frantz) I'm not aware of the forestry practices 18 Α. in Maine. 19
- 20 What impacts can wood shortages and/or cost increases Q. 21 have on biomass plants already operating?
- 22 (Mr. Frantz) Well, all else equal -- I am an Α. economist. I will say all else equal, large 23 increases in demand have an upward pressure on price. 24

- I don't believe forestry practices are exempt from supply and demand.
 - Q. Assuming there are six operating facilities in the North Country, with a combined output, let's say, of approximately 120-megawatts, is it your opinion that these plants offer more direct and indirect jobs than the 67.5-megawatt project would offer?
 - A. (Mr. Frantz) I haven't looked at each individual project and don't have the data for each individual project to know whether or not what their direct employment is or their indirect employment associated with those direct purchases of wood. To the extent that they have similar production technologies, input, uses, if they're larger, they probably have a somewhat significant effect on indirect and induced effects. But I did not look directly at those facilities.
 - Q. Does the continued existence of these plants contribute to the state's goal of 25 percent by 2025?
- 20 A. (Mr. Frantz) I think all the uses of renewable
 21 resources that are now used in the state and outside
 22 the state that are certified to meet the New
 23 Hampshire RPS requirements are important.
 - Q. Thank you.

- Mr. McCluskey, the expert for the City of

 Berlin, Skip Sansoucy, has stated that the existing

 infrastructure should save considerable capital

 costs. Do you agree with that concept?
- 5 A. (Mr. McCluskey) Capital cost of the plant? Is that 6 what you're referring to?

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- Q. The existing infrastructure should save considerable capital costs. I'm wondering if you agree with that concept.
- A. (Mr. McCluskey) Well, if he's referring to the
 existing infrastructure which Laidlaw would continue
 to use in the development of the plant, then,
 potentially, yes, it could avoid the need to acquire
 capital, acquire new assets. So, in theory, I can
 imagine the more plant that exists, the less that has
 to be spent by the developer.
 - Q. So, given the savings, would you agree this should lead to reduced debt service?
- 19 A. (Mr. McCluskey) It should result in a capital cost
 20 that's lower than it otherwise would be, which would
 21 have the effect of, under a certain capital
 22 structure, would reduce the amount of loans that they
 23 have to make and, hence, reduce the interest on those
 24 loans.

- Q. So if the project has less debt service, would you
 agree the project should produce cheaper power than a
 Greenfield project?
- (Mr. McCluskey) Not necessarily. There's capital 4 Α. costs, just one element of the cost of a project. 5 It's possible that a Greenfield project might use 6 7 equipment that's more efficient and, hence, reduce the operating costs. So the net effect could be a 8 reduced average cost for the facility than using --9 than starting with a facility with an existing 10 potentially inefficient power plant. 11
 - Q. In your opinion, have the savings in debt service been reflected in the rate structure now being considered in this PPA?

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- A. (Mr. McCluskey) I cannot comment on that. I don't know what effect the cost of the facility would take into the account in the development of the PPA prices.
- Q. In your opinion, has this project offered to sell its wrapped-up rates for less than other projects, other projects it proposed?
- A. (Mr. McCluskey) Well, I've testified to the fact that
 PSNH received unsolicited offers from two alternative
 biomass projects, and PSNH's own analysis showed that

- the levelized costs of those two unsolicited projects
 was lower than the levelized cost for the Laidlaw
 project.
- 4 Q. And do you recall those percentages?
- 5 A. (Mr. McCluskey) I believe the CPD project was
 6 8.5 percent lower than the Laidlaw levelized, and the
 7 Concord Steam project I believe was either 12 or
 8 12.5 percent lower.
- 9 Q. Thank you.

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- Mr. Frantz, as a specialist in your profession,

 I'm sure you understand the concepts of supply and

 demand and micro and macro economics, and deal with

 these concepts on a regular basis. And with your

 understanding of economics, in very generic form, can

 you explain economy of scale?
 - A. (Mr. Frantz) Economy of scale occurs when costs are reduced as output increases. Average costs are reduced as output increases.
- 19 Q. So, would you agree that this 67.5-megawatt project 20 should cost less than a smaller facility?
- A. (Mr. Frantz) Well, you know, I think in general,
 without looking at the actual facilities -- the
 boiler, the actual fuel contracts -- there are a lot
 of variables that go into that. And so I'll fall

- back on my ceteris paribus, "all else equal." A
 larger facility would have lower average costs than a
 much smaller facility. But for any particular
 project, I think you have to look at the actual cost
 of the project.
 - Q. Would you not agree that a 67.5-megawatt project like this would have a significant advantage over much smaller plants in its utilization of labor?

- A. (Mr. Frantz) The project stated that it would use 40 direct employees. I'm not aware of how many direct employees are at other facilities. Again, I think you need to know what exactly the labor force is, how many shifts, in general. I haven't conducted that analysis. So, to extend what is a traditional economy of scale or scope to an individual project I think would border on reckless.
- A. (Mr. McCluskey) If I could just add? I think your question was going to cost. But remember that Laidlaw is not a rate-regulated entity. Utilities establish their prices based on costs. This is not a utility. Typically, the prices that they charge for the products that they produce are based on the market. They're in competition with other providers of the same products. So you could well have a

facility that has actually got a lower average cost, and they rightfully receive a price -- the same price as anyone else because that is the way markets work. So I just wanted to make clear that there's a distinction between cost-based pricing and market-based pricing that we are addressing -- supposed to be addressing for the Laidlaw facility.

Q. Thank you, Mr. McCluskey.

So, Mr. McCluskey, in your opinion, why could smaller plants provide rates that have been quoted recently of 8.5 and 12.5 percent below that of a larger plant?

- A. (Mr. McCluskey) Well, I'm not sure which plant you're referring to. I'm not sure where the information comes from. So I really can't comment on those prices at all.
- Q. I guess what I'm asking is, I'm referring back to the two percentages you referred to recently of 8-1/2 percent and 12-1/2 percent. You mentioned one came from Clean Power. And I guess what I'm asking is, why could those smaller plants provide rates that have been quoted recently of 8.5 and 12.5 percent less than a 67.5-megawatt plant?
- A. (Mr. McCluskey) Sorry. I misunderstood you. I guess

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those two projects submitted bids that they felt they could live with and make the required returns that they need to stay in business. If the levelized prices that I referred to had been the result of a competitive bid -- which you heard we've not got one here -- but had they been the result of a competitive bid, then the Laidlaw project would not win out. Presumably, they would select, after taking into account other criteria, they would select the least cost bidder. And that's, I think, the way it should Regardless of the size of the project, how efficient the equipment is of the project, at the end of the day, if a particular developer wants the business, they will sharpen the pencil and attempt to undercut the prices that he feels other developers will offer. And we think that's how it should be done, and the lowest bidder should receive the contract.

Q. Thank you. When it comes to federal grant funds, I'm a little fuzzy. So you'll have to excuse me if I'm not asking these questions entirely correctly.

Please feel free to correct me.

Just talking a little bit about federal grant funds. Throughout the SEC process, prior to this

process with the PUC, it's been mentioned about grants and that grants are available that amount to 3 percent of the capital costs; is that correct?

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the facility.

- A. (Mr. McCluskey) There are different federal grants.

 The ITC program -- investment tax credit, I can't

 believe I forgot that. The invest tax credit does

 provide a significant helping hand to developers.

 And I think it is on the order of 30 percent of the

 capital costs of the facility paid over the life of
- Q. Is it true the eligibility requires construction by a certain point?
- 13 (Mr. McCluskey) I don't really know the details as to Α. 14 how -- what they need to do to qualify for those things. It's my understanding that the Laidlaw 15 project does qualify for the ITC, or a version of it, 16 which is actually a little bit more beneficial. 17 they also receive a grant under the new market 18 development something. So my understanding is that 19 20 they are availing themselves of those two 21 opportunities, which I think all renewable projects 22 would attempt to seek. So there is certainly nothing wrong with the developer getting the helping hand. 23 So they have two choices of how they're going to get 24 Q.

1 compensated.

23

- 2 A. (Mr. McCluskey) Say that again?
- Q. They have two different choices as to how they're going to get compensated on these grants?
- A. (Mr. McCluskey) No. They actually qualify for both,
 the ITC, or a version of it. And they also receive
 some additional funds through a different federal
 program.
- 9 Q. Okay. So, is one of these choices to earn
 10 protection -- production tax credit and sell it as a
 11 revenue source?
- 12 A. (Mr. McCluskey) No. The protection tax credit is an
 13 alternative to the ITC. I think the general feeling
 14 is that the ITC is more financially beneficial. So
 15 they could use the ITC, or they could use the ITC or
 16 a version that came out of the American --
- 17 A. (Mr. Frantz) American Recovery Act.
- A. (Mr. McCluskey) -- American Recovery Act. And I
 believe they selected the one that gives them the
 biggest helping hand. And they've also availed
 themselves of funds through the new market
 development program.
 - Q. So, is it one of these programs where they get the lion's share of their funds right up front as opposed

1 to over time?

- A. (Mr. McCluskey) The modified ITC, my understanding, that's the case, I believe, yeah. Instead of receiving it over a period of time, they receive it upfront.
- Q. With what you know, has the financial information you're aware of been reflected in the pro forma of the rates where these -- where this company has the benefit of these grants?
- A. (Mr. McCluskey) Well, Staff is not aware of the detailed negotiations between PSNH and Laidlaw. What work PSNH did on these grants and how they worked those into their determination of what a reasonable set of prices are, we don't know. We can't comment on that. The Commission issued a decision which said that those discussions are confidential.
- Q. With your knowledge of the project, if the Company chooses to take the grant funds 60 days after start-up, do you agree that that amount will be somewhere in the range of \$45- to \$70 million?
- A. (Mr. McCluskey) I don't have that figure in my head.

 When I did the financial modeling using the cash flow analysis, it was easier to model it using the production tax credits. So the fact that I didn't

- 1 use the ITC version, I don't have a figure in my head as to what would be the amount of dollars that they 2 would receive. 3
 - Would you agree that if the owners take that grant Q. after 60 days, that they no longer are at risk for their initial investments?

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what?

- 7 (Mr. McCluskey) No. There is a capital cost Α. associated with the facility which will not be 8 covered by the federal government in total. And 9 there's always the potential for the cost of the 10 11 project to be higher than what it initially estimated. And so there is some risk which they are 12 not compensated for through the PPA prices. When I 13 14 say "not compensated," there's no automatic adjustment mechanism that increases the PPA prices if 15 the capital cost of the project rises. 16 So, the 17 company is at risk that it could be more costly than it initially estimated. 18
 - Q. Would you agree that that risk would be significantly dropped?

