In Re:

DE 10-195 PSNH/LAIDLAW BERLIN BIOPOWER

DAY 5 - MORNING SESSION ONLY February 8, 2011

SUSAN J. ROBIDAS, LCR NO. 44

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14	Robert A. Bersak, Esq.	14	
15	Reptg. City of Berlin: Christopher Boldt, Esq.(Donahue, Tucker)	15	
16	Keriann Roman, Esq. (Donahue, Tucker)	16	
17	Reptg. Bridgewater Power, Pinetree Power, Pinetree Power-Tamworth, DG Whitefield	17	
18	Power, Springfield Power, and Indeck Energy-Alexanderia:	18	
19	David J. Shulock, Esq. (Brown, Olson) David K. Wiesner, Esq. (Brown, Olson)	19	
20	Reptg. Clean Power Development:	20	
21	James T. Rodier, Esq.	21	
22	Reptg. Edrest Properties, LLC: Jonathan Edwards	22	
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Page 5 Page 7 that period. So we'll be able to just move forward 1 the prices increase to those facilities, affecting 1 with the hearing today. Thank you. 2 2 their operations, then some of those positive effects 3 CHAIRMAN GETZ: Okay. And that 3 that are included in her testimony and rebuttal reminds me of one other issue. testimony would be reduced. One should keep in mind 4 4 Mr. Bersak, rebuttal witnesses? Is that multiplier effects work in both directions. 5 5 6 there --6 Her analysis also includes all three -- direct, MR. BERSAK: We have to wait and see. 7 indirect and induced effects in the RIMS II model. 7 CHAIRMAN GETZ: All right. Then we And one should be very cautious of using induced 8 8 9 shall wait and see. 9 effects, as they depend highly on household income Ms. Amidon. 10 and its distribution of savings and expenditures. 10 11 MS. AMIDON: Thank you. 11 O. Thank you. Did you review the article that PSNH DIRECT EXAMINATION (cont'd) 12 12 provided as an exhibit, and it was in the Berlin 13 BY MS. AMIDON: 13 newspaper, about a new company that had tentative 14 Q. Good morning, Mr. Frantz. agreements to locate with Laidlaw, or co-locate? 14 15 A. (Mr. Frantz) Good morning. 15 A. (Mr. Frantz) I did look at it. 16 Q. When we last met, we were -- I had just finished 16 O. You did? Do you have any comments about that 17 examining Mr. McCluskey regarding his testimony and 17 article? 18 A. 18 the rebuttal testimony that PSNH filed. And in its (Mr. Frantz) My first thought was: Good. To the 19 rebuttal testimony, PSNH included rebuttal of Dr. 19 extent that that facility locates there and creates 20 Shapiro. Did you review that rebuttal testimony? 20 new jobs, that's certainly something beneficial to 21 A. (Mr. Frantz) Yes, I did. 21 Berlin. But we really don't know much about the 22 Q. Do you agree with Dr. Shapiro, that your testimony 22 project. We don't know who owns it. We don't really 23 contains three critically flawed assumptions? 23 know what the agreement is between Laidlaw and that 24 A. (Mr. Frantz) No, I do not, though I do agree with Dr. 24 project and its developer. We don't know the effect Page 6 Page 8 Shapiro that, if the net economic impact of the 1 1 the new company will have on Laidlaw's operations. 2 project is positive from a ratepayer perspective, 2 We don't know whether the facility would have located something that would be quite different from the elsewhere in New Hampshire. We don't know a lot of 3 3 results contained in Mr. McCluskey's testimony, or facts about that facility and its location and the 4 4 that of Mr. Traum, my conclusion of net economic harm 5 relationship with Laidlaw, and those things would 5 would indeed change. have been useful in this proceeding. 6 6 7 O. 7 Q. Thank you. In her rebuttal testimony, Dr. Shapiro And did you hear Dr. Shapiro, in her testimony from states that, even if the PPA results in over-market 8 the stand, describe what she believed to be the 8 costs of \$26 million per year, the economic economic benefits associated with this unknown 9 9 development benefits of the project would still be entity? 10 10 positive. Do you agree? (Mr. Frantz) I heard her mention them, yes. 11 11 A. **12** A. (Mr. Frantz) Well, her conclusions depend on a number 12 Q. And did you hear Mr. Sansoucy say that he saw some of of assumptions, including that the information 13 the work papers Dr. Shapiro used to develop her 13 estimates regarding the benefits associated with this 14 provided by Laidlaw in the SEC filing is reasonably 14 15 unidentified entity?

accurate and represents the direct effects of the 15 16 project, because they form the basis for the construction and biomass shocks that are used in the 17 RIMS II multiplier effect. To the extent those 18 numbers are less than she modeled, the results will 19 20 similarly be reduced. The model assumes no 21 substitution effects and that the output can be 22 increased to whatever level's needed without

affecting other industries, such as other biomass

facilities. If other plants can't get the wood, or

(Mr. Frantz) Yes. 16 A. Q. Have you had a chance to look at those work papers? 17 (Mr. Frantz) I haven't seen those work papers. 18 A. 19 Q. Thank you. 20 I want to ask an additional question with 21 respect to the record request responses, or one of them that was provided by PSNH. And do you have 22

23 those in front of you?

(Mr. Frantz) I don't have that one in front of me. 24 A.

23

		Page 9			Page 11
1		If you'd like to show it to me, I'd be happy to	1		see what it looks like, then I know what I'm hunting
2	Q.	I'm specifically looking at record request, it says	2		for. I don't recall seeing it. But it's probably my
3		HD-02.	3		fault.
4		MS. AMIDON: May I?	4		MS. AMIDON: Attorney Hatfield
5		CHAIRMAN GETZ: Please.	5		provided me this copy for you to take a look at.
6		(Atty. Amidon hands document to the	6		(Atty. Amidon hands document to Cmsr.
7		witness. Witness reviews document.)	7		Ignatius.)
8		Y MS. AMIDON:	8		CMSR. IGNATIUS: So these weren't
9	Q.	And do you see that now?	9		distributed during the hearing. They were since
	A.	(Mr. Frantz) Yes, I do.	10		then?
11	Q.	And is that a record request which I believe you	11		MS. AMIDON: They were provided by the
12		requested in connection with statements made about	12		Company last Thursday or Friday.
13		the effect of the contract on PSNH's financing or credit worthiness?	13		CHAIRMAN GETZ: Let's just go off the record for a second.
14 15	Δ	(Mr. Frantz) Yes, it is.	14 15		(Discussion off the record)
16		And would you please comment on that response.	16		CHAIRMAN GETZ: All right. We'll go
	A.	(Mr. Frantz) Well, the response just states that the	17		back on the record and continue with the direct.
18	11.	vice-president for investor relations for Northeast	18		MS. AMIDON: And that concludes my
19		Utilities, Jeffrey Kotkin, stated that the size and	19		direct examination. Thank you, Mr. Chairman. The
20		nature of Laidlaw's PPA is not significant enough to	20		witnesses are available for cross.
21		have any adverse effect on PSNH's debt rating. It	21		CHAIRMAN GETZ: Thank you. In terms
22		does not state whether PSNH or Mr. Kotkin actually	22		of order of cross, I was contemplating Ms. Hatfield,
23		contacted any lenders or potential lenders and asked	23		Mr. Rodier, Mr. Shulock, Mr. Boldt, Mr. Bersak. Is
24		for their opinions and discussed it with them, or	24		there any concern about that order of cross?
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		Page 10			Page 12
1		that we have anything in writing from those lenders	1		(No verbal response)
2		that we have anything in writing from those lenders stating that they've reviewed the PPA and believe it	2		(No verbal response) CHAIRMAN GETZ: Okay. Ms. Hatfield.
2	0	that we have anything in writing from those lenders stating that they've reviewed the PPA and believe it has no adverse effect on PSNH.	2		(No verbal response) CHAIRMAN GETZ: Okay. Ms. Hatfield. MS. HATFIELD: Thank you. Mr.
2 3 4	Q.	that we have anything in writing from those lenders stating that they've reviewed the PPA and believe it has no adverse effect on PSNH. So, can you conclude anything from looking at that	2 3 4		(No verbal response) CHAIRMAN GETZ: Okay. Ms. Hatfield. MS. HATFIELD: Thank you. Mr. Chairman, I will have a few questions about the
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- 1 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.
- 5 O. And is it true that 362-F, the RPS statute, in
- 6 Section 9, which is the PPA section, does discuss
- economic benefits? Is that right? 7
- 8 A. (Mr. Frantz) That's correct.
- Q. But is it your belief that potential economic
- 10 benefits from an energy facility should be elevated
- 11 over potential costs or risks to consumers?
- 12 A. (Mr. Frantz) Well, I think it's a package. I think
- 13 there's a number of criteria, and that is one of
- them. And I think the most important part of this 14
- 15 cost-effective project, I think, all else equal, one
- 16 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.

- 1 market and pay the alternative compliance payment.
- **2** Q. And when a utility makes that determination, do they
 - need to factor in cost-effectiveness to customers?

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Page 16

- 4 A. (Mr. McCluskey) Yes. Clearly, it would not be
- cost-effective to enter into a purchase with a REC 5
- provider at a price greater than the ACP. The 6
- 7 legislature has introduced a cap on prices for that
- purpose of minimizing the cost on consumers 8
- 9 associated with the RPS.
- 10 O. Could you turn to Page 14, please, of PSNH's 11 rebuttal.
- 12 A. (Mr. McCluskey) okay.
- 13 Q. And on Lines 23 through 24 there's a statement that
- says, "In Mr. McCluskey's world, it is apparent that 14
- 15 the cost to customers is number one." Do you see
- that? 16
- 17 A. (Mr. McCluskey) I do.
- **18** Q. Do you think that should also be number one for PSNH?
- 19 A. (Mr. McCluskey) As Mr. Frantz said, there are several
- criteria in the section of the RPS law that deals 20
- 21 with long-term contracts. It's really up to the
- Commission to provide what weight it considers 22
- 23 appropriate to each of the criteria. I certainly
- 24 believe that these projects, whether they -- the

Page 14

- (Pause in proceedings)
- 2 A. (Mr. McCluskey) Okay.
- 3 Q. If you would turn to Page 11, please.
- 4 A. (Mr. McCluskey) Okay.
- 5 Q. And starting on Line 27 there's a question, and it
- 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
- 9 resources when the developer needs some form of price
- assurance when future market prices are not known?" 10
- Do you see that question? 11
- 12 A. (Mr. McCluskey) Yes, I do.
- 13 Q. And is one response to that question, about how PSNH
- 14 meets the State's renewable energy goals, that the
- 15 Company can buy RECs on the market?
- 16 A. (Mr. McCluskey) Yes, it can buy in what we refer to as the short-term REC market. 17
- **18** Q. And could the Company also make payments to the
- 19 renewable energy fund, according to the alternative
- compliance payment price? 20
- 21 A. (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
- 24 option of simply deciding not to purchase from the

- 1 purchase of RECs, whether they are acquired through
- 2 short-term market or long-term market, should be done
- in a cost-effective way. I personally think that the 3
- primary criteria should be cost-effectiveness, but 4
- 5 serious consideration given to the local economic
- benefits associated with the particular project. 6
- 7 Q. Could you turn to Page 14, please.
- A. (Mr. McCluskey) Yes.
- 9 Sorry. That's where we are.
- Going on to Page 15, PSNH talks about an issue 10
- that you raised, that the cumulative reduction fund 11
- 12 does not accrue interest. Do you recall that?
- 13 A. (Mr. McCluskey) Yes.
- And at the top of Page 15, PSNH says, "These 14 O.
- 15 complaints about the lack of interest as relatively
 - insignificant..." Do you see that?
- 17 A. (Mr. McCluskey) I do.
- 18 Q. Is it possible that interest, just the interest, if
- 19 there was interest on all portions of the cumulative
- reduction fund, that that could amount to a 20
- 21 significant sum?
- 22 A. (Mr. McCluskey) Yes. The amount of the interest
- 23 obviously depends on what interest rate you use and
- 24 also on the amount of the above-market payments. If

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- the above-market payments are significant, then, over 1
- 2 a 20-year period, potentially you can accumulate a
- 3 significant amount of interest on energy or on RECs,
- if it's going to be applied to RECs as well, and 4
- perhaps also on the customer. So if interest were 5
- 6 accumulated, it could be significant at the end of
- the 20-year term. 7
- 8 Q. Do you believe that accruing interest on the
- 9 cumulative reduction fund addresses the underlying
- problems with the CRF? 10
- 11 A. (Mr. McCluskey) Not on its own. In my testimony, I
- 12 addressed two, what I considered to be two problems
- 13 with the -- economic problems with the cumulative
- reduction account. One was the lack of interest. 14
- 15 The other was the capping of the amount that
- 16 customers could receive at the end of the 20-year
- 17 term through a reduction in the market -- a reduction 18 in the cost of purchasing the facility.
- 19 To me, you need to have interest and the lifting 20 of the cap in order to ensure that customers are
- 21 going to receive the value that they have paid to Laidlaw in the form of above-market payments. 22
- 23 Without lifting the cap, it could turn out that
- 24 customers receive very little of those above-market

- 1 was \$143-, \$144 million. But importantly, it was
- 2 based on market prices that are higher than if you
 - were to redo the analysis that PSNH did, using more
- 4 current NYMEX numbers. It would produce a lower
- 5 forecast of market energy prices, which would have
- the effect of increasing the balance in the account. 6
- 7 Then, if you add interest onto that account, and you
- 8 also include interest from RECs, which has been
- 9 suggested, you can imagine that it's quite possible
- 10 that the balance in the account is significantly
- 11 above the \$132 million estimate of Mr. Sansoucy. So
- 12 it's highly likely that we could have a situation
- 13 where a substantial sum of money paid in by consumers
- 14 to Laidlaw will not be returned to customers through
- 15 a reduction in the value of the plant -- or reduction
- in the purchase price of the plant, I should have 16 17
 - said.
- 18 O. And I believe you also testified that the cumulative 19 reduction fund violates the used and useful principle 20 of rate-making; is that correct?
- 21 A. (Mr. McCluskey) That's correct.
- And can you just simply explain why you believe that's the case?
- 23 24 A. (Mr. McCluskey) Yes. I think it's best to consider

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- payments, depending on the market value of the plant 1
- 2 at that time. And as I've said in my testimony, that will depend on the conditions in the market. And 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
- market value of the plant is, and how big the cap 8
- will be when it comes to determining how much
- ratepayers should receive at the end of the day. 10
- 11 O. Do you recall hearing Mr. Sansoucy testify that it 12 had been his estimate that the plant would be worth
- somewhere around \$130 million at the end of the PPA? 13
- 14 A. (Mr. McCluskey) Yes, I did.
- 15 Q. And was this hearing the first time that you had
- 16 heard that figure?
- 17 A. (Mr. McCluskey) Yes.
- **18** Q. And if that is an accurate estimate, does that cause
- 19 you concern that there might be more than that amount
- 20 in the CRF?
- 21 A. (Mr. McCluskey) Yes. I think PSNH itself did an
- 22 analysis of what could be the balance in the CRF at
- 23 the end of 20 years, based on market prices that it
- 24 developed in 2009. That figure, I recall, I think it

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 1
- 2 renewable plant, which I believe would violate the
- 3 used and useful principle. And this is essentially
- 4 what PSNH is proposing to do in the PPA. But with
- 5 the 10-percent premium on market energy prices
- 6 replaced with the above-market energy payments, the
- fund -- importantly, the fund at the end of the 7
- 8 20-year term in the PPA is used to pay for the
- 9 acquisition of the Laidlaw power plant. And we have
- heard that the Company intends to place the plant in 10
- 11 generation rate base once it is acquired. The
- 12 proposal to have customers pre-fund the purchase of
- 13 the plant through above-market energy payments is a
- 14 violation of the used and useful principle because
- 15 customers will not begin to receive any useful 16 service from the asset until the term of the contract
- 17 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 with the public interest.

