## In Re:

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\begin{gathered}
\text { DE 10-195 } \\
\text { PSNH/LAIDLAW BERLIN BIOPOWER }
\end{gathered}
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> DAY 4
> February 1, 2011

STEVEN E. PATNAUDE, LCR NO. 52



|  | $\text { Page } 9$ |  | Page 11 |
| :---: | :---: | :---: | :---: |
|  | may, Mr | 1 | e of the assumptions and inputs into what |
| 2 | e just make | 2 | it 10 to Mr. Sansoucy's rebuttal testimony. We were |
|  | stand. So, this is specifically with Exhibit |  | ate in the day that the Excel spreadsheets were not |
|  | 10 Revised? | 4 | able, and that the data had to be recreated. |
|  | MR. BOLDT: Correct. Mr. Chairman, this | 5 | Now, we've been presented with this |
|  | smitted yesterday afternoon, about 3:30, |  | Exhibit 10, which looks to me, to the untrained |
|  | ally. There was a second page of a 2 -page |  | kind of a hybrid between Exhibit 9 and Exhibit |
|  | ic spreadsheet that I mistakenly did not catch the | 8 | h some new information. But I just want to point |
|  | y you |  | old |
| 10 | note the page, I have handwritten in "Exhibit 10 | 10 | would be provided with a working Excel |
| 11 | evised". That was in response to request -- I took it | 11 | adsheet, and we were not. So, this is new information |
| 12 | a records request made during the technical session | 12 | t we have not had a chance to examine. And, I would |
| 13 | rday morning. It was provided to me by Mr. Sansoucy | 13 | with Attorney Hatfield's objection to introducing |
| 14 | I transmitted it over as soon as possible. It is in | 14 | in the record at this point. |
| 15 | give clarity to some of the questions that were | 15 | MR. BOLDT: And, we can clarify further, |
| 16 | uring the tech session. And, it's at the Board's | 16 | ay, Mr. Chairman? What was electronically |
| 17 | on whether that com | 17 | mitted yesterday were two working spreadsheets. One |
| 18 | CHAIRMAN GETZ: Well, I guess I'm having | 18 | wich was for the Exhibit 9 that is in your binder, and |
|  | lowing. | 19 | ich |
| 20 | 10 Revised | 20 | "Revised Exhibit 10". That was transmitted at |
| 21 | make earlier in Exhibit 10, is that accurate? | 21 | rroximately 3:00 yesterday afternoon. What I informed |
| 22 | MR. BOLDT: I believe so. It might be | 22 | at the time, and is still true today, is that at that |
| 23 | hav | 23 | ould not locate the spreadsheet for original |
| 24 | CHAIRMAN GETZ: Well, let's hold | 24 | Exhibit 10. That was, he tried to recreate over the |
|  |  |  | Page 12 |
|  |  |  | g. |
| 2 | 'ts something new or if it's truly |  | I provided paper copy of that in an |
| 3 | ificati |  | al document that's not in the binders, but we |
| 4 | M |  | vided it to them. And, electronically, my associate, I |
| 5 | ground, Exhibit 10 was the original exhibit attached | 5 | by now, will have sent over the electronic version |
| 6 | Mr. Sansoucy's data request responses. It was |  | that document. So, it's not like we are playing |
| 7 | inally labeled "Exhibit 1", because that was the only |  | de-the-ball. It is, we provided what we had as we got |
| 8 | bit. The subsequent version revised is in follow up | 8 | d, I have referenced these materials I believe in |
| 9 | he questions that were raised that were somewhat | 9 | fash |
| 10 | confusing during the tech session yesterday. Mr. Sansoucy | 10 | CHAIRMAN GETZ: And, it may not be |
|  | thought it would be beneficial to be clearer, and, | 11 | ball, but we may have a problem of find-the-ball. |
|  | refore, created yesterday afternoon this Revised | 12 | BOLDT: I readily admit th |
| 13 | hibit 10. | 13 | HAIRMAN GETZ: And, I think we have |
| 14 | MS. AMIDON: May I, Mr. Chairman? | 14 | of, there's a statement, there's discovery, |
| 15 | MR. BOLDT: The building blocks of it he | 15 | rmation comes out in discovery, and then more |
| 16 | in much better than I, Mr. Chairm | 16 | and |
| 17 | AIRM | 17 | n there needs to be an opportunity |
| 18 | MS. AMIDON: May I? Thank you. As | 18 | hose documents. So, -- |
| 19 |  | 19 | MR. BOLDT: And, we did offer a tech |
| 20 | n for yesterday to review certain materials that | 20 | before we started this morning |
| 21 | ming in as ruled by the Commission on last Frida | 21 | CHAIRMAN GETZ: Mr. Shu |
| 22 | cretarial letter. And, at that technical | 22 | I'd |
|  | we specifically requested an Excel, a workin | 23 | read a data request that I made of Mr. Sansoucy |
| 24 | pardon me, a working Excel spreadsheet, so that we could | 24 | back on December 28th. It says: "Please provide all |

18 Q. Okay. And, frankly, on the top of Exhibits 1 and 2,
calculations and work papers that Mr. Sansoucy or anyone at George E. Sansoucy, P.E., LLC, prepared to arrive at the figure of $\$ 300,000$ in ratepayer savings referenced on Page 9 of his testimony, and state when each calculation and work paper was prepared."

These papers should have been provided at that time, not the morning of the hearing.

CHAIRMAN GETZ: Okay.
(Chairman and Commissioners conferring.)
CHAIRMAN GETZ: Mr. Shulock, what was the answer to that data request?

MR. SHULOCK: It says: "Please find enclosed Table 1, Sansoucy Exhibit A, which forecasts gross operating revenue of the Laidlaw plant." And, it goes onto describe what has become what we're discussing, Exhibit 9.

CHAIRMAN GETZ: Exhibit 9 or Exhibit 10?
MR. SHULOCK: I'm sorry, Exhibit 10.
CHAIRMAN GETZ: Okay.
MR. SHULOCK: And, if I may point out, I
have a copy of the e-mail from yesterday, and it does not attach Exhibit 10, it only attaches Exhibit 9.

CHAIRMAN GETZ: Okay. Let's do this for
now. Hold off any direct or any, excuse me, cross about

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this particular exhibit. And, we need to give it some further thought, and we may have some discussion later in the day about exactly how to handle this exhibit. And, let's proceed with the direct and the cross on the other issues.

MR. BOLDT: Thank you, Mr. Chairman.
BY MR. BOLDT:
Q. Mr. Sansoucy, Exhibit 3, save the last page, are there any additional changes, corrections, or errata that have not already been incorporated into that document as you see it today?
A. No.
Q. Okay. And, does that version of Exhibit 3 correctly strike through those sections and the first two exhibits in accordance with the Board's order of last Friday? does it have a header that says that those two were stricken over the City's objections?
A. The top of --
Q. Exhibits 1 and 2 to the rebuttal testimony, the original.
A. The rebuttal testimony.
Q. I just wanted to call the Board's attention to that.
A. Yes, it does.
Q. Okay. And, can you summarize your testimony for the Board?
A. Yes, I can.

CHAIRMAN GETZ: Briefly, please. WITNESS SANSOUCY: Yes. MR. BOLDT: Yes.

## BY THE WITNESS:

A. My testimony, my direct testimony articulates positive benefits of this plant and positive elements of this plant to -- in behalf of the City of Berlin and for the City of Berlin. My rebuttal testimony directly rebuts the capacity -- the lack of analysis regarding capacity and the value and cost of capacity of the plant. That was not performed by Staff and OCA. And, it also rebuts the use of short-term market analysis and suggests that long-term market trends are very different. It also rebuts the $\$ 400$ million comment or discussion that was out there from OCA, that this plant will cost more than 400 million for the ratepayers than otherwise. In fact, there are a wide variety of scenarios that could occur where, in fact, this plant would save 3 or 400 million of ratepayers' money over

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time.
So, my rebuttal testimony summarizes those, those beliefs and opinions, as another opinion towards OCA and Staff that there are some very positive benefits and there are many scenarios that could occur where this could be very beneficial financially to the ratepayers of Public Service.

MR. BOLDT: Nothing further at this time, Mr. Chairman.

CHAIRMAN GETZ: Thank you. In terms of order of cross, I was planning to turn to PSNH, then Mr. Shulock, Ms. Hatfield, and Ms. Amidon. Is there any problem with that order of cross?

MS. AMIDON: Mr. Shulock, Attorney Hatfield, and I agreed that Staff would go first with respect to the cross after PSNH.

CHAIRMAN GETZ: Okay. Mr. Bersak.
MR. BERSAK: Thank you, Mr. Chairman. Good morning, Mr. Sansoucy.

## CROSS-EXAMINATION

## BY MR. BERSAK:

Q. Now, as I read your testimony, you testified on behalf of the City of Berlin regarding the economic benefits that would accrue to the City and to the northern


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given quarter, any given month, they fluctuate substantially in price. As the laws and the ramp-up occurs on the percentage of RECs that are required, i.e., the percent of renewable energy that's required to be purchased by the load-serving entities, that elastic is going to very quickly stretch to its end, where the low-hanging fruit of RECs that are out there and available gets consumed. And, then, as we sit here today, nothing is being built. Very, very little real REC qualifying Class I capacity is actually being constructed. And, this is one of the few plants that can actually be shovel-ready. There is a lot of discussion, a lot of queue activity, a lot of permitting, a lot of siting, and then a lot of projects being canceled. But very little is actually being built that is going to be able to be applied to the Class I RECs. And, very quickly, it's my belief that we're going to hit a point where we have no RECs and the price is going to go up to the alternative compliance payment. It will come hard and slow as we ramp up. One, two, three, four percent of any of the load-serving entity's load is a lot. We need approximately 30 million RECs by 2025, in New England, at ISO's projection of New England wide electric sales, stable, obviously. And, I don't think that was the intent. I think there was just an oversight, in that many of the other states, and they list the year, at the end of the program they put "thereafter", the number of RECs, the year, and then the laws will say "thereafter". And, I think that, as Mr. Long pointed out, there are many other parts of that law that he interprets as a layman to suggest that no one thought that this would just go away and we would all of a sudden shut down the wind plants and the wood plants and would not have an RPS standard.
Q. Do you know whether those RPS laws in the other New England states have that "thereafter" term, so that they will continue indefinitely?
A. My recollection is, each one of them that is currently written has the "thereafter" term in it, with the exception of New Hampshire, subject to check on each one. But my recollection is they do.
Q. Supposing notwithstanding Mr. Long's view of the Renewable Portfolio Standard, and we reach the end of year 2025, and, for whatever reason, New Hampshire hangs up the "Mission accomplished" banner, and that's

$\square$ Page 34
confused with what's been marked as exhibits for this proceeding. But there's an exhibit attached to your rebuttal testimony, which is marked as "Exhibit 3". The caption on that -- it's a spreadsheet. And, the caption on the top says "Laidlaw Berlin Biopower PPA and Market Price Forecast". And, there's something there which I am not quite sure that I understand. You have columns there that say "with carbon", "without carbon". What does that mean?
A. What that means, I'm on Exhibit 9 in my rebuttal testimony, towards the end, it's the actual "Exhibit 9 ", not the Revised 10 or anything. What I'm comparing there, and the point that I'm trying to make, on behalf of the City, is that this entire analysis, OCA's analysis and Staff's analysis, neglects or doesn't talk about the fact that there is still the 800 -pound gorilla in the room called "carbon". Carbon legislation is off the table currently at the federal level, but it is by no means gone. If we eventually enact some form of carbon tax in the United States, then there is an immediate change in the price of electricity. So, what I've tried to do in Exhibit 9, in one of the items in Exhibit 9, is to show a forecast with and without carbon. Obviously, without carbon is

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what we're doing today for the moment. But the moment that we do have carbon, and we use a reasonable forecast for carbon, in this case, the forecast coming from Ventyx, it immediately indicates that the current PPA with Laidlaw becomes very cost-effective against a carbon-constrained environment and carbon-constrained world. This actually acts as an excellent hedge against a carbon-constrained electric environment. And, the price with carbon immediately levelizes within nearly the first one to three years of carbon legislation. The price of electricity and all its other components immediately goes up to about where the Laidlaw contract is without carbon today. So, it's an area that's not been discussed. It's put on the shelf for the time being. I don't think it's off the shelf in the long run. I completely agree with the Company that it's the direction we're going, into a green direction for electricity. I see it everywhere in the United States where I work, whether it's California, Michigan, Ohio, Maryland, that it's in everybody's -it's on everybody's radar screen. So, we seem to have lost sight of the fact that this contract, with its fixed costs, not only is a cost-effective contract, but an excellent hedge against the price of electricity in

1 a carbon-constrained environment.
2 Q. In that same Exhibit 9 that's attached to your rebuttal testimony, if we just look at the first real number on the top left of the chart, which is in Row 1, Column C, it says "Total Laidlaw Payment (dollars per megawatt-hour)". If we wanted to know, for the year 2014, not what it was per megawatt-hour, but what we expect the cost to be of the Laidlaw PPA for the entire year, would you need to have an estimate of how many megawatt-hours the plant was going to produce?
A. Yes.
Q. To do that, would you need to know the total installed capacity of the plant?
A. Yes.
Q. And, would you have to assume some capacity factor as what percentage of the time is it actually generating?
A. Yes.
Q. And, you'd probably have a good idea how many hours there are in a year?
A. Yes.
Q. Based upon the numbers that you are familiar with for the Laidlaw plant, do you now have an idea ofo approximately how many megawatt-hours it's expected the plant will generate in a typical year?

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A. Yes. I think, at the 67.5 megawatts, this plant's going to generate a half a million -- 500,000 megawatt-hours, a half a million -- billion kilowatts, 500 million kilowatts in the course of a year.
Q. So, if you wanted to take this figure that's on your chart, the $\$ 144.08$ figure, which is in dollars per megawatt-hour, and come up with dollars per year, you would multiply that times your 500,000 megawatt-hour expected generation and come up with some number?
A. Yes.
Q. Thank you. In your rebuttal testimony, you state "There is no secret that a PPA is necessary in today's environment to finance this project." Why?
A. Because.
Q. Oh, okay.
(Laughter.)
BY MR. BERSAK:
Q. Can you elaborate on that?
A. Certainly. At this time, the days of market-based financing and market-based plants are over. I think everybody knows that some enormous number, 80 percent of the existing fleet of power plants has been through some form of bankruptcy in New England from the days of deregulation to now. With the tightening up of the
banking system, it is nearly impossible to do any form of financing of any type of power generation facility in New England without a power purchase contract and a financeable power purchase contract. Either it is accomplished as a balance sheet from a larger company for market purposes or it is done with a PPA. There are no longer short-term market-derived financing being offered and being completed in the industry right now.