MR. BERSAK: Mr. Chairman, I think we've gone well beyond Mr. McCluskey's testimony. CHAIRMAN GETZ: Actually, risk of Would you remind me what the underlying

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question is? The risk of recovery of their
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2
         investment?
                      Is that what your --
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                        MR. EDWARDS: Yeah, their initial
4
         investment.
5
                         CHAIRMAN GETZ: Mr. McCluskey?
         (Mr. McCluskey) What's the question again?
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7
    BY MR. EDWARDS:
         Do you agree that their initial investment would be
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    0.
         dramatically decreased, as far as the risk would be
9
         dramatically decrease?
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11
                        MR. BERSAK: I don't believe, Mr.
12
         Chairman, Mr. McCluskey discussed development costs,
         development risks, investment tax credit, the new
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         market credits, or any of that in his testimony.
14
         We've given Mr. Edwards great latitude in asking
15
         questions. Sounds like, to me, he's more testifying
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17
         than cross-examining.
                         CHAIRMAN GETZ: Well, I think that
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         this line of questioning may in some respects go to
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         Mr. -- can be related to Mr. McCluskey's testimony.
                         But Mr. Edwards, it seems what it's
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22
         directed at is trying to elicit from Mr. McCluskey
         some judgment about the internal returns or
23
         assumptions of the Company, which he's testified to
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- that he's not aware of those issues. So I do think
 that it is duplicative.
- MR. EDWARDS: Thank you.
- 4 BY MR. EDWARDS:

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- Q. Mr. Frantz, if we could turn for a moment to talking about loggers. It's been said that many loggers have gone out of business in the state as a result of lost business and that loans will be made available for these loggers to purchase new machinery for their trade; is that correct?
- 11 A. (Mr. Frantz) My testimony doesn't address loans for
 12 loggers. If you have a particular question
 13 concerning labor force associated with it, I'd be
 14 happy to talk about that.
- Q. Do you have any idea how much it would cost for a logger to set up enough equipment to be able to function as a viable business?
- A. (Mr. Frantz) Are you assuming that they either start from scratch or have already sold their equipment?
- 20 Q. They've already sold their equipment.
- 21 A. (Mr. Frantz) It's a significant investment.
- Q. Do you believe in the definition that biomass-grade wood is waste wood, such as tops and branches?
- 24 A. (Mr. Frantz) Normally, the wood is actually the tops

- 1 left over from logging operations, or limbs, branches
 2 that's been used for biomass.
- Q. Would you agree that roundwood or pulpwood,
 economically speaking, does not fall into this
 category?
- A. (Mr. Frantz) By definition, roundwood and pulpwood are different uses.
- 8 Q. So, would you agree that the highest and best use of 9 roundwood which can be sold to a different user for, 10 say 48 per ton, is not to sell it to Schiller or some 11 other biomass company for 27 per ton?

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- A. (Mr. Frantz) I think you have some assumptions in there that there isn't a viable alternative for those higher-valued wood products, and therefore they would find their way to a lower value option.
- 16 Q. Hasn't 1.3 million tons described as "available due to the closure of mills recently" been focusing on roundwood, pulp, which is a waste to sell it twice the amount per ton?

MR. BERSAK: Objection, Mr. Chairman.

Mr. Frantz already said he didn't testify regarding

wood?

23 CHAIRMAN GETZ: Mr. Edwards, any response?

MR. EDWARDS: Your Honor, I'm just trying to point out that there's two different prices of two different types of wood, and there's a significant difference in price per ton. And I'm just trying to find out from an economic standpoint what Mr. Frantz's thoughts are regarding that.

CHAIRMAN GETZ: Mr. Frantz?

- A. (Mr. Frantz) Well, I think that most rational people would rather sell a higher valued product than a lower valued product. And to the extent there's a market, I'm sure they'll look for that market for the higher valued product. If it's not there, I think that's going to affect their decision on what to do with that value of the product. If they can find other markets, even if it's less, they may actually go after those markets.
- Q. What do you think the likelihood would be of a logger purchasing new equipment if he had no market beyond \$27 per ton, if the whole tree were to go for this reasonable purpose?
- A. (Mr. Frantz) I think there's a lot that goes into deciding whether or not you're going to invest a lot of money into an operation. And obviously included in that is what kind of markets are out there and how

- 1 long will they be there and how much competition do I have and what are my financing rates. 2 I mean, there's a lot of areas that are there. And I think 3 you are much better off asking someone who's a 4 logger. 5 CHAIRMAN GETZ: Mr. Edwards, how much 6 7 more do you have along this line? MR. EDWARDS: I have two more 8 9 questions, Your Honor. BY MR. EDWARDS: 10 If we were to place the entire tree into the boiler 11 0. at the Laidlaw plant, at what efficiency rate did we 12
- achieve in burning the entire tree?

 CHAIRMAN GETZ: Are you suggesting

MR. EDWARDS: You chip it first.

without chipping it or what?

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- A. (Mr. Frantz) If it's all chipped, it's still going to burn at the same levels as the tops. It's going to be whatever the efficiency factor is of that boiler.
- Q. And we've been told that the efficiency factor of this plant is what?
- A. (Mr. Frantz) Well, most wood plants are in the 18,000 to 22,000 BTUs per-kilowatt-hour basis. To the extent this boiler is more efficient, it might be in

[WITNESS PANEL: McCLUSKEY|FRANTZ]

- the 14 to 15,000 BTUs per-kilowatt-hour basis.
- Q. So is that a percentage efficiency in the low 20s
- 3 range, 20, 22, 23 percent?
- 4 A. (Mr. Frantz) Those are what most people would
- 5 consider fairly inefficient heat rates for an
- 6 operation.
- 7 Q. What would you consider to be an average?
- 8 A. (Mr. Frantz) Well, it depends on the fuel you're
- 9 talking about.
- 10 Q. For a plant like this.
- 11 A. (Mr. Frantz) For burning biomass?
- 12 Q. Hmm-hmm.
- 13 A. (Mr. Frantz) You can get down to 13-, 14,000 BTU per
- 14 kilowatt hour. That's a pretty good heat rate for a
- 15 biomass facility.
- 16 Q. What percentage would you say that is?
- 17 Twenty-five-percent efficiency?
- 18 A. (Mr. Frantz) I'll have to calculate it. I'd have to
- 19 check and get back to you.
- 20 Q. I guess what I'm getting at is, from an economic
- 21 perspective, does it make any economic sense to use a
- whole tree at a 25-percent efficiency rating?
- 23 A. (Mr. Frantz) Well, I think I answered that when I
- said it would depend a lot on if you didn't have any

- other better or higher value reasons to sell that
 wood. If you have sawlogs, much rather sell sawlogs
 and then just work your way down.
- 4 Q. Thank you.
- 5 Mr. McCluskey, just a hypothetical. If
 6 Noble/Brookfield was to fill capacity in the Coos
 7 Loop, what would Laidlaw need to do?
- 8 A. (Mr. McCluskey) Could you give me that again?
- 9 Q. If the Noble/Brookfield 100-megawatt project filled
 10 the capacity in the Coos loop, what would Laidlaw
 11 need to do?
- 12 A. (Mr. McCluskey) Well, I assume the transmission line
 13 would have to be expanded in order to send the output
 14 to the low centers in New Hampshire and elsewhere.
- 15 Q. What if the loop wasn't expanded? What would Laidlaw need to do?
- 17 A. (Mr. McCluskey) If it wasn't expanded?
- 18 Q. Yes.
- 19 A. (Mr. McCluskey) Well, I can't see how, in that
 20 hypothetical, how the project would proceed.
- 21 Q. Is that expansion a requirement of this PPA?
- 22 A. (Mr. McCluskey) Not to my knowledge.
- 23 Q. Thank you.
- Mr. Frantz, in weighing out the economic benefit

- the Laidlaw plant can have for New Hampshire, the

 North Country, and Berlin, how much weight is given

 to the economic impact such a project can have?
 - A. (Mr. Frantz) Well, I mentioned in my answers to

 Attorney Hatfield that it's one factor, if you look

 at the statute, the economic benefits. There's a

 number of criteria, and this is one of those.
 - Q. Would you say that the economic benefit could outweigh the economic sensibility of a substantially higher rate to the ratepayer?
- 11 A. (Mr. Frantz) I believe I answered that, stating that
 12 cost-effectiveness, in my opinion, certainly should
 13 always be the key aspect of these criteria. I think
 14 that when all else is close to equal, then obviously
 15 you want to go with the economic benefits.
- Q. Are you aware that Brookfield/Noble are beginning their wind project next month?
- 18 A. Which project?

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- Q. Well, I'm referring to it as the Brookfield/Noble
 Project. That's the 100-megawatt project in the
 North Country.
- A. (Mr. Frantz) I'm aware of the Noble project. I
 thought it was 99-megawatts. I'm not aware of what
 stage of completion it's at.

1	Q.	I've been contacted by this company to find housing
2		for approximately 140 workers from outside of New
3		Hampshire, as well as 70 jobs from inside this area.
4		What immediate impact do you think that can have for
5		Berlin over the entire year economically?
6		MR. BERSAK: Objection. Facts not in
7		the record.
8		CHAIRMAN GETZ: What's the relevance?
9		MR. EDWARDS: I am trying to find out
10		from Mr. Frantz, by some very definite projects that
11		are in the works in Berlin, what kind of economic
12		impact those projects can have in comparison to this
13		one.
14		CHAIRMAN GETZ: And how would that
15		affect our decision in this case?
16		MR. EDWARDS: I understand that the
17		economic leg of your decision here is very important,
18		and I also understand that there are some very viable
19		projects coming to Berlin that are that could be
20		very important to that decision.
21		CHAIRMAN GETZ: Well, first of all, I
22		mean, you are testifying to what you know about facts
23		that aren't in evidence in this case. And I'm not
24		sure what the relevance of this line of inquiry is.

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So let's move along to your next set of questions.
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    BY MR. EDWARDS:
         Mr. Frantz, are you familiar with the federal prison
3
    Q.
         project coming to Berlin?
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                         MR. BERSAK: Objection.
                                                   Same
         objection, Mr. Chairman.
6
7
                         CHAIRMAN GETZ: Relevance, Mr.
8
         Edwards?
                         MR. EDWARDS: Well, Your Honor,
9
         between those two projects, there is 50 million in
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         payroll coming to the area, which I would think would
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12
         be a very valid argument as to some economic
         stability coming into Berlin. That's very important
13
14
         to Berlin.
                         CHAIRMAN GETZ: Well, let me stop you
15
16
         there.
17
                         Mr. Frantz, is there any -- is your
         opinion with respect to this PPA affected by other
18
19
         economic developments and employment that would occur
         in Berlin or the Berlin vicinity?
20
21
                         WITNESS FRANTZ: Only to the extent
22
         that the multiplier effects mentioned by Dr. Shapiro
         assume in all I/O models that there's an unlimited
23
         supply of local labor for those multiplier effects to
24
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be realized, to the extent there are leakages in
1
         labor, because you can't get that supply of labor
2
         from the local economy, it reduces the effects on
3
         whatever project you happen to be analyzing.
 4
5
                         CHAIRMAN GETZ: Is that something you
         can quantify?
6
7
                         WITNESS FRANTZ:
                                          No.
8
                         CHAIRMAN GETZ: Mr. Edwards.
                         MR. EDWARDS: Your Honor, I have four
9
         more questions on this that I would like to ask Mr.
10
         Frantz, if I could.
11
                         CHAIRMAN GETZ: Well, let's see where
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13
         they go.
    BY MR. EDWARDS:
14
         Hypothetically speaking, if these two projects were
15
    Q.
16
         to go online as projected for this spring and summer,
17
         what kind of impact can a $50 million payroll have on
         the City of Berlin?
18
19
                         CHAIRMAN GETZ: When you say "these
20
         two projects," you're talking about the --
21
                         MR. EDWARDS: I'm talking about the
         windmill project and the prison.
22
         (Mr. Frantz) I think for the size of the city of
23
         Berlin, that would be a significant economic impact
24
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1 for the city.