- 2 Q. On Page 25, at Line 18, PSNH states, "Financing is
 - the developer's responsibility, not PSNH's." Do you
- agree with that? 4
- 5 A. (Mr. McCluskey) I do, yes.
- 6 Q. And do you recall PSNH's testimony, that the project
- could not be financed if Staff's recommendations in 7 8
 - your testimony were adopted by the Commission?
- 9 A. (Mr. McCluskey) Yes, I do.
- 10 O. Do you agree with that?
- 11 A. (Mr. McCluskey) No. I think the particular
- 12 recommendation that Mr. Long was referring to was the
- 13 recommendation that the energy prices be based not on
- 14 cost of service but on market prices. And I believe
- 15 he said that if that were the case, the project can
- 16 be financed. And I attempted through cross to
- 17 demonstrate that in New York, where they have an RPS
- 18 since 2004, the structure of the solicitation in New
- 19 York is they solicit RECs, and all of the energy
- 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
- 23 prices for a contract period, and they would receive
- 24 short-term energy payments and capacity payments from

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Page 23

or concept. 1

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- 2 Q. On Page 20 of PSNH's rebuttal, at Lines 22 to 23,
- PSNH writes, "The CRF only adds value per customers. 3
- There is no scenario under which it will diminish 4
- value per customers." 5
- It sounds like, from the testimony you've just 6 7 given regarding the CRF, that you disagree with that
- statement. 8
- A. (Mr. McCluskey) I do disagree with it. To the extent 9
- 10 customers have made payments over a 20-year period
- and they are not likely to receive in full those 11
- 12 payments, including interest, then I think that
- clearly does diminish value to customers. 13
- 14 Q. On Page 24 of PSNH's rebuttal, at Line 25, PSNH
- 15 refers to a "bad policy-making choice." Do you see that?
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- 17 A. (Mr. McCluskey) Yes, I do.
- **18** Q. And do you think that this docket is about
- 19 policy-making, or is it about the Commission applying
- 20 the requirements of the PPA section of the RPS law?
- 21 A. (Mr. McCluskey) It's the latter. The policy has been 22
- established through the RPS law. The Company has 23 made a filing consistent with that law. And we now
- 24 try to determine whether the filing is consistent

- 1 the New York ISO. And so that is the structure that 2
 - works there. And they've developed many renewable
- projects in that state. And I think that example 3 demonstrates that you don't have to have a 4
- fixed-price contract for each component of the output 5
- 6 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.
- 10 Q. And you were just discussing the use of RFPs. And if
- you look at PSNH's rebuttal testimony on Page 27, 11
- 12 starting at Line 33, they discuss the drawbacks -- or
- one drawback of an RFP process. Do you see that? 13
- 14 A. (Mr. McCluskey) What was the line again?
- 15 O. Thirty-three.
- 16 A. (Mr. McCluskey) Yes.
- 17 Q. Could the Company use RFPs to seek to purchase
- particular products it needs, such as RECs or energy? 18
- (Mr. McCluskey) Well, if it was -- it would certainly 19 A. 20 have to -- the Company could have an RFP for any
- 21 product that it needs in order to meet customer
- demands, energy capacity or RECs. 22
- 23 Q. On Page 36 of PSNH's rebuttal, at Line 23, PSNH
- states that the PPA essentially prices energy at the 24

- day-ahead locational marginal price over a portion of 1
- the life of the facility. Do you agree that the PPA 2 3 essentially prices energy at the day-ahead LMP?
- 4 A. (Mr. McCluskey) No. Absolutely not.
- 5 O. Why not?

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6 A. (Mr. McCluskey) Well, first of all, the energy's priced at the energy prices in the PPA, which are 7 8 designed to recover fuel costs and O&M estimated costs. So the actual price that PSNH pays and will 9 recover from its customers has nothing to do with the 10 11 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.

23 Q. There are a few places in PSNH's rebuttal where they 24 refer to a "Catch-22." One of those is on Page 15 at

- 1 possible that perhaps the statute could be changed to 2 expressly allow over-market PPAs, or something of 3
 - that nature?
- **4** A. (Mr. McCluskey) We actually have -- these power plants typically are not economic on a stand-alone 5 basis. They cannot compete with non-renewable 6 7 generators. The RPS law is intended to provide an 8 additional revenue stream that will allow those 9 projects essentially to compete, to be dispatched in 10 the ISO-New England power market. All we're trying 11 to do is to ensure that customers are paying no more 12 than they need to in order to acquire those products. 13 I'm not sure whether that's responsive to your
- 14 question, but... 15 O. Thank you. Do you recall PSNH's testimony about their understanding of the Schiller agreement that 16 17 was the subject of Docket DE 03-166?
- (Mr. McCluskey) Yes, I do. 18 A.

that that's not the case.

- 19 Q. Do you agree that that requires that the Company must 20 sell the RECs from Schiller without regard for the 21 price that they would receive for those RECs, and 22 also without regard for the price that the Company is 23 paying to comply with New Hampshire RPS?
- 24 A. (Mr. McCluskey) I think there's two questions. One

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- Line 31. And what the Company says, starting on 1
- 2 Line 29, is that the testimonies filed by you and Mr.
- 3 Traum would frustrate the legislative goal of the RPS
- law by creating a "Catch-22," where a PPA couldn't be 4
- approved. Do you see that? 5
- 6 A. (Mr. McCluskey) Yes.
- 7 Q. If there is a "Catch-22," do you think perhaps a
 - legislative solution might be required?
- 8 9 A. (Mr. McCluskey) I'm not sure. I personally don't
- agree that there is a "Catch-22". We've made 10 11 recommendations to change the PPA which we think will
- 12 make -- has the potential to make the project in the
- public interest. I don't understand this argument 13
- that it's a "Catch-22." We're not trying to have the 14 15 contract not approved. We are supportive of a
- 16 renewable plant in the North Country developed
- through a long-term PPA. We just feel that it has to 17
- 18 be based on prices which are more in the public
- 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.
- 22 Q. Well, assuming that PSNH is correct, and if the 23 changes that you propose are made, that the
- 24 Company -- the project is not financeable, is it

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

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

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- 1 PSNH has suggested.
- **2** Q. And is that why you believe that Schiller RECs need
- 3 to be considered when trying to determine PSNH's need
- 4 for RECs?
- 5 A. (Mr. McCluskey) Yes.
- 6 Q. Do you know what PSNH's most recent migration7 percentage is?
- 8 A. (Mr. McCluskey) Yes. The calculations that I've done
- 9 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
- 12 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

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

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- $\boldsymbol{2}~A.~$ (Mr. McCluskey) Okay. Earlier I was describing that
 - in 2009, PSNH developed a forecast of the market
- 4 energy prices, which is included -- developed a
- 5 forecast of market energy prices, which it included
 - in a discovery response issued by Staff. That
- 7 forecast was based on NYMEX electricity price and

natural gas price data. And it was based on a lookat 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.

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- at risk of losing load rather than at less risk.
- 2 I'll just leave it at that.
- **3** Q. And that would impact their need for RECs and energy?
- 4 A. (Mr. McCluskey) Yes. It has this effect in the
- 5 calculations that I did. I was able to show that, if
- 6 Schiller RECs were used to meet PSNH's RPS
- 7 obligations, that PSNH would not have a need for all
- 8 of the RECs produced by Laidlaw until 2023. What an
- 9 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
- I call the excess RECs, which adds costs to
- 15 consumers.
- **16** Q. Mr. McCluskey, do you have a copy of your testimony
- that you filed in this docket?
- 18 A. (Mr. McCluskey) Yes, I do.
- Q. Could you please turn to Bates Page 65, which is yourExhibit GRM-12.
- 21 A. (Mr. McCluskey) Yes, I've got that.
- 22 Q. The third column from the left is titled "Adjusted
- Market Energy Price Projections." Do you see that?
- 24 A. (Mr. McCluskey) I do.

1 BY MS. HATFIELD:

- 2 Q. Mr. McCluskey, do you have the copy of the recordrequest that the Company filed on February 4th?
- 4 A. (Mr. McCluskey) I just have one, the rate-impact 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 Icouldn't confirm that.
- 11 O. 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
- provide the assumed rate impact for 2015, using a
- 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.
- ${\bf 18}\,$ Q. And if we look at Page 2 of 2, that's where PSNH
- provided the analysis; is that right?
- 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.

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24 Q.

- 1 Q. And the top line shows that in all scenarios they've used a facility size of 67.5 megawatts; is that
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- 4 A. (Mr. McCluskey) Correct.
- 5 Q. And that facility size relates to PSNH's revised
- 6 Exhibit 9; is that right?
- 7 A. (Mr. McCluskey) Correct. Yes.
- 8 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 10
- 11 ACP." Do you see that?
- 12 A. (Mr. McCluskey) Yes, I do.
- 13 Q. Does that mean that in all their scenarios they
- utilized the PPA REC price? 14
- 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.
- 19 Q. And have you had a chance to review the analysis that
- 20 the Company has provided?
- 21 A. (Mr. McCluskey) Yes, I have.
- 22 Q. If the REC price in the market is lower than that,
- 23 would that mean that there would actually be a higher
- 24 monthly bill impact as a result of the PPA?

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.

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Page 36

- 1 A. (Mr. McCluskey) Yes. In fact, under the Avoided
- 2 Costs of Products section, we have prices for energy
- RECs and capacity. If any of those is lower than 3
- what's shown in this exhibit, then you would have a 4
- greater impact on customers as a result of the PPA. 5
- And conversely, if the prices are higher than what's 6
- 7 shown in this particular column, then the impact
- would be less than what's shown. 8
- Q. And have you tested these scenarios by using
- different figures to look at what the rate impact 10
- 11 might be?
- **12** A. (Mr. McCluskey) Yes, I have. The Company actually
- provided Staff with the spreadsheet. So we had the 13
- 14 ability to change the inputs to what we considered to
- be more reasonable than what the Company has, and 15
- 16 which I did. And I've actually got two groups of
- numbers: One, what I call the Laidlaw proposed 17
- 18 facility, which is at a capacity of 66 megawatts, and
- then I redo the analyses under what I call the 19
- 20 Laidlaw expanded facility, which is the 67.5. And
 - so, just focusing on the Laidlaw proposed facility of
- 22 63 megawatts, assuming it's got the capacity factor
- 23 of 87.5, what I'm describing now is what I call base
- 24 case. And I will vary the assumptions under the base

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.

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.

And that's for residential customers.

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

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Page 37

- talking about the numbers that you used and not that 1 it shows that the PPA itself is reasonable? 2
- 3 A. (Mr. McCluskey) I'm talking about the market price inputs I think are reasonable as a base case. 4
- If I could just add? That \$3.50 impact is based 5 on migration rate of 31 percent. If we change the 6 migration rate -- I haven't done this calculation. 7
- 8 But if we change the migration rate to 34, 35 and
- 9 36 percent, which has been shown in the Company's
- recent quarterly report, then we're going to push up 10
- 11 that impact significantly, because what's happening 12 is there's a smaller energy sales base in order to
- spread over the economic cost of the PPA. So the 13
- higher the migration rate, the greater the impact on 14
- 15 the consumers. This \$3.50 is based on 31 percent.
- 16 So, in a sense, it's a conservative number.
- 17 Q. Mr. McCluskey, do you have a copy of Mr. Sansoucy's
- rebuttal with you? 18
- 19 A. (Mr. McCluskey) I do.
- 20 Q. Would you please turn to Page 47.
- 21 A. (Mr. McCluskey) Okay.
- 22 Q. At Line 1, Mr. Sansoucy is asked the following
- 23 question: "On Page 45, Mr. McCluskey, starting at
- 24 Line 9, talks about the conflict with least cost

1 Q. And would you believe that PSNH is trying to comply

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- with the RPS law in a way that is consistent with
 - both the least cost planning statute and with its own
- 4 least cost plan?
- 5 A. (Mr. McCluskey) Well, I'm not the analyst that
 - reviews the Company's energy service filings. But
- 7 I'd be very surprised if the Company were not trying
 - to minimize the cost of making the RPS law by buying
- 9 least cost RECs available, whatever class it's
- 10 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
- least cost planning statute? 14
- 15 A. (Mr. McCluskey) Yes.
- 16 O. Thank you. I have nothing further.
- 17 CHAIRMAN GETZ: Thank you.
- Mr. Shulock. 18
- 19 **CROSS-EXAMINATION**
- BY MR. SHULOCK: 20
- 21 Q. Good morning, Mr. McCluskey.
- 22 A. (Mr. McCluskey) Good morning.
- 23 Q. I'd like to direct your attention back to Record
- 24 Request No. 5 and then the analysis that you

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- conducted. 1
 - **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
 - demonstrate the impacts of the PPA on energy service 8
 - 9 rates in 2014. You subsequently revised that
 - analysis using inputs you thought were more 10
 - reasonable and came up with higher impacts; is that 11
 - right? 12
 - 13 A. (Mr. McCluskey) Correct. I believe the year that
 - PSNH was using was 2015. 14
 - 15 O. I stand corrected.
 - What, if anything, does the impact on the energy 16
 - service rates in 2015 tell us about the 17
 - reasonableness of the rates in the PPA over a 20-year 18
 - period? 19
 - 20 A. (Mr. McCluskey) The cost-effectiveness of the rates?
 - 21 Q.
 - 22 A. (Mr. McCluskey) They don't tell us anything.
 - 23 Q. Okay.
 - **24** A. (Mr. McCluskey) Let me retract that.

integrated resource planning. What is your opinion?" 1

- Do you see that? 2
- 3 A. (Mr. McCluskey) Yes.
- **4** Q. And then at Line 4, at the beginning of his answer he
- 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
- believe, the PPA -- "to least cost integrated 8
- 9 resource planning and then condemn the PPA with
- Laidlaw is misleading and should be ignored by the 10
- Commission." Do you see that? 11
- 12 A. (Mr. McCluskey) I do.
- 13 Q. Do you believe that the Commission should ignore the
- 14 least cost planning statute?
- **15** A. (Mr. McCluskey) Absolutely not.
- 16 Q. And do you agree with Mr. Sansoucy, that lease cost planning and the development of new Class I RECs are 17
- 18 mutually exclusive?
- 19 A. (Mr. McCluskey) No.
- 20 Q. And PSNH is complying with the RPS law right now; is
- 21 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.