So, anything that's going to be built
has to be -- somehow has to have an off-take agreement from a creditworthy load-serving entity or utility in order to gain financing. The banks have tightened up to the point where they don't even take risks on market fluctuation of any of the three components. There has to be no risk in the fluctuation, market price
fluctuation of fuel and electricity, capacity or RECs. It's, in part, due to the current glut of capacity that we have, the current method of capacity pricing that we have.

The unusual reduction in the price of natural gas with this Marcellus shale bubble that is coming through the system as we speak. And, the RECs in this infancy, the early RECs, they are fluctuating. They're going from very low values, up, down, and

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1 they're fluctuating. And, these type of fluctuations,
2 in today's environment, bankers won't go near this

24 Q. In your opinion, if such a recommendation was included

3 A. If the market price of electricity is allowed to float with the ISO daily market prices, as a risk factor, that will kill this PPA. That will kill the financeability of this plant, that item.
Q. The Staff Advocate also recommends that the pricing for capacity should be set on the actual ISO Forward Capacity Market prices. Are you familiar with that recommendation?
A. Yes, I am.
Q. In your opinion, if the Commission imposed that recommendation as a condition to its approval of the PPA, would the PPA be financeable?
A. If the -- if the price is allowed to float with capacity, then that also will kill the financing of the PPA or it will individually kill the financing of the PPA. Capacity needs to be fixed in a fashion that's visible to the bankers.
Q. Similarly, the Staff Advocate recommends that the PPA should be amended, such that PSNH is obligated to purchase no more RECs than it needs to meet the RPS law's obligations. Are you familiar with that recommendation?

Page 40
A. Yes.
Q. In your opinion, if the Commission imposed that recommendation as a condition to its approval of the PPA, would the project be financeable?
A. If the RECs are limited to a unknown amount of RECs being purchased in any given year, then that will kill the financing of the PPA, because of its uncertainty. And, I would like to draw the Commission's attention for its own review of the Michigan system, under Act 295, the very successful, much larger RPS Program, 10 percent of the total electricity in Michigan. That rollout, we had worked on that for the Michigan Environmental as an expert witness. It has been a very successful rollout of a massive RPS multi-billion dollar program. They contract for the total REC, and the REC has energy, capacity, and REC prices in it on a fixed price. And, the Michigan Public Service Commission approves each fixed price contract, so there's no uncertainty for the developers once the REC is fixed.

Internally, they will put some in the PSCR, put some in the transfer price, and put some in the REC pricing. Internally, under the Power Supply Cost Recovery, they will put the Locational Marginal

21 Q. Is it fair to say that your resumé was not attached to

23 A. I don't remember if it was or it wasn't.
24 Q. Would you accept that this is being offered as an

1 exhibit today, and that it was not part of either your
2 direct or your rebuttal testimony?
A. I'll accept that. I don't remember if it was or it wasn't.
Q. And, when you look at your resumé, which is GES-2, at the lower left-hand corner it says "Rev. October 2008". What does that mean?
A. That's this particular revision date, rev. date.
Q. So that this resumé is revised as of October 2008?
A. Yes, it is.
Q. Okay. And, if we go to Page 9 of your resumé, at Item 100 it says "City of Nashua, New Hampshire", and the final sentence there is "Valuation of Pennichuck Water Company and consulting services for eminent domain taking of the water company."
A. Yes.

17 Q. Are you the same George Sansoucy who testified in Docket DE 04-048?
A. Yes, I am.
Q. All right. Thank you. Mr. Bersak referred to PSNH Exhibit 10, which is an article from the Berlin Daily Sun. Did you read that article?
A. Exhibit 10? Do we have the --

24 Q. That's the article that says -- entitled "Green company
interested in locating on former mill site".
A. I don't know if I've read the Berlin Daily Sun article. I've been actually quite aware of the activities related to the green company.
Q. And, do you agree that -- with the article that it says "a preliminary agreement to allow a green technology company to co-locate" at the Laidlaw facility?
A. I've been advised by Laidlaw that there is a preliminary agreement.
Q. Right. So, would you agree that that's not a final agreement?
A. I would agree it's not final, that's right.
Q. And, Mr. Sansoucy, do you know the name or nature of the business of this entity that has a preliminary agreement for collocation?
A. Yes, I do. But I don't know if it's still confidential or not.
Q. And, insofar as that goes, have you had an opportunity to review the work papers developed by Dr. Shapiro related to her assessment about the additional jobs made available by this unidentified new green technology company?
A. I have not reviewed in detail the work papers related to the new proposed company.

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Q. Have you reviewed any work papers?
A. I've scanned them, but I have not reviewed them in detail.
Q. Okay. In light of all the benefits the City has stated it will receive from this Project, what is the City contributing to the Project?
A. The first thing the City is contributing is a tax PILOT agreement. And, a tax PILOT agreement is a negotiation that allows for the stabilization of taxes separate from the tax rate for the Company, and for the City. Usually, it's a negotiation, and usually it represents some level of conservative estimate of prospective taxes going forward.

The second thing the City is offering in this deal is they are offering to work very closely with the Water Department and the Company to provide for cost-effective purchase of a significant amount of water. And, they are also looking at the cost-effective purchase of a significant amount of use of sewer, by potentially studying and redoing their sewer rates to reflect the amount of sewer water coming in.

The City is further providing access to the -- through its easements through the Goebel Street


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| 1 | response to a question about the potential market value |
| :--- | :--- |
| 2 | of the plant after the end of the PPA term, you |
| 3 | indicated that you have prepared valuations of the |
| 4 | plant in the period after the 20-year term has ended? |
| 5 | A. Yes. |
| 6 | Q. And, I think you said valuations "ranging from 120 to |
| 7 |  |
| 8 | A. I said that the current valuation is 120 million. And, |
| 9 | if we go to the 67.5 megawatt, because the valuations |
| 10 | were prepared at the lower megawatt capacity, if we go |
| 11 | to the 67.5 megawatts, there will be at least a |
| 12 | 10 percent to 15 percent increase in that value, which |
| 13 | will bring it up to the $\$ 135$ million range. |
| 14 | Q. And, was that information highlighted in your direct |
| 15 | testimony? |
| 16 | A. No. That's part of the work that we have done for the |
| 17 | tax agreement. |
| 18 | Q. And, was that information highlighted in your rebuttal |
| 19 | testimony? |
| 20 | A. No. |
| 21 | Q. Even though the Staff testimony highlighted the |
| 22 | uncertainty regarding the value of the plant, you did |
| 23 | not care to share that information with the Commission |
| 24 | in your rebuttal testimony? |

1 A. I did not. I stated what I stated, which is this plant will have value, in my opinion, this plant will have value at the end of this PPA. And, that my job in managing the tax values of all of the power plants in the City of Berlin, every year we calculate a residual value for every one of the power plants, as part of the reversionary component of the value that we use for our tax value. This is true in Berlin, Bow, Newington, and the other communities we work in.
Q. Okay. Thank you. Moving onto a different issue. When you were discussing the energy pricing in the PPA with Mr. Bersak, did you say that those prices will rise at a 2.5 percent inflation rate?
A. Yes. We've used 2.5 percent inflation from real to estimate our power prices.
Q. My question is, with regard to the actual energy pricing in the PPA, is it your testimony that the prices will actually rise at a 2.5 percent rate?
A. Not in the PPA. The PPA is fixed. The fuel escalation is estimated to rise, and I think everybody has used 2.5 percent. The RECs are estimated to rise with inflation, I think everybody used 2.5 for that price. But the comparative energy prices that we have used, with and without carbon, we use 2.5 percent. So, it

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3 Q. Is it your position that the energy prices in the PPA are fixed?
A. The energy prices in the PPA are essentially fixed, yes.
Q. "Essentially". What does "essentially" mean?
A. Well, they allow for the wood fuel to move up and down. Once the fuel moves up and down, the fuel is paid for, the residual portion of that energy price. That the energy price pays for the fuel. And, once the fuel is paid for, the residual is all that's left for operations. If you run it out at 2.5 percent, if you actually run that out for 20 years, which we have done in our tax valuation, the amount remaining in the energy price to run the plant is essentially fixed.
Q. Okay. My question is, will the energy price track the actual cost of fuel or is it a fixed energy price?
A. No, it tracks the actual cost of fuel in the fuel adjustment clause.
Q. So, if actual fuel prices vary over the 20-year term, the energy prices will vary as well, correct?
A. Only to the extent that the fuel varies.
Q. Correct. So, you would agree then that the energy



A. In the -- well, yes and no. The REC is carried into that. The REC is not in the market. It's the Laidlaw REC. It's market energy, market capacity, and Laidlaw REC. So, for all of these, there is the Laidlaw REC.
Q. Okay. So, we'll just leave out the RECs for the moment. So, Column C, D, and E have different prices for energy and capacity, based on the Ventyx numbers, is that correct?
A. They have -- Column C is different capacities -- is different numbers based on energy. And, it's Laidlaw capacity and Laidlaw REC, in Column C.
Q. Okay. And, what's D?
A. D, I cannot find my original calculation papers for $D$. So, I cannot answer what D is. But I did find a chart that -- a graph I was doing to determine -- I was looking at D, which is "Capacity @ Ventyx 2010" -"Fall 2010". So, I have not been able to find my work paper on what D is.
Q. Okay.

CHAIRMAN GETZ: Can we hold on for a second? Let me make sure I'm understanding what you're saying about Column C. This is a value that -- this takes the RECs from the PPA, the capacity from the PPA, and inserts a different energy price, which is the Ventyx Fall

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2009 forecast, and that's how you calculated this number?
WITNESS SANSOUCY: Yes. And, the important element of that at the time this was done for the data request is that the Ventyx Fall and the Ventyx Spring included carbon, the carbon --

CHAIRMAN GETZ: Okay. I don't want to get into that at this point.

WITNESS SANSOUCY: Okay.
CHAIRMAN GETZ: i just want to make sure I find out what it is.

WITNESS SANSOUCY: That's correct, your Honor. That's right.

CHAIRMAN GETZ: And, you say, if I'm following some of this inquiry, you have the work papers for this calculation, these calculations in Column C, and you've provided them to the parties?

WITNESS SANSOUCY: In Column C, I have recreated the work paper that created Column C. Okay? That --

CHAIRMAN GETZ: So, you couldn't find the work papers, but you --

WITNESS SANSOUCY: It's not a spreadsheet.

CHAIRMAN GETZ: Okay. All right. But
what you're saying on Column $D$ is you can't -- you couldn't find the work paper, you can't recreate it?

WITNESS SANSOUCY: D, I couldn't find the work papers and recreate.

CHAIRMAN GETZ: Okay.

## BY MR. McCLUSKEY:

Q. Okay. Based on questions from the Chairman, your work papers that you say underlying Column C, have you provided that to the parties?
A. The three pages, that, plus these two, that show --

MR. BOLDT: Okay. I'm sorry.
BY THE WITNESS:
A. That, plus these two.

CHAIRMAN GETZ: What are you referring to when you say "that"?

WITNESS SANSOUCY: "That" is the graph where I was looking at what was occurring under different scenarios against the base case.

CHAIRMAN GETZ: But is that a document that nobody has or is it a document that you have?

WITNESS SANSOUCY: That was in my work papers. As I was putting together the question from the data requests from the tech session yesterday. It was not in one single spreadsheet, because it was different -- we

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were drawing from different places, looking at different

CHAIRMAN GETZ: Okay. I think I've got that but -- I've got the notion. Do any of the parties have the actual documents?

MS. AMIDON: No.
MR. BOLDT: My --
MS. AMIDON: The answer is "no".
MR. BOLDT: If I may clarify or attempt to clarify, Mr. Chairman. One page was provided over, I thought that was the correct document that Mr. Sansoucy was referring to as his underlying work paper. That was provided this morning, when I provided the paper copy to all parties on that side of the aisle. There are two other sheets that I have not provided, did not know I was -- that that was something that was appropriate to go with the graph that I provided this morning. I do have copies to provide. We may take a break, if you wish, and allow some time for them to take a look at it. It is a -- it is Ventyx -- labeled "Ventyx Market Clearing Prices Any East Region Nominal Dollars/Megawatt-Hour". And, the second one is "Ventyx Annual Capacity Price Forecast New England Region Nominal Dollars/Kilowatt-Hour".

CHAIRMAN GETZ: Okay. Let's hold off on

|  |  |
| :---: | :---: |
| that for a second. It is getting about time for a break. But, Mr. McCluskey, how much more do you have on this item or how much more cross, so we can get an idea just for how to play out the schedule? <br> MR. McCLUSKEY: Could be half an hour, 45 minutes, just on this Exhibit 10. <br> CHAIRMAN GETZ: Okay. <br> (Chairman and Commissioners conferring.) <br> CHAIRMAN GETZ: I think it's a good time for a recess. During the recess, let's make sure at a minimum everybody has the documents. You know, there may or may not be issues about whether they're objectionable, per se, but there certainly may be issues about preparation, adequate time to prepare cross, and what is the nature of these work papers? It doesn't sound like they were preexisting or, if they did preexist, they can't be found and now they're being recreated. So, we've got some issues to deal with. <br> But, Ms. Hatfield? <br> MS. HATFIELD: Mr. Chairman, I strongly believe that they are objectionable, per se. There's no amount of time that you can give us today that would allow us to be prepared to cross Mr. Sansoucy about this information. We think we should proceed with the cross. | Attorney Boldt provided us are not relevant to our examination, and we think they should not be included in the record. We understand that Attorney Boldt did not provide the Commission or the Court Reporter or the Clerk with copies, and we'd just as soon leave it that way. However, it does point up one deficiency in what we were provided concerning the so-called "Ventyx study". We received, courtesy of Attorney Boldt, a full copy of the report on the "Fall 2010 Northeast Region Power Reference Case Electricity and Fuel Price Outlook." But, for 2009, which is also information that he includes so-called "carbon in" numbers, all we received are four tables relative to that. So, we don't have the backup to that. So, insofar as some columns of Exhibit 10 reference the Ventyx tables for 2009, there's no background provided on that. We only have the Fall 2010 background to, and that's what we relied on in preparing our examination. <br> What this might mean is that at some point we may consider whether it's appropriate to strike information in, let's say, Column C of Exhibit 10, which relies on information that we were not -- where we didn't have the additional background. Just to let you know that there's just an additional issue with respect to what information we received on Ventyx. It was just Fall 2010, |
|  Page 66 <br> 1 And, if this is the way the City wants to prepare their <br> 2 case, and the Commission wants to allow this in, then <br> 3 we'll just have to take up hearing time. We don't even <br> 4 know what we have at this point. And, we think it really <br> 5 puts the parties in a catch 22, when we keep stopping the <br> 6 hearing to allow us to review more information, and then <br> 7 that allows the witness to supplement his testimony. <br> 8 So, we have really tried to be <br> 9 cooperative and tried to get the information we need. But <br> 10 I think we've reached the point where this is just <br> 11 completely unfair. Thank you. <br> 12 CHAIRMAN GETZ: Okay. Thank you. <br> 13 Anyone else before we take a recess? <br> 14 (No verbal response) <br> 15 CHAIRMAN GETZ: All right. Let's break <br> 16 until 11:15. <br> 17 (Whereupon a recess was taken at 10:57 <br> 18 a.m. and the hearing resumed at 11:24 <br> 19 p.m.) <br> 20 MS. AMIDON: Mr. Chairman, may I clarify <br> 21 something regarding the so-called "work papers" that were <br> 22 provided by -- <br> 23 CHAIRMAN GETZ: Please. <br> 24 MS. AMIDON: Okay. The work papers that | and not anything related to 2009. <br> CHAIRMAN GETZ: So, I take it, it could <br> be motions to strike or arguments about what weight, if any, to give to some certain information? <br> MS. AMIDON: Correct. Probably more to the weight. We're not quite there at a motion to strike, but we are concerned about -- <br> CHAIRMAN GETZ: Well, or, ultimately, at the end of the proceeding, in terms of when we get to motions to what should be admitted into evidence. <br> MS. AMIDON: Right. I think that that would be fair to deal with at that point. <br> MR. BOLDT: May I clarify, Mr. Chairman? <br> CHAIRMAN GETZ: One moment. <br> CMSR. IGNATIUS: No, that's all right. <br> Go ahead. <br> MR. BOLDT: If I can call your attention to the tables we provided, that we did a supplemental correction with you this morning, as I had made reference to last week. The first two pages are Fall 2009. The last two pages are Spring 2010. Those are the supplemental pages, those were immediately provided to Staff and OCA and Mr. Shulock last Wednesday, the same documents. Those are the supplemental backup pages that |

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state that correctly, Mr. Sansoucy?
WITNESS SANSOUCY: Yes.
MR. BOLDT: Okay. I apologize for creating confusion. Okay. Thanks. I'm happy to take back the incorrect pages that I gave you this morning, if you wish.