- Q. Would you agree that, statistically, 90 percent of that payroll stands to go back into the community in Berlin?
 - A. (Mr. Frantz) I have no knowledge of whether -- how much of that goes back, actually, in the city of Berlin and how much is actually sent back to wherever those construction workers actually live. That's one of the concerns in all models, is what -- where does that savings go? Does it stay in the local community and recirculate and therefore drive the multipliers, or does it actually leak out of the economy?
 - Q. Turning to the value that the Laidlaw project can provide to Berlin to increase its assessed value, Mr. Frantz, we've been told by the City of Berlin's expert that the finished product could save the ratepayer in Berlin 17 percent. Are you familiar with whether or not that's over 20 years?
 - A. (Mr. Frantz) Are you talking about the taxpayer in Berlin or the electric ratepayer in Berlin?
 - Q. I'm talking about the taxpayer. In other words, that the impact that the assessed value can have on the total value of Berlin, the City's expert has stated that that figure is 17 percent. Are you aware that's

- 1 over 20 years?
- 2 A. (Mr. Frantz) I'm not aware of what period of time 3 that was for.
- Q. Okay. When it comes to economic development and assessing in a city, are you familiar with neighborhood codes?
- 7 A. (Mr. Frantz) No, I don't assess for tax purposes.
 8 I'm not an assessor.
 - Q. Would it surprise you that in close proximity to this mill there is a neighborhood code, called a Neighborhood Code C, that has a 20-percent decreased rating as a result of all of the properties within close proximity to this mill?

MR. BERSAK: Mr. Chairman, objection.

CHAIRMAN GETZ: I'm going to permit

this question. Let's move along.

17 BY MR. EDWARDS:

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Q. I'm curious, from an economic standpoint, if this mill is impacting a 17-percent decrease from what the City's expert tells us, but it's having a 20-percent decrease impact on a substantial number of properties in close proximity to the mill, would you agree that that 17 percent is not necessarily accurate?

MR. BERSAK: Objection, Mr. Chairman.

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1	CHAIRMAN GETZ: Well, I'm going to
2	permit this because it's a similar line of
3	questioning we've heard from other witnesses, and I'd
4	like to get an answer from Mr. Frantz, if he has one.
5	WITNESS FRANTZ: Could you repeat the
6	question?
7	CHAIRMAN GETZ: 'Cause I think
8	ultimately where we were with the previous witness
9	was that you were raising the issues of whether there
10	could be positive or negative effects on residences
11	or business near to the plant, depending on certain
12	assumptions. Is that
13	MR. EDWARDS: Correct.
14	A. (Mr. Frantz) Well, if that's the question, then I
15	think the answer is yes.
16	Q. Thank you. I have no other questions.
17	CHAIRMAN GETZ: Okay. I think it's
18	about time for recess. But let me try to get an
19	understanding of where we may be going.
20	Next to Mr. Boldt. Do you have an
21	estimate of how much cross you have?
22	MR. BOLDT: Maybe an hour, Your
23	Honor.
24	CHAIRMAN GETZ: Okay. And Mr. Bersak?

prepared Staff Exhibit 14, that analysis?

A. (Mr. McCluskey) I did.

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Α.

Q. Okay. And if I am reading the second page of that
report, the middle tier of numbers, those numbers
confirm Mr. Sansoucy's testimony that there would be
between 300 million and 400 million in savings to the
ratepayers over the life of the PPA, depending upon

which variables are used in the forecasting; correct?

It --

(Mr. McCluskey) That's correct.

- 9 Q. Okay. In fact, your numbers show it would be 336
 10 million to 391 million, depending upon which
 11 variables; correct?
- MS. AMIDON: Mr. Chairman, would you
 ask Mr. Boldt to show down so that Mr. McCluskey can
 hear the questions?
- 15 BY MR. BOLDT:
- 16 Q. Are you having any trouble hearing me, sir?
- A. Well, I was responding to your previous question, and you cut me off and started on another question.
- 19 Q. I'm sorry. I thought I heard a "Yes," so I went on.
- 20 A. (Mr. McCluskey) I was going to add something to the
 21 "Yes."
- Q. Well, if there's much that needs to be added, I'll
 allow Ms. Amidon to come back and redirect. I think
 that might be the most efficient way of handling

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         this, since we are trying to do a limited time for
         the Commission.
2
                         CHAIRMAN GETZ: Well, actually, let me
3
4
         set the ground rules.
5
                              BOLDT: Okay. You always can.
                         MR.
                         CHAIRMAN GETZ: Certainly I'd like all
6
         witnesses to answer "Yes" or "No" as directly as
7
8
         possible to the question from counsel. But I also
         think it is more efficient if they have the
9
         opportunity to explain at a time more related to the
10
11
         questions rather than waiting for redirect. So it's
         helpful to our understanding of what's going on.
12
13
                              BOLDT: I'll do my best, Your
                         MR.
14
         Honor.
15
                         CHAIRMAN GETZ:
                                         Thank you.
16
    BY MR. BOLDT:
17
    0.
         So did I read the two numbers from your calculations
         correctly?
18
19
    Α.
         (Mr. McCluskey) You did. Whether they agree with
20
         statements made by Mr. Sansoucy or not, I couldn't
21
         say. These are the numbers that result from the
22
         analysis that I did.
23
         Okay. And whether that analysis or Mr. Sansoucy's
    Q.
         analysis is correct, again, depending upon which
24
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- variables are used, you'd agree with me that there is then no fund, no dollars in the cumulative reduction fund at the end of the 20-year period; correct?

 (Witness reviews document.)
- 5 Q. There is a savings to the ratepayers over that period; correct?

A. (Mr. McCluskey) Well, let me just think about the question. The cumulative reduction fund relates only to energy payments. And so you seem to be focusing on the total above- or below-market calculation under the second block.

So, recognizing that the cumulative reduction account applies only to energy, could you give me your question again?

- Q. If these numbers are correct, is it your opinion that there is or is not money in the cumulative reduction fund at the end of the period?
- A. (Mr. McCluskey) You cannot answer that question based on these numbers, because this second block shows for each year an above- or under-market amount. What it does not address is whether the energy costs are above or below the energy costs in the PPA.

Let me say that again. It does not address whether the market energy prices are above or below

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         the energy prices in the PPA.
1
         Okay. Thank you for that clarification.
2
    0.
                         CMSR. BELOW: Excuse me.
3
                                                   I just need
         to interrupt because I don't understand where we're
 4
              If we're looking at Staff Exhibit 14 --
5
         at.
                              BOLDT: Yes, sir.
6
                         MR.
7
                         CMSR. BELOW: -- to get to the overall
8
         number, don't you compare the total in the first
         block with the total in the second block?
9
                         WITNESS McCLUSKEY: That's correct.
10
         That's correct.
11
                         CMSR. BELOW: And can't you look at
12
         the second page and look at the total for energy in
13
         the first block, which is 965 million, versus energy
14
         in the second block, which is 1,274,000,000?
15
                         WITNESS McCLUSKEY: That's correct.
16
17
         That would be one way of doing it. So the issue is
         whether the Ventyx market energy prices with carbon
18
19
         is a reasonable proxy for market energy prices going
20
         forward.
21
                         CMSR. BELOW: But if you use those
         numbers, wouldn't that indicate whether you're over
22
         or under market over the term, using these
23
24
         assumptions?
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[WITNESS PANEL: McCLUSKEY|FRANTZ]

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1
                         WITNESS McCLUSKEY: If you assumed
         that the -- with carbon, Ventyx energy prices were a
2
         reasonable proxy of future market energy prices, then
3
         these numbers would indicate that there would be no
 4
         above-market energy costs.
5
                         CMSR. BELOW: Okay.
6
                                              Thank you.
7
                        MS. AMIDON: Mr. Chairman, I
8
         apologize. Would Mr. McCluskey please speak into the
         mic for the benefit of the stenographer? Thank you.
9
    BY MR. BOLTON:
10
         Mr. McCluskey, also on that same line, I believe you
11
    Q.
         testified this morning that you were concerned with
12
         the CRF that would create a violation of the use and
13
         useful principle.
14
15
        (Mr. McCluskey) Used and useful.
    Α.
         Used and useful. Thank you.
16
    Q.
              Now, if we are assuming there is no dollar
17
         amount in the CRF, there is, I assume, no violation
18
         of the used and useful principle; correct?
19
20
         (Mr. McCluskey) That's correct. If in every hour
    Α.
21
         customers were not asked to pay above-market costs,
22
         then there would be no additional payment to finance
         the future purchase of a power plant. That's
23
24
         correct.
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Q. Now, to be fair to your position, your Exhibit 14
does support your contention that there is a
300 million to 400 million overpayment to the
ratepayers over the life of the PPA, depending upon
certain variables that you've selected; correct?

- A. (Mr. McCluskey) Correct. The 333,000,000
 above-market figure assumes a 63-megawatt power plant
 with 87.5-percent capacity factor. And it assumes
 the products, the market prices of the products are
 as detailed in the Ventyx 2010 study.
- Q. So, isn't it safe to say that, depending upon which variables change over the life of this PPA, there could be different swings in whether it's an overpayment by the ratepayers or a savings to the ratepayers; correct?
- A. (Mr. McCluskey) Correct. If you're talking about actual prices as opposed to forecasts? Yes.