The cost-effectiveness cannot be demonstrated 1 through the rate impact analysis, which indicates 2 3 little impact. The cost-effectiveness study essentially is comparing the cost of the products 4 purchased with the, say the market price of those 5 6 products. We can avoid doing that if we have competitive solicitation, and the bidders will 7 8 determine what is the most appropriate price for a 9 particular product. But absent that, we have to do this kind of analysis to determine whether it's 10 11 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

1 above-market REC costs through 2025; is that right?

- **2** A. (Mr. McCluskey) That's what it says here.
- Q. And do you remember what percentage -- what interest
- rate you applied in calculating that?
- 5 A. (Mr. McCluskey) I believe I used 5 percent. I think
- it says in the second paragraph of the response, 6
- 7 5 percent per annum.
- 8 Q. And then we asked you to calculate interest on
- 9 above-market REC payments through 2033; correct?
- 10 A. (Mr. McCluskey) Correct.
- 11 Q. And your conclusion was that, using a 5-percent interest rate, the above-market -- or the interest on 12
- 13 the above-market cost of those RECs would be
- \$211 million; is that correct? 14
- **15** A. (Mr. McCluskey) That's correct.
- **16** Q. And then you concluded that the total above-market 17 REC payment with interest would be \$399 million; is
- 18 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
- dependent not just on the interest rates but on the 22
- 23 assumed market price for the product. Here I'm using
- 24 the current price for Class I RECs, \$6.50, which is

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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

- 12 two or three times more costly. So, that's the danger. I think that we should not use a rate impact
- 13 14 analysis as the basis for determining
- 15 cost-effectiveness.

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- 16 Q. Thank you. Now I'd like to direct your attention to IPP Exhibit 28. 17
- 18 A. (Mr. McCluskey) Okay.
- **19** Q. In Subpart B of this data request, the IPPs asked you 20 to calculate interest on above-market REC payments
- 21 through 2025; correct?
- 22 A. (Mr. McCluskey) That's correct.
- 23 Q. And your conclusion was that there would be
- 24 \$74 million in additional interest on those

- 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
- 7 want to make it clear that this particular analysis
- 8 uses that assumption. And it's only an assumption.
- And just for point of clarification, I believe you
- said the current price that you used was \$6.50. And 10 11 did you intend to say 16.50?
- (Mr. McCluskey) I did. 16.50. That's correct. 12 A.
- 13 Q. Okay. Thank you.
- Now I'd like to draw your attention to IPP 30. 14
- 15 A. (Mr. McCluskey) Okay.
- 16 Q. You're aware that in the Lempster Wind docket, the
- 17 Commission permitted PSNH to purchase more RECs than 18 were required for PSNH to meet its New Hampshire RPS
- 19 requirements?
- 20 A. (Mr. McCluskey) I believe that's the case, yes.
- 21 Q. Why is it your opinion that PSNH should not be permitted to do the same here and pass the cost of 22
- 23 that acquisition on to its customers?
- 24 A. (Mr. McCluskey) It has to do with the difference in

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1 MR. BERSAK: Objection, Mr. Chairman. Objection. He's already testified he doesn't know. 2 3 CHAIRMAN GETZ: Mr. Edwards, I mean, 4 this is verging from not cross-examination, but into

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

his testimony.

BY MR. EDWARDS:

10 Q. Mr. Frantz, would you agree that the 67.5-megawatt Laidlaw plant is probably the largest forest-driven 11 plant in the U.S., or certainly in New England? 12

13 A. (Mr. Frantz) I'm aware it's the largest proposed facility for New Hampshire, and certainly one of the 14 15 largest in New England. I can't say for sure whether it is the largest in New England. 16

17 Q. Would you agree that New Hampshire wood supply is 18 tapped versus untapped -- in other words, there are 19 other users?

(Mr. Frantz) There are certainly other users. 20 A.

21 O. Would you agree that the 67.5-megawatt Laidlaw project, the largest forest-derived biomass plant at 22 23 least in the state, will be located basically in the 24 middle of this tapped forest?

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CHAIRMAN GETZ: Well, certainly the 1 petitioner gets in this case --2 3

but maybe a few, at most, if that's okay.

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

MR. SHULOCK: Thank you. I have no

MR. RODIER: Mr. Chairman, I don't

CHAIRMAN GETZ: Thank you.

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 --

MR. RODIER: Okay. No questions.

That's okay. Thank you.

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obligation.

more questions.

Mr. Rodier.

CHAIRMAN GETZ: Okay. Thank you. Mr. Edwards.

MR. EDWARDS: Your Honor, I was a little bit late in getting here this morning, and I'm assuming that Mr. McCluskey has had most of the questions. But I assume Mr. Frantz is also up there

to inquire of him with any questions? CHAIRMAN GETZ: Yes.

MR. EDWARDS: I'd like to start with

Mr. Frantz.

CROSS-EXAMINATION

BY MR. EDWARDS: 16

- 17 Q. Were you aware that there were a couple of biomass 18 plants in the U.S. that are 100 megawatts?
- **19** A. (Mr. Frantz) I don't have any particular knowledge of 20 those facilities, no.
- **21** O. So you also probably wouldn't be aware that those 22 facilities don't just use forest-derived wood, then.
- 23 A. (Mr. Frantz) No.
- 24 Q. They in fact use construction debris --

- 1 A. (Mr. Frantz) Well, I don't quite understand what you
- mean by "tapped." But to the extent there are other facilities, it's in an area where there are other 3
- 4 facilities nearby, depending how you define "near."
- Were you aware that liquidated harvesting is
- significantly happening in the Berlin area? 6
- 7 A. (Mr. Frantz) I'm not a forester, and my testimony doesn't discuss liquidated forest practices.
- Are you aware of any sweeping legislative change that 9 10 has occurred in Maine as a result of liquidated
- 11 harvesting?
- 12 A. (Mr. Frantz) No, I'm not. I have a tough enough time 13 keeping track of New Hampshire legislation.
- Were you aware that one of these harvesters that can 14 O.
- 15 no longer operate with this practice in Maine has purchased and liquidated thousands of acres in close 16
- proximity to Berlin? 17
- 18 A. (Mr. Frantz) I'm not aware of the forestry practices 19 in Maine.
- 20 Q. What impacts can wood shortages and/or cost increases 21 have on biomass plants already operating?
- 22 A. (Mr. Frantz) Well, all else equal -- I am an
- 23 economist. I will say all else equal, large
- increases in demand have an upward pressure on price. 24

- 1 I don't believe forestry practices are exempt from supply and demand. 2
- 3 Q. Assuming there are six operating facilities in the
- North Country, with a combined output, let's say, of 4
- approximately 120-megawatts, is it your opinion that 5
- 6 these plants offer more direct and indirect jobs than
- the 67.5-megawatt project would offer? 7
- A. (Mr. Frantz) I haven't looked at each individual 8
- 9 project and don't have the data for each individual
- project to know whether or not what their direct 10
- 11 employment is or their indirect employment associated
- 12 with those direct purchases of wood. To the extent
- 13 that they have similar production technologies,
- input, uses, if they're larger, they probably have a 14
- 15 somewhat significant effect on indirect and induced
- 16 effects. But I did not look directly at those
- 17 facilities.
- **18** Q. Does the continued existence of these plants
- 19 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
- the state that are certified to meet the New 22
- 23 Hampshire RPS requirements are important.
- 24 Q. Thank you.

1 Q. So if the project has less debt service, would you

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- agree the project should produce cheaper power than a 3
 - Greenfield project?
- 4 A. (Mr. McCluskey) Not necessarily. There's capital 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 9 reduced average cost for the facility than using --
- 10 than starting with a facility with an existing
- 11 potentially inefficient power plant.
- 12 Q. In your opinion, have the savings in debt service
- 13 been reflected in the rate structure now being
- considered in this PPA? 14
- 15 A. (Mr. McCluskey) I cannot comment on that. I don't
- know what effect the cost of the facility would take 16
- 17 into the account in the development of the PPA
- 18 prices.
- 19 Q. In your opinion, has this project offered to sell its 20 wrapped-up rates for less than other projects, other
- 21 projects it proposed?
- 22 A. (Mr. McCluskey) Well, I've testified to the fact that
- 23 PSNH received unsolicited offers from two alternative
- 24 biomass projects, and PSNH's own analysis showed that

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- 1 the levelized costs of those two unsolicited projects
 - was lower than the levelized cost for the Laidlaw 2
 - 3 project.
 - **4** Q. And do you recall those percentages?
 - 5 A. (Mr. McCluskey) I believe the CPD project was
 - 8.5 percent lower than the Laidlaw levelized, and the 6
 - 7 Concord Steam project I believe was either 12 or

 - 12.5 percent lower. 8
 - 9 Q. Thank you.
 - Mr. Frantz, as a specialist in your profession, 10
 - 11 I'm sure you understand the concepts of supply and 12 demand and micro and macro economics, and deal with
 - 13
 - these concepts on a regular basis. And with your
 - 14 understanding of economics, in very generic form, can
 - 15 you explain economy of scale?
 - 16 A. (Mr. Frantz) Economy of scale occurs when costs are
 - 17 reduced as output increases. Average costs are 18
 - reduced as output increases.
 - 19 O. So, would you agree that this 67.5-megawatt project should cost less than a smaller facility? 20
 - 21 A. (Mr. Frantz) Well, you know, I think in general, without looking at the actual facilities -- the 22
 - 23 boiler, the actual fuel contracts -- there are a lot
 - - of variables that go into that. And so I'll fall

Mr. McCluskey, the expert for the City of 1

- 2 Berlin, Skip Sansoucy, has stated that the existing
- infrastructure should save considerable capital 3
- costs. Do you agree with that concept? 4
- 5 A. (Mr. McCluskey) Capital cost of the plant? Is that
- what you're referring to? 6
- 7 Q. The existing infrastructure should save considerable
- 8 capital costs. I'm wondering if you agree with that
- concept. 9
- (Mr. McCluskey) Well, if he's referring to the 10 A.
- existing infrastructure which Laidlaw would continue 11
- 12 to use in the development of the plant, then,
- potentially, yes, it could avoid the need to acquire 13 capital, acquire new assets. So, in theory, I can 14
- 15 imagine the more plant that exists, the less that has
- to be spent by the developer. 16 17 Q. So, given the savings, would you agree this should
- lead to reduced debt service? 18 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.

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- back on my ceteris paribus, "all else equal." A 1
- larger facility would have lower average costs than a 2
- 3 much smaller facility. But for any particular
- project, I think you have to look at the actual cost 4
- of the project.
- **6** 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 10 11 employees are at other facilities. Again, I think
- 12 you need to know what exactly the labor force is, how
- 13 many shifts, in general. I haven't conducted that
- 14 analysis. So, to extend what is a traditional
- 15 economy of scale or scope to an individual project I
- 16 think would border on reckless.
- 17 A. (Mr. McCluskey) If I could just add? I think your 18 question was going to cost. But remember that
- 19 Laidlaw is not a rate-regulated entity. Utilities
- 20 establish their prices based on costs. This is not a
- 21 utility. Typically, the prices that they charge for
- the products that they produce are based on the 22
- 23 market. They're in competition with other providers
- 24 of the same products. So you could well have a
 - Page 54

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- facility that has actually got a lower average cost, 1
- and they rightfully receive a price -- the same price 2
- as anyone else because that is the way markets work. 3
- So I just wanted to make clear that there's a 4
- distinction between cost-based pricing and 5
- market-based pricing that we are addressing --6
- 7 supposed to be addressing for the Laidlaw facility.
- 8 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 11
- 12 larger plant?

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- 13 A. (Mr. McCluskey) Well, I'm not sure which plant you're 14 referring to. I'm not sure where the information
- 15 comes from. So I really can't comment on those
- prices at all. 16
- 17 Q. I guess what I'm asking is, I'm referring back to the
- 18 two percentages you referred to recently of 8-1/2 percent and 12-1/2 percent. You mentioned one came 19
- 20 from Clean Power. And I guess what I'm asking is,
- why could those smaller plants provide rates that 21
- 22 have been quoted recently of 8.5 and 12.5 percent
- 23 less than a 67.5-megawatt plant?
- 24 A. (Mr. McCluskey) Sorry. I misunderstood you. I guess

- 1 those two projects submitted bids that they felt they
- could live with and make the required returns that 2
 - they need to stay in business. If the levelized
- prices that I referred to had been the result of a 4
- competitive bid -- which you heard we've not got one 5
- 6 here -- but had they been the result of a competitive
- 7 bid, then the Laidlaw project would not win out.
 - Presumably, they would select, after taking into
- 8 9 account other criteria, they would select the least
- 10 cost bidder. And that's, I think, the way it should
- 11 be. Regardless of the size of the project, how
- 12 efficient the equipment is of the project, at the end
- 13 of the day, if a particular developer wants the
- business, they will sharpen the pencil and attempt to 14
- 15 undercut the prices that he feels other developers
- will offer. And we think that's how it should be 16
- 17 done, and the lowest bidder should receive the 18 contract.
- 19 Q. Thank you. When it comes to federal grant funds, I'm 20 a little fuzzy. So you'll have to excuse me if I'm
- 21 not asking these questions entirely correctly.
- Please feel free to correct me. 22 23

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

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- process with the PUC, it's been mentioned about 1
- 2 grants and that grants are available that amount to
- 30 percent of the capital costs; is that correct? 3
- 4 A. (Mr. McCluskey) There are different federal grants.
- The ITC program -- investment tax credit, I can't 5 believe I forgot that. The invest tax credit does 6
- 7 provide a significant helping hand to developers.
- And I think it is on the order of 30 percent of the 9
- capital costs of the facility paid over the life of the facility. 10
- 11 O. Is it true the eligibility requires construction by a certain point?
- 12 13 A. (Mr. McCluskey) I don't really know the details as to
- 14 how -- what they need to do to qualify for those
- 15 things. It's my understanding that the Laidlaw
- project does qualify for the ITC, or a version of it, 16
- which is actually a little bit more beneficial. And 17 18
- they also receive a grant under the new market 19 development something. So my understanding is that
- 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
- 23 wrong with the developer getting the helping hand.
- So they have two choices of how they're going to get 24 Q.