CHAIRMAN GETZ: Okay. Ms. Amidon, did you have something further on this?

MS. AMIDON: No, I just wanted to bring it to the Commission's attention. But, I believe, at this point, Mr. McCluskey should proceed with his cross-examination, if it pleases the Commission?

CHAIRMAN GETZ: Please. Thank you.
MS. AMIDON: Thank you.
MR. BOLDT: We agree.
MR. McCLUSKEY: Thank you.

## BY MR. McCLUSKEY:

Q. Mr. Sansoucy, before the break, we were in the process of working our way across the columns in Exhibit 10.

CHAIRMAN GETZ: I'm sorry, let me -there was one thing I just wanted to make sure I understood. We have Exhibit 10 that's been in -- it's the same Exhibit 10 that was in the rebuttal testimony when it was originally filed. We have "Exhibit 10 Revised" --

MR. BOLDT: "Revised" is the way it's labeled currently.

CHAIRMAN GETZ: Is that supposed to be -- is 10 Revised an additional exhibit or it's supposed to substitute for 10 ?

MR. BOLDT: I will leave that clarification to Mr. Sansoucy, so I do not misspeak.

WITNESS SANSOUCY: It is supposed to substitute for 10 . Because it's updated -- it's, as you said, it matches the 9 that's in the exhibit, that's in the rebuttal testimony, the 10 that was in there was what was in the data requests and the direct testimony. The 10 Revised matches the 9. And, it is supposed to substitute for the 10 .

CHAIRMAN GETZ: Let me just say, I don't understand the sense of that at all. Why 10 would -- 10 Rev. would substitute for 10 . But let's continue with the cross-examination, and maybe I'll understand the point. But it seems to be something additional, not something that would be a substitute, given how I read Exhibit 10 --

WITNESS SANSOUCY: Oh. Okay.
CHAIRMAN GETZ: -- as originally
proposed.
WITNESS SANSOUCY: I apologize for the Page 72

24 Q. As I said, we were working our way across the columns


## Page 74

6 A. Yes, it is. B minus E.
Q. Okay. And, you say that in your heading for Column F, correct?
A. Yes.
Q. Okay. Thank you. Now, let's go back to the base case. Am I correct in saying that, when you were questioned on the development of these dollar numbers in the base case, you stated that they were calculated based on a capacity, plant capacity of 58 megawatts?
A. They're based on approximately 58 megawatts, and an approximate capacity factor of 85 percent.
Q. Okay. If you could actually let me finish the question, Mr. Sansoucy.
A. I thought you did. I'm sorry.
Q. So, they were based on a capacity of 58 megawatts, correct?
A. Yes.
Q. And, you said yesterday that it was based on a capacity factor of 80 percent, is that correct?
A. That's what I thought it was, when I researched this, that is about 85 percent. That base case comes out of my valuation, my valuation that I did for the City of Berlin. And, it's about an 85 percent capacity factor.
Q. Thank you for that correction. But, if you go to Exhibit 9, Footnote (2), you actually state there that you're "assuming a capacity factor of 80 percent", is that correct?
A. Yes, it is.
Q. Okay. So, in terms of these dollar numbers, in essence, the numbers in Column B are the product of the three prices in the PPA for energy, capacity, and RECs, on a dollar per megawatt-hour basis, times -multiplied, I said the "product", at those prices, and the megawatt-hours produced from a facility of 58 megawatts and a capacity factor of 80 percent. That's what you said yesterday, correct?
A. Yes, I believe I did.
Q. Okay. And, now, you're saying, when you actually checked the numbers, it's an 85 percent capacity factor?
A. Yes. Approximately.
Q. Okay. Thank you. So, moving onto Column C, I believe you said, with regard to the energy component of this

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4 Q. Because the Ventyx number is in constant dollars, so you need to put them into nominal dollars to match the PPA numbers, correct?
A. Yes.
Q. Thank you. And, with regard to the capacity component, didn't you also say that these numbers were based on a 2009 Ventyx capacity number?
A. No. Column C is based on the Laidlaw capacity.
Q. No, I'm asking the question, did you say at the tech session that it was based on the Ventyx 2009 capacity number?
A. No, I don't remember that I said that. I said that I would check. I didn't know what capacity it was.
Q. Okay. And, we've already said the REC number is the PPA number?
A. Yes, that's correct.
Q. So, it's your position then that two out of the three products in this Column C are not market-based numbers, but PPA numbers?
A. Yes.
Q. Thank you. Now, in the case -- in the case of Column


| 1 | been no testimony about the potential for a |
| :--- | :--- |
| 2 | carbon-constrained environment. All I'm trying to show |
| 3 | is those two market indicators with this contract, not |
| 4 | a forecast of RECs. If we drift into a forecast of |
| 5 | RECs, we can, but we're going to be discussing what we |
| 6 | talked about earlier. Is that it's based on wind that |
| 7 | will probably not happen. It's based on wood that |
| 8 | won't happen. The amount of wood plants that people |
| 9 | are forecasting won't be built. So, this REC price is |
| 10 | known. It's known in the contract. And, I'm adding to |
| 11 | that two market indicators that can at least give a |
| 12 | position to the Commission or an opinion that there is |
| 13 | a potential upside to this contract that's very large. |
| 14 | Q. |
| 15 | So, you're telling -- you're telling the parties that |
| 16 | Ventyx, you have confidence in the capacity price |
| 17 | forecast from Ventyx, but you don't have confidence in |
| 18 | the long-term REC price forecast from Ventyx, is that |
| 19 | what you're saying? |
| 20 | A. |
| 21 | thave not studied Ventyx's long-term REC forecasts for |
| 22 | Q. And, -- |
| 23 | A. |

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15 A. Yes, I do. They do one, they do one, based on current 16
17 Q. And, you chose to omit that?
18 A. I did not use that.
Q. Thank you. Going -- let's talk a little bit about the development of the Ventyx energy prices. First of all, this is a forecast, is it not?
A. Yes, it is.
Q. And, Ventyx, it's my understanding, reading the documents that you provided, that Ventyx has quite a

3 A. Yes, it does.
4 Q. And, I assume that, once that model is developed,
5 Ventyx would insert various assumptions into the model, crank of the handle, and turn out a long-term energy price forecast. Is that accurate?
A. Ventyx provides a forecast twice a year.

9 Q. Okay.
A. So, they respond very quickly to things that -(Court reporter interruption.)

## BY THE WITNESS:

A. -- to occurrences that occur in the marketplace. BY MR. McCLUSKEY:
Q. So, they are constantly updating the model to reflect changes in inputs?
A. Yes, they do.
Q. Okay. Now, the forecast that we're using, my understanding, it's not just based on the output of this model. I believe you provided us some information yesterday on how they created the long-term forecast, particularly with regard to the early years. Is that accurate?
A. I don't understand the question.
Q. Did -- are the early years of the forecast based on the model output?
A. No. The early years in the capacity forecast is based on the capacity forwards. Okay?
Q. And, what about the energy?
A. The energy, they look at short-term forwards on the energy, and then go from there to a model.
Q. So, they have actually merged forward electricity prices with the prices from the model, is that correct.
A. They have merged forward -- forward components of what's going to be the electricity pricing with their forward -- with their long-term model.
Q. Okay. So, --
A. But they do more than just those two.
Q. Oh, if you could just -- you've answered the question. Thank you. Now, I assume this is a long-term forecast that's subject to some uncertainty, you would agree with that?
A. Say again?
Q. It's subject to some uncertainty?
A. Of course, yes.
Q. But, presumably, you have some confidence in the prices that you're using for the -- to support your calculations, is that correct?

| Page 85 | Page 87 |
| :---: | :---: |
| A. We do have confidence. We use this regionwide, and we do have confidence in this as a good model. <br> Q. Okay. Now, let's talk about the inputs to the energy price forecast. My understanding is the latest forecast for Fall of 2010, the base case for Ventyx does not include carbon, is that correct? <br> A. That is my understanding, yes. <br> Q. Whereas the same forecast for Fall of 2009 did include carbon? <br> A. Yes. <br> Q. So, you chose to not use the most recent base case forecast from Ventyx in your calculations, is that accurate? <br> A. No, I didn't -- no, that's not accurate. I was trying to make a distinction between a carbon-constrained and a non-carbon-constrained environment. And, I was trying to use an independent source. That the last carbon estimate was Spring of 2010 to compare the two, with currently carbon is off the table for several years. <br> Q. So, Ventyx does not think carbon pricing is a reality in the near term, based on its base case assumptions, is that correct? <br> A. Well, Ventyx says what it thinks. | CHAIRMAN GETZ: Well, why don't you <br> consult with your witness, so we know which way to go. <br> WITNESS SANSOUCY: It's okay. <br> MR. BOLDT: Okay. <br> WITNESS SANSOUCY: No, it's -- <br> MR. BOLDT: You know the -- <br> WITNESS SANSOUCY: The questions so far <br> are fine. We can move forward to get this done. <br> MR. BOLDT: Thank you, Mr. Chair. <br> MS. AMIDON: For simplicity sake, Mr. <br> Chairman, if we could at this point mark for identification the Ventyx "Power Reference Case <br> Electricity and Fuel Price Outlook Northeast Region Fall 2010", and you can use Staff, I think we're up to Exhibit Number 13. And, then, the compilation of two 2-page tables, the cover page of which has this docket number that relate to 2009 markets, I mean, prices, in the first instance, and 2010 market prices in the second instance, that would be Spring 2010 as "Exhibit 14", just for purpose of referencing them in the cross-examination. <br> CHAIRMAN GETZ: Okay. So marked. <br> MS. AMIDON: Thank you. <br> (The documents, as described, were actually herewith marked as Exhibit 12C |
| MR. BOLDT: Mr. Chairman, if I may, because these are confidential materials, I'm not sure where the line is in confidential questions or public questions. I don't want to waive something inadvertently. <br> CHAIRMAN GETZ: Well, and I guess, I mean, there is some lack of clarity at least in my mind, well, a lot of the composite information, at any rate, is in the exhibits that haven't -- it doesn't appear that confidentiality has been sought. And, there wasn't always, to me, a clear line between what was sought to be confidential in and of itself and what was an issue with copyright reproduction. So, and you're going to have to speak up if there's anything that deserves confidentiality, should be protected. <br> MR. BOLDT: My question was only, if we're getting into the text of the report of Ventyx, that may be across the line. But it's for the public consumption, but not for the cross-examination by the Board. I believe we went into confidential session at what point in time last week. <br> CHAIRMAN GETZ: You're going to have to <br> alert me. <br> MR. BOLDT: I guess I am right now on this, if he's to read a text from the report, versus -- | and Exhibit 13C, respectively, for identification due to numbering error.) <br> (Chairman and Commissioners conferring.) CHAIRMAN GETZ: Mr. McCluskey. MR. McCLUSKEY: Thank you. <br> BY MR. McCLUSKEY: <br> Q. Mr. Sansoucy, I assume you would say that the modelers, the Ventyx modelers, are pretty smart people. Would you agree with that? <br> A. Yes. <br> Q. And, so, when they come to develop what you refer to as "long-term energy prices without carbon", I think what you're saying is "without carbon under a federal program", is that accurate? <br> A. Yes. Because it all relates to greenhouse gas legislation, and taking it off the table in Summer of 2010 by the Obama Administration. <br> Q. Okay. So, if they decided that legislation was not likely to pass on climate change in the near term, they would then model ISO-New England how it currently operates, correct? <br> A. Yes. <br> Q. And, they would reflect in their energy prices the cost that the generators incur under RGGI, is that correct? |



| 1 | slow, and we know they do, and they stop buying, the |
| :--- | :--- |
| 2 | roundwood will go immediately into the burning -- the |
| 3 | wood burning plant. It's keeping the industry alive. |
| 4 | It's a great flattening tool to keep the industry |
| 5 | alive. So, I think we're going to see an industry come |
| 6 | back. I think it's not going to come back overnight. |
| 7 | The loan programs that Laidlaw is proposing with the |
| 8 | City are going to be very helpful. But I think the |
| 9 | industry will come back to its original. What we |
| 10 | recognized prior to 2005, when the Burgess Mill was |
| 11 | running, is about what this mill is going to take. |
| 12 | And, it will take some roundwood when the other mills |
| 13 | are not buying or when the prices are different for |
| 14 | transportation. |
| 15 | Q. |
| 16 | Would you agree that the use of roundwood for biomass |
| 17 | A. |

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A. I think some loggers will come back into the business. But there are some that we know will not. I might add, Mr. Edwards, that we closed the Forestry and Logging Program at our high school, White Mountain Regional High School, because of the closure of the mill. We may reopen that to train young people, like we did for decades, at White Mountain Regional High School.
Q. Are you familiar with the Noble/Brookfield Project?
A. Say again?
Q. Are you familiar with the Noble/Brookfield Project?
A. Yes, sir.
Q. Hypothetically, Noble/Brookfield, if they were to fill the capacity of the Coos Loop, what would Laidlaw need to do?
A. Noble is ahead in the queue. There is a -- there is a upgrade that will like -- that's going to be required if there is a coincident peak between the two. And, I understand from Laidlaw that their interconnection study and that their budget, their current construction budget, is upgrading the loop to handle both Laidlaw and Noble. And, that they're going to be spending in the order of about 8 to $\$ 9$ million to do that upgrade. And, I might add that there's a secondary upgrade going on that is not in this record, from Brookfield Hydro,
the hydroelectric plants, that's part of the bigger picture to get everybody out of the Coos Loop, Brookfield Hydro, Public Service's existing hydros. Brookfield Hydros are the hydros from the mill when it was closed, the existing plants, Laidlaw and Noble.