 Depending on how the actual prices turn out, that would determine whether the PPA at any point in time is above or below market.
- Q. Now, I believe you testified during your additional direct back last Tuesday, on February 1st, that you had two major variable changes that you were suggesting should take place. My notes reflect the

- first was that you wanted to replace the Ventyx 2009
 market energy projections with carbon legislation; as
 used by Mr. Sansoucy, with the Ventyx 2010 market
 energy projections without carbon legislation.
- 5 Correct? That's the first one.
- 6 A. (Mr. McCluskey) That's correct.
- 7 Q. And the second one, my notes reflect that you wanted
 8 to replace the Ventyx 2010 REC pricing -- use the
 9 2010 REC pricing projections instead of the REC
 10 prices set by this PPA; correct?
- 11 A. (Mr. McCluskey) That's correct.
- Q. Okay. Now, if you would, concerning that first
 variable change, the "with" versus "without" carbon,
 are you saying that your crystal ball projections,
 you're confident that we're never going to have
 carbon legislation?
- 17 A. (Mr. McCluskey) No, I'm not saying that.
- 18 Q. Okay.
- A. (Mr. McCluskey) What I'm saying is that the base case assumed by the Ventyx modelers, they apparently have determined that there is not a sufficient probability that carbon legislation or climate-change legislation will pass at the federal government level; and, as a result, they've determined that it should not be in

- 1 their base case projection.
- Q. That's your assumption based on your read of the Ventyx report?
- 4 A. (Mr. McCluskey) That's right.
- Q. Now, in reading the Ventyx report, did you review its executive summary?
- 7 A. (Mr. McCluskey) I did, yes.
- 8 Q. Okay. You have it in front of you; correct?
- 9 A. (Mr. McCluskey) I do.
- Q. And I believe the Commission has that document as
 well. If you turn to Page ES1, first page of the
 executive summary, do you see at the beginning of the
 second paragraph -- are you all there?
- 14 A. (Mr. McCluskey) Yup.
- 15 Q. -- where it reads, This Fall 2010 reference case

 16 assumes no federal climate legislation. Throughout

 17 2010, the likelihood of federal GHG legislation -
 18 Greenhouse gas -- is that your understanding of that

 19 acronym?
- 20 A. (Mr. McCluskey) That's correct.
- 21 Q. The likelihood of federal GHG legislation passing
 22 continually decreased as of November 2010, with no
 23 current active legislative. The act -- flipped my
 24 page too quick. The likelihood of a climate bill

- passing in the next two years is low as a result of
 the current political climate. The Fall 2010 North
 American Power Reference Case does not assume the
 implementation of GHG legislation during our forecast
 period. Did I read that correctly?
- 6 A. (Mr. McCluskey) That's correct.
- Q. Okay. Now, you'd agree with me that, just as wind blows on a turbine, winds blow in the political arena back and forth, without any real ability to predict; correct?
- 11 A. (Mr. McCluskey) Policy issues can change. I agree
 12 with that.
- Now, staying on ES1, let's continue on. 13 You see Q. 14 where it states, Similarly -- that same paragraph. Similarly, Ventyx does not assume the implementation 15 of a federal renewable energy standard as well and 16 that the Fall 2010 reference case meets individual 17 state RPS -- renewable portfolio standard -- through 18 the study horizon. Did I state that correctly? 19
 - A. (Mr. McCluskey) You did.

Q. Okay. And then the conclusion of that paragraph, you see where it states, The Fall 2010 Federal
Environmental Legislation Case assumes the implementation of Federal Greenhouse Gas legislation

- and nationwide renewable energy standard beginning in 2015. See that?
- 3 A. (Mr. McCluskey) Yes, I do.

- Q. So wouldn't you agree with me that this Ventyx report
 both does and does not use carbon in its 2010
 forecasting, just as Mr. Sansoucy did in his
 Exhibit 9?
 - A. (Mr. McCluskey) No. With regard to the forecast energy prices, it's clear that there is no assumption of carbon in those energy prices. Now, that does not mean to say that Ventyx might have other scenarios that it's developed. But in terms of the energy prices which run through the term of this PPA, it's my understanding that there is no assumption of carbon regulations that would increase cost and increase prices.
 - Q. Okay. But again, that's one of the variables, with or without. And the Ventyx executive summary reflects that their report uses both. Gives a scenario with and gives a scenario without; correct?
 - A. (Mr. McCluskey) They may well have some other scenarios. But in terms of the energy prices that we are using in this particular proceeding, they -- it's my understanding that they do not include carbon.

- Q. That was one of the assumptions you selected in making your model, Exhibit 14; correct?
- A. (Mr. McCluskey) It's -- you say "one of the
 assumptions." I used the projection in the 2010
 Ventyx report. I'm not sure whether that's an
 assumption. I actually used the numbers that were
 reflected on Exhibit 10 to Mr. Sansoucy's testimony,
 which came from the 2010 report.
- 9 Q. So you didn't use -- just for clarity, you didn't use
 10 the portion of the Ventyx report that included
 11 carbon; correct?
- 12 A. (Mr. McCluskey) I did not. That's correct.
- Q. Okay. Now, before we leave this page, let's go down to the paragraph that begins, Under-market Overview.

 Do you see where they define the Northeast Region as including New York ISO, ISO-New England, Ontario,

 Quebec, and the Canadian Maritime Provinces?
- 18 A. (Mr. McCluskey) That's correct.
- Q. Okay. Now, concerning your second change of
 variables, whether or not to use the Ventyx 2010 REC
 pricing projections, let's turn in Ventyx to Page
 5-14, which includes -- it shows Table 5-1.

23 CHAIRMAN GETZ: Sorry. Say that 24 again? What page?

- MR. BOLDT: Page 5-14 has a Table 5-1
- that looks like this (indicating).
- 3 BY MR. BOLDT:

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Α.

- Q. Now, I'm correct, aren't I, that you used in your modeling for the REC prices the column that is entitled "Northeast"?

(Mr. McCluskey) That's correct.

- 8 Q. Okay. And you see at the top of that table that 9 these numbers are in 2010 dollars per megawatt hour; 10 correct?
- 11 A. (Mr. McCluskey) That's correct.
- 12 Q. That means there's no factor built in for inflation
 13 in these numbers; correct?
- 14 A. (Mr. McCluskey) That's correct.
- 15 Q. Now, turn back to Page 5-12. That's two pages

 16 before. Do you see that final sentence of that first

 17 paragraph where it states, In preparing the forecast

 18 REC values, Ventyx made the following assumptions in

 19 real 2010 dollars for marginal wind generators? So

 20 these are REC prices, wind REC prices; correct?
- 21 A. (Mr. McCluskey) That's what it says.
- Q. Okay. Now let's continue on with their assumptions, the bullets that are right there.
- The first one is they calculated the REC value,

- represents a marginal regional renewable energy resource. I read that correctly, didn't I?
- 3 A. (Mr. McCluskey) That's correct.
- Q. And they assumed the extension of the production tax credit per the American Recovery and Reinvestment Act of 2009.
- 7 A. (Mr. McCluskey) That's correct.
- 8 Q. Reading that?
- 9 A. (Mr. McCluskey) Yeah.
- 10 Q. Now, they state the PTC is 21 cents per kilowatt
 11 hour. Is that correct? Or do you think there's a
 12 typo there, that it should be 2.1?
- 13 A. (Mr. McCluskey) No, I think it's 21 cents. I need to
 14 check that. The PTC for wind is different from
 15 biomass. I need to double-check with regard to
 16 whether that's 2.1 or 21 cents.
- Q. Well, if it's 21 cents, then the PTC for a megawatt is \$210. If it's 2.1, it's \$21.
- 19 A. (Mr. McCluskey) That's correct.
- Q. Doesn't it make more sense that it's -- I mean, subject to check, obviously. But isn't -- your understanding is it's \$21, not \$210?
- A. (Mr. McCluskey) That's correct. I think that's correct. But as I said, I need to check on it.

[WITNESS PANEL: McCLUSKEY|FRANTZ]

	88
1	Q. We can check that.
2	MS. HATFIELD: Mr. Chairman, this is
3	the City's exhibit. So perhaps they could just
4	clarify that that is a typo rather than asking Mr.
5	McCluskey?
6	MR. BOLDT: I'm asking for his
7	understanding. It's our understanding it's a typo.
8	CHAIRMAN GETZ: Okay.
9	MS. AMIDON: Pardon me. So does that
10	mean that Mr. McCluskey doesn't have to go back and
11	do the calculation?
12	MR. BOLDT: I believe he's answered
13	my questions, Mr. Chairman.
14	CHAIRMAN GETZ: I'm taking that he's
15	accepted it, subject to check.
16	BY MR. BOLDT:
17	Q. Now, as we just discussed, that equates to a source
18	of revenue for the REC producer of \$21 per REC,
19	because a REC is 1 megawatt hour; correct?
20	A. (Mr. McCluskey) That's correct.
21	Q. Now, am I correct that your Exhibit 14 does not
22	include the \$21 per REC in your calculations?
23	A. (Mr. McCluskey) Actually, the \$21 is reflected in the
24	REC prices that's shown on the Table 5-1.

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1
    Q.
         Okay. Let me collar you on that, Mr. McCluskey.
2
         These numbers are the Ventyx numbers. And it clearly
         is stating that --
3
                         CHAIRMAN GETZ: Well, I'm losing
4
5
         track. When you say "these numbers," are you
         referring to --
6
7
                         MR.
                              BOLDT:
                                      In 5-1.
8
    BY MR. BOLDT:
         So let me ask the question a different way.
9
    Q.
              You're assuming that the column labeled
10
         "Northeast" includes the $21?
11
         (Mr. McCluskey) Yes.
12
    Α.
         And you have a negative number of $21 for 2011?
13
    Q.
14
         (Mr. McCluskey) No. If I could just explain? My
    Α.
         understanding of these REC prices, these are the
15
         results of a modeling exercise by the Ventyx people.
16
17
         It's my understanding that they have a supply and
         demand model, and they model what renewable resources
18
         will be at the margin and will establish the REC
19
20
         prices in this market --
21
    Q.
         So your --
22
         (Mr. McCluskey) If I could finish?
    Α.
23
                         CHAIRMAN GETZ: Let him finish.
24
                         MR.
                              BOLDT:
                                      Sorry.
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A. (Mr. McCluskey) And when they do -- in doing -- in implementing that supply and demand model, they determined what the costs are, what is required for a renewable resource in order to make that resource cost-effective. And you take into account in determining the required REC price that it just makes that resource competitive, and take into account all of the subsidies that are received from the federal government. The greater the subsidy -- in this case, the PTC subsidy -- the less they need in REC revenues to make them competitive.

So the result of the modeling of these REC prices reflect the fact that they are receiving incentives from the federal government. If they did not receive those incentives, they would -- the developers would demand higher REC prices, which would increase the prices that we see in Table 5-1. So in that sense, these REC prices reflect any grants or loans that they receive from the federal government.

- Q. That's your understanding of what Ventyx does; correct?
- 23 A. (Mr. McCluskey) That's my understanding, yes.
- Q. Okay. Now, let's look, actually, at what Ventyx says

they do.

On this same page, you see right below the first two bullets where it states, Ventyx has based its forecast of REC values on the premise that renewable energy generators rely on RECs to complement energy and capacity revenues to meet their production costs and levelized capital requirements. Another source of revenue is the PTC.

Now, would you agree with me that levelized capital requirements is a financing concept that basically extends a level payment over a certain period of years?