DAY 5 - MORNING SESSION ONLY - February 8, 2011 DE 10-195 PSNH/LAIDLAW BERLIN BIOPÓWER Page 57 1 compensated. use the ITC version, I don't have a figure in my head 1 **2** A. (Mr. McCluskey) Say that again? as to what would be the amount of dollars that they 2 3 Q. They have two different choices as to how they're 3 would receive. going to get compensated on these grants? **4** Q. Would you agree that if the owners take that grant 4 after 60 days, that they no longer are at risk for **5** A. (Mr. McCluskey) No. They actually qualify for both, 5 the ITC, or a version of it. And they also receive 6 their initial investments? some additional funds through a different federal 7 A. (Mr. McCluskey) No. There is a capital cost 7 associated with the facility which will not be 8 program. 8 Q. Okay. So, is one of these choices to earn 9 covered by the federal government in total. And protection -- production tax credit and sell it as a there's always the potential for the cost of the 10 10 11 revenue source? 11 project to be higher than what it initially 12 A. (Mr. McCluskey) No. The protection tax credit is an 12 estimated. And so there is some risk which they are 13 alternative to the ITC. I think the general feeling 13 not compensated for through the PPA prices. When I is that the ITC is more financially beneficial. So say "not compensated," there's no automatic 14 14 15 they could use the ITC, or they could use the ITC or 15 adjustment mechanism that increases the PPA prices if 16 a version that came out of the American -the capital cost of the project rises. So, the 16 17 A. (Mr. Frantz) American Recovery Act. 17 company is at risk that it could be more costly than 18 A. (Mr. McCluskey) -- American Recovery Act. And I it initially estimated. 18 19 believe they selected the one that gives them the 19 Q. Would you agree that that risk would be significantly biggest helping hand. And they've also availed 20 20 dropped? 21 themselves of funds through the new market 21 development program. 22 22

MR. BERSAK: Mr. Chairman, I think

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

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question is? The risk of recovery of their investment? Is that what your --2

MR. EDWARDS: Yeah, their initial 3

4 investment.

CHAIRMAN GETZ: Mr. McCluskey?

A. (Mr. McCluskey) What's the question again? BY MR. EDWARDS:

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Q. Do you agree that their initial investment would be dramatically decreased, as far as the risk would be 9 10 dramatically decrease?

> MR. BERSAK: I don't believe, Mr. Chairman, Mr. McCluskey discussed development costs, development risks, investment tax credit, the new market credits, or any of that in his testimony. We've given Mr. Edwards great latitude in asking questions. Sounds like, to me, he's more testifying

than cross-examining. CHAIRMAN GETZ: Well, I think that this line of questioning may in some respects go to Mr. -- can be related to Mr. McCluskey's testimony.

But Mr. Edwards, it seems what it's directed at is trying to elicit from Mr. McCluskey some judgment about the internal returns or assumptions of the Company, which he's testified to

- to over time? 1
- **2** A. (Mr. McCluskey) The modified ITC, my understanding,

So, is it one of these programs where they get the

lion's share of their funds right up front as opposed

- that's the case, I believe, yeah. Instead of 3
- receiving it over a period of time, they receive it 4
- upfront. 5

23 Q.

- 6 Q. With what you know, has the financial information
- you're aware of been reflected in the pro forma of 7
- 8 the rates where these -- where this company has the
- benefit of these grants?
- 10 A. (Mr. McCluskey) Well, Staff is not aware of the
- detailed negotiations between PSNH and Laidlaw. What 11
- 12 work PSNH did on these grants and how they worked
- those into their determination of what a reasonable 13
- 14 set of prices are, we don't know. We can't comment
- 15 on that. The Commission issued a decision which said
- that those discussions are confidential. 16
- 17 Q. With your knowledge of the project, if the Company
- 18 chooses to take the grant funds 60 days after
- 19 start-up, do you agree that that amount will be
- 20 somewhere in the range of \$45- to \$70 million?
- 21 A. (Mr. McCluskey) I don't have that figure in my head.
- 22 When I did the financial modeling using the cash flow
- 23 analysis, it was easier to model it using the
- 24 production tax credits. So the fact that I didn't

DAY 5 - MORNING SESSION ONLY - February 8, 2011 DE 10-195 PSNH/LAIDLAW BERLIN BIOPÓWER Page 61 1 that he's not aware of those issues. So I do think 1 it is duplicative. 2 2 3 MR. EDWARDS: Thank you. 3 BY MR. EDWARDS: 4 5 O. Mr. Frantz, if we could turn for a moment to talking 5 about loggers. It's been said that many loggers have 6 6 CHAIRMAN GETZ: Mr. Frantz? gone out of business in the state as a result of lost 7 7 business and that loans will be made available for 8 these loggers to purchase new machinery for their 9 9 10 trade; is that correct? 10 11 A. (Mr. Frantz) My testimony doesn't address loans for 11 12 loggers. If you have a particular question 12 13 concerning labor force associated with it, I'd be 13 happy to talk about that. 14 14 15 Q. Do you have any idea how much it would cost for a 15 16 logger to set up enough equipment to be able to go after those markets. 16 17 function as a viable business? **18** A. (Mr. Frantz) Are you assuming that they either start 18 from scratch or have already sold their equipment? 19 20 Q. They've already sold their equipment. reasonable purpose? 20

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21 A. (Mr. Frantz) It's a significant investment.

22 Q. Do you believe in the definition that biomass-grade 23 wood is waste wood, such as tops and branches?

24 A. (Mr. Frantz) Normally, the wood is actually the tops

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.

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8 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

17 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

21 A. (Mr. Frantz) I think there's a lot that goes into deciding whether or not you're going to invest a lot 22 23 of money into an operation. And obviously included 24 in that is what kind of markets are out there and how

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left over from logging operations, or limbs, branches 1

2 that's been used for biomass.

3 Q. Would you agree that roundwood or pulpwood,

economically speaking, does not fall into this 4 category? 5

6 A. (Mr. Frantz) By definition, roundwood and pulpwood 7 are different uses.

8 Q. So, would you agree that the highest and best use of roundwood which can be sold to a different user for. 9 say 48 per ton, is not to sell it to Schiller or some 10 other biomass company for 27 per ton? 11

12 A. (Mr. Frantz) I think you have some assumptions in there that there isn't a viable alternative for those 13 higher-valued wood products, and therefore they would 14 15 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 17 roundwood, pulp, which is a waste to sell it twice 18 19 the amount per ton? 20

MR. BERSAK: Objection, Mr. Chairman. Mr. Frantz already said he didn't testify regarding wood?

23 CHAIRMAN GETZ: Mr. Edwards, any 24 response?

long will they be there and how much competition do I

2 have and what are my financing rates. 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 more do you have along this line?

MR. EDWARDS: I have two more 8 questions, Your Honor. 10

BY MR. EDWARDS:

11 O. If we were to place the entire tree into the boiler at the Laidlaw plant, at what efficiency rate did we 12 13 achieve in burning the entire tree? 14

CHAIRMAN GETZ: Are you suggesting without chipping it or what?

MR. EDWARDS: You chip it first.

(Mr. Frantz) If it's all chipped, it's still going to 17 A. burn at the same levels as the tops. It's going to 18 19 be whatever the efficiency factor is of that boiler.

20 Q. And we've been told that the efficiency factor of 21 this plant is what?

22 A. (Mr. Frantz) Well, most wood plants are in the 18,000 23 to 22,000 BTUs per-kilowatt-hour basis. To the extent this boiler is more efficient, it might be in 24

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Page 65 Page 67 the 14 to 15,000 BTUs per-kilowatt-hour basis. 1 the Laidlaw plant can have for New Hampshire, the 1 2 Q. So is that a percentage efficiency in the low 20s 2 North Country, and Berlin, how much weight is given 3 range, 20, 22, 23 percent? 3 to the economic impact such a project can have? 4 A. (Mr. Frantz) Those are what most people would 4 A. (Mr. Frantz) Well, I mentioned in my answers to consider fairly inefficient heat rates for an Attorney Hatfield that it's one factor, if you look 5 operation. 6 at the statute, the economic benefits. There's a 6 **7** Q. What would you consider to be an average? 7 number of criteria, and this is one of those. 8 A. (Mr. Frantz) Well, it depends on the fuel you're 8 Q. Would you say that the economic benefit could talking about. 9 outweigh the economic sensibility of a substantially 10 Q. For a plant like this. higher rate to the ratepayer? 10 11 A. (Mr. Frantz) For burning biomass? 11 A. (Mr. Frantz) I believe I answered that, stating that 12 Q. Hmm-hmm. 12 cost-effectiveness, in my opinion, certainly should 13 A. (Mr. Frantz) You can get down to 13-, 14,000 BTU per 13 always be the key aspect of these criteria. I think kilowatt hour. That's a pretty good heat rate for a that when all else is close to equal, then obviously 14 14 15 biomass facility. 15 you want to go with the economic benefits. 16 Q. What percentage would you say that is? 16 Q. Are you aware that Brookfield/Noble are beginning Twenty-five-percent efficiency? 17 17 their wind project next month? 18 A. (Mr. Frantz) I'll have to calculate it. I'd have to Which project? 18 A. 19 check and get back to you. 19 Q. Well, I'm referring to it as the Brookfield/Noble 20 Q. I guess what I'm getting at is, from an economic Project. That's the 100-megawatt project in the 20 21 perspective, does it make any economic sense to use a 21 North Country. whole tree at a 25-percent efficiency rating? (Mr. Frantz) I'm aware of the Noble project. I 22 22 A. 23 A. (Mr. Frantz) Well. I think I answered that when I 23 thought it was 99-megawatts. I'm not aware of what 24 said it would depend a lot on if you didn't have any 24 stage of completion it's at. Page 66 Page 68 other better or higher value reasons to sell that 1 Q. I've been contacted by this company to find housing 1 2 wood. If you have sawlogs, much rather sell sawlogs 2 for approximately 140 workers from outside of New and then just work your way down. Hampshire, as well as 70 jobs from inside this area. 3 3 4 Q. Thank you. What immediate impact do you think that can have for 4 Mr. McCluskey, just a hypothetical. If 5 Berlin over the entire year economically? 5 Noble/Brookfield was to fill capacity in the Coos MR. BERSAK: Objection. Facts not in 6 6 7 Loop, what would Laidlaw need to do? 7 the record. CHAIRMAN GETZ: What's the relevance? A. (Mr. McCluskey) Could you give me that again? 8 Q. If the Noble/Brookfield 100-megawatt project filled MR. EDWARDS: I am trying to find out 9 the capacity in the Coos loop, what would Laidlaw from Mr. Frantz, by some very definite projects that 10 10 need to do? are in the works in Berlin, what kind of economic 11 11 12 A. (Mr. McCluskey) Well, I assume the transmission line 12 impact those projects can have in comparison to this would have to be expanded in order to send the output 13 13 one. CHAIRMAN GETZ: And how would that 14 to the low centers in New Hampshire and elsewhere. 14 15 Q. What if the loop wasn't expanded? What would Laidlaw 15 affect our decision in this case? need to do? MR. EDWARDS: I understand that the 16 16 17 A. (Mr. McCluskey) If it wasn't expanded? economic leg of your decision here is very important, 17 18 Q. Yes. and I also understand that there are some very viable 18 19 A. (Mr. McCluskey) Well, I can't see how, in that projects coming to Berlin that are -- that could be 19 20 hypothetical, how the project would proceed. 20 very important to that decision. 21 Q. Is that expansion a requirement of this PPA? CHAIRMAN GETZ: Well, first of all, I 21

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23 Q. Thank you.

22 A. (Mr. McCluskey) Not to my knowledge.

Mr. Frantz, in weighing out the economic benefit

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mean, you are testifying to what you know about facts

that aren't in evidence in this case. And I'm not

sure what the relevance of this line of inquiry is.

Page 69 Page 71 1 So let's move along to your next set of questions. 1 for the city. BY MR. EDWARDS: Would you agree that, statistically, 90 percent of 3 Q. Mr. Frantz, are you familiar with the federal prison that payroll stands to go back into the community in project coming to Berlin? Berlin? 4 4 MR. BERSAK: Objection. Same **5** A. (Mr. Frantz) I have no knowledge of whether -- how 5 6 objection, Mr. Chairman. much of that goes back, actually, in the city of 6 CHAIRMAN GETZ: Relevance, Mr. 7 Berlin and how much is actually sent back to wherever 7 8 Edwards? 8 those construction workers actually live. That's one MR. EDWARDS: Well, Your Honor, 9 of the concerns in all models, is what -- where does 9 between those two projects, there is 50 million in 10 that savings go? Does it stay in the local community 10 and recirculate and therefore drive the multipliers, 11 payroll coming to the area, which I would think would 11 12 be a very valid argument as to some economic or does it actually leak out of the economy? 12 13 stability coming into Berlin. That's very important 13 Q. Turning to the value that the Laidlaw project can to Berlin. provide to Berlin to increase its assessed value, Mr. 14 14 15 CHAIRMAN GETZ: Well, let me stop you 15 Frantz, we've been told by the City of Berlin's 16 there. expert that the finished product could save the 16 17 Mr. Frantz, is there any -- is your 17 ratepayer in Berlin 17 percent. Are you familiar 18 opinion with respect to this PPA affected by other with whether or not that's over 20 years? 18 19 economic developments and employment that would occur 19 A. (Mr. Frantz) Are you talking about the taxpayer in 20 in Berlin or the Berlin vicinity? 20 Berlin or the electric ratepayer in Berlin? 21 WITNESS FRANTZ: Only to the extent 21 Q. I'm talking about the taxpayer. In other words, that that the multiplier effects mentioned by Dr. Shapiro the impact that the assessed value can have on the 22 22 23 assume in all I/O models that there's an unlimited 23 total value of Berlin, the City's expert has stated 24 supply of local labor for those multiplier effects to 24 that that figure is 17 percent. Are you aware that's Page 70 Page 72 be realized, to the extent there are leakages in over 20 years? 1 1 labor, because you can't get that supply of labor 2 A. (Mr. Frantz) I'm not aware of what period of time 2 from the local economy, it reduces the effects on that was for. 3 3 whatever project you happen to be analyzing. 4 Q. Okay. When it comes to economic development and 4 CHAIRMAN GETZ: Is that something you assessing in a city, are you familiar with 5 5 can quantify? 6 neighborhood codes? 6 7 WITNESS FRANTZ: No. 7 A. (Mr. Frantz) No, I don't assess for tax purposes. CHAIRMAN GETZ: Mr. Edwards. I'm not an assessor. 8 9 MR. EDWARDS: Your Honor, I have four 9 Would it surprise you that in close proximity to this more questions on this that I would like to ask Mr. mill there is a neighborhood code, called a 10 10 Frantz, if I could. Neighborhood Code C, that has a 20-percent decreased 11 11 rating as a result of all of the properties within 12 CHAIRMAN GETZ: Well, let's see where 12 they go. 13 close proximity to this mill? 13 BY MR. EDWARDS: MR. BERSAK: Mr. Chairman, objection. 14 15 Q. Hypothetically speaking, if these two projects were 15 CHAIRMAN GETZ: I'm going to permit 16 to go online as projected for this spring and summer, this question. Let's move along. 16 what kind of impact can a \$50 million payroll have on BY MR. EDWARDS: 17 17 18 the City of Berlin? Q. I'm curious, from an economic standpoint, if this 18 CHAIRMAN GETZ: When you say "these 19 mill is impacting a 17-percent decrease from what the 19 20 two projects," you're talking about the --20 City's expert tells us, but it's having a 20-percent 21 MR. EDWARDS: I'm talking about the 21 decrease impact on a substantial number of properties 22 windmill project and the prison. in close proximity to the mill, would you agree that 22 23 A. (Mr. Frantz) I think for the size of the city of 23 that 17 percent is not necessarily accurate? 24 Berlin, that would be a significant economic impact MR. BERSAK: Objection, Mr. Chairman. 24