But, beyond that, I think, Mr. Edwards, there's no further representations made to anybody wishing to get out of that loop after that group.
Q. Is that upgrade a condition in the PPA?
A. I would have to check the PPA, but I know that all the upgrades are conditions in the interconnection study agreement, and the interconnection agreement I would assume is mentioned or it's attached to the PPA. I just don't know exactly where.
Q. So, getting back to the hypothetical, if there was no upgrade or if there was an upgrade, but Noble and Brookfield were filling the capacity of the Coos Loop, what would Laidlaw need to do?
A. There are two fundamental issues with the Coos Loop. One is the interconnection at the points where it's interconnected, the substation capacities that have to be upgraded. Laidlaw is doing all that it has to do to upgrade to transmission line voltages to get into the loop. If they fill it to capacity and Laidlaw couldn't

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get in, then there was going to have to likely be some additional capacity requirements in the actual wire sizes. That is not what's anticipated at this time. There may be the occurrence of light loading, where somebody comes down slightly to allow for the flow of electricity, depending on the demand. But that's not what's in the interconnection studies at this time.
Q. Is a plant the size of Laidlaw's able to come down slightly or is a plant the size of Laidlaw efficient at coming down slightly?
A. The wood plants can come down. The wood plants can ratchet down. And, they remain reasonably efficient ratcheting down, and they can ratchet right back up.
Q. How much do you anticipate that impacts a 22 percent efficient plant?
A. Say again?
Q. How much impact would that have on a 22 percent efficient plant?
A. I don't know the exact impact that this will have on this modified boiler. But, in general, a ratchet down to 50 percent on a solid fuel plant, will generally impact the efficiency 10 to 15 percent, in general.
Q. What is your opinion as to the potential of wind at the Noble/Brookfield site?
A. My opinion on that site or that potential? Well, the following: First and foremost, it is not going to be as easy as it may appear, because those are what we call "high elevation turbines". We do live in this Arctic-type environment above treeline. And, we do get significant ice structure in the winter. There has been some serious icing problems on the Kibby Mountain units, which are either very close to this elevation or a little higher, that forced the closure of Kibby last winter, until they addressed the ice situation. The wind is there. We know that from the wind meters and the wind monitoring. I think, from an operational point of view, in the cold, that the capacity factors may not be quite what people are anticipating. That's a possibility. I'm not saying they are. I haven't studied the wind rose in great detail. I have studied detailed wind roses for other wind plants in the region. And, on paper, we can get the amount.

The wind flows blows at times when the capacity is not necessarily always needed. It blows in the winter, but it blows the most in the spring, when we get the shift and the change, and then into June and July. But, on hot days, the wind doesn't blow. It just "pluff" [sic], it goes soft, so to speak.

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So, what's going to likely happen with that plant is it will produce capacity -- it will produce energy, but it's not going to produce much reliable capacity. The production of energy is fine, because, from a policy point of view, that's a kilowatt of energy that has not got carbon in it. It's not generated by fossil fuel. But the Laidlaw plant will be producing the capacity in that region.

I think the plant, the Noble plant will be fine. I think it's going to have some operational constraints as they learn the ropes, how to deal with the North Country. And, I don't think it will likely produce what everybody hopes it will by some amount.
Q. Just out of curiosity, on these windmills, and I know this is kind of a sidenote of this, but is there any type of de-icing that they can do for those windmills?
A. No, there isn't, Mr. Edwards. They're carbon fiber blades, these composites, those big blades to hold them together. And, you cannot put electricity in them to heat them.
Q. Okay.
A. And, you can't spray them with de-icing, like you would an airplane wing. So, when they build up rime ice, they sling it. And, it can go a mile, and big chunks. financed?
A. Oh, yes. I'm aware that that -- wait a minute, Noble/Brookfield or Noble?
Q. Well, I'm not --
A. I'm sorry. Brookfield --
Q. I'm not sure what to call it, to be honest, right at the moment.
A. Brookfield bought Noble.

CHAIRMAN GETZ: But, Mr. Edwards, where are we going with this, in terms of relevance?

MR. EDWARDS: Well, Noble/Brookfield is a pretty substantial project. Certainly, of the same magnitude that the Laidlaw Project is. And, I'm just curious as to why Mr. Sansoucy feels that a project of this magnitude needs to be financed, and why that should be taken into consideration?

CHAIRMAN GETZ: A project of what? Are you talking about Laidlaw or --

MR. EDWARDS: Yes.
CHAIRMAN GETZ: Why it needs to be financed?

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And, it can kill somebody, if it hits him. So, they have to shut them down until the ice melts.
Are you aware that Noble/Brookfield is not being

MR. EDWARDS: Why it needs to be taken into consideration to offset some of these things. I mean, we're pointing out that there's some negatives within the PPA, and those negatives are brought out as though it's very important to have those to obtain financing. I guess what I'm getting at is that there's another project of similar significance that is not relying on financing. And, I'm just bringing that up as a point.

MR. BERSAK: There's nothing in the record, Mr. Chairman, that even talks about that. There is no testimony.

CHAIRMAN GETZ: Well, yes. We're certainly talking about facts not in evidence. But, if you can ask the -- well, Mr. Sansoucy, do you have any familiarity with the financing of the Noble/Brookfield Project?

WITNESS SANSOUCY: The familiarity I have, your Honor, is that Noble was not able to get solid PPAs for more than one half of the capacity of the plant. So, they were not able to go forward. And, they were also, from the information we get, were not able to finance this project in New Hampshire. So, they sold it to Brookfield. Brookfield is a publicly traded company,
and they do balance sheet financing. They just recently floated $\$ 500$ million worth of bonds to be used for balance sheet financing of alternate energy projects. And, they buy real estate, they buy office buildings. So,
Brookfield will step up to the plate, finance with public bonds.

## CHAIRMAN GETZ: Mr. Edwards.

 BY MR. EDWARDS:Q. Mr. Sansoucy, you've referred to the plant as a user of Berlin water and sewer. Have you heard from the Water and Sewer Departments specifically what impact the Laidlaw usage will have on rates?
A. Water, sir?
Q. Water and sewer.
A. Water first?
Q. Sure.
A. Yes, I have. I've been working with the City and the Water Department to sort out the appropriate rate structure that this plant could and should have that would be good for Berlin, as opposed to the Company rebuilding the water plant that it owns on site. Like we're currently looking at rate reductions of between 10 and 25 percent for the water at the -- for the City water for all other ratepayers. That's currently the

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ranges that we're looking at, Mr. Edwards.
Q. And, for the sewer?
A. The sewer, we're looking at an additional contribution of approximately 2 to $\$ 350,000$ I have not done the precise rate reduction, but I think it's no more than 10 percent. But I have not calculated it precisely, I'm just estimating it.
Q. Are you aware of whether or not those reductions have been made public before now?
A. They have not until this minute.
Q. Okay. What is your projected value of the Laidlaw Project upon completion?
A. Prior to the uprate of capacity, we are working off a projected -- current value, Mr. Edwards?
Q. No. Upon completion.
A. Upon completion? Prior to the announcement of the 67.5 megawatts, we were working on a value of 162 million.
Q. And, what portion of that is taxable?
A. We believe that at least approximately 120 million of that will be taxable, between 105 and 120 million.
Q. And, is that the figure that you used to reach a determination that the plant would save the Berlin taxpayer roughly 17 percent?
A. Yes. I used 104 million for that calculation, sir.
Q. Okay. So, assuming an average assessed value in Berlin of a little bit under 70,000 on a residential home, that equates to about a buck a day for the average ratepayer. What are the other real estate tax benefits to the City and the State?
A. The State, well, the City receives a tax, and they receive three of the four tax components. The City will bill for school, local school, local city, and county. Obviously, they will transfer the county money to the county. And, so, they receive the three. The State will then apply the State Utility Tax, at $\$ 6.60$. And, they will bill Laidlaw directly for the taxable portion of the plant.
Q. Generally speaking, what negative impact can an industrial facility of this size have on real estate values surrounding it?
A. Generally speaking, immediate adjacent neighborhoods can be impacted marketwise, depending on where the market is, they can be impacted through view, traffic, noise, and those types of impacts created by any industrial facility on the adjacent neighborhoods.
Q. What kind of percentage do you figure on that generally?

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A. I have not done a market study on what that percentage would be. I don't know the answer to that.
Q. But you would agree that that's a negative impact?
A. It can be. It depends on people's perception. It depends on people's concept of and market value in the region. You know, most of the housing built around mills were not negative impacts. They were housing where people could walk to work, and they liked that housing and they paid good money for it. It depends on where you are and what you're doing.
Q. Would you agree that the real estate value of residential property upon the closure of some of these facilities around New England has actually increased the residential value around the facilities?
A. Yes and no. The closure has decreased value in some places, so that any reopening of a job-oriented industrial facility, like Laidlaw, will have the positive effect of providing jobs and thereby increasing the value of real estate. Conversely, there are markets, and I don't know the exact percentages, where industrial closures have been good, and they have increased real estate values, because that, for whatever reason, the industry that's closed should have closed and is gone.
Q. In figuring your 17 percent on a decrease for the average taxpayer in Berlin, have you taken into consideration the potential decreased value of their assessed value on their property?
A. I have not. And, I don't necessarily agree that there will be a decrease in value. I don't think anyone has done a market study that Laidlaw will decrease value. It could increase value based on the jobs that it brings to the region.
Q. Are you aware that the assessing firm for the City of Berlin attributes a negative value to properties that are within close range of the existing plant as it sits?
A. I am not. No.
Q. Are you familiar with the recent economic expansion in Littleton?
A. Some.
Q. Aside from the close proximity to Interstate 93 , what other economic factors do you feel may be driving business and industries to Littleton?
A. What other factors?
Q. Yes.
A. Well, first and foremost, Littleton's maintained enough sewer and water capacity to bring industry into the

Page 106 Littleton?
region, first and foremost. Secondly, Littleton has made the decision to rezone a significant amount of its bottom land to commercial land. Third, it has supported the reuse and conversion of its old mills to reuse for industrial. Fourth, what Littleton has done is it has tapped into a pent-up demand from the entire quadrant in Vermont in the Northeast Kingdom that migrate to Littleton. And, they have allowed, through planning, sufficient varied commercial uses, so as to provide for destination shopping and destination services to attract people and do their expansion.

So, from a planning point of view and from an infrastructure point of view, they have done very well. They have expanded their roads. Littleton's paid for substantial new bridges to go across the rivers, just like -- just like Berlin has.
I mean, Berlin has new bridges that they built to bring wood into the original mill. So, Littleton has done many of the similar things.
Q. You haven't mentioned anything about "Littleton Power \& Light". Do you believe that Littleton Power \& Light rates have anything to do with the recent expansion in
to go on line as projected for the spring and summer, what kind of impact can that 200 million payroll have on the concerns that our politicians have raised over Berlin's current economic crisis?
A. That's a broad question that I don't necessarily understand totally. It's clear that the prison is being built, and they're going to be bringing in a significant amount of labor. The Feds have put an interesting condition on the labor, where they have to be -- I think it's either 34 or 35 years or younger. So, there's a very different in migration of a young crowd. And, it's clearly going to be helpful to the entire region.

The wood plant is going to more than likely reabsorb a number of the mill workers who were millwrights, who ran the original wood plants, the original boiler, this boiler was run by a boiler crew. I would expect and anticipate that a number of the original workers will come back, get retrained with Laidlaw. And, so, I think it's going to absorb some existing long-term layoff or people that have taken what do they call that, a lesser job or something. I don't think that the wind plant is going to do much in the way of labor.

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Q. Are you aware that the average worker age in that mill was between 50 and 55 ?
A. Yes, I am.
Q. And, you think that the odds of that pool of worker having reached that age, having reached a point where, more than likely, they certainly have secured payoff in many cases of their mortgages, etcetera, etcetera, you really think that that is something that's going to happen in Berlin between the ages of 50 and 55?
A. Well, you're asking me if the guys -- the older guys are going to come back to work. Certainly, there's some -- of those older people will want to work, and may well come back to work, if they're not working. There wasn't everybody that was under -- that was over 50 either. There are some younger people. This plant needs between -- is going to need close to I think it's 40 people is the estimate. So, I think they will tap a certain percentage of people that used to work at that mill that are very familiar with that type of machinery. You've got the log yard, you've got the log yard people, the people who were let go when Currier went under. When the log operation, which was subcontracted out, went under, those guys are around. So, I think you're going to pick up some of those guys.

I think you're also going to get some new people. And, I also think you're going to get some people that might move, might shift from other lesser jobs in the entire region. Whether it's Gorham, Lancaster, Groveton. Don't forget we still have everyone that was laid off at the Groveton Mill, that can commute very easily to Berlin. They operated the boilers, they also operated the combined -- the turbine plants at Groveton. So, we have the Groveton crew also that may want to come down. So, I think the labor pool is going to be okay.
Q. Of those 40 jobs that you're talking about, how many of those jobs are specialized? That not necessarily a papermaker or somebody within the paper industry would be necessarily schooled as a 50 to 55 year old in that field?
A. At least half of those jobs in a wood plant are very specialized. And, people are going to be either trained into those positions or bring some specialty skills with them.
Q. So, we're talking about 20 direct jobs, perhaps in a pool of the 50 to 55 average age group?
A. Yes.

MR. EDWARDS: Thank you. That's all I have.

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## CHAIRMAN GETZ: Thank you. Ms. Hatfield?

MS. HATFIELD: I have no questions. Thank you.

CHAIRMAN GETZ: Mr. Shulock? MR. SHULOCK: I have no questions. CHAIRMAN GETZ: Commissioner Below. CMSR. BELOW: Yes. Thank you.