A. (Mr. McCluskey) That's the idea of a -- that's what levelized means. But this paragraph is supportive of what I said.

For renewable developers, there's three sources of revenue: Energy revenue, capacity revenue and RECs. These developers require a certain stream of RECs. Those that can bid into any competitive market at a low REC price are the ones that win these requests for proposals. And so this paragraph is supporting my statement that, for renewable developers, the capacity in energy revenues are not sufficient to provide the total return that they're

- 1 looking for. They need this third revenue stream. 2 And it's these prices that the modelers determine that these wind generators -- why wind? Because the 3 wind generators are generally the most cost-effective 4 5 renewable resource. They are the ones that are going to establish the model price for RECs. 6 7 else, biomass, solar facilities, will have to take 8 the REC price that the most competitive renewal generators produced. And that is life in the 9 competitive market. 10
- 11 Q. But aren't you --

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- 12 A. If you can't compete with the most cost-effective 13 renewable generators, you're not going to be in 14 business.
- 15 Q. So you said that there are only three sources of 16 revenue: Energy, capacity and RECs; correct?
 - A. (Mr. McCluskey) Well, there may be some plants that biomass may have a fourth stream, if they can sell some heat to some project. But typically, there are three sources of revenues for renewable generators.
- Q. But aren't you ignoring the sentence that Ventyx states, "Another source of revenue is the PTC"?
 - A. (Mr. McCluskey) No. The three major sources of revenue from the products sold. You can treat the

- PTC as another revenue stream if you wish. But,
 really, it's just subsidy that the federal government
 has in order to promote these kinds of resources. So
 if you want to treat it as a fourth source, fine.

 The effect of it is to reduce the REC revenues that
 the developers need.
- Q. So if the PTC was not there, the REC price would be correspondingly higher; correct?
- 9 A. (Mr. McCluskey) That's correct.
- 10 Q. Now look at the methodology that is listed at the
 11 bottom of Page 512 to the top of Page 513. The first
 12 step of Ventyx methodology is to estimate the average
 13 levelized capital requirement in dollars per megawatt
 14 hour by renewable type. Now, again, per the
 15 references above, this means we're talking about
 16 marginal wind; correct?
- A. (Mr. McCluskey) It says "by renewable type." So they are referring to different types of resources.
- Q. Well, the only one they're referring to in that page is marginal wind.
- A. (Mr. McCluskey) No. I think you're misunderstanding
 their calculation. I think their calculations are
 showing that the wind generators are the generators
 that establish the market price. This clearly states

- that they will -- that they've estimated the capital requirements by renewable type, not just wind.
- Q. Well, they don't use anything in its text other than marginal wind. You'd agree with me there?
 - A. (Mr. McCluskey) As I've said, their supply/demand modeling will include supply from various types of resources. Those resources that are at the margin in this supply/demand analysis are the ones that establish the price.
- 10 Q. Mr. --

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- 11 A. (Mr. McCluskey) So if we have a significant amount of
 12 wind resources, which are generally considered to be
 13 the lowest-cost renewable resources, we may have wind
 14 forcing out any other renewable projects, and their
 15 analysis may indicate that those wind generators are
 16 the ones that are going to establish the market
 17 price.
- Q. Mr. McCluskey, isn't it true that you stated in prior testimony that you've never seen the Ventyx report before; correct?
- MS. AMIDON: Mr. --
- 22 CHAIRMAN GETZ: I think that's a fair 23 question. Let's hear the question.
- 24 BY MR. BOLDT:

- 1 Q. You've never seen the Ventyx report before; correct?
- 2 A. (Mr. McCluskey) That is correct.

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- Q. So your testimony over the last couple minutes of
 what you believe Ventyx means in its report is pure
 speculation; isn't, sir?
- (Mr. McCluskey) No. I've been in this business for 6 Α. 7 30 years. I think I know how to read these reports. It's standard practice for modelers to create a 8 supply and demand model and stack up each type of 9 resource based upon their incremental costs. 10 resources that happen to be at the margin when the 11 demand is met are the ones that establish the price. 12 I'm reading this to say that those resources are wind 13 14 resources that are going to determine what the REC prices are. And any other resource, whether it be 15 biomass or solar, that wants to sell in this 16 17 Northeast market is going to have to accept the price established by the wind resources or they don't play 18 19 in that market.
 - Q. So you'd agree with me, then, that wind has a lower capital cost than wood, in part because it doesn't have fuel costs; right?
 - A. (Mr. McCluskey) Well, they don't have fuel costs.

 They are very, obviously, very capital-intensive.

The -- what's your question?

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- Q. That wind has a lower capital cost requirement than wood, in part because it has no fuel costs.
- 4 A. They have no fuel costs. I'm not saying that they
 5 have lower capital costs.
 - Q. So the industry standard of it's roughly \$2.5 million per megawatt for wind and \$3.5 million per megawatt for wood is something that you're familiar with and you would agree with?
- 10 A. (Mr. McCluskey) I'm not familiar with those numbers.
- 11 Q. Okay. Now, similarly, there's not usually a large

 12 residual job creation from a wind project as there is

 13 in the wood basket for a wood project; correct?
 - A. (Mr. McCluskey) I haven't studied the job creation of these resources, but I've heard that's the case.
- Q. Let's turn back to the methodology, the text that
 Ventyx actually says they use.

The second one there at the bottom of Page 5-12, do you see where it states they estimate expected gross margins, plural, for renewable generation in the state as a combination of the following: A, energy market gross margins -- again, plural -- from the Ventyx fall reference case; and the second is the production tax credit? Did I read that correctly?

- 1 A. (Mr. McCluskey) Yes.
- 2 Q. Now, the use of the plural, margins, it's safe to
- 3 assume that means both energy and capacity
- 4 projections, as included in the report?
- 5 A. (Mr. McCluskey) I think that's a reasonable
- 6 assumption.
- 7 Q. Okay. Going to the top of Page 5-13, the third step
- in their methodology is they calculate the deficit in
- 9 meeting the levelized capital requirements, Item 1,
- 10 from the gross margins -- again, plural -- calculated
- in Item 2. Did I read that correctly?
- 12 A. (Mr. McCluskey) Yes.
- 13 Q. And this means that these two products increase, then
- the price of the RECs declines; correct?
- 15 A. (Mr. McCluskey) I think what it's saying is that if
- the -- they're looking to see how much of the capital
- 17 costs of the facility will be covered from the energy
- 18 and capacity revenues. And to the extent that they
- 19 fall short, what is often referred to as
- insufficiency, it's the REC price that is designed to
- 21 make that up.
- 22 Q. But Mr. McCluskey, we have to use No. 2. And No. 2
- 23 states it's the energy and capacity margins -- we
- just discussed that -- and the PTC.

- 1 A. (Mr. McCluskey) Correct.
- 2 Q. Correct?
- 3 A. (Mr. McCluskey) Correct.
- Q. Okay. Now, the fourth step that they take is they
 calibrate the REC prices in 2010 through 2011 to
 reflect the currently traded REC market prices. Did
- 7 I read that correctly?
- 8 A. (Mr. McCluskey) Correct.
- 9 Q. Now, you recall Mr. Traum's revised direct testimony
 10 in this case, particularly Exhibit 5 of his
- materials. Do you have that available in front of you?
- 13 A. (Mr. McCluskey) I have his direct testimony. Which is it?
- 15 Q. The revised Traum exhibit -- or revised direct

 16 testimony that came in right before our first day of

 17 hearing. If you'd look at Page 22 of that document.
- A. (Mr. McCluskey) I have his direct testimony filed

 December 17th. Is that what you're referring to?
- Q. Well, there was a revised one. But that one should work. I think the exhibits are the same.
- 22 A. (Mr. McCluskey) Okay.
- Q. If you see Attachment KET5, which I believe is
 Page 22, it's a statement from Evolution Markets.

- 1 A. (Mr. McCluskey) Yes.
- 2 Q. Okay. And you see there at the bottom of that
- document where it states that there are 20,000
- 4 vintage 2010 RECs eligible as Class I in
- 5 Massachusetts, New Hampshire, Connecticut and Maine
- that were auctioned at an average price of \$13.16?
- 7 Did I read that correctly?
- 8 A. (Mr. McCluskey) I see that. Yes, you did.
- 9 Q. Okay. Now, simple math. "Average" means some that
- were higher and some that were lower; correct?
- 11 (Witness reviews document.)
- 12 A. (Mr. McCluskey) Yes. Since they're referring to
- 13 several states, this price presumably is referring to
- the average of different prices in different states.
- 15 Q. Okay. And it also states that there were 15,000
- vintage 2011 RECs eligible for Class I in those same
- 17 states that auctioned at an average of \$18.90. Did I
- 18 read that correctly?
- 19 A. (Mr. McCluskey) That's correct.
- 20 Q. Now, you'd agree with me that simple math would state
- 21 that that's a 43.6-percent increase in the market
- 22 price of Class I RECs in just one year; correct?
- 23 (Witness reviews document.)
- 24 A. It appears that the Class I average price has risen

- from one year to the next. That's correct.
- 2 Q. Now turn back to the Ventyx chart you used in your
- 3 calculation, Page 5-14. Let me know when you're
- 4 there.
- 5 A. (Mr. McCluskey) Just give me it to me once more.
- 6 Q. Page 5-14.
- 7 A. (Mr. McCluskey) Yes.
- 8 Q. The table you used in calculating Table 14.
- 9 A. (Mr. McCluskey) Okay.
- 10 Q. You'll see the first entry in the Northeast column
- 11 that you used for 2011 is \$13.56.
- 12 A. (Mr. McCluskey) That's correct.
- 13 Q. So the actual price, as reflected in Mr. Traum's
- Exhibit 5 of \$18.90, is similarly higher by a factor
- of 43 percent; correct?
- 16 A. (Mr. McCluskey) That's correct.
- 17 Q. But you did not use actual market prices in your
- 18 calculations in Exhibit 14; correct?
- 19 A. (Mr. McCluskey) That's correct. Nor did I use actual
- 20 energy prices or actual capacity prices. I used
- 21 consistently the forecasts contained in the Ventyx
- 22 report.
- 23 Q. Turn back to Page 5-13, the immediately prior page.
- Do you have water by any chance? Are you okay?