Page 73 Page 75 CHAIRMAN GETZ: Well, I'm going to 1 A. (Mr. McCluskey) I did. 1 permit this because it's a similar line of **2** Q. Okay. And if I am reading the second page of that 2 3 questioning we've heard from other witnesses, and I'd 3 report, the middle tier of numbers, those numbers like to get an answer from Mr. Frantz, if he has one. confirm Mr. Sansoucy's testimony that there would be 4 4 WITNESS FRANTZ: Could you repeat the between 300 million and 400 million in savings to the 5 5 question? 6 ratepayers over the life of the PPA, depending upon 6 CHAIRMAN GETZ: 'Cause I think 7 which variables are used in the forecasting; correct? 7 (Mr. McCluskey) That's correct. It --8 ultimately where we were with the previous witness 8 A. Q. Okay. In fact, your numbers show it would be 336 9 was that you were raising the issues of whether there 9 could be positive or negative effects on residences million to 391 million, depending upon which 10 10 11 or business near to the plant, depending on certain 11 variables: correct? assumptions. Is that --12 12 MS. AMIDON: Mr. Chairman, would you 13 MR. EDWARDS: Correct. 13 ask Mr. Boldt to show down so that Mr. McCluskey can 14 A. (Mr. Frantz) Well, if that's the question, then I hear the questions? 14 15 think the answer is yes. 15 BY MR. BOLDT: **16** Q. Thank you. I have no other questions. **16** Q. Are you having any trouble hearing me, sir? CHAIRMAN GETZ: Okay. I think it's 17 17 A. Well, I was responding to your previous question, and 18 about time for recess. But let me try to get an you cut me off and started on another question. 18 19 understanding of where we may be going. 19 Q. I'm sorry. I thought I heard a "Yes," so I went on. Next to Mr. Boldt. Do you have an 20 20 A. (Mr. McCluskey) I was going to add something to the 21 estimate of how much cross you have? 21 "Yes." MR. BOLDT: Maybe an hour, Your 22 Q. Well, if there's much that needs to be added, I'll 22 23 Honor. 23 allow Ms. Amidon to come back and redirect. I think 24 CHAIRMAN GETZ: Okay. And Mr. Bersak? 24 that might be the most efficient way of handling Page 74 Page 76 MR. BERSAK: Two-plus. this, since we are trying to do a limited time for 1 1 2 CHAIRMAN GETZ: Okay. 2 the Commission. (Chairman and Commissioners conferring.) CHAIRMAN GETZ: Well, actually, let me 3 3 CHAIRMAN GETZ: All right. Well, set the ground rules. 4 4 let's take a brief recess now. What we intend to do MR. BOLDT: Okay. You always can. 5 5 is take 15 or 20 minutes, come back, go for another CHAIRMAN GETZ: Certainly I'd like all 6 6 witnesses to answer "Yes" or "No" as directly as 7 90 or so, take the lunch hour in the 1:00 to 2:00 7 possible to the question from counsel. But I also range, and then come back and see how far we can get. 8 8 think it is more efficient if they have the 9 So we'll recess until about 11:15, 11:20. 9 (Whereupon a recess was taken at 11:00 opportunity to explain at a time more related to the 10 10 a.m. and the hearing resumed at 11:25 a.m.) questions rather than waiting for redirect. So it's 11 11 CHAIRMAN GETZ: Mr. Boldt. helpful to our understanding of what's going on. 12 12 MR. BOLDT: Thank you, Mr. Chairman. MR. BOLDT: I'll do my best, Your 13 13 **CROSS-EXAMINATION** Honor. 14 14 BY MR. BOLDT: 15 CHAIRMAN GETZ: Thank you. 15 BY MR. BOLDT: 16 Q. Mr. McCluskey, before we started this morning, I 16 wanted to make sure you had the Ventyx 2010 fall 17 Q. So did I read the two numbers from your calculations 17 reports, which I believe is Staff 12 and Staff 18 correctly? 18 Exhibit 14. Do you have those two exhibits in front 19 A. (Mr. McCluskey) You did. Whether they agree with 19 20 statements made by Mr. Sansoucy or not, I couldn't of you? 20 21 A. (Mr. McCluskey) I have Staff Exhibit 14 and the 2010 21 say. These are the numbers that result from the analysis that I did. 22 report. 22 23 Q. Okay. Now, just for the record, confirm for me: You 23 Q. Okay. And whether that analysis or Mr. Sansoucy's 24 prepared Staff Exhibit 14, that analysis? analysis is correct, again, depending upon which 24

Page 77 Page 79 1 variables are used, you'd agree with me that there is 1 WITNESS McCLUSKEY: If you assumed then no fund, no dollars in the cumulative reduction that the -- with carbon, Ventyx energy prices were a 2 2 3 fund at the end of the 20-year period; correct? 3 reasonable proxy of future market energy prices, then (Witness reviews document.) these numbers would indicate that there would be no 4 4 5 Q. There is a savings to the ratepayers over that above-market energy costs. 5 6 period; correct? CMSR. BELOW: Okay. Thank you. 6 7 A. (Mr. McCluskey) Well, let me just think about the 7 MS. AMIDON: Mr. Chairman, I question. The cumulative reduction fund relates only 8 8 apologize. Would Mr. McCluskey please speak into the 9 to energy payments. And so you seem to be focusing 9 mic for the benefit of the stenographer? Thank you. on the total above- or below-market calculation under 10 10 BY MR. BOLTON: the second block. 11 11 Q. Mr. McCluskey, also on that same line, I believe you 12 So, recognizing that the cumulative reduction 12 testified this morning that you were concerned with 13 account applies only to energy, could you give me 13 the CRF that would create a violation of the use and your question again? useful principle. 14 14 15 Q. If these numbers are correct, is it your opinion that 15 A. (Mr. McCluskey) Used and useful. 16 there is or is not money in the cumulative reduction 16 Q. Used and useful. Thank you. 17 fund at the end of the period? 17 Now, if we are assuming there is no dollar amount in the CRF, there is, I assume, no violation **18** A. (Mr. McCluskey) You cannot answer that question based 18 19 on these numbers, because this second block shows for 19 of the used and useful principle; correct? 20 A. (Mr. McCluskey) That's correct. If in every hour 20 each year an above- or under-market amount. What it 21 does not address is whether the energy costs are 21 customers were not asked to pay above-market costs, above or below the energy costs in the PPA. 22 then there would be no additional payment to finance 22 23 Let me say that again. It does not address 23 the future purchase of a power plant. That's 24 whether the market energy prices are above or below 24 correct. Page 78 Page 80 the energy prices in the PPA. Now, to be fair to your position, your Exhibit 14 1 does support your contention that there is a 2 Q. Okay. Thank you for that clarification. 2 CMSR. BELOW: Excuse me. I just need 300 million to 400 million overpayment to the 3 3 to interrupt because I don't understand where we're 4 ratepayers over the life of the PPA, depending upon 4 at. If we're looking at Staff Exhibit 14 --5 certain variables that you've selected; correct? 5 MR. BOLDT: Yes, sir. 6 Α. (Mr. McCluskey) Correct. The 333,000,000 6 above-market figure assumes a 63-megawatt power plant 7 CMSR. BELOW: -- to get to the overall 7 number, don't you compare the total in the first 8 with 87.5-percent capacity factor. And it assumes 8 block with the total in the second block? the products, the market prices of the products are 9 9 WITNESS McCLUSKEY: That's correct. as detailed in the Ventyx 2010 study. 10 10 That's correct. 11 O. So, isn't it safe to say that, depending upon which 11 variables change over the life of this PPA, there 12 CMSR. BELOW: And can't you look at 12 the second page and look at the total for energy in 13 could be different swings in whether it's an 13 the first block, which is 965 million, versus energy overpayment by the ratepayers or a savings to the 14 14 15 in the second block, which is 1,274,000,000? 15 ratepayers; correct? WITNESS McCLUSKEY: That's correct. 16 16 A. (Mr. McCluskey) Correct. If you're talking about That would be one way of doing it. So the issue is actual prices as opposed to forecasts? Yes. 17 17 Depending on how the actual prices turn out, that 18 whether the Ventyx market energy prices with carbon 18

forward.

assumptions?

is a reasonable proxy for market energy prices going

numbers, wouldn't that indicate whether you're over

or under market over the term, using these

CMSR. BELOW: But if you use those

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21 O.

would determine whether the PPA at any point in time

Now, I believe you testified during your additional

direct back last Tuesday, on February 1st, that you

suggesting should take place. My notes reflect the

had two major variable changes that you were

is above or below market.

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- first was that you wanted to replace the Ventyx 2009 1
- 2 market energy projections with carbon legislation; as
- 3 used by Mr. Sansoucy, with the Ventyx 2010 market
- 4 energy projections without carbon legislation.
- 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
- to replace the Ventyx 2010 REC pricing -- use the
- 9 2010 REC pricing projections instead of the REC
- prices set by this PPA; correct? 10
- 11 A. (Mr. McCluskey) That's correct.
- 12 Q. Okay. Now, if you would, concerning that first
- 13 variable change, the "with" versus "without" carbon,
- are you saying that your crystal ball projections, 14
- 15 you're confident that we're never going to have
- 16 carbon legislation?
- 17 A. (Mr. McCluskey) No, I'm not saying that.
- 18 O. Okav.

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- 19 A. (Mr. McCluskey) What I'm saying is that the base case
- 20 assumed by the Ventyx modelers, they apparently have
- 21 determined that there is not a sufficient probability
- 22 that carbon legislation or climate-change legislation
- 23 will pass at the federal government level; and, as a
- 24 result, they've determined that it should not be in

1 passing in the next two years is low as a result of

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- 2 the current political climate. The Fall 2010 North
- 3 American Power Reference Case does not assume the
- 4 implementation of GHG legislation during our forecast
- period. Did I read that correctly? 5
- 6 A. (Mr. McCluskey) That's correct.
- 7 Q. Okay. Now, you'd agree with me that, just as wind
 - blows on a turbine, winds blow in the political arena
- 9 back and forth, without any real ability to predict;
- correct? 10

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- 11 A. (Mr. McCluskey) Policy issues can change. I agree 12 with that.
- 13 Q. Now, staying on ES1, let's continue on. You see 14
 - where it states, Similarly -- that same paragraph.
- 15 Similarly, Ventyx does not assume the implementation
- of a federal renewable energy standard as well and 16
- 17 that the Fall 2010 reference case meets individual
- state RPS -- renewable portfolio standard -- through 18 19 the study horizon. Did I state that correctly?
- 20 A. (Mr. McCluskey) You did.
- 21 Q. Okay. And then the conclusion of that paragraph, you
- see where it states, The Fall 2010 Federal 22
- 23 Environmental Legislation Case assumes the
- 24 implementation of Federal Greenhouse Gas legislation

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- 2 Q. That's your assumption based on your read of the
- Ventyx report? 3
- 4 A. (Mr. McCluskey) That's right.

their base case projection.

- **5** Q. Now, in reading the Ventyx report, did you review its
- executive summary? 6
- 7 A. (Mr. McCluskey) I did, yes.
- 8 Q. Okay. You have it in front of you; correct?
- **9** A. (Mr. McCluskey) I do.
- 10 Q. And I believe the Commission has that document as
- well. If you turn to Page ES1, first page of the 11
- 12 executive summary, do you see at the beginning of the
- second paragraph -- are you all there? 13
- 14 A. (Mr. McCluskey) Yup.
- 15 Q. -- where it reads, This Fall 2010 reference case
- 16 assumes no federal climate legislation. Throughout
- 2010, the likelihood of federal GHG legislation --17
- 18 Greenhouse gas -- is that your understanding of that
- acronym? 19
- 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

- 1 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 4
 - both does and does not use carbon in its 2010
- forecasting, just as Mr. Sansoucy did in his 6
- 7 Exhibit 9?
- A. (Mr. McCluskey) No. With regard to the forecast
- 9 energy prices, it's clear that there is no assumption
- 10 of carbon in those energy prices. Now, that does not
- mean to say that Ventyx might have other scenarios 11
- that it's developed. But in terms of the energy 12
- prices which run through the term of this PPA, it's 13
- my understanding that there is no assumption of 14
- 15 carbon regulations that would increase cost and
- increase prices. 16
- O. Okay. But again, that's one of the variables, with 17
- or without. And the Ventyx executive summary 18
- reflects that their report uses both. Gives a 19
- 20 scenario with and gives a scenario without; correct?
- 21 A. (Mr. McCluskey) They may well have some other 22 scenarios. But in terms of the energy prices that we
- 23 are using in this particular proceeding, they -- it's
 - my understanding that they do not include carbon.