## BY CMSR. BELOW:

Q. Mr. Sansoucy, on your Exhibit 10, can you tell us what is either assumed or implicit for the annual output that you used in your calculations in megawatt-hours?
A. Yes, Commissioner. In the first exhibit, it was 431,000 approximate megawatt-hours. And, in the revised exhibit, it was 500,000 .
Q. Okay. Thank you. I believe you made a statement to the effect that "wind is not in any circumstance as valuable as wood, in terms of its energy output." Is that correct?
A. Yes, that's my belief.
Q. Is that all wind, all locations, or what -- what's the context of that statement?
A. The context is wind in New England is vastly more intermittent and less predictable than wind in the
$\square$ Page 114

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Midwest and the West.
Q. Are you distinguishing between onshore and offshore wind?
A. I am not distinguishing offshore. I have not studied the wind roses offshore. I'm only saying that in relationship to the onshore wind plants that we have looked at in New England.
Q. Okay. So, you would add that qualification to your previous testimony?
A. Yes, I would, sir.
Q. I have another question, I'm just not thinking of it right now. Just a moment. On Page 11 of your direct testimony, at Line 15,11 and 15 , you've referred to a "natural gas major transmission line from Canada to Boston" that runs through the City of Berlin?
A. Yes, sir.
Q. What are you referring to, in terms of "Canada to Boston"? Are you referring to pipelines that go to Portland, Maine?
A. No. The pipeline I'm referring to that is in Berlin is Portland Natural Gas Transmission line, that emanates in Canada, comes through the State of New Hampshire, goes to Portland, and then ties up with Maritimes Northeast into the Boston markets. It's the Portland
essentially runs from Portland, Maine, to Canada, is that correct?
A. Yes, it does. And, then, it -- it runs from Boston, basically, to Portland. It ties up at the line that comes from Sable Island that comes down from down central Maine. that line?
A. Gas flows at this time from Canada to Boston in that line, runs to the Boston market. There is offtake at the Newington Station for the Newington power plants. And, yes, that's where the offtake is for it.

CMSR. BELOW: That's all.
CHAIRMAN GETZ: Commissioner Ignatius. CMSR. IGNATIUS: Thank you. Good afternoon, Mr. Sansoucy.

WITNESS SANSOUCY: Good afternoon. BY CMSR. IGNATIUS:
Q. You know from the filed testimony and from hearing the PSNH witnesses at the start of this case that PSNH is very reluctant to make forecasts of future prices,
correct?
A. Yes, they are.
Q. What do you make of that reluctance, given what you do in forecasting prices?
A. I think that it's very valid that Public Service operate in the existing world the way they do. Unfortunately, what I have to do in my world is forecast, because I have to produce values now, and I do it by forecasting. Public Service has long asked us, along with other utilities, not just them, to consider the income approach, market sales approach, to valuation of their utility property. It requires me to forecast. So, I have to put that out there. Forecasts are just what they are, they're forecasts. In this instance, I compliment Public Service for structuring a PPA that is essentially -- doesn't need forecasts to potentially provide benefits. Especially in light of what occurred in, you know, the last round of the IPP, you know, the 15 cent contracts were based on forecasts at the time. We were all in the room when that happened. We were wrong by 30 years. Here we are today, I guess, but we were wrong when that happened, so -- except the early ones. I remember the early contracts were structured similar to these, what I

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called then the "original $90-10 \mathrm{~s}$ ". Where 10 percent of the total cash flow was put into an account, an escrow account, to be used against under-market power payments, versus over-market power payments for the ratepayers. And, those got washed out through forecasts.

So, my world, I have to forecast. In this PPA, I think Public Service has done a good job of structuring a PPA without relying on forecasts. And, I understand why they have done it.
Q. Do you have confidence in your forecasts?
A. Yes, I do. I have confidence in them, because I have to -- I have to choose forecasts that, to the best of my ability to screen through their assumptions, are reasonable. Now, that doesn't mean I accept everything they say verbatim. That doesn't mean that me sitting in New Hampshire, in the center where I value property, agree with every component in the forecast. But, yes, I have confidence in them. I have used the original Platts. Ventyx is the outgrowth of the original Platts Forecasting Group, and we've used them now for about ten years. One of the good things about using them and staying with them, they're a good forecasting, is the consistency that it provides my towns and cities and
the utilities we value. Right or wrong, there is a consistency in the valuations that relate to consistent forecasts. And, that's a positive thing for both the communities and the taxpayers.
Q. When you first identified in your direct testimony that you thought that the Laidlaw plant and the PPA could lead to a $\$ 300$ million savings, why did you not quantify those savings and go through the analysis?
A. Because I was working on running valuation models for the City. I was coming up with very positive values, much greater than the testimony was saying. I was then going back and putting together the pieces of what are the components of that value, that over value? Is it carbon? Is it electricity? Is it capacity? Is it the RECs? And, I got to -- I was able to get to the point of producing the estimate of 300 million in time for the direct testimony. But I was not able to put together a illustrative 20-page technical package on all the reasons why, because it was all in the computer, it was all in my notes. I had run all of the property values. And, the property values were coming in much higher than the testimony would allow you to believe. So, I knew that there was some positive benefit that was accruing under the surface. I needed

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16 Q. -- in which you included $\$ 300$ million without any

8 A. Right. Right. My 300 million, I did prepare -- I did



A. I was developing my components. I did develop them.
Q. But how do you start with a total of 300 and then later figure out what the components are that add to 300 ?
A. No. I didn't start with the total. What I started with is, on Exhibit 10, the Base Case. That Base Case came directly out of my valuation work, where I modeled the power plant and modeled the PPA.
Q. Mr. Sansoucy, I asked you about your direct testimony, -explanation on Page 9. have the numbers that prepared the table for Exhibit 1 in my PPA -- my data request. I had those numbers put together in different increments and pieces.
Q. You stated that a number of renewable plants have been "canceled", despite early interest in being in the queue and other early development discussions. What

3 A. Well, the most recent cancellation is Madiera Energy/Pioneer Energy, the 50 megawatt wood plant that is proposed for the Greenfield, Massachusetts area. In talking with the developer last week, they're essentially giving up on that plant. The Russell biomass plant, in Russell, Massachusetts, is essentially on ice. And, then, on the ISO website, there is a list, and it's actually printed with the ISO queue, that lists all of the cancellations of projects. They got the queue, and then they got the cancellations. But the two big biomass plants in Massachusetts, one is essentially canceled and one is on hold.
Q. And, it's your view that that's because of financing constraints without a PPA?
A. The two wood plants are financing. They're essentially permitted. There is a -- there was a wind plant in northern Vermont, where the owner is walking away from his -- that proposal, up in the Northeast Kingdom. And, that is just not going to be financially feasable for him, it's too small. But no one's offering --
are some examples of actual plants that have been canceled?

Everybody needs a PPA to get going, and nobody is

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offering a PPA to get going. They need a -- you know, we know that Russell Biomass cannot get a PPA for their wood plant, for example.
Q. Let me ask you about your Exhibits 9 and 10. I've heard two different answers to a couple of questions, depending on when they were asked. And, so, I'm going to ask you again, and see if maybe it was my notes that were wrong. On Exhibit 9, did you assume the higher or the lower capacity?
A. Exhibit 9 doesn't require the assumption of a high or low capacity, except in the capacity price conversions. And, those conversions we're assuming the lower, on K and L .
Q. And, I have a record that Mr. Bersak asked you that question, and you said it assumed the higher "67.5 capacity". So, it's the lower?
A. I have to double-check. We're going back and forth. I can answer that very quickly. The Exhibit 9, it assumes the 67.5. It's the higher. I just cross calculated the capacity, it's the higher. And, it is the higher. So, I have converted it to the higher.
Q. So, the answer a moment ago to Mr. Below is wrong, it's not the lower number, it's the higher?
A. It's the higher number, yes, it is.

1 Q. And, on Exhibit 10, does it use the higher or the 2
A. 10 uses the lower, because it was created earlier.

4 Q. Okay. So, when you just told Commissioner Below it was the higher, that was a mistake?
A. Yes. It's reversed.
Q. If Exhibit 10 was created after Exhibit 9, why would you go from the larger in Exhibit 9 to the smaller in Exhibit 10?
A. No. Exhibit 10 was not created after Exhibit 9. It was included in this document, but it was the first creation based on my original direct testimony for the 300 million. And, then, it was prepared for the data request, and it was included in the rebuttal testimony.
Q. Similarly, I heard two different answers on Exhibit 10, in Column E, whether it was based on -- the capacity price was based on 2009 or 2010 figures. You said to Mr. McCluskey that "it was based on 2009" -- excuse me, "2010". But, I think, when an earlier discussion was that it was using the 2009 figures, and the only thing that had changed were the calculation -- the escalation, the 2.5 escalation?
A. Okay. Column E in 10 used the Fall 2009 energy price. It used the Company contract REC, and the Fall 2010

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capacity price.
Q. And, why use a different year?
A. Because the whole point of 10 was to back up my statement that, under a high energy, high capacity scenario, there could be significant savings to the ratepayer. The forecast for energy, the high energy, which includes carbon, was fall and spring, were the last two forecasts for Ventyx with carbon. The high capacity forecast is the most recent. So, I married the two forecasts to come up with the high scenario to back up my statement, that the whole -- the statement in the direct testimony is, under a high energy, high capacity forecast, i.e., the Fall or Spring 2009 energy, the Fall capacity of 2010, to marry those two together, that's why you've got two separate years. There's no greenhouse gas forecast for Fall of 2010 for energy. They did not forecast it, they took it off the table.

CHAIRMAN GETZ: I'm sorry, say that again.

WITNESS SANSOUCY: There's no Fall 2010 forecast for carbon. Ventyx did not include it in their forecast. They took it off the table until further clarity from the Legislature, from Congress.

## BY CMSR. IGNATIUS:

Q. Looking at your Exhibit 9, at the Column J, "Total Market Capacity", between Year 1 and Year 2, there is a significant increase.
A. Yes.
Q. And, I guess I won't ask you to give the number, if that's protected. I don't know the source of the number, so I'm not sure.
A. It's not protected.
Q. All right. It does not come from the Ventyx numbers?
A. One, the first one does not come from Ventyx. The first year is 2014, which is the last year of the capacity forwards, which is $\$ 36$ a year. The second year comes from Ventyx at 2.5 percent inflation from 2010, and that is $\$ 93$ a year from Ventyx, adjusted for inflation. No. The 93 is adjusted with 2.5 percent inflation from 2010. It was 80 some odd dollars in the Ventyx forecast. So, that's -- the jump is coming off of the forward capacity pricing market for 2014 to 2015.
Q. And, the significant increase in Years 1 and 2 in Column L, can you explain that also please?
A. Yes. That's exactly the same. One is the capacity price in kilowatt-months, and the other just converts

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that to capacity price in megawatt-hours. It's just the conversion of the capacity price converted to the megawatt-hours produced for the year. So, this exact same reason for the change. One is the forward capacity market, the other is the Ventyx projection for 2015.
Q. You said to Mr. McCluskey that, although Ventyx studies include projections of REC prices, you didn't use or study them, correct?
A. I studied them. We did not use them.
Q. And, you said that it wasn't appropriate to use them, because the REC price is fixed in the PPA, correct?
A. That's correct.
Q. But didn't you also say to Mr. McCluskey that the energy price is fixed in the PPA, but for the Wood Price Adjustment?
A. Yes.
Q. Then, why is it appropriate to use the projections for the energy price from Ventyx, but not to use the REC price from Ventyx?
A. Because I am comparing the effect of energy and capacity forecasts on whether or not this PPA has a possibility or probability of being a good deal for the ratepayers. It is in direct rebuttal to Staff and OCA

24 Q. Mr. Edwards asked you about what would happen if, as he

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not addressing those two issues, especially the capacity. I will point out that the Ventyx capacity pricing is approximately equal to the PPA in their projections. So, it runs up about $\$ 25$ to $\$ 30$, plus inflation. And, the bulk of the PPA, which would bring it up to 40 to 50 , the bulk of the PPA, at 50 percent, is down around $\$ 45$. I did not use that projection, because I wasn't doing that analysis. My analysis is very simple. You avoided the issue of capacity, which is a major component of a wood plant. It's significant, it should be valued and taken into consideration. Staff didn't deal with capacity, period. And, then, I went to the issue of energy. The testimony against this plant is based on the current short-term energy outlook. And, that energy outlook is tanked. We know that. I don't believe it's going to stay there. I believe it's going to reverse.

I did not do an independent projection of the value of the RECs. The RECs are fixed, in my view. And, I don't believe they would add anything to my analysis. Although, I will say that the Ventyx REC pricing is not that dissimilar from the discounted RECs in the PPA.
put it, Noble filled the capacity on the transmission line, and what that would mean for what Laidlaw would have to do. Let me ask you a slightly different question, which may or may not be what he was getting at. If the Noble Wind Project were running at full capacity, and Laidlaw were constructed, would not Laidlaw be dispatched down to allow the wind plant to be fully dispatched during a period of high production?
A. My conservations with the people in the North Country from Public Service on that grid is this: That there is the possibility of a coincident peak, with a significant outflow from the hydroelectric plants, and very little internal use by the people in the Berlin area that could result in a high water, so high hydro, high wind, and high woods, where, for some period of time, either short or less than short, Laidlaw would have to probably feather back, that's true. And, I think, in all of the capacity factors that everyone has talked about, I don't think it would be that significant to Laidlaw, because if the wind is operating at a 25 percent capacity factor, and Laidlaw is at a 85 percent, there's 15 full percentage points for Laidlaw to feather back within its capacity factor. Whereas, that represents more than 60 percent of the
time that the wind would be running 15 percentage points to 25 . But, yes, I think -- I believe that everybody believes that there could be a set of circumstances where Laidlaw would have to throttle back until the system corrected itself.
Q. Well, is it the system correcting itself or just simply that there's more capacity available?
A. The loads flow, that's correct. The loads re-adjust and the capacity becomes available and it goes back up. That being said, 100 megawatts of wind is a lot of wind on the Coos grid. The Laidlaw plant is going to stabilize the frequency of that wind. There's no question about that. Especially, if Comerford and Moore are offline for any reason, because they back feed in and they control the frequency of that grid. That is going to be essential to the frequency control. The dispatch people may feather the wind back a little bit, by feathering the blades, if they need to.

But I think the primary answer to your question is I think that, within the capacity factor of Laidlaw, there could be coincident peaks where they have to throttle back.

CMSR. IGNATIUS: No other questions. Thank you.