- 1 A. (Mr. McCluskey) I'm fine.
- 2 Q. You see in the middle there's that Figure 5-13?
- 3 A. (Mr. McCluskey) Yes.
- 4 Q. And that is labeled "Renewable Energy Credit Supply
- 5 Curve Example." And you see in the paragraph
- 6 immediately preceding that where this figure is
- 7 explained, correct, how they came up with it?
- 8 (Witness reviews document)
- 9 A. (Mr. McCluskey) Yes.
- 10 Q. And it states that it is a supply curve for all
- renewable assets in the appropriate renewable market
- 12 area. Did I read that correctly?
- 13 A. (Mr. McCluskey) That's correct.
- 14 Q. And you'd agree with me that this points to the
- different areas listed on Table 5-1, the one we were
- just referring to: Midwest, Northeast, the WECC,
- which is a western state region; correct?
- 18 A. (Mr. McCluskey) Just one moment.
- 19 Q. Sure.
- 20 (Witness reviews document.)
- 21 A. (Mr. McCluskey) Yes. I think the term "renewable
- 22 market area" would be referring to the different
- areas referenced elsewhere in the report.
- Q. And it states that the X axis, the axis along the

- bottom, shows the cumulative renewable capacity and
 cumulative gigawatt hours; correct?
- 3 A. (Mr. McCluskey) Correct.
- 4 Q. And that the Y axis, the one on the left-hand side,
- 5 represents the deficit calculated in Step 3 above.
- 6 See that?
- 7 A. (Mr. McCluskey) Yes. Just let me look at Step 3
- 8 again.
- 9 Q. Certainly.
- 10 (Witness reviews document.)
- 11 A. (Mr. McCluskey) Yes.
- 12 Q. Okay. Now, that deficit by that calculation does not
- include the \$21 PTC, does it?
- 14 A. (Mr. McCluskey) No, I don't believe that's the case.
- 15 Q. You believe that it does include or does not include?
- 16 A. (Mr. McCluskey) I don't -- when they determined the
- deficit, what I refer to as the insufficiency, they
- are saying what REC revenues they need in order to
- make these projects cost-effective.
- 20 Q. But they're taking into account the PTC in Step 2;
- 21 correct?
- 22 A. (Mr. McCluskey) That's correct.
- 23 Q. And they are subtracting from Step 2, Step 1;
- 24 correct?

- 1 (Witness reviews document.)
- 2 A. (Mr. McCluskey) Give me that question again?
- 3 Q. They are subtracting Step 1 from Step 2; correct?
- 4 (Witness reviews document.)
- 5 Q. To reach the deficit --
- A. (Mr. McCluskey) I think it's the reverse. I think they're subtracting 2 from 1.
- Q. Okay. Either way, it is subtracting an element that includes the PTC to reach the deficit, which is the REC price; correct?
- 11 A. (Mr. McCluskey) That's correct.
- 12 Q. So, simple mathematics means that you cannot have the
- element of the PTC on both sides of the equations;
- 14 correct?
- 15 A. (Mr. McCluskey) And I don't believe it is on both 16 sides of the equation.
- 17 Q. Thank you. So the REC price deficit does not include the PTC?
- 19 A. (Mr. McCluskey) No. I disagree. I believe it does.
- 20 All revenues from energy and capacity markets, plus
- any revenues from subsidies, are taken into account
- in determining what the required REC price is. And
- 23 it's that insufficiency or deficit that you refer to
- is what establishes the REC price.

 $\{DE\ 10-195\}[DAY\ 5\ -\ MORNING\ SESSION\ ONLY]\{02-08-11\}$

- Q. But your interpretation of what Ventyx is doing does not comport with what Ventyx says it is doing; correct?
- 4 A. (Mr. McCluskey) No.
- Q. When you have -- also, you see on that page that the flat section of the curve represents the costs of typical wind units, while the increasing portion of the stack represents new additions with higher capital costs? See that? Last sentence of that paragraph?
- 11 (Witness reviews document.)
- 12 A. (Mr. McCluskey) Yes.
- Q. Okay. And wood plants, like the one covered in this
 PPA, would be one such new addition with higher
 capital costs; correct?
- 16 A. (Mr. McCluskey) I believe so.
- Q. And it also states, continuing on at the bottom of
 this page, there is an increase in prices through
 2020 as state RPSs begin to ramp up and more capacity
 is needed to meet energy needs. Did I read that
 correctly?
- 22 A. (Mr. McCluskey) You did.
- Q. It continues. As we get past the bulk of these new renewable additions, and higher gas prices result in

- greater market revenues, RECs begin to decline and continue to do so throughout the end of our study horizon.
- 4 A. (Mr. McCluskey) That's correct.
- Q. Now, this greater market revenue is the result of increases in market prices for energy and capacity; correct?
- 8 A. (Mr. McCluskey) If it's energy revenue... if I can
 9 just read that?
- 10 (Witness reviews document.)
- 11 A. (Mr. McCluskey) The higher gas prices result in
 12 higher energy revenues. They are not going to impact
 13 the capacity market revenues.
- Q. But in essence, as gas prices, oil prices increase, that influences the energy prices; correct?
- 16 A. (Mr. McCluskey) If gas prices are at margin of units
 17 in a particular wholesale power market, then increase
 18 in gas prices will impact market energy prices. If
 19 the oil units are not at the margin, then the
 20 decrease in oil prices has no effect on the market
 21 energy prices.
 - Q. Now, you'd agree with me that it's a fairly safe assumption that oil and gas prices are going to. escalate in the future?

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- A. (Mr. McCluskey) I don't think you can necessarily say
 that they're going to increase. If you just go -- if
 you just look at the recent period from 2008 through
 the current period, gas prices -- natural gas prices
 have actually fallen.
- Q. And isn't it true that the standard price has usually been around \$6 per million BTU?
- 8 A. (Mr. McCluskey) For natural gas?

that nature; correct?

9 Q. Yeah.

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- 10 A. (Mr. McCluskey) It varies considerably.
- Q. Varied so much, in fact, during the life of this hearing it went to \$20 at the Newington station, didn't it?
- 14 A. (Mr. McCluskey) I've got no information to support that statement.
- 16 Q. Now, you'd agree with me that oil and gas prices
 17 escalate faster in periods of uncertainty,
 18 international risk, monetary crises, wars, things of
- 20 A. (Mr. McCluskey) Well, certainly oil prices respond to
 21 those effects. The natural gas market is very
 22 different from the international oil market. It's
- essentially a United States-based, natural gas-priced

24 market. So it's developments within the United

- States which generally drive natural gas prices. And there's been one major development which has impacted natural gas prices, and that is the development of shale, natural gas resources.
- 5 Q. That's the Marcellus Shale?
- A. Marcellus is one. But there's been significant deposits in Texas which were developed before Marcellus.
- 9 Q. You're aware that Marcellus has actually been put into a moratorium?
- 11 A. (Mr. McCluskey) No, I'm not aware of that.
- 12 Q. You're not aware of New York Senate Bill S8129B?
- MS. AMIDON: Mr. McCluskey answered
- 14 the question.
- 15 CHAIRMAN GETZ: Well, I think
- follow-up's appropriate. Let's get that on the
- 17 record.
- 18 BY MR. BOLDT:
- Q. You're not aware of New York Senate Bill S8129B that
- 20 passed putting a moratorium on the Marcellus gas
- 21 drilling?
- 22 A. (Mr. McCluskey) I'm not. But you need to understand
- that the Marcellus development runs into part of New
- 24 York, right through Pennsylvania and into West

- Virginia. The majority of the resources are in

 Pennsylvania. And I can tell you that the regulatory

 climate in Pennsylvania is significantly different

 from New York. So what New York does is not

 necessarily going to impact the production from that

 development.
 - Q. Are you aware of the 850-member Responsible Drilling
 Alliance in Pennsylvania that has called for such a
 moratorium in Pennsylvania?
 - A. (Mr. McCluskey) There has been activity in each of the three main states with regard to this resource.

 My understanding, based on conferences which I've attended, is that it's having very little impact in Pennsylvania on how much of the resource is developed.
- 16 Q. When was that last seminar you attended, sir?
- 17 A. (Mr. McCluskey) About year ago.

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- Q. Okay. Would you agree with me that Ventyx is saying that the REC prices decline in the circumstances of energy and capacity increasing because there is less of a delta to cover?
- A. (Mr. McCluskey) That's it. I'm trying to explain
 that, their supply and demand model. If the revenues
 from the energy market increase significantly, then

- there is going to be less of a insufficiency; and therefore, all developers of renewable resources require lower REC prices to achieve the target returns. And if those projects are decided based on competitive bids, those developers are forced to cut their prices to the bone just to achieve the minimum target returns that they're looking for. That's how this REC market works. It's very dependent on revenues from the other products to determine what the prices are in the REC market.
 - Q. In essence, there's is a seesaw back and forth with the market pricing.
- 13 A. (Mr. McCluskey) That's correct.

- Q. Okay. Now, you stated earlier in your testimony
 today that this PPA does fix the energy, capacity and
 REC prices. Would you agree that by taking those
 variables off the table, this PPA eliminates the
 seesaw back and forth?
 - A. (Mr. McCluskey) Well, I don't recall today talking about fixed prices within the PPA. I think I've testified that the capacity prices and the REC prices are fixed. The energy price has a fuel adjustment mechanism to it. So if fuel prices increase, then the energy price is going to decrease. That clearly

- is not a fixed energy price. That can vary depending
 on the volatility in the fuel costs incurred by
 Schiller.
- Q. Now, do you remember your testimony, when you were talking about some undesignated New York PPA that fixed the RECs and then used short-term energy and capacity pricing? Do you remember that testimony this morning, sir?
 - A. (Mr. McCluskey) The RFP establishes the price that developers will receive for RECs. The New York ISO markets, the conditions in those markets, capacity and energy, will determine the revenues that the developers receive for their energy capacity prices.
 - Q. So I trust the answer to my question is, yes, you do remember your prior testimony?
- 16 A. (Mr. McCluskey) I think I do, yes.

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- Q. And you stated at that time that that was a reason to support your basis, your opinion that this PPA did not have to have the fixed prices for each of the three elements.
- A. (Mr. McCluskey) I said it does not have to have fixed prices for energy and capacity. In fact, I was particularly talking about energy. I said that you could have a market-based energy price and that would

not necessarily preclude a renewable resource from being selected and being successful.

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- Q. Let me put you a hypothetical. If the market prices for energy, capacity and RECs increase above those set by this PPA, would you agree with me that the PPA is a good deal for the ratepayers and in the public interest?
- 8 A. (Mr. McCluskey) So you're saying if, after the fact,
 9 we look back and determine whether the market prices
 10 were actually above or below, we can conclude that it
 11 was a good or a bad deal. Is that what you're asking
 12 me?
- 13 Q. Correct. If our crystal balls, which are very murky
 14 right now, are clarified by actual events to show
 15 that this PPA is below market on energy, capacity and
 16 RECs, then this PPA is a good deal for the
 17 ratepayers; correct?
- 18 A. (Mr. McCluskey) After the fact, that's how it would 19 turn out. That's correct.
- Q. And isn't it true that your calculations in

 Exhibit 14 do not take into account the upcoming

 retirements of existing power plants that are listed

 in Mr. Sansoucy's rebuttal Exhibits 3, 4, and 4A?
 - A. (Mr. McCluskey) No, I don't agree with that. The

1 calculations in Exhibit 14 use the Ventyx energy 2 capacity and REC prices. Any retirement that the modelers for Ventyx -- they would determine when 3 various power plants will be retired. And that will 4 be one of the factors that determines what the future 5 market energy price will be. So, the market energy 6 7 prices that I'm using fully take into account the 8 prospect of new power plants coming online, old power plants being retired. 9

- You didn't do any independent modeling; correct? 10 0.
- (Mr. McCluskey) I did not. That's correct. 11 Α.
- 12 And you're assuming that Ventyx did. Q.