DAY 5 - MORNING SESSION ONLY - February 8, 2011 DE 10-195 PSNH/LAIDLAW BERLIN BIOPÓWER Page 85 1 Q. That was one of the assumptions you selected in 1 making your model, Exhibit 14; correct? 2

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3 A. (Mr. McCluskey) It's -- you say "one of the assumptions." I used the projection in the 2010 4

Ventyx report. I'm not sure whether that's an 5

assumption. I actually used the numbers that were 6

reflected on Exhibit 10 to Mr. Sansoucy's testimony, 7

which came from the 2010 report. 8

Q. So you didn't use -- just for clarity, you didn't use the portion of the Ventyx report that included 10 11 carbon; correct?

12 A. (Mr. McCluskey) I did not. That's correct.

13 Q. Okay. Now, before we leave this page, let's go down

14 to the paragraph that begins, Under-market Overview. 15 Do you see where they define the Northeast Region as

16 including New York ISO, ISO-New England, Ontario,

17 Quebec, and the Canadian Maritime Provinces?

18 A. (Mr. McCluskey) That's correct.

19 Q. Okay. Now, concerning your second change of

20 variables, whether or not to use the Ventyx 2010 REC

21 pricing projections, let's turn in Ventyx to Page 5-14, which includes -- it shows Table 5-1. 22

23 CHAIRMAN GETZ: Sorry. Say that 24

again? What page?

represents a marginal regional renewable energy

Page 87

Page 88

resource. I read that correctly, didn't I?

3 A. (Mr. McCluskey) That's correct.

4 Q. And they assumed the extension of the production tax

credit per the American Recovery and Reinvestment Act 6 of 2009.

7 A. (Mr. McCluskey) That's correct.

8 Q. Reading that?

9 (Mr. McCluskey) Yeah.

Now, they state the PTC is 21 cents per kilowatt 10 O.

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

whether that's 2.1 or 21 cents.

17 Q. Well, if it's 21 cents, then the PTC for a megawatt

is \$210. If it's 2.1, it's \$21. 18

19 A. (Mr. McCluskey) That's correct.

20 O. Doesn't it make more sense that it's -- I mean,

21 subject to check, obviously. But isn't -- your

understanding is it's \$21, not \$210?

23 A. (Mr. McCluskey) That's correct. I think that's

24 correct. But as I said, I need to check on it.

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MR. BOLDT: Page 5-14 has a Table 5-1 1

that looks like this (indicating). 2

BY MR. BOLDT: 3

4 Q. Now, I'm correct, aren't I, that you used in your

modeling for the REC prices the column that is 5

entitled "Northeast"? 6

7 A. (Mr. McCluskey) That's correct.

8 Q. Okay. And you see at the top of that table that

these numbers are in 2010 dollars per megawatt hour;

correct? 10

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

paragraph where it states, In preparing the forecast 17

18 REC values, Ventyx made the following assumptions in

real 2010 dollars for marginal wind generators? So 19

20 these are REC prices, wind REC prices; correct?

21 A. (Mr. McCluskey) That's what it says.

22 Q. Okay. Now let's continue on with their assumptions,

23 the bullets that are right there.

The first one is they calculated the REC value,

1 O. We can check that.

2 MS. HATFIELD: Mr. Chairman, this is the City's exhibit. So perhaps they could just 3 clarify that that is a typo rather than asking Mr. 4

McCluskey?

MR. BOLDT: I'm asking for his understanding. It's our understanding it's a typo.

CHAIRMAN GETZ: Okay.

MS. AMIDON: Pardon me. So does that mean that Mr. McCluskey doesn't have to go back and do the calculation?

MR. BOLDT: I believe he's answered my questions, Mr. Chairman.

CHAIRMAN GETZ: I'm taking that he's 14 15 accepted it, subject to check.

BY MR. BOLDT: 16

Q. Now, as we just discussed, that equates to a source 17

of revenue for the REC producer of \$21 per REC, 18

19 because a REC is 1 megawatt hour; correct?

(Mr. McCluskey) That's correct. 20 A.

21 Q. Now, am I correct that your Exhibit 14 does not

include the \$21 per REC in your calculations? 22

23 A. (Mr. McCluskey) Actually, the \$21 is reflected in the REC prices that's shown on the Table 5-1. 24

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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 3 is stating that --
- CHAIRMAN GETZ: Well, I'm losing 4 track. When you say "these numbers," are you 5 6 referring to --
- MR. BOLDT: In 5-1. 7
- BY MR. BOLDT:
- Q. So let me ask the question a different way.
- You're assuming that the column labeled 10 11 "Northeast" includes the \$21?
- 12 A. (Mr. McCluskey) Yes.
- 13 Q. And you have a negative number of \$21 for 2011?
- 14 A. (Mr. McCluskey) No. If I could just explain? My 15 understanding of these REC prices, these are the 16 results of a modeling exercise by the Ventyx people.
- 17 It's my understanding that they have a supply and 18 demand model, and they model what renewable resources
- 19 will be at the margin and will establish the REC
- 20 prices in this market --
- 21 Q. So your --

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- 22 A. (Mr. McCluskey) If I could finish?
- 23 CHAIRMAN GETZ: Let him finish.
- 24 MR. BOLDT: Sorry.

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?

13 A. (Mr. McCluskey) That's the idea of a -- that's what 14 levelized means. But this paragraph is supportive of 15 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

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- 1 A. (Mr. McCluskey) And when they do -- in doing -- in
- 2 implementing that supply and demand model, they
- determined what the costs are, what is required for a 3
- renewable resource in order to make that resource
- cost-effective. And you take into account in 5
- determining the required REC price that it just makes 7 that resource competitive, and take into account all
- of the subsidies that are received from the federal 8
- 9 government. The greater the subsidy -- in this case,
- the PTC subsidy -- the less they need in REC revenues 10
- to make them competitive. 11

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.

- 21 Q. That's your understanding of what Ventyx does; correct? 22
- 23 A. (Mr. McCluskey) That's my understanding, yes.
- 24 Q. Okay. Now, let's look, actually, at what Ventyx says

- 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
- renewable resource. They are the ones that are going 5
- to establish the model price for RECs. Everyone 6
- 7 else, biomass, solar facilities, will have to take
- 8 the REC price that the most competitive renewal
- 9 generators produced. And that is life in the 10
 - competitive market.
- 11 O. But aren't you --
- 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 O. So you said that there are only three sources of revenue: Energy, capacity and RECs; correct? 16
- (Mr. McCluskey) Well, there may be some plants that 17 A. 18 biomass may have a fourth stream, if they can sell
- 19 some heat to some project. But typically, there are
- 20 three sources of revenues for renewable generators.
- 21 Q. But aren't you ignoring the sentence that Ventyx states, "Another source of revenue is the PTC"? 22
- 23 A. (Mr. McCluskey) No. The three major sources of 24 revenue from the products sold. You can treat the

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- PTC as another revenue stream if you wish. But, 1
- really, it's just subsidy that the federal government 2
- 3 has in order to promote these kinds of resources. So
- if you want to treat it as a fourth source, fine. 4
- The effect of it is to reduce the REC revenues that 5
- 6 the developers need.
- 7 Q. So if the PTC was not there, the REC price would be
- correspondingly higher; correct? 8
- 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
- hour by renewable type. Now, again, per the 14
- 15 references above, this means we're talking about
- 16 marginal wind; correct?
- 17 A. (Mr. McCluskey) It says "by renewable type." So they 18 are referring to different types of resources.
- 19 Q. Well, the only one they're referring to in that page 20 is marginal wind.
- 21 A. (Mr. McCluskey) No. I think you're misunderstanding
- their calculation. I think their calculations are 22
- 23 showing that the wind generators are the generators
- 24 that establish the market price. This clearly states

1 Q. You've never seen the Ventyx report before; correct?

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- **2** A. (Mr. McCluskey) That is correct.
- 3 Q. So your testimony over the last couple minutes of
- what you believe Ventyx means in its report is pure 4
- speculation; isn't, sir? 5
- A. (Mr. McCluskey) No. I've been in this business for 6 7 30 years. I think I know how to read these reports.
- 8 It's standard practice for modelers to create a
- 9 supply and demand model and stack up each type of
- resource based upon their incremental costs. Those 10
- 11 resources that happen to be at the margin when the
- 12 demand is met are the ones that establish the price.
- 13 I'm reading this to say that those resources are wind
- resources that are going to determine what the REC 14
- 15 prices are. And any other resource, whether it be
- 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.
- 20 O. So you'd agree with me, then, that wind has a lower
- capital cost than wood, in part because it doesn't 21 have fuel costs; right? 22
- 23 A. (Mr. McCluskey) Well, they don't have fuel costs.
- 24 They are very, obviously, very capital-intensive.

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- that they will -- that they've estimated the capital 1 1
- 2 requirements by renewable type, not just wind. 3 Q. Well, they don't use anything in its text other than
- marginal wind. You'd agree with me there? 4
- 5 A. (Mr. McCluskey) As I've said, their supply/demand
- modeling will include supply from various types of 6
- 7 resources. Those resources that are at the margin in
- this supply/demand analysis are the ones that
- establish the price.
- 10 Q. Mr. --
- 11 A. (Mr. McCluskey) So if we have a significant amount of
- 12 wind resources, which are generally considered to be
- the lowest-cost renewable resources, we may have wind 13
- 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.

21

- 18 Q. Mr. McCluskey, isn't it true that you stated in prior
- 19 testimony that you've never seen the Ventyx report
- 20 before; correct?
 - MS. AMIDON: Mr. --
- CHAIRMAN GETZ: I think that's a fair 22
- 23 question. Let's hear the question.
- BY MR. BOLDT:

- The -- what's your question?
- 2 Q. That wind has a lower capital cost requirement than 3
 - wood, in part because it has no fuel costs.
- 4 A. They have no fuel costs. I'm not saying that they have lower capital costs. 5
- Q. So the industry standard of it's roughly \$2.5 million 6
- 7 per megawatt for wind and \$3.5 million per megawatt
- 8 for wood is something that you're familiar with and
- 9 you would agree with?
- 10 A. (Mr. McCluskey) I'm not familiar with those numbers.
- 11 O. 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?
- (Mr. McCluskey) I haven't studied the job creation of 14 A.
- 15 these resources, but I've heard that's the case.
- 16 Q. Let's turn back to the methodology, the text that 17 Ventyx actually says they use.

The second one there at the bottom of Page 5-12, 18 do you see where it states they estimate expected 19 20 gross margins, plural, for renewable generation in 21 the state as a combination of the following: A, energy market gross margins -- again, plural -- from 22 23 the Ventyx fall reference case; and the second is the

production tax credit? Did I read that correctly?

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- 1 A. (Mr. McCluskey) Yes.
- 2 Q. Now, the use of the plural, margins, it's safe to
- assume that means both energy and capacity
- projections, as included in the report? 4
- 5 A. (Mr. McCluskey) I think that's a reasonable
- assumption. 6
- 7 Q. Okay. Going to the top of Page 5-13, the third step
- in their methodology is they calculate the deficit in 8
- meeting the levelized capital requirements, Item 1, 9
- from the gross margins -- again, plural -- calculated 10
- 11 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? 14
- 15 A. (Mr. McCluskey) I think what it's saying is that if
- 16 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
- 20 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
- 24 just discussed that -- and the PTC.

- 1 A. (Mr. McCluskey) Yes.
- 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? 6
- 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? 10 11
 - (Witness reviews document.)
- 12 A. (Mr. McCluskey) Yes. Since they're referring to
- several states, this price presumably is referring to 13
- the average of different prices in different states. 14
- 15 Q. Okay. And it also states that there were 15,000
- vintage 2011 RECs eligible for Class I in those same 16
- 17 states that auctioned at an average of \$18.90. Did I
- read that correctly? 18
- 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
- price of Class I RECs in just one year; correct? 22
- 23 (Witness reviews document.)
- 24 A. It appears that the Class I average price has risen

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- 1 A. (Mr. McCluskey) Correct.
- 2 Q. Correct?
- 3 A. (Mr. McCluskey) Correct.
- 4 Q. Okay. Now, the fourth step that they take is they
- calibrate the REC prices in 2010 through 2011 to 5
- reflect the currently traded REC market prices. Did 6
- 7 I read that correctly?
- 8 A. (Mr. McCluskey) Correct.
- Q. Now, you recall Mr. Traum's revised direct testimony
- in this case, particularly Exhibit 5 of his 10
- materials. Do you have that available in front of 11
- you? 12
- 13 A. (Mr. McCluskey) I have his direct testimony. Which
- is it? 14
- 15 Q. The revised Traum exhibit -- or revised direct
- testimony that came in right before our first day of 16
- hearing. If you'd look at Page 22 of that document. 17
- (Mr. McCluskey) I have his direct testimony filed 18
- December 17th. Is that what you're referring to? 19
- 20 Q. Well, there was a revised one. But that one should
- work. I think the exhibits are the same. 21
- 22 A. (Mr. McCluskey) Okay.
- 23 Q. If you see Attachment KET5, which I believe is
- 24 Page 22, it's a statement from Evolution Markets.

- from one year to the next. That's correct. 1
- 2 Q. Now turn back to the Ventyx chart you used in your
- calculation, Page 5-14. Let me know when you're 3
- 4 there.
- A. (Mr. McCluskey) Just give me it to me once more. 5
- 6 O. Page 5-14.
- 7 A. (Mr. McCluskey) Yes.
- 8 Q. The table you used in calculating Table 14.
- (Mr. McCluskey) Okay. 9 A.
- You'll see the first entry in the Northeast column 10 Q.
- that you used for 2011 is \$13.56. 11
- (Mr. McCluskey) That's correct. 12 A.
- 13 Q. So the actual price, as reflected in Mr. Traum's
- Exhibit 5 of \$18.90, is similarly higher by a factor 14
- 15 of 43 percent; correct?
- 16 A. (Mr. McCluskey) That's correct.
- 17 Q. But you did not use actual market prices in your
- calculations in Exhibit 14; correct? 18
- 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.
- 24 Do you have water by any chance? Are you okay?

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

- (Witness reviews document.) 1
- (Mr. McCluskey) Give me that question again?

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- They are subtracting Step 1 from Step 2; correct? (Witness reviews document.) 4
- 5 O. To reach the deficit --
- A. (Mr. McCluskey) I think it's the reverse. I think 6
- 7 they're subtracting 2 from 1.
- 8 Q. Okay. Either way, it is subtracting an element that
- includes the PTC to reach the deficit, which is the 9
- 10 REC price; correct?
- 11 A. (Mr. McCluskey) That's correct.
- 12 Q. So, simple mathematics means that you cannot have the
- 13 element of the PTC on both sides of the equations;
- correct? 14
- 15 A. (Mr. McCluskey) And I don't believe it is on both sides of the equation. 16
- 17 Q. Thank you. So the REC price deficit does not include the PTC? 18
- 19 A. (Mr. McCluskey) No. I disagree. I believe it does.
- 20 All revenues from energy and capacity markets, plus
- 21 any revenues from subsidies, are taken into account
- in determining what the required REC price is. And 22
- 23 it's that insufficiency or deficit that you refer to
- 24 is what establishes the REC price.