## BY CMSR. BELOW:

Q. I am confused about something you just said. You were talking about a high wind situation where the Coos Loop may reach transmission capacity. And, you referred to something like a 20 percent or something capacity factor. In a high wind situation, isn't the capacity factor wind close to its full capacity?
A. Yes. Yes. At a high wind, it's close to its full capacity, but that doesn't occur very often. And, at a 25 percent capacity factor, the days where that would occur are far less than the days where Laidlaw is running at full bore. So, you need to have coincident peaks in order to create that bottleneck. And, Laidlaw's -- the wind plant is not going to run at full capacity every single day of its capacity factor. There's going to be very few days where it actually runs full bore, all turbines, across that full cross-section of mountains, because the wind varies so much. But it could happen.
Q. And, your understanding is that it would have priority on the transmission line when that occurs in general, over the Laidlaw?
A. My understanding is, reliability of the Grid is top priority, no matter who's in the queue. That the

| 1 | frequency and the reliability of the Grid has top |
| :--- | :---: |
| 2 | priority. So, Laidlaw could have top priority for |
| 3 | frequency control and VAR control, depending on what's |
| 4 | happening in the Grid, and the wind boys would have to |
| 5 | feather their turbines. |
| 6 | All else being equal, it's my |
| 7 | understanding that first in the queue, that the wind |
| 8 | people would have first priority, if there was a |
| 9 | dispute on when they would run versus Laidlaw. But my |
| 10 | understanding is, when these plants are built, they |
| 11 | ultimately, under the interconnection agreements, have |
| 12 | to defer to reliable operation for the Grid, as |
| 13 | dispatched by New England ISO. |
| 14 | Q. And, when you, in your direct testimony, suggest that |
| 15 | there's a scenario which ratepayers could save up to |
| 16 | 300 million over 20 years, under a carbon-constrained |
| 17 | high capacity cost market in the future, what have you |
| 18 | assumed about the Laidlaw power plant, in terms of |
| 19 | carbon-constrained use -- use of those figures from the |
| 20 | Ventyx earlier forecast? |
| 21 | A. I've assumed that the wood-fired plant, Laidlaw, will |
| 22 | not pay a carbon tax. That it will be deemed |
| 23 | "carbon-neutral". And, it will not pay a carbon tax. |
| 24 | It will be advantaged over a fossil fuel plant. |

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Q. And, what do you think the likelihood of it qualifying for Class I RECs in Massachusetts is? At the time it comes on line in 2014? Do you think that's likely that it will qualify for Class I RECs in Massachusetts from what you know?
A. From what I know, I think that the -- I think that Massachusetts will change, and that no wood plant will qualify for Class I RECs that's not located in the State of Massachusetts. My own personal opinion is that it is less likely that it will qualify than not for Mass. RECs.
Q. And, the two that you referred to earlier that were canceled, you said the reason you understand they were cancelled was because they couldn't get PPAs or financing. Does Massachusetts' change in its policy with regard to its RPS potentially bear on why those were canceled?
A. Yes. There's a confluence of not being able to get a PPA and a confluence of Massachusetts putting a freeze on any additional Class I RECs from wood plants, until they review their carbon policy on wood plants and wood sustainability in the State of Massachusetts and issue new regulations in that regard. So, even if they wanted today to get a contract, because this has been
ongoing for several years, even if they wanted a contract today, that contract would have to be outside of Massachusetts, and they would have to ship their electricity out of Massachusetts, if they wanted RECs today in Massachusetts.
Q. And, is that because Massachusetts seems to be considering a policy where they might not deem certain biomass fuel power plants to be carbon neutral?
A. No, that's not what it is. If you read the Manomet study that was commissioned by the State, the Manomet study --
Q. Excuse me, I didn't ask about the Manomet study.
A. Oh. Okay. But to get -- then, to get to your question, Massachusetts is looking at whether or not it should develop a policy of forest sustainability, as opposed to any form of wholesale liquidation. And, that forest sustainability, i.e., burning only what you grow, will severely reduce the number of wood plants that could possibly be built in Massachusetts to approximately one and a half 50 megawatt plants. And, it is considering that policy as the appropriate way to permit the use of its own forests. And, what it says is that the carbon deficit from the cutting, if they slow down the amount that's burned annually in the

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State of Massachusetts, that deficit fills in much quicker, so that it becomes carbon positive much faster or environmentally positive much faster, than it would otherwise have become.
Q. If we look at your Exhibit 10, and using your -- in years 2014, 2015, and 2016, under your assumptions that you used for Column E, which include using Ventyx energy and capacity market value forecasts, compared to the Base Case. In Column F, you have a positive value for those first three years of operations, is that correct?
A. Yes.
Q. And, those positive values would indicate over-market expenditures by PSNH for the purchase of that energy and capacity?
A. Yes.
Q. And, it essentially assumes that the RECs are neither over-market, nor under-market, that they are, in effect, equal to market, is that --
A. It assumes that the RECs are what they are.
Q. And, that there's no over-market expense in those?
A. That's correct.
Q. Okay. Do you have any concern about, in those early years, there being an over-market expense that would
$\square$ Page 134
raise Default Service rates and increase the migration of customers who choose competitive suppliers that are less expensive?
A. That's a great question. It has two parts. One is, if there's an over-market expense that raises rates. And, that has to be factored into the total rate structure of Public Service, in that an over-market REC expense is one expense on the plus side of the ledger, while there may be expenses on the negative side of the ledger that do not raise rates, so that there's a net that doesn't raise rates. Okay. A second part of that question is, that if rates go up one percent half a percent from what they are now, I don't believe you're going to see continued accelerated migration from Public Service that we have seen in the last, I think, two and a half years. If you look at the curve and the precent, that curve has flattened right off as to the acceleration. The acceleration has stopped, and the migration curve has flattened at around the 30 to 31 percent range. That is simply because the easy people who can migrate, the people who can benefit the most from migration, with this very low electric price, have migrated. The residential and the commercials are not significantly migrating. It's too much work and

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nobody is servicing them. When we talk to the power marketers, they're not even chasing the residentials, because the cost of servicing the accounts greater than the net benefit that they can get from the electricity. So, I think the migration is beginning to feather off and is not going to substantially grow. That's my -that's my personal opinion.

Secondly, this sword has an enormous back edge to it. If electricity prices -- if natural gas prices begin to move at all, the advantage of the migrants is going to diminish. And, the companies are not going to be able to offer it. And, some portion of that capacity is coming back, which is going to have a tendency to reduce rates if it has to be served. Unless there is a real toggle problem, because Public Service is holding capacity, and the whole issue of toggling back and forth and how much capacity does Public Service have to hold. But I think the minute that gas starts to rise, you're going to see a stop in the migration and probably a reverse. And, I personally don't believe you're going to see a greater level of migration going forward. Public Service is essentially more than a third residential, a third commercial, and less than a third industrial. And, the
Q. And, have you testified previously before the Commission?
A. On many occasions.
Q. Did you file testimony in this proceeding? A. Yes, I did.

MS. HATFIELD: And, Mr. Chairman, we have premarked Mr. Traum's testimony as "OCA 1-P" for public and "1-C" for confidential.

## BY MS. HATFIELD:

Q. Mr. Traum, do you have a copy of both of those versions



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A. He apparently, as I understand his explanation on the stand today, which differed somewhat from the explanation at the technical session yesterday, that, for purposes of Exhibit 10, he used either a 2009 or 2010 energy or capacity prices from Ventyx, but he ignored the Ventyx REC assumptions forecasts.
Q. Can you just pull the microphone a little closer?

Thank you. But Mr. Sansoucy did acknowledge that there is a REC forecast in the Ventyx materials, right?
A. Yes, he did.
Q. And, we could find that on the second to last page of the big Ventyx 2010 packet at Page E-2, is that right?
A. That's correct.
Q. And, do you know, if you look at that table and use the pricing that's appropriate for our region, does that change the outcome of Mr. Sansoucy's Exhibit 10?
A. It absolutely does. After receiving the information from Mr. Sansoucy yesterday, and the spreadsheets, I saw there was an inconsistency in terms of the application of the Ventyx numbers. And, I tried to recreate what the PPA price versus market would be over the 20 years, if I were to use Ventyx for the Ventyx energy, capacity, and REC price forecasts. When I used all three of those, what I come out with is that the

Laidlaw PPA payments are 300 million over the Ventyx market forecasts.

CHAIRMAN GETZ: Are they all at the same vintage?

WITNESS TRAUM: Yes. I used Fall 2010 consistently, the most recent information that we were provided.

MS. HATFIELD: I have nothing further. The witness is available for cross-examination. Thank you.

CHAIRMAN GETZ: Okay. Thank you. Has there been some agreement on order of cross? Because, in the absence of such agreement, I guess I would go to Mr. Shulock, Ms. Amidon, Mr. Edwards, Mr. Boldt, and Mr. Bersak.

MR. SHULOCK: Okay. CHAIRMAN GETZ: Mr. Shulock. CROSS-EXAMINATION

## BY MR. SHULOCK:

Q. Mr. Traum, I'd like to direct your attention to IPP Exhibit 26 and 27. Do you have those up there with you?
A. I do not have those, I don't have the IPP ones.

Whether it's a particular data response, I may have it.

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(Atty. Shulock handing document to the witness.)
WITNESS TRAUM: Okay. Thank you. Yes, I have them.
BY MR. SHULOCK:
Q. On Page 6 of your testimony, when you were determining the risk that ratepayers would face as a result of the Laidlaw PPA, you estimated a cumulative over-market cost for RECs of $\$ 276$ million, is that correct?
A. Yes. And, that number appears on Line 21.
Q. Okay. Did your estimate account for there being no RPS requirement in 2026 and beyond?
A. For purposes of the 276 million, I assumed that the RECs would continue.
Q. And, if the RECs did not continue, how would that change your analysis?
A. Well, that's the basis of IPP 26, which would indicate that it would add approximately another $\$ 100$ million over market to my 276 million.
Q. And, if I can direct your attention now to Page 10 of your testimony and KET-4, and IPP Exhibit 27.
A. I have it.
Q. When you were determining the risk that ratepayers would face, you estimated the interest on the

| 1 | over-market costs under the Cumulative Reduction |
| :---: | :---: |
| 2 | Account. And, you estimated those to be $\$ 4.7$ million, is that correct? |
| A. | That is on Line 2 of Page 10 of my testimony. |
| 5 Q. | And, you estimated that at what percentage rate? |
| 6 A. | I believe I used three and a half percent, which I |
| 7 | eve was the prime rate at that point in time, which |
| 8 | is consistent with the rate the Commission uses |
|  | other proceedings. |
| 10 Q. | But, in your direct testimony, you did not calculate |
| 11 | interest on the over-market costs of capacity and REC |
| 12 | And, we asked you to do that as part of a discovery |
| 13 | request, and you did. And, can you tell us what your |
| 14 | estimate is of the interest on the over-market cost of |
| 15 | capacity would be under the PPA? |
| 16 A. | Approximately \$1 million. |
| 17 Q. | Okay. And, if you assumed that the RPS continued, what |
| 18 | would be the interest on the over-market portion of th |
| 19 | REC payment? |
| 20 A | Again, using the same interest rate assumption, approximately $\$ 120$ million. |
| 22 Q. | And, if you assumed that the RPS ends in 2025, would |
| 23 | that add an additional cost |
| 24 A. | That would add an additional \$14 million. |

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Q. And, this morning you testified about the importance of

6 A. That certainly is a very, very significant issue.

24 Q. Would you agree that the overall purpose of the important factors to project, when looking at PSNH' Default Service needs over time, would be the rate and level of migration?

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

CHAIRMAN GETZ: Thank you. Ms. Amidon. MS. AMIDON: Thank you. Good afternoon, Mr. Traum.

WITNESS TRAUM: Good afternoon. BY MS. AMIDON:
Q. Regarding the over market analysis in your testimony, do you consider that to be a forecast or a prediction of future prices of the PPA products?
A. I consider it to be merely illustrative. I wouldn't call it a "forecast" or "prediction".
Q. Thank you. If PSNH's scenarios which you used in your testimony prove to be wrong, your testimony would be that the PPA is still too risky for Energy Service customers, is that correct?


1 A. That's correct.
Q. When you performed your review, did you use your own
forecasts of market prices?
A. I did not use a forecast, per se. I had relied on PSNH's Base Case, had originally thought was a forecast, but you've since termed a "scenario". And, I assumed that you had an obligation, on behalf of your customers, to do the best job you could.
Q. Assuming that it is a "scenario", as testified to by 10 Mr. Long, what would that make the calculations that 11 you make in your testimony? Would they also be a 12 hypothetical scenario?
13 A. They would be a scenario. And, thanks to the forecast that was just put into the record by the City of Berlin, we've got a forecast from an outside consulting firm that's a long-term forecast that could be viewed as a sanity check for the results that I developed and Mr. McCluskey and Staff developed.
Q. In your testimony, you've said, though, that, on Page 5, that "It is important to note, however, that forecasts generally tend to be less certain over longer term time periods", is that correct?
A. It certainly is. And, I think -- I'm not sure if that's where I quoted from Public Service's Least Cost

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1 Plan or not, but, certainly, I agree with that.
Q. Why did you provide that qualification only after your testimony, where you testified that "assuming that PSNH's forecast for capacity prices is correct [would] result in the PPA capacity costs being $\$ 11$ million under market"? My question is, why are forecasts less certain over time when the prices are under market, but you didn't have a similar qualification when your analysis showed an over market amount?
A. I would have the same concern, whether it was over or under market.
Q. When you performed your analysis of the REC pricing in your testimony, on Page 5 you testified that you "considered several data points", is that right?
A. Yes.
Q. If you go to the next page, you testify that using certain market information "that current market prices for Class I RECs in 2010 and 2011 are about 30 percent of the ACP." Do you see that testimony?
A. Yes, I do.
Q. So, then, you go on to testify that "Therefore, for the purposes of my analysis of how the REC prices in the PPA compare to the market, I used amounts equal to 30 percent of the future ACPs over the life of the PPA

3 A. Yes, I see that language.
4 Q. So, what I'm wondering about is essentially you used last year's price, 2010, and this year's price, 2011, and then said that those two prices were a fair proxy for REC pricing five, ten, and almost fifteen years from now?
A. I said they were "a proxy". I did not, at that point in time, have anything else to use. Now, we do have the Ventyx forecast, which to an extent I could view as confirmatory.
Q. I'd like you to take a look at your response to our Question Number 1, PSNH 1-1, which is one of the data request responses that I put out.

MR. BERSAK: And, I'm not sure what our next exhibit number is for that record request.

MS. DENO: Sixteen.
MR. BERSAK: Sixteen is next? If we can mark the OCA response to 1-1 as "PSNH Exhibit 16"? CHAIRMAN GETZ: So marked.
(The document, as described, was herewith marked as PSNH Exhibit 16 for identification.)