- (Mr. McCluskey) I'm assuming they would use the 13 Α. 14 standard techniques for creating a market price model.
- Now, let's look at some of your testimony concerning 16 Q. 17 wind versus wood. Is it your contention that there is no difference between a wind generator and a wood 18 19 generator; it's apples to apples?
- 20 (Mr. McCluskey) Could you point me to my testimony Α. 21 where I --
- I'm going in general and your direct on the stand 22 Q. last Tuesday. Put it this way -- well, let's just 23 24 open the question.

Is it your contention that there is no difference between a wind generator and a wood generator?

- 4 A. (Mr. McCluskey) From what standpoint?
 5 Cost-effectiveness?
- 6 Q. You pick the standard.
- 7 A. (Mr. McCluskey) Well --
- MS. AMIDON: I think we need a little
 more specific question to assist Mr. McCluskey to be
 able to answer.
- 11 BY MR. BOLDT:

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Q.

- Q. Well, you'd agree with me that it costs approximately
 2.5 million per megawatt for wind; correct?
- 14 A. (Mr. McCluskey) I don't have that figure in my head,
 15 no.
- 16 Q. So you've not used that in any of your comparison models?
- 18 A. (Mr. McCluskey) Not to my knowledge. You'd have to point me to comparisons that you're referring to.
- ISO-rated capacity for a wind generator is
 approximately 10 to 12 percent of the nameplate-rated
 capacity?

Let me ask this, then: Are you aware that the

24 A. (Mr. McCluskey) I may have heard that. I couldn't

- say. That's not in my memory at the moment.
- Q. Okay. Now, you do have the Lempster PPA in your memory; correct?
- A. (Mr. McCluskey) Any particular aspect you want to ask me a question about?
- Q. I do. But I wanted to make sure, because you
 testified previously on some benefits of the Lempster
 PPA. I don't want to get into exact minutia of it
 because it's confidential, but I'm wanting to make
 sure that I heard you correctly.

11 You're familiar with the Lempster PPA?

- 12 A. (Mr. McCluskey) I'm familiar with the pricing of the
 13 PPA. That's correct.
- 14 Q. Now, again, without giving me the exact figure used
 15 in the Lempster PPA, do you agree that the
 16 Lempster -- ISO-rated capacity for that project is in
 17 the ballpark of 10 to 12 percent?
- A. (Mr. McCluskey) That's not a PPA figure. When you talk about the Lempster PPA, I think you're talking about energy prices, capacity prices, REC prices.

 And anything else I have not researched.
- Q. Would you agree with me -- and my mathematical skills
 are limited I will admit -- that to get, in a
 hypothetical situation, 67.5 megawatts of capacity

- that the Laidlaw plant has, that you would need to produce 675 megawatts of wind if the ISO-rated capacity is 10 percent?
- A. (Mr. McCluskey) That's not a calculation I can do in my head. Subject to check, I'll accept that.
- 6 Q. Okay. Would you agree that that equates to 7 approximately 350 wind towers?
- MS. AMIDON: Mr. McCluskey said he
 couldn't calculate that in his head. I'm not quite
 sure where this question is going.
- 11 A. (Mr. McCluskey) I don't know the answer.
- 12 BY MR. BOLDT:
- Q. Okay. Now, the Noble wind project that was
 questioned by Mr. Edwards, I believe that is
 approximately 99 to 100 megawatts of power; correct?
- 16 A. (Mr. McCluskey) I heard Mr. Frantz say 99.
- Q. And that's approximately 50 towers? Is that your understanding?
- 19 A. (Mr. McCluskey) I couldn't say yes or no to that.
- 20 Q. Mr. Frantz, do you know?
- A. (Mr. Frantz) I actually don't know. I thought there
 were 3-megawatt towers for 33 --
- 23 (Court Reporter interjects.)
- 24 A. (Mr. Frantz) So there would have been 33 towers. But

1 I'm...

Q. So whether it is a factor of 300 new towers or 350 new towers to get the necessary 675 megawatts of power to equate to the Laidlaw plant, would you agree with me that we don't have mountain top in New Hampshire for 300 to 350 wind turbines?

WITNESS FRANTZ: May I answer that?

CHAIRMAN GETZ: Please.

- A. (Mr. Frantz) I think there's been reports done, one by Ross Gittell, stating that we had enough wind resources to support 2,000 megawatts of wind in New Hampshire. That was for the RGGI study that was ultimately used to pass the RGGI legislation.
- Q. Now, is that based solely on the wind rose, the charts of wind patterns in the state, not where you could actually site the tower?
- A. (Mr. Frantz) I think there's a big difference between what potential's out there and what actually gets sited and approved.
 - Q. And did it include offshore?
- A. (Mr. Frantz) I don't believe the study included
 offshore. But I think you'd need to refer to his
 study if you'd like.
 - Q. Do you agree with me -- let's go back to you, Mr.

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McCluskey -- that due to the lack of predictability
in the wind, each wind tower has to have an
appropriate oil- or gas-fired generator to back it
up?
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- A. (Mr. McCluskey) That's not something that I've been researching recently. I may have heard that in the past, but it's not like I could really comment on today.
- 9 Q. Mr. Frantz, do you agree?
- 10 A. (Mr. Frantz) It's clear that you need some resources
 11 to back up wind resources. I mean, most people -12 how much that is, what types of resources, you
 13 know...
- 14 Q. Has to have some backup, though; right?
- 15 A. (Mr. Frantz) Correct.
- Q. And you're both aware that the wind can blow too fast for a wind turbine and it has to shut down; correct?

 MS. AMIDON: I'm just wondering where
- 19 this is going, Mr. Chairman.
- 20 CHAIRMAN GETZ: I think this is a relevant line of inquiry. Let's move along.
- 22 A. (Mr. Frantz) In general.
- 23 BY MR. BOLDT:

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24 Q. Pardon?

- 1 A. (Mr. Frantz) I haven't looked at that. I don't know
- 2 where they cut out.
- 3 Q. But if there is a cut-out --
- 4 A. (Mr. Frantz) There is a cut-out at some point.
- 5 Q. And that creates a disruption in the grid; correct?
- 6 A. (Mr. Frantz) It can.
- 7 Q. Sure. Now, do you know whether wind creates
- inductive power or asynchronous power?
- 9 A. (Mr. Frantz) I'm not an engineer.
- 10 Q. Okay. Mr. McCluskey, do you know?
- 11 A. (Mr. McCluskey) I don't.
- 12 Q. Now, would you agree with me that it's the expressed
- 13 public policy in this state to support the forestry
- industry? Either of you.
- 15 A. (Mr. Frantz) Could you refer us to the specific
- 16 legislation?
- 17 Q. Certainly.
- 18 MR. BOLDT: If I may approach? Just
- 19 a couple statutory references.
- 20 (Atty. Boldt hands documents to the
- 21 witness. Witness reviews document.)
- 22 BY MR. BOLDT:
- 23 Q. The question was: Are you aware it is the expressed
- 24 public policy of the state to support the forestry

industry? And you asked were there some references.

I've handed you copies of RSA 227-G:1. Do you see

where it states that the public welfare of this state

requires the maintenance, protection, conservation,

multiple use and rehabilitations of forests for

social, economic, environmental benefits that result

from a diverse forest cover? Such benefits include a

viable -- excuse me. They include forest products, a

viable forest-based economy, recreation

opportunities, scenic values, healthful surroundings,

various other things.

You see there the text of RSA 227-I:1 talking about the need for accurate and detailed information concerning the state's forest resources? Did I read that correctly?

A. (Mr. Frantz) Yes.

Q. And you see RSA 227-J:1, where it states the public welfare of this state requires the care and protection of forest cover adequate to certain -- adjacent to certain waters of the state, along public highways, and the proper disposal of slash and mill residue resulting from forest operations in certain circumstances to help conserve the amount and quality of surface waters. It goes on with other public

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benefits. Did I read that correctly?
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- 2 A. (Mr. Frantz) Yes.
- 3 Q. And then, finally, RSA 672:1-III(c), this is the
- 4 zoning and planning enabling language that states
- that forestry, when practiced in accordance with
- accepted silviculture principles, constitutes a
- beneficial and desirable use of New Hampshire's
- 8 forest resource. Forestry contributes greatly to the
- 9 economy of the state through a vital forest products
- industry. Did I read that correctly?
- 11 A. (Mr. Frantz) Yes.
- 12 Q. So, is it safe to say that it is the public policy of
- this state to support the forestry industry?
- 14 (Witness reviews document.)
- 15 A. (Mr. McCluskey) I guess it is.
- 16 Q. Well, these statutes --
- 17 A. (Mr. Frantz) Do you mind if I read a little bit more?
- 18 Q. By all means. Which one?
- 19 A. (Mr. Frantz) Reading all of them.
- 20 (Witness reviews document.)
- 21 CHAIRMAN GETZ: Mr. Frantz?
- 22 A. (Mr. Frantz) Well, I think it's clear from these
- 23 statutes and declaration of purposes that the forest
- industry in New Hampshire is a vital and important

- industry to the state of New Hampshire, and that it's important to the health and well-being of the state. Now, forestry encompasses a whole lot of practices.
- 4 O. Positively. Positively.

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- A. (Mr. Frantz) And so, to try to narrow that down to one little issue I think is probably not fair. But in general, there are -- obviously to the state and the legislature that passed this, there are a lot of benefits, and it's an important industry. I don't think anyone would deny that.
- 11 Q. Wonderful. Just wanted to make sure.

Now turning to the statute we're dealing with today, RSA 362-F:1. You had a copy of that in your earlier materials. Do you have that now?

- A. (Mr. Frantz) Under Purpose, again, 362?
- Q. 362-F:1, the Purpose statement of this electric renewable portfolio standard.

You'd agree with me that it reads, "Renewable energy generation technologies can provide fuel diversity to the state and New England generation supply through the use of local renewable fuels and resources..." Did I read that correctly?

- A. (Mr. Frantz) Yes.
- Q. Now, the only local renewable fuels and resources we

- have are wood, wind and solar; correct -- and water?
- 2 A. (Mr. Frantz) I was going to mention hydro.
- Q. Right. But we don't have natural gas. That's not a renewable.
- 5 A. (Mr. Frantz) Correct. Last I checked, we're a little short on coal also.
- Q. Right. And we haven't figured out a way to burn granite.
- 9 A. (Mr. Frantz) We'd be a very wealthy state, indeed, if we did.
- 11 Q. And if you drop to the bottom, the last sentence, "It

 12 is, therefore, in the public interest to simulate

 13 investment in low-emission renewable generation

 14 technologies in New England and, in particular, New

 15 Hampshire, whether at new or existing facilities";

 16 correct?
- 17 A. (Mr. Frantz) Correct.
- Q. So this is a statute that puts the emphasis on the use of local resources; correct?
- 20 A. (Mr. Frantz) It does.
- Q. And one of the criteria that this Commission is
 charged with in evaluating this PPA is the economic
 development and environmental benefits for New
 Hampshire; correct?