- But your interpretation of what Ventyx is doing does
- not comport with what Ventyx says it is doing; 2
- correct? 3
- 4 A. (Mr. McCluskey) No.
- 5 Q. When you have -- also, you see on that page that the
- flat section of the curve represents the costs of 6
- 7 typical wind units, while the increasing portion of
- the stack represents new additions with higher 8
- capital costs? See that? Last sentence of that 9
- paragraph? 10
- (Witness reviews document.) 11
- 12 A. (Mr. McCluskey) Yes.
- include the \$21 PTC, does it? 13 Q. Okay. And wood plants, like the one covered in this
 - 14 PPA, would be one such new addition with higher
 - 15 capital costs; correct?
 - 16 A. (Mr. McCluskey) I believe so.
 - 17 O. And it also states, continuing on at the bottom of
 - this page, there is an increase in prices through 18
 - 2020 as state RPSs begin to ramp up and more capacity 19
 - is needed to meet energy needs. Did I read that 20
 - 21 correctly?
 - 22 A. (Mr. McCluskey) You did.
 - 23 Q. It continues. As we get past the bulk of these new
 - renewable additions, and higher gas prices result in 24

- bottom, shows the cumulative renewable capacity and 1
- 2 cumulative gigawatt hours; correct?
- 3 A. (Mr. McCluskey) Correct.
- 4 Q. And that the Y axis, the one on the left-hand side,
- represents the deficit calculated in Step 3 above. 5
- See that? 6
- 7 A. (Mr. McCluskey) Yes. Just let me look at Step 3
- again. 8
- Q. Certainly. 9
- (Witness reviews document.) 10
- 11 A. (Mr. McCluskey) Yes.
- 12 Q. Okay. Now, that deficit by that calculation does not
- 13
- 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 17
- 18 are saying what REC revenues they need in order to
- make these projects cost-effective. 19
- 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?

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- greater market revenues, RECs begin to decline and 1
- continue to do so throughout the end of our study 2
- 3
- 4 A. (Mr. McCluskey) That's correct.
- 5 O. Now, this greater market revenue is the result of
- increases in market prices for energy and capacity; 6
- correct? 7
- 8 A. (Mr. McCluskey) If it's energy revenue... if I can
- 9 just read that?
- (Witness reviews document.) 10
- 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.
- But in essence, as gas prices, oil prices increase, 14 O.
- 15 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.
- 22 Q. Now, you'd agree with me that it's a fairly safe
- 23 assumption that oil and gas prices are going to.
- 24 escalate in the future?

- 1 States which generally drive natural gas prices. And
- 2 there's been one major development which has impacted
 - natural gas prices, and that is the development of
- shale, natural gas resources. 4
- That's the Marcellus Shale? 5 O.
- A. Marcellus is one. But there's been significant
- 7 deposits in Texas which were developed before
 - Marcellus.
- 9 Q. You're aware that Marcellus has actually been put into a moratorium? 10
- 11 A. (Mr. McCluskey) No, I'm not aware of that.
- 12 Q. You're not aware of New York Senate Bill S8129B?
- 13 MS. AMIDON: Mr. McCluskey answered
- 14 the question.
- 15 CHAIRMAN GETZ: Well, I think
- 16 follow-up's appropriate. Let's get that on the 17 record.
- BY MR. BOLDT: 18
- Q. You're not aware of New York Senate Bill S8129B that 20 passed putting a moratorium on the Marcellus gas
- 21 drilling?
- (Mr. McCluskey) I'm not. But you need to understand 22 A.
- 23 that the Marcellus development runs into part of New
- 24 York, right through Pennsylvania and into West

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- 1 A. (Mr. McCluskey) I don't think you can necessarily say
- that they're going to increase. If you just go -- if 2
- you just look at the recent period from 2008 through 3
- the current period, gas prices -- natural gas prices 4
- have actually fallen. 5
- Q. And isn't it true that the standard price has usually 6
- 7 been around \$6 per million BTU?
- 8 A. (Mr. McCluskey) For natural gas?
- 9 Q. Yeah.
- 10 A. (Mr. McCluskey) It varies considerably.
- 11 O. Varied so much, in fact, during the life of this
- hearing it went to \$20 at the Newington station, 12
- didn't it? 13
- 14 A. (Mr. McCluskey) I've got no information to support
- that statement. 15
- 16 Q. Now, you'd agree with me that oil and gas prices
- escalate faster in periods of uncertainty, 17
- 18 international risk, monetary crises, wars, things of
- that nature; correct? 19
- 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
- 23 essentially a United States-based, natural gas-priced
- 24 market. So it's developments within the United

- Virginia. The majority of the resources are in 1
- 2 Pennsylvania. And I can tell you that the regulatory
- climate in Pennsylvania is significantly different 3
- from New York. So what New York does is not 4
- 5 necessarily going to impact the production from that
- development. 6
- **7** Q. Are you aware of the 850-member Responsible Drilling
- 8 Alliance in Pennsylvania that has called for such a
- 9 moratorium in Pennsylvania?
- (Mr. McCluskey) There has been activity in each of 10 A.
- the three main states with regard to this resource. 11
- My understanding, based on conferences which I've 12
- attended, is that it's having very little impact in 13
- Pennsylvania on how much of the resource is 14
- 15 developed.
- 16 Q. When was that last seminar you attended, sir?
- 17 A. (Mr. McCluskey) About year ago.
- Okay. Would you agree with me that Ventyx is saying 18 Q.
- 19 that the REC prices decline in the circumstances of
- 20 energy and capacity increasing because there is less
- 21 of a delta to cover?
- (Mr. McCluskey) That's it. I'm trying to explain 22 A.
- 23 that, their supply and demand model. If the revenues
- 24 from the energy market increase significantly, then

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- there is going to be less of a insufficiency; and 1
- therefore, all developers of renewable resources 2
- 3 require lower REC prices to achieve the target
- 4 returns. And if those projects are decided based on
- 5 competitive bids, those developers are forced to cut
- 6 their prices to the bone just to achieve the minimum
- target returns that they're looking for. That's how 7
- 8 this REC market works. It's very dependent on
- 9 revenues from the other products to determine what
- 10 the prices are in the REC market.
- 11 Q. In essence, there's is a seesaw back and forth with
- 12 the market pricing.
- 13 A. (Mr. McCluskey) That's correct.
- **14** Q. Okay. Now, you stated earlier in your testimony
- 15 today that this PPA does fix the energy, capacity and
- 16 REC prices. Would you agree that by taking those
- 17 variables off the table, this PPA eliminates the
- 18 seesaw back and forth?
- 19 A. (Mr. McCluskey) Well, I don't recall today talking
- 20 about fixed prices within the PPA. I think I've
- 21 testified that the capacity prices and the REC prices
- are fixed. The energy price has a fuel adjustment 22
- 23 mechanism to it. So if fuel prices increase, then
- 24 the energy price is going to decrease. That clearly
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- 1 is not a fixed energy price. That can vary depending
- 2 on the volatility in the fuel costs incurred by
- Schiller. 3
- **4** Q. Now, do you remember your testimony, when you were
- talking about some undesignated New York PPA that 5
- fixed the RECs and then used short-term energy and 6
- 7 capacity pricing? Do you remember that testimony
- this morning, sir? 8
- **9** A. (Mr. McCluskey) The RFP establishes the price that
- 10 developers will receive for RECs. The New York ISO
- 11 markets, the conditions in those markets, capacity
- 12 and energy, will determine the revenues that the
- developers receive for their energy capacity prices. 13
- 14 O. So I trust the answer to my question is, yes, you do
- 15 remember your prior testimony?
- 16 A. (Mr. McCluskey) I think I do, yes.
- 17 Q. And you stated at that time that that was a reason to
- 18 support your basis, your opinion that this PPA did
- not have to have the fixed prices for each of the 19
- 20 three elements.
- 21 A. (Mr. McCluskey) I said it does not have to have fixed
- 22 prices for energy and capacity. In fact, I was
- 23 particularly talking about energy. I said that you
- 24 could have a market-based energy price and that would

- 1 not necessarily preclude a renewable resource from
- 2 being selected and being successful.
- з О. Let me put you a hypothetical. If the market prices
- for energy, capacity and RECs increase above those
- 5 set by this PPA, would you agree with me that the PPA
- 6 is a good deal for the ratepayers and in the public
- 7 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 O. 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
- RECs, then this PPA is a good deal for the 16
- 17 ratepayers; correct?
- (Mr. McCluskey) After the fact, that's how it would 18 A. 19
 - turn out. That's correct.
- 20 Q. And isn't it true that your calculations in
- 21 Exhibit 14 do not take into account the upcoming
 - retirements of existing power plants that are listed
- 23 in Mr. Sansoucy's rebuttal Exhibits 3, 4, and 4A?
- 24 A. (Mr. McCluskey) No, I don't agree with that. The

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- 1 calculations in Exhibit 14 use the Ventyx energy
- 2 capacity and REC prices. Any retirement that the
- 3 modelers for Ventyx -- they would determine when
- 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
- prices that I'm using fully take into account the 7
- 8 prospect of new power plants coming online, old power
- 9 plants being retired.
- You didn't do any independent modeling; correct? 10 Q.
- (Mr. McCluskey) I did not. That's correct.
- **12** Q. And you're assuming that Ventyx did.
- 13 A. (Mr. McCluskey) I'm assuming they would use the
- 14 standard techniques for creating a market price
- 15
- 16 Q. Now, let's look at some of your testimony concerning 17 wind versus wood. Is it your contention that there
- 18 is no difference between a wind generator and a wood
- 19 generator; it's apples to apples?
- 20 A. (Mr. McCluskey) Could you point me to my testimony 21 where I --
- I'm going in general and your direct on the stand 22 Q.
- 23 last Tuesday. Put it this way -- well, let's just
- 24 open the question.

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- Is it your contention that there is no 1
- difference between a wind generator and a wood 2
- 3 generator?
- 4 A. (Mr. McCluskey) From what standpoint?
- Cost-effectiveness?
- 6 Q. You pick the standard.
- 7 A. (Mr. McCluskey) Well --
- MS. AMIDON: I think we need a little 8
- more specific question to assist Mr. McCluskey to be 9
- able to answer. 10
- 11 BY MR. BOLDT:
- 12 Q. Well, you'd agree with me that it costs approximately
- 13 2.5 million per megawatt for wind; correct?
- A. (Mr. McCluskey) I don't have that figure in my head, 14 15
- 16 Q. So you've not used that in any of your comparison
- 17 models?
- A. (Mr. McCluskey) Not to my knowledge. You'd have to 18
- 19 point me to comparisons that you're referring to.
- 20 Q. Let me ask this, then: Are you aware that the
- 21 ISO-rated capacity for a wind generator is
- approximately 10 to 12 percent of the nameplate-rated 22
- 23 capacity?

1

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

that the Laidlaw plant has, that you would need to 1

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- produce 675 megawatts of wind if the ISO-rated 2
- 3 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. 5
- O. Okay. Would you agree that that equates to 6
- 7 approximately 350 wind towers?
 - MS. AMIDON: Mr. McCluskey said he
- 9 couldn't calculate that in his head. I'm not quite
- sure where this question is going. 10
- 11 A. (Mr. McCluskey) I don't know the answer.
- BY MR. BOLDT: 12
- Q. Okay. Now, the Noble wind project that was 13
- questioned by Mr. Edwards, I believe that is 14
- 15 approximately 99 to 100 megawatts of power; correct?
- 16 A. (Mr. McCluskey) I heard Mr. Frantz say 99.
- 17 Q. And that's approximately 50 towers? Is that your 18 understanding?
- 19 A. (Mr. McCluskey) I couldn't say yes or no to that.
- 20 Q. Mr. Frantz, do you know?
- 21 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

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- say. That's not in my memory at the moment.
- 2 Q. Okay. Now, you do have the Lempster PPA in your memory; correct? 3
- 4 A. (Mr. McCluskey) Any particular aspect you want to ask
- me a question about? 5
- 6 Q. I do. But I wanted to make sure, because you
- 7 testified previously on some benefits of the Lempster
- PPA. I don't want to get into exact minutia of it 8
- because it's confidential, but I'm wanting to make 9
- sure that I heard you correctly. 10
- You're familiar with the Lempster PPA? 11
- 12 A. (Mr. McCluskey) I'm familiar with the pricing of the
- PPA. That's correct. 13
- 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
- the ballpark of 10 to 12 percent? 17
- (Mr. McCluskey) That's not a PPA figure. When you 18 A.
- talk about the Lempster PPA, I think you're talking 19
- 20 about energy prices, capacity prices, REC prices.
- And anything else I have not researched. 21
- 22 Q. Would you agree with me -- and my mathematical skills
- 23 are limited I will admit -- that to get, in a
- 24 hypothetical situation, 67.5 megawatts of capacity

- 1 I'm...
- So whether it is a factor of 300 new towers or 350 2 Q.
- new towers to get the necessary 675 megawatts of 3
- power to equate to the Laidlaw plant, would you agree 4
- with me that we don't have mountain top in New 5
- 6 Hampshire for 300 to 350 wind turbines?
 - WITNESS FRANTZ: May I answer that? CHAIRMAN GETZ: Please.
- 9 (Mr. Frantz) I think there's been reports done, one
- by Ross Gittell, stating that we had enough wind 10
- resources to support 2,000 megawatts of wind in New 11
- Hampshire. That was for the RGGI study that was 12
- ultimately used to pass the RGGI legislation. 13
- Now, is that based solely on the wind rose, the 14 O.
- 15 charts of wind patterns in the state, not where you
- could actually site the tower? 16
- (Mr. Frantz) I think there's a big difference between 17 A.
- what potential's out there and what actually gets 18
- 19 sited and approved.
- 20 Q. And did it include offshore?
- 21 A. (Mr. Frantz) I don't believe the study included
- offshore. But I think you'd need to refer to his 22
- 23 study if you'd like.
- 24 Q. Do you agree with me -- let's go back to you, Mr.