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## BY MR. BERSAK:

Q. In this data request, we asked "Is it OCA's opinion and testimony that REC prices will be 30 percent of the ACP for the term of the proposed Laidlaw contract?" And, is it correct that your answer was "no."
A. That's correct. And, then I went on from there.
Q. Then it went on. It went on to say, "As stated on Page 6, Line 11, of my testimony, the OCA used 30 percent as a proxy for future REC markets", and then you said "emphasis added" on "proxy". "I used a proxy because I do not know what the actual ACP will be for the term of the PPA. This approach is consistent with the Joint Petitioners' use of forecasts in their analysis." So, that was your response. So, it sounds like your testimony, regarding future REC prices, was based on a 30 percent value for RECs, 30 percent of the ACP, which your data request response says is not your opinion of what the future will be?
A. That's correct, because we don't know if it's going to be 30 percent, 29 percent, 31 percent, or something different. We just know that it's going to be different over the long term.
Q. Would you agree that the cost of RECs ultimately will be the subject of the principle of supply and demand?
A. And, yes, as well as driven by potential legislative

## BY MR. BERSAK:

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Q. Okay. Thanks. Now, your analysis of REC pricing did not include the fact that requirements for Class I RECs grow by 1,600 percent from 2010 to 2025, did it?
A. It did not include that analysis. We did not do an analysis of load growth, just as PSNH did not, as I understand it, with regards to Energy Service. And, part of that load growth for Energy Service requires migration forecasts.
Q. But you did include load growth in your exhibits where you did your calculations, is that correct?
A. Could you point me to what you're referring to please.
Q. Take a look at KET-15, the RPS analysis sheet attached to your testimony. Do you have that exhibit, Mr. Traum?
A. I have that exhibit.
Q. In that table that's attached -- let's see, where is
it? It's an attachment here. KET-15, I guess it will
be Page -- the third page of that attachment.
A. This would be Bates Page 48 ?
Q. Let me see. They're all "15". But which Page 15, let's see here. One of these includes sales for each year of the PPA. And, I believe it might be -- is it on Page 45? When I looked at it, I didn't realize they were all Page 15. "Try 48", is what my friend is
telling me here. Oh. There it is. Page 48. On the second line down, where it says "Energy Service Forecast". Do these not show differing amounts of Energy Service being provided each year, from 2009 up through 2025?
A. The numbers vary slightly. What they assumed, in terms of any changes in migration, I do not know.
Q. But I assume that, since these numbers appear in your attachment, you must have used them somewhere in your analyses?
A. I do not believe that I did. I believe I just used this to show that, for at least the early years, you do not -- PSNH did not need the Laidlaw RECs to meet their Energy Service requirements.
Q. How could you determine what RECs were necessary by PSNH unless you had an estimate of what the Energy Service deliveries were going to be for a particular year?
A. And, that's why I relied on the PSNH numbers, for that purpose.
Q. But, if you look at that line, starting from, let's say now, "2011", there's approximately 7.9 million megawatt-hours of sales in your chart. And, then it goes up to 2025, that goes up to about 9.5 million

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megawatt-hours, is that correct?
A. I see that.
Q. So, that would be load growth of about 1.2 times, more or less?

MS. HATFIELD: Mr. Chairman, I'm going to object. And, if we look right at PSNH 17, we can all see that the OCA objected to this question, and Mr. Traum's answer was "The OCA has not performed these calculations."

CHAIRMAN GETZ: Do you have a response, Mr. Bersak?

MR. BERSAK: Yes. Number one, the testimony that he referred to was that "the cost of RECs were going to stay stable at 30 percent." We asked a data request to determine whether he had taken into consideration the fact that, not only would there be 1,600 percent increase in the number of RECs needed under the RPS law itself. But that would be compounded by load growth. And, we were testing to see whether his hypothesis that the -- a 30 percent number, based on 2010, and a 30 percent number based on 2011 was sense -- made any sense, in light of in excess of 1,600 percent increase in demand over time. He did not perform this calculation, but it was easily calculatable, certainly much more easily


1 at year 2020, it ends up just north of 12,000 2 gigawatt-hours
$\square$ Page 174
identification.)
BY MR. BERSAK:
Q. I'd like to refer you now to the response to OCA 1-3, a question from PSNH. And, we will note that there was another objection to this question as being
"argumentative and seeking additional testimony from the witness", notwithstanding that there was a response. The question in OCA 3 was, "As the demand for renewable energy increases (i.e. based on escalating the percentage obligations in the various state RPS programs) will new sources of renewable energy need to be constructed to meet the increase in demand?" And, then, following your objection, you said "Yes, assuming that the "demand for renewable energy increases (i.e. based on escalating percentage obligations in the various state RPS programs)" as they exist today, new resources will be needed in the region."

Doesn't that ISO-New England chart that we were just discussing, the one that's PSNH Attachment Rebuttal 6, indicate that, even if 60 percent of all renewable projects in the ISO queue were developed, that sooner than 2016 there would not be sufficient renewable energy generation to supply the region's RPS

## needs?

A. If the need as reflected in current legislation and load growth assumptions held true, I would say, yes. But, then, from state to state, we don't know how things may change, if generation, in particular states, is ineligible for meeting the requirements in other states.
Q. And, if there was such a problem, where some generation would not be eligible to meet some or all of the state's programs, that would just move the year of need up even sooner, is that correct?
A. It would depend on what state it was. If New Hampshire generation is not eligible for Massachusetts, then it may push the need for higher prices in New Hampshire further back.
Q. And, according to the ISO-New England chart, if only 40 percent of the proposed projects in the queue are actually built, doesn't that chart reflect that the supply of available renewable generation would become insufficient in 2013?
A. Again, with the same caveats, yes.
Q. You had earlier agreed that the price of RECs will be subject to the law of supply and demand, again with caveats that legislation doesn't change and, you know,

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5 A. Again, on a case-by-case basis, the law of supply and demand would come into play.
Q. And, based upon the law of supply and demand, if there is inadequate supply to meet the legal demand, what would become the price that load-serving entities would have to pay for their marginal RECs?
A. I would assume it would increase, all other things being equal.
Q. I'm sorry, what was that?
A. I assume it would increase, all other things being equal.
Q. Would it increase beyond the alternative compliance price?
A. I would certainly expect not.
Q. So, despite all the facts projected by ISO-New England, you still used 30 percent of the ACP as a proxy for future REC market prices, is that correct?
A. Yes.
Q. If the price of RECs, instead of being 30 percent of the ACP, actually went to the ACP, wouldn't that

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| 1 |  | significantly change the analysis and conclusions |
| :--- | :--- | :--- |
| 2 |  | contained in your testimony? |
| 3 | A. | It certainly would impact the results of my testimony, |
| 4 |  | just like the Ventyx numbers were confirmatory of it. |
| 5 | Q. | I think we both agree, it's very difficult to forecast |
| 6 |  | the future? |
| 7 | A. | I will agree with that. |
| 8 | Q. | And, you said that specifically with respect to the |
| 9 |  | cost of RECs, on Page 6 of your testimony, do you |
| 10 |  | recall that? |
| 11 | A. | If you give me a second. |
| 12 | Q. | 6, Line 21. |
| 13 | A. | Do you have a line reference? |
| 14 | Q. | I believe it's on Line 21, Mr. Traum. I understand |
| 15 |  | that it is very difficult to forecast the future cost |
| 16 |  | of RECs? |
| 17 | A. | That's correct. |
| 18 | Q. | Is it any easier to forecast the future cost of energy? |
| 19 | A. | I don't know if it's easier, but, with regards to RECs, |
| 20 |  | there were -- the REC pricing, it's sort of an animal |
| 21 | created by legislation. So, it puts another unknown |  |
| 22 | into play. |  |
| 23 | Q. | REC pricing has a cap, though, the Alternative |
| 24 | Compliance Price, is that correct? |  |

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A. Currently, yes.
Q. Do other energy prices have a CAP?
A. Well, for energy, no. For capacity, currently, there is, in effect, a CAP.
Q. But you would agree that the only certainty with forecasting is, in the end, the forecast is likely to be wrong?
A. Yes.
Q. So, when you testified on Page 14, at Line 18, that the pricing terms in the PPA are significantly above market, you don't really know for a fact that the PPA will prove to be above market, do you?
A. We don't know that it will prove to be above market. We feel that the risk of it being significantly over market is not worth taking on behalf of Energy Service customers.
Q. So, are you changing your testimony to that respect?
A. I don't believe so.
Q. Okay. On Page 10 of your testimony, at Line 22, you discuss the "cumulative reduction" mechanism. And, there you testified "in order for customers to get any of the hypothetical benefits from the cumulative reduction, the law must be changed." Do you see that? A. Yes.
Q. What law must be changed and why?
A. We do not know what any future regulatory regime will be like. We don't know if PSNH will be, in the future, be able to acquire generation, if they'll have been divested by then, we don't know if Energy Service will stay the way it is or if you will even have customers that you supply directly at that point in time. There are just very many unknowns. We don't know if the cumulative reduction, if there will be any value to the plant at the time when a cumulative reduction comes into play.
Q. Does the value of the cumulative reduction mandate a change in law?
A. No. But, if customers are being asked to pay in excess of market for 20 years without -- I view that, as I said in my summary, as akin to CWIP. And, in that sense, I suppose it could be looked at as you need a change in law to be able to allow CWIP.
Q. When you were testifying to this -- to this change in law, weren't you, in fact, referring to a change that would expressly allow PSNH to own generation in the future?
A. That was certainly an issue.
Q. You heard Mr. Sansoucy testify earlier today indicating

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that 20 years from now, in his opinion, it's quite likely that there will be many potential buyers for the facility, and that some or all those potential buyers would be interested in having the right of first refusal that's given under the Purchase Option Agreement, as well as to compensate PSNH for the value of the Cumulative Reduction Fund. If PSNH was to sell the purchase option to some third party, and to sell the Cumulative Reduction to a third party, and take those proceeds and credit customers. Would any change in law be necessary?
A. You're assuming that there was any value to the Cumulative Reduction or more or less if there's any value to the plant after 20 years.
Q. Well, that's not the issue here. Because right now we're talking about your testimony, where you said that "the law must be changed." So, let's assume that there's value. I'm trying to figure out what law must be changed.
A. I said that "PSNH does not have the legal authority to purchase the plant."
Q. So, in my hypothetical, where PSNH gets value from selling its rights for value, and never owns the plant, there wouldn't need to be a change in law, would there?

1 A. I believe you're correct.
Q. Thank you.
A. Recognizing that I'm not an attorney.
Q. No. No, that's fine. Finally, just one last thing.

Are you familiar with the consulting firm/energy firm
"Evolution Markets, LLC"?
A. I've certainly heard the name, yes. And, I have an exhibit in my testimony with some information from them.
Q. They have been quoted as saying "As renewable energy project developers know full well, financial institutions demand certainty. Financial resources for traditional power projects are conditioned on the existence of long-term power purchase agreements. But, due to the cost of doing business, renewable energy project developers are asked to demonstrate long-term commitments for the purchase of not only the electricity, but also the RECs." Do you agree or disagree with that statement?
A. Could you -- that statement is something I am not aware of at this point in time.

MR. BERSAK: Okay. That's fair. I have no further questions, Mr. Chairman. Thank you very much, Mr. Traum.

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$\begin{array}{ll}1 & \text { CHAIRMAN GETZ: Thank you. } \\ 2 & \text { CMSR . IGNATIUS: Thank you }\end{array}$

## BY CMSR. IGNATIUS:

Q. Let's continue to work on the questions that Mr. Bersak was just finishing up with, about what developers need to see in order to get to the point of a completed project, all right?
A. Okay.
Q. Do you have any reason to disagree with the testimony from PSNH that developers need certainty in recovery of energy prices and RECs over time?
A. I guess I would look at the fact that there is a recently approved PPA with Lempster that also provides Class I RECs, and that was, in effect, tied to market.
Q. And, you heard the testimony that, in PSNH's view, that those are not really comparable, a PPA for a wind plant and a PPA for a bio plant really can't be compared. Do you disagree with that?
A. I guess I would say, well, obviously, they are different types of plants. But, in terms of the legislation, "Class I RECs" mean "wind" or "wood" or "biomass". So, I didn't differentiate in that sense, from a customer perspective.
Q. Do see a trajectory on how we will get to the level of
renewable generation projects that will be required, if legislation remains as is and the level of REC needs will grow as we see it laid out at least in the current New Hampshire statute?
A. No, we haven't projected or focused on that.
Q. You've talked about the balance of risk being just too great on the part of ratepayers, correct?
A. On behalf of Energy Service customers, yes.
Q. All right. Do you have any recommendations on how one could shift that risk, still within the context of a long-term PPA?
A. Well, the example of Lempster, where it's, you know, tied to a percentage of market --

MS. HATFIELD: Oh, excuse me. I'm sorry, I don't want us to go into confidential information right now, because we had to go into a confidential session previously. So, sorry for the outburst. I just want to make sure my witness doesn't disclose information that shouldn't be disclosed.

CMSR. IGNATIUS: Thank you. It's a good reminder.

## BY CMSR. IGNATIUS:

Q. Let's say, in general, you would advocate, and you've testified "tying things to market prices" would be

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appropriate?
A. Yes.
Q. And, you've heard testimony from PSNH that, in its view, that would not be successful. I'm not asking you to agree or disagree with that. But can you think of any other mechanisms or contract structures that could shift some of that risk away from ratepayers? Besides a floating up and down with market prices?
A. Not at this point in time, no. Let me add, whether somehow the prior Schiller sharing mechanism could be adopted in some fashion, I don't know what that fashion would be, but whether there's any kind of a model there, it's something that could be considered in the future.
Q. And, in that, in Schiller, without the specific details of Schiller, there's a point at which certain costs coming in below projections were treated one way, certain costs coming in above projections were treated a different way in the allocation between ratepayers and shareholders?
A. Well, there was a sharing tied to the cost of the plant. But, on an ongoing basis, the sharing is tied to revenues and cost avoidances against the target on an annual basis.


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5 A. I do recall something along that line.
6 Q. And, do you agree that there's nothing in the RPS law, including in the PPA section, that requires that a project must be financeable?
A. Again, recognizing I'm not an attorney, yes, I agree with you.

MS. HATFIELD: Thank you. Nothing
further.
CHAIRMAN GETZ: Thank you. All right. Then, the witness is excused. Thank you, Mr. Traum.
(Chairman and Commissioners conferring.)
CHAIRMAN GETZ: Okay. Off the record.
(Brief off-the-record discussion ensued.)
CHAIRMAN GETZ: All right. Well, let's go back on the record. Well, two things. First, I'd like to try and get to start with the Staff direct. And, recognizing that we're not going to finish today, we have held next Tuesday, the 8th. But I did have one other piece of business. Mr. Boldt, I have a letter from Mayor

Grenier to Ms. Howland and to the docket, saying "I'm sending this request to you in my official capacity as the Mayor of Berlin, asking that we consider changing the venue of the hearings if they go beyond today." Is this -- should I consider this a motion on behalf of the City of Berlin or how should I treat this?