- 1 A. (Mr. Frantz) Yes.
- 2 Q. Now, let's turn, Mr. McCluskey, to your testimony
- 3 concerning competitive bid process. Am I correct in
- 4 saying that you believe this PPA should have been put
- 5 out to competitive bid?
- 6 A. (Mr. McCluskey) First of all, could you -- where in
- 7 my testimony are you referring?
- 8 Q. You spoke about it at length this morning. You spoke
- 9 about it at length on Tuesday.
- 10 A. (Mr. McCluskey) Okay.
- 11 Q. Do you recall that testimony?
- 12 A. (Mr. McCluskey) So that's the testimony you're
- referring to.
- 14 Q. That's the testimony, yeah.
- 15 A. (Mr. McCluskey) And the question is what?
- 16 Q. That you believe this PPA should have been put out to
- 17 competitive bid.
- 18 A. (Mr. McCluskey) That's correct.
- 19 Q. Now, you'd agree with me that nowhere in RSA 362-F is
- there a requirement that the PPA be submitted for
- 21 competitive bid?
- 22 A. (Mr. McCluskey) That's correct.
- 23 Q. You would agree with me that, if a competitive bid --
- an RFP for short -- had been put out, then Laidlaw,

- with its control over the existing, unused

 67.5-megawatt boiler in Berlin, would have been a

 responsive, viable bidder with an advantage by having
 that existing system; correct?
 - A. (Mr. McCluskey) Certainly would qualify to bid. And whether it would have an advantage would depend on the prices that it was willing to bid in at.
- 8 Q. Well, you're not aware of anyone else having an 9 existing, unused 67.5-megawatt boiler lying around 10 somewhere else in New Hampshire, are you?
- 11 A. (Mr. McCluskey) That's correct. In fact, you keep

 12 saying 67. I'm not aware that the existing facility

 13 can produce 67 megawatts. The expanded facility that

 14 Laidlaw is referring to could produce 67 megawatts.
- 15 Q. Are you aware of anybody with a 65-megawatt --
- 16 A. (Mr. McCluskey) I'm not, no.
- 17 Q. -- boiler?

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- So someone else who would want to respond to
 this RFP would have had to build a new boiler;
 correct?
- A. (Mr. McCluskey) If the RFP was limited to biomass
 facilities, then that would be the case. If they
 wanted to compete, then they would have to develop a
 new facility.

- Q. And the likelihood of someone spending upwards of \$245- to \$280 million to create a new plant is somewhat slim, correct, in light of Laidlaw's existing plant?
- A. (Mr. McCluskey) Well, I think we've actually seen
 that there are a couple of developers out there that
 were willing to offer PSNH alternative prices.
- Q. But neither of those two plants had 65-megawattboilers in place.
- 10 A. (Mr. McCluskey) They were generally smaller. That's correct.
- Q. Yes. And no one else had site-evaluation approval from the New Hampshire Site Evaluation Commission.
- A. (Mr. McCluskey) At the time the solicited offers came in, I'm not sure whether Laidlaw had site approval.
- 16 Q. In fact, no one else, to your knowledge, is even in queue for this size of a plant; correct?
- 18 A. (Mr. McCluskey) To my knowledge, that's correct.
- Q. And no one else has a site that is connected with municipal sewer and water capable of meeting the needs of the size of a plant such as Laidlaw's?
- A. (Mr. McCluskey) As I've said, the two that I'm
 familiar with were smaller. I'm not clear on how far
 along those projects were at the time that they

submitted their unsolicited offers.

- Q. And no one else, to your knowledge, has existing wood yards, scales, water-treatment facilities, or even the right to withdraw substantial amounts of water from a major New Hampshire river, do they?
- A. (Mr. McCluskey) As I've said, I'm not familiar with the details of the development of those two projects at the time the offer was made.
- Q. No one else responding to an RFP, to your knowledge, would have an approximate 60-acre site with additional industrially zoned land adjacent to it.

CHAIRMAN GETZ: Mr. Boldt, I think we've covered this area well enough.

MR. BOLDT: Well, I had just a few more along those lines, just to make the record clear, Mr. Chairman, if I may be allowed to continue very briefly.

CHAIRMAN GETZ: He's already testified a couple times he can't -- he's not in a position to compare what the specifics were of these other potential competitors to the specific facts of the Laidlaw --

MR. BOLDT: No, I'm talking about an RFP in general, Mr. Chairman. I'm not talking just

about the two unsolicited smaller bids. I'm talking

about if an RFP had gone out as he requests --

CHAIRMAN GETZ: But he's already testified he doesn't know about the two projects that he's aware of. How can he -- I assume his answer is he's certainly unaware of all the projects that he's unaware of. I don't want to drift into a Rumsfeld moment, but I'm not sure how this is moving along the --

MR. BOLDT: I'll try to avoid that,
Mr. Chairman.

12 BY MR. BOLDT:

- Q. A responding party to the RFP would have to have the same things or better than Laidlaw has to have a better bid; correct?
- A. (Mr. McCluskey) They could have -- unless the RFP specified a certain capacity, there could be all kinds of projects that are put forward to PSNH. The terms of the contract could be different, the size of the contract could be different, certainly the prices of the contract could be different. And that would be up to PSNH to determine what was the most attractive. A smaller project may best fit the REC requirements of PSNH rather than a larger project.

- Since we haven't developed the RFP, never mind issued it, we really don't know what we would be asking the market to respond to.
- Q. Are you saying that the RFP has to be developed through your office?
- 6 A. (Mr. McCluskey) I didn't say that.
- 7 Q. Just to be clear --
- 8 A. (Mr. McCluskey) PSNH is a regulated entity.
- 9 Typically, certainly in Massachusetts, any RFP issued
- by a utility has to be approved by the regulator.
- And I would think that the regulator in New Hampshire
- would also have some input into the contents of the
- 13 RFP. Ensuring fair play between potential bidders is
- an important issue, and I'm sure the Commission would
- want to weigh in on how the RFP was developed.
- 16 Q. So, simply having an RFP itself doesn't mean that
- 17 there would be anything different in this PPA.
- 18 Laidlaw could still have come in, because of its
- 19 location, the available infrastructure, the job
- 20 market, the skills available in this community, to
- 21 still have a winning bid on the RFP for its plant of
- this size.
- 23 A. (Mr. McCluskey) If Laidlaw responded to this RFP that
- we're talking about, it may well have been the

- winning bidder. But it's quite possible that the prices are very different from the ones that were negotiated.
- Q. And it's quite possible that it could be exactly what we have today; correct?
- 6 A. (Mr. McCluskey) It is. But when you --
- 7 Q. That's all.

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- A. (Mr. McCluskey) If I could finish? When Laidlaw is
 exposed to competition from other developers, it will
 be forced to establish prices that it thinks will win
 the bid and provide the kind of return it's looking
 for. So I would -- I'd be shocked if the prices from
 a competitive bid produced the prices that we are
 seeing in this PPA.
- Q. But you don't really know. That's just speculation, isn't it, sir?
- A. (Mr. McCluskey) Well, I think I know how the market
 operates. That's why we have competitive bids. We
 want the various bidders to compete against each
 other and to give customers the maximum benefit from
 the project, from the purchase that PSNH makes.
 - Q. And you have agreed with me already, but let's just make sure. Based on which variables, this PPA could have a \$300- to \$400 million benefit to the

1 ratepayers; correct?

outcomes.

- 2 A. (Mr. McCluskey) Depending on the prices that are used 3 to benchmark the PPA, you could have all kinds of
- Q. Mr. Frantz, in your direct testimony, you basically state that you did not perform any analysis, any
- 7 modeling on your own. You were relying on Mr.
- 8 McCluskey's analysis and modeling; correct?
- 9 A. (Mr. Frantz) Well, I was. But I will state that
- during the development of his testimony, we
- conferred, as we do in our division all the time. I
- mean, he talked to me, he talked to others. It's a
- very collegial environment. And we discussed issues
- 14 and models and assumptions and what goes into the
- 15 testimony, including the final writing of it.
- 16 Q. Certainly. No doubt about it. I'm not expecting you
- 17 to work in a vacuum. I'm just wanting to make sure
- that there's not something else that was not produced
- in your testimony. In essence, everything that was
- 20 produced in Mr. McCluskey's, you've adopted.
- 21 A. (Mr. Frantz) I adopted.
- 22 Q. Correct. So that, if there are flaws in Mr.
- 23 McCluskey's product, your opinions are equally
- shaped; correct?

- A. (Mr. Frantz) My testimony was based on his analysis, as we worked together and went through it. That's correct.
- Q. And you'd agree with me that, if the public policy of this state is to have a viable forest product -forest economy and renewable portfolio standard, then to have a PPA to meet that standard, it has to be financeable; correct?
- 9 A. (Mr. Frantz) Well, there's a few pieces to that.

 10 Could you read that back for me, please?
 - BY MR. BOLDT:

- Q. If we assume that the public policy of this state is to have a viable forest economy and a renewable portfolio standard, as stated in the statute, that to meet that standard, a PPA has to be financeable.
- A. (Mr. Frantz) Okay. Well, the first part is that we need a viable forestry, which we've already established is in the statute. Whether or not that actually, explicitly includes biomass is not explicit in the statute. But let's assume it does. The second part, then, is that we have renewable standards for Class I in this case, which may or may not include biomass. It could just be wind. But if we link them together, I think we need projects that

[WITNESS PANEL: McCLUSKEY|FRANTZ]

	132
1	absolutely are financeable.
2	MR. BOLDT: No further questions, Mr.
3	Chairman.
4	CHAIRMAN GETZ: Okay. Thank you, Mr.
5	Boldt.
6	I think we're at a good juncture for
7	the lunch recess. It's quarter of one. I understand
8	the parties need to talk about the briefing issues,
9	so let's resume at 2:00. Thank you.
10	(WHEREUPON, the Day 4 AM Session
11	recessed for lunch at 12:47 p.m. Day 4
12	Afternoon Session to resume under separate
13	cover so designated.)
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CERTIFICATE

I, Susan J. Robidas, a Licensed
Shorthand Court Reporter and Notary Public of
the State of New Hampshire, do hereby
certify that the foregoing is a true and
accurate transcript of my stenographic notes
of these proceedings taken at the place and
on the date hereinbefore set forth, to the
best of my skill and ability under the
conditions present at the time.

I further certify that I am neither attorney or counsel for, nor related to or employed by any of the parties to the action; and further, that I am not a relative or employee of any attorney or counsel employed in this case, nor am I financially interested in this action.

Susan J. Robidas, LCR/RPR Licensed Shorthand Court Reporter Registered Professional Reporter N.H. LCR No. 44 (RSA 310-A:173)