DAY 5 - MORNING SESSION ONLY - February 8, 2011 DE 10-195 PSNH/LAIDLAW BERLIN BIOPÓWER Page 117 McCluskey -- that due to the lack of predictability 1 1 in the wind, each wind tower has to have an 2 2 3 appropriate oil- or gas-fired generator to back it 3 4 up? 4 **5** A. (Mr. McCluskey) That's not something that I've been 5 researching recently. I may have heard that in the 6 past, but it's not like I could really comment on 7 7 8 today. 8 **9** Q. Mr. Frantz, do you agree? 9 10 A. (Mr. Frantz) It's clear that you need some resources 10 11 to back up wind resources. I mean, most people --11 various other things. 12 how much that is, what types of resources, you 12 13 know... 13 14 Q. Has to have some backup, though; right? 14 15 that correctly?

15 A. (Mr. Frantz) Correct. 16 Q. And you're both aware that the wind can blow too fast

17 for a wind turbine and it has to shut down; correct? 18 MS. AMIDON: I'm just wondering where 19 this is going, Mr. Chairman.

CHAIRMAN GETZ: I think this is a 20 21 relevant line of inquiry. Let's move along.

22 A. (Mr. Frantz) In general.

23 BY MR. BOLDT:

24 Q. Pardon?

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,

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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

(Mr. Frantz) Yes. 16 A.

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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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1 A. (Mr. Frantz) I haven't looked at that. I don't know where they cut out. 2

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 public policy in this state to support the forestry 13
- industry? Either of you. 14
- 15 A. (Mr. Frantz) Could you refer us to the specific
- legislation? 16
- 17 Q. Certainly.

MR. BOLDT: If I may approach? Just 18 a couple statutory references. 19

(Atty. Boldt hands documents to the 20 witness. Witness reviews document.) 21

BY MR. BOLDT: 22

23 Q. The question was: Are you aware it is the expressed 24 public policy of the state to support the forestry

- benefits. Did I read that correctly? 1
- 2 A. (Mr. Frantz) Yes.
- 3 Q. And then, finally, RSA 672:1-III(c), this is the
- zoning and planning enabling language that states 4
- that forestry, when practiced in accordance with 5
- accepted silviculture principles, constitutes a 6
- 7 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? 10
- (Mr. Frantz) Yes. 11 A.
- 12 O. So, is it safe to say that it is the public policy of 13 this state to support the forestry industry?

(Witness reviews document.)

- 15 A. (Mr. McCluskey) I guess it is.
- Well, these statutes --16 Q.
- A. (Mr. Frantz) Do you mind if I read a little bit more? 17
- By all means. Which one? 18 Q.
- A. (Mr. Frantz) Reading all of them. 19

(Witness reviews document.) 20

CHAIRMAN GETZ: Mr. Frantz?

(Mr. Frantz) Well, I think it's clear from these 22 A. 23 statutes and declaration of purposes that the forest industry in New Hampshire is a vital and important 24

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- industry to the state of New Hampshire, and that it's 1
- 2 important to the health and well-being of the state.
- 3 Now, forestry encompasses a whole lot of practices.
- 4 Q. Positively. Positively.
- **5** A. (Mr. Frantz) And so, to try to narrow that down to
- one little issue I think is probably not fair. But 6
- in general, there are -- obviously to the state and 7
- the legislature that passed this, there are a lot of 8
- 9 benefits, and it's an important industry. I don't
- think anyone would deny that. 10
- 11 Q. Wonderful. Just wanted to make sure.
- Now turning to the statute we're dealing with 12
- 13 today, RSA 362-F:1. You had a copy of that in your
- earlier materials. Do you have that now? 14
- 15 A. (Mr. Frantz) Under Purpose, again, 362?
- 16 Q. 362-F:1, the Purpose statement of this electric
- 17 renewable portfolio standard.
- 18 You'd agree with me that it reads, "Renewable
- 19 energy generation technologies can provide fuel
- diversity to the state and New England generation 20 21 supply through the use of local renewable fuels and
- resources..." Did I read that correctly?
- 22
- 23 A. (Mr. Frantz) Yes.
- 24 Q. Now, the only local renewable fuels and resources we

- 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
- saying that you believe this PPA should have been put 4
- out to competitive bid? 5
- A. (Mr. McCluskey) First of all, could you -- where in 6
- 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 (Mr. McCluskey) Okay. A.
- 11 Q. Do you recall that testimony?
- 12 A. (Mr. McCluskey) So that's the testimony you're
- 13 referring to.
- That's the testimony, yeah. 14 Q.
- 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.
- (Mr. McCluskey) That's correct. 18 A.
- 19 Q. Now, you'd agree with me that nowhere in RSA 362-F is
- 20 there a requirement that the PPA be submitted for
- 21 competitive bid?
- (Mr. McCluskey) That's correct. 22 A.
- 23 Q. You would agree with me that, if a competitive bid --
- 24 an RFP for short -- had been put out, then Laidlaw,

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- have are wood, wind and solar; correct -- and water? 1
- 2 A. (Mr. Frantz) I was going to mention hydro.
- 3 Q. Right. But we don't have natural gas. That's not a
- renewable. 4
- 5 A. (Mr. Frantz) Correct. Last I checked, we're a little
- short on coal also. 6
- Q. Right. And we haven't figured out a way to burn 7
- granite. 8
- A. (Mr. Frantz) We'd be a very wealthy state, indeed, if 9
- 10
- 11 O. And if you drop to the bottom, the last sentence, "It
- 12 is, therefore, in the public interest to simulate
- investment in low-emission renewable generation 13
- 14 technologies in New England and, in particular, New
- 15 Hampshire, whether at new or existing facilities";
- correct? 16
- 17 A. (Mr. Frantz) Correct.
- 18 Q. So this is a statute that puts the emphasis on the
- 19 use of local resources; correct?
- 20 A. (Mr. Frantz) It does.
- 21 Q. And one of the criteria that this Commission is
- 22 charged with in evaluating this PPA is the economic
- 23 development and environmental benefits for New
- Hampshire; correct? 24

- with its control over the existing, unused 1
- 67.5-megawatt boiler in Berlin, would have been a 2
- responsive, viable bidder with an advantage by having 3
- that existing system; correct? 4
- 5 A. (Mr. McCluskey) Certainly would qualify to bid. And
- whether it would have an advantage would depend on 6
- 7 the prices that it was willing to bid in at.
- 8 Q. Well, you're not aware of anyone else having an existing, unused 67.5-megawatt boiler lying around 9
 - somewhere else in New Hampshire, are you?
- 10 11 A. (Mr. McCluskey) That's correct. In fact, you keep
- saying 67. I'm not aware that the existing facility 12
- 13 can produce 67 megawatts. The expanded facility that
- Laidlaw is referring to could produce 67 megawatts. 14
- 15 O. Are you aware of anybody with a 65-megawatt --
- (Mr. McCluskey) I'm not, no. 16 A.
- **17** O. -- boiler?
- So someone else who would want to respond to 18
- this RFP would have had to build a new boiler; 19
- 20 correct?
- 21 A. (Mr. McCluskey) If the RFP was limited to biomass
- facilities, then that would be the case. If they 22
- 23 wanted to compete, then they would have to develop a
- new facility. 24

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- 1 Q. And the likelihood of someone spending upwards of
- \$245- to \$280 million to create a new plant is 2
- 3 somewhat slim, correct, in light of Laidlaw's existing plant? 4
- 5 A. (Mr. McCluskey) Well, I think we've actually seen
- that there are a couple of developers out there that 6
- were willing to offer PSNH alternative prices. 7
- 8 Q. But neither of those two plants had 65-megawatt 9 boilers in place.
- A. (Mr. McCluskey) They were generally smaller. That's 10 11 correct.
- **12** Q. Yes. And no one else had site-evaluation approval
- 13 from the New Hampshire Site Evaluation Commission.
- **14** A. (Mr. McCluskey) At the time the solicited offers came 15 in, I'm not sure whether Laidlaw had site approval.
- 16 Q. In fact, no one else, to your knowledge, is even in
- 17 queue for this size of a plant; correct?
- **18** A. (Mr. McCluskey) To my knowledge, that's correct.
- 19 Q. And no one else has a site that is connected with 20 municipal sewer and water capable of meeting the
- 21 needs of the size of a plant such as Laidlaw's?
- 22 A. (Mr. McCluskey) As I've said, the two that I'm
- 23 familiar with were smaller. I'm not clear on how far

along those projects were at the time that they

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:

- 13 Q. A responding party to the RFP would have to have the same things or better than Laidlaw has to have a 14 15 better bid: correct?
- 16 A. (Mr. McCluskey) They could have -- unless the RFP 17 specified a certain capacity, there could be all kinds of projects that are put forward to PSNH. The 18 19 terms of the contract could be different, the size of 20 the contract could be different, certainly the prices of the contract could be different. And that would 21 be up to PSNH to determine what was the most 22 23 attractive. A smaller project may best fit the REC 24 requirements of PSNH rather than a larger project.

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submitted their unsolicited offers. 1

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- 2 Q. And no one else, to your knowledge, has existing wood
- yards, scales, water-treatment facilities, or even 3
- the right to withdraw substantial amounts of water 4
- from a major New Hampshire river, do they? 5
- A. (Mr. McCluskey) As I've said, I'm not familiar with 6 7 the details of the development of those two projects
- at the time the offer was made. 8
- Q. No one else responding to an RFP, to your knowledge, 9 would have an approximate 60-acre site with 10 additional industrially zoned land adjacent to it. 11

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

- 1 Since we haven't developed the RFP, never mind issued
- 2 it, we really don't know what we would be asking the market to respond to. 3
- 4 Q. Are you saying that the RFP has to be developed through your office? 5
- (Mr. McCluskey) I didn't say that. 6 Α.
- 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. 10 11 And I would think that the regulator in New Hampshire
- 12 would also have some input into the contents of the
- 13 RFP. Ensuring fair play between potential bidders is
- 14 an important issue, and I'm sure the Commission would want to weigh in on how the RFP was developed.
- 15 16 Q. So, simply having an RFP itself doesn't mean that 17
- there would be anything different in this PPA. Laidlaw could still have come in, because of its 18
- 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. 22
- 23 A. (Mr. McCluskey) If Laidlaw responded to this RFP that we're talking about, it may well have been the 24

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winning bidder. But it's quite possible that the 1

- prices are very different from the ones that were 2
- 3 negotiated.
- 4 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.
- 8 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 10
- 11 the bid and provide the kind of return it's looking
- 12 for. So I would -- I'd be shocked if the prices from
- 13 a competitive bid produced the prices that we are
- seeing in this PPA. 14
- 15 Q. But you don't really know. That's just speculation,
- 16 isn't it, sir?
- 17 A. (Mr. McCluskey) Well, I think I know how the market
- 18 operates. That's why we have competitive bids. We
- 19 want the various bidders to compete against each
- 20 other and to give customers the maximum benefit from
- 21 the project, from the purchase that PSNH makes.
- 22 Q. And you have agreed with me already, but let's just
- 23 make sure. Based on which variables, this PPA could
- 24 have a \$300- to \$400 million benefit to the

- 1 A. (Mr. Frantz) My testimony was based on his analysis,
- as we worked together and went through it. That's
- 3
- 4 Q. And you'd agree with me that, if the public policy of
- this state is to have a viable forest product --5
- 6 forest economy and renewable portfolio standard, then
- to have a PPA to meet that standard, it has to be 7 8
 - financeable: correct?
- A. (Mr. Frantz) Well, there's a few pieces to that.
- Could you read that back for me, please? 10

BY MR. BOLDT:

- 12 Q. If we assume that the public policy of this state is 13 to have a viable forest economy and a renewable 14 portfolio standard, as stated in the statute, that to 15 meet that standard, a PPA has to be financeable.
- 16 A. (Mr. Frantz) Okay. Well, the first part is that we 17 need a viable forestry, which we've already
- 18 established is in the statute. Whether or not that
- 19 actually, explicitly includes biomass is not explicit
- in the statute. But let's assume it does. The 20 21 second part, then, is that we have renewable
- standards for Class I in this case, which may or may 22
- 23 not include biomass. It could just be wind. But if
 - we link them together, I think we need projects that

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- ratepayers; correct? 1
- 2 A. (Mr. McCluskey) Depending on the prices that are used
- to benchmark the PPA, you could have all kinds of 3
- outcomes.
- 5 Q. Mr. Frantz, in your direct testimony, you basically
- state that you did not perform any analysis, any 6
- 7 modeling on your own. You were relying on Mr.
- McCluskey's analysis and modeling; correct? 8
- A. (Mr. Frantz) Well, I was. But I will state that
- during the development of his testimony, we 10
- conferred, as we do in our division all the time. I 11
- 12 mean, he talked to me, he talked to others. It's a
- very collegial environment. And we discussed issues 13
- 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 to work in a vacuum. I'm just wanting to make sure 17
- 18 that there's not something else that was not produced
- 19 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
- 24 shaped; correct?

absolutely are financeable.

MR. BOLDT: No further questions, Mr. Chairman.

CHAIRMAN GETZ: Okay. Thank you, Mr.

Boldt.

I think we're at a good juncture for the lunch recess. It's quarter of one. I understand the parties need to talk about the briefing issues, so let's resume at 2:00. Thank you.

> (WHEREUPON, the Day 4 AM Session recessed for lunch at 12:47 p.m. Day 4 Afternoon Session to resume under separate cover so designated.)

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	DAY 5 - MORNING SESSIO DE 10-195 PSNH/LAIDLA	ON ONLY - February 8, 2011 AW BERLIN BIOPOWER
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1	CERTIFICATE	
2	I, Susan J. Robidas, a Licensed	
3	Shorthand Court Reporter and Notary Public of	
4	the State of New Hampshire, do hereby	
5	certify that the foregoing is a true and	
6	accurate transcript of my stenographic notes	
7	of these proceedings taken at the place and	
8	on the date hereinbefore set forth, to the	
9	best of my skill and ability under the	
0	conditions present at the time.	
1	I further certify that I am neither	
2	attorney or counsel for, nor related to or	
3	employed by any of the parties to the action;	
4	and further, that I am not a relative or	
5	employee of any attorney or counsel employed	
6	in this case, nor am I financially interested	
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DAY 5 - MORNING SESSION ONLY - February 8, 2011 DE 10-195 PSNH/LAIDLAW BERLIN BIOPOWER

	DE 10-19313	SIMILAIDLAW BERLIN	DIOTOWER	
	43:24;44:10	140 (1)	2015 (4)	336 (1)
\$	\$70 (1)	68:2	32:14;40:14,17;84:2	75:9
Ψ	58:20	15 (5)	2020 (1)	34 (5)
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13.56 (1)	0			
100:11	U	65:1;99:15	2025 (3)	29:20;37:8
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