MR. BOLDT: Frankly, I don't know, Mr. Chairman. I heard rumors of it. I have not seen the letter, I hate to admit. But it is one where I guess this Board can treat it as a request from the Mayor.

CHAIRMAN GETZ: Well, I guess, let me try this. Does anybody else have this letter? It looks like -- well, maybe it hasn't been given to the service list. It was sent to Ms. Howland, Executive Director, and I guess the only -- it's cc'd to Councilor Burton and the Berlin Daily Sun, but apparently none of the parties --

MR. BOLDT: I apologize, your Honor. I don't know.

MR. BERSAK: Mr. Chairman, there is a front-page Berlin Daily Sun story in today's edition regarding that letter. So, it has been publicized that way.

CHAIRMAN GETZ: And, looks like it's been filed as a public comment. I assume some of the

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people in our front office just saw the letter and has been treating it like other letters that have been coming in.

Well, in any event, does anybody want to make any comments or take any positions about this request to convene hearings, not in here next week, but in Berlin?

MR. BERSAK: Wherever you are, we will be there, too, Mr. Chairman.

MR. BOLDT: I second that.
CHAIRMAN GETZ: All right. Well, let's start with the direct from Staff.

MS. AMIDON: I ask that Mr. Frantz and Mr. McCluskey be called to the stand.

MR. BERSAK: I do have one procedural question, I guess, for perhaps Ms. Amidon or perhaps for the Commission. The Commission designated Mr. McCluskey
as "Staff Advocate", whereas Mr. Frantz is not designated as "Staff Advocate". They're sitting as a panel. Which is kind of like having two different parties sitting up at the same time. The Company doesn't have a problem with that. I'm just raising it as an issue.

CHAIRMAN GETZ: Well, I guess I'm trying to understand the premise.

MR. BERSAK: Under the statutes that
allow for designation of Staff, there's two definitions; one is "Staff" and one is "Staff Advocate". And, Staff Advocate is treated as a separate party. So, we've got --

CHAIRMAN GETZ: I'm not sure that I would have drawn that conclusion. I think the distinction is that of who can speak to us and when are the ex parte rules invoked. Do you have something more on this?

MR. BERSAK: No. Like I said, we're not objecting to it. We just don't want a procedural issue. If everybody's fine with it, then we are fine with it, and we can carry on.

CHAIRMAN GETZ: Is there any -- does anybody else have anything to offer on that issue?
(No verbal response)
CHAIRMAN GETZ: Just to clarify then, at least my understanding of the statute and the import of designation, is that Mr. McCluskey will not be able to assist us in deliberations, and he cannot speak to us about the merits of the case

MR. BERSAK: That's fine, Mr. Chairman.
CHAIRMAN GETZ: Mr. Frantz has not been
designated, there's been no request that he be so. So, he's not subject to those same rules.

Okay. Ms. Hatfield.

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24 Q. And, without going into your resumé, could you just

just wanted to point out that the only time that I would think that they -- we would think of them as two different parties is if Mr. Frantz had been designated as "advisory", because then those rules would apply between the two of them. But, as you pointed out, because he hasn't been designated, they, in my view, they still both represent a Staff position, but then just one of them can't speak with you. Thank you.

CHAIRMAN GETZ: Okay. Thank you. Ms.
Amidon. Oh, if you'd swear the witnesses.
(Whereupon Thomas C. Frantz and
George R. McCluskey were duly sworn and cautioned by the Court Reporter.)
THOMAS C. FRANTZ, SWORN
GEORGE R. McCLUSKEY, SWORN DIRECT EXAMINATION
BY MS. AMIDON:
Q. Mr. Frantz, I'll begin with you. Would you please state your name for the record.
A. (Frantz) Thomas C. Frantz, F-r-a-n-t-z.
Q. What is your position here at the Commission?
A. (Frantz) Director of the Electric Division.
describe how long you've been working here at the Commission.
A. (Frantz) Started here at the Commission in February of 1989 as an Economist. I was promoted to Analyst, and then to Chief Economist. And, then, as the Commission reorganized, to Director of the Electric Division.
Q. Thank you. And, have you previously testified before this Commission?
A. (Frantz) Yes.
Q. Do you have your testimony in front of you? I have premarked that as "Staff Exhibit 2", and there will be a cover letter from me, the letter dated "December 17th, 2010".
A. (Frantz) I do.
Q. And, do you have any corrections to that testimony?
A. (Frantz) I do not.
Q. And, if I asked you the same questions that are in that testimony and you responded to them today, would they still be the same answers?
A. (Frantz) Yes, they would.

MS. AMIDON: Okay. Thank you. And, as I indicated, Mr. Chairman, I premarked that as "Staff Exhibit 2". And, I do have a housekeeping issue after I qualify Mr. McCluskey.

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## BY MS. AMIDON:

## Q. Mr. McCluskey, --

CMSR. BELOW: Hold on a second, I'm confused. I thought I heard Mr. Frantz answer "yes", in terms of having corrections. Did I mishear you?

WITNESS FRANTZ: You may have. I do not have any corrections.

CMSR. BELOW: Okay. Thank you.
WITNESS FRANTZ: I would answer the same
questions the same way, I believe is how she asked it.
CMSR. BELOW: Okay.
WITNESS FRANTZ: "Yes" to that. MS. AMIDON: That's all right. It's late in the day. Thank you.
BY MS. AMIDON:
Q. Mr. McCluskey, would up please state your full name for the record.
A. (McCluskey) My name is George Robert McCluskey.
Q. And, for whom are you employed and what is your position?
A. (McCluskey) I'm an Analyst in the Electric Division.
Q. And, would you just briefly describe the length of your experience in using -- in the electric industry?
A. (McCluskey) Yes. Kind of working backwards, this is my

| Q. You can be brief. <br> A. (McCluskey) Yes. This is my second time around at the Commission. I've been here four or five years. Prior to that, I was in consulting for five years. Prior to that, I held various positions at the Commission for more than ten years, I believe. I forget the exact time period. And, before that, I worked for the nationalized electric utility industry in England. <br> Q. Have you previously testified before this Commission? <br> A. (McCluskey) Yes. Many times. <br> Q. Do you have in front of you testimony in this docket? The date of that testimony would be "December 17th, 2010"? <br> A. (McCluskey) I have that, yes. <br> MS. AMIDON: And, Mr. Chairman, I marked <br> that as "Staff Exhibit 1". And, I will note, I'll provide the Clerk a copy of a confidential exhibit, I did not duplicate the entire testimony and exhibits, but there was one exhibit, GRM-10, which was confidential. So, that will be identified as "Staff 1-C". Thank you. <br> BY MS. AMIDON: <br> Q. And, Mr. McCluskey, do you have any corrections to your testimony today? | MR. BOLDT: Excuse me. Could you give that page again, Mr. McCluskey? <br> WITNESS McCLUSKEY: Twenty-four, Line <br> 14. <br> MR. BOLDT: Thank you. <br> BY THE WITNESS: <br> A. (McCluskey) And, if we could please replace "2009" with "2008". The fourth is at Page 25, Line 7 -- Lines 7 and 10. Please replace the word "four" with "three". <br> BY MS. AMIDON: <br> Q. Does that conclude the corrections to your testimony? <br> A. (McCluskey) It does. <br> Q. And, if you were asked the questions today, with the exception of these corrections, would your answers be the same? <br> A. (McCluskey) They would. <br> Q. Thank you. At the outset, I'd like you to comment on the rebuttal testimony of Mr. Sansoucy that you heard earlier today. <br> A. (McCluskey) Yes. As was indicated earlier, a technical session was held to understand how the costs that appear in Exhibit 10 to Mr. Sansoucy's rebuttal testimony were developed. And, it was agreed, as Mr. Sansoucy left that meeting, that he would provide the |
| :---: | :---: |
| A. (McCluskey) Yes. I've got four small changes to my testimony. The first one is on Page 14, Line 4. And, the year "2005" on that line should read "2025". The second is at Page 20, Line 11. Hmm. Line 11 doesn't seem to have much on it. <br> MR. BERSAK: Will be a short correction <br> then. <br> BY THE WITNESS: <br> A. (McCluskey) I have somewhere, I believe it's on this page, a statement which reads "historic relationship between natural gas and wood prices", and I would like to change that to "historic" -- <br> CHAIRMAN GETZ: Line 21. <br> WITNESS McCLUSKEY: Twenty-one? <br> MS. AMIDON: Thank you, Mr. Chairman. <br> BY MS. AMIDON: <br> Q. And, you said you would like to change that? <br> A. (McCluskey) I see it. Twenty-one, you're correct. And, I would like to change that to "historic relationship between the cost of electricity produced by natural gas facilities and the cost of electricity produced by wood-fired facilities." <br> Q. Do you have another change? <br> 24 A. (McCluskey) The third is at Page 24, Line 14. | spreadsheets that would allow us to check the various statements that Mr. Sansoucy made at the tech session. <br> Since we didn't receive that spreadsheet <br> before we left for the day, I spent yesterday evening preparing my own spreadsheet, to first check his numbers and make a number of changes. <br> The changes relate to, if you can recall in Exhibit 10, Column E, was -- had three price components to it. One of which was energy, which reflected a carbon scenario future. It had a capacity price from 2010. And, it had the Laidlaw REC prices from the contract. And, so, what I wanted to check was what would happen to the above- or below-market calculation, if I replaced the Ventyx market energy prices that were based on a 2009 report, replace them with the Ventyx 2010, which would not have a carbon future reflected in it, because that is Ventyx current base case assumption. And, I also changed the Laidlaw REC prices to reflect the Ventyx market price projection for the Northeast United States, and ran the model to determine whether it would produce the similar $\$ 300$ million under-market estimate that Mr. Sansoucy developed. |

1 spreadsheet, if Ms. Amidon would like to hand that out.

2 Q. And, in connection with this analysis, you prepared a
3
$\square$ Page 198

I -- this is the housekeeping matter. I omitted -- well, there's one number of Staff exhibits for which there is no exhibit. So, "Staff 12" would be the Ventyx Fall 2010. "Staff 13 ", and the Clerk will correct me if I'm wrong, is the Ventyx four-page. So, this Staff will be "Staff 14", is that correct?

MS. DENO: Yes.
MS. AMIDON: So, I apologize for that.
(The document, as described, was
herewith marked as Staff Exhibit 14 for
identification.)
WITNESS McCLUSKEY: Okay?
MS. AMIDON: Yes.
CHAIRMAN GETZ: Well, let's -- now that we've got the numbering correct, Mr. Bersak?

MR. BERSAK: The title on this document, which has just been marked for identification as "Staff Exhibit 14", is "PSNH Financial Analysis". Mr. McCluskey did make a correction. I just want to make sure it's duly noted that this is not a PSNH financial analysis. We have never seen this document before this very moment. And, like others in this docket, we're kind of doing it on the fly.

MS. AMIDON: Well, Mr. Chairman, I would
just say that we were waiting yesterday to get the working Excel spreadsheet for Mr. Sansoucy's Exhibit Number 10, which we never got. And, while Mr. McCluskey may have mislabeled it saying "PSNH Financial Analysis", he was attempting to reconstruct Exhibit Number 10 and to perform a calculation of the contract prices with the market prices. So, -- and, it's no different than Exhibit 9 for PSNH coming in or the late --

CHAIRMAN GETZ: I think all we're arguing about is the title. So, --

MS. AMIDON: Thank you.
MR. BERSAK: I have not objected. I just want to note that it's not ours. That's all.

CHAIRMAN GETZ: Please proceed.
WITNESS McCLUSKEY: Thank you.

## BY THE WITNESS:

A. (McCluskey) So, there's two pages, and there's essentially three blocks of data. The first block contains the estimated power costs under the PPA for capacity, energy, and RECs. And, this particular set of numbers is referring to a plant with a capacity of 63 megawatts and a capacity factor of 87.5 . And, I'll connect it with Mr. Sansoucy's 58 megawatts and 80 percent capacity factor in one moment. But this

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particular analysis is assuming it's the plant that was described by Laidlaw at the SEC. Okay? Sixty-three (63) megawatts, 87.5 capacity factor. And, it's showing that the total revenue over the 20 year period is approximately $\$ 1.6$ billion, if you turn to Page 2.

The second block is -- I've titled it
"Market Revenue 1". And, what this has is, based on the information that we received from Mr. Sansoucy yesterday at the tech session, I'm modeling here his version of Column E. So, we have the Ventyx market energy prices with carbon, we have the Ventyx market capacity prices, which come from a 2010 study, and we have the Laidlaw REC prices in there. And, so, I also have an additional line, which shows whether it's above market or under market. If the number is in parentheses -- parentheses, I have trouble saying that word, it's an under-market number. If it's just as is, it's an above-market number.

And, so, if you turn to Page 2, you will see that this calculation is showing that, over the 20 year term, it's significantly under market. It's actually quite by bit more under market than what Mr. Sansoucy was calculating. And, then, what I do is I changed the inputs in the third block, which I've
$\square$ Page 202
titled "Market Revenue 2". And, here we have only market prices for energy, capacity, and RECs. And, I believe they are all from the same vintage, the 2010, Fall 2010. So, when you insert those numbers, and you go onto Page 2, the calculation flips from being substantially under market to substantially over market.

And, there is another column, the above or below-market numbers, under this scenario where you have a 63 megawatt plant, are shown in the column headed "Difference Run 2". The numbers under the "Difference Run 1", those are the numbers if you run this calculation at 58 megawatts and 80 percent capacity factor. So, they're not substantially different. But, clearly, if you increase the size of the capacity, you're going to make -- you're going to make the under or over-market value greater, which is what you would expect.
(Court reporter interruption.)

## BY THE WITNESS:

A. (McCluskey) Okay. So, if you do the calculation as I thought Mr. Sansoucy was doing, he was comparing the power costs under the PPA with some market benchmark, it actually produces a significant above-market result.

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And, it's very interesting, we have testified that, when you use other methods to determine the market price of energy and REC prices, we came out with an above-market quantity which was higher than this 333 million that we're showing. But it's not significantly higher.

And, so, here we have a different source of market price projections or forecasts, whatever you want to call them, which we were not aware of, I've never even heard of Ventyx before this, the hearings. And, so, when you input their numbers for this 20 year period, it effectively supports the number, it's a little lower, but you would expect it to be different because you have a different set of -- different forecasters are going to come up with their own opinions of where these markets are going to go in the long term. So, we were in the 400 or more range, and I forget the exact number, from the market price projections that we described in our testimony. And, this is showing that we're in the right ballpark. This is indicating something lower, but I regard this as supportive. And, it's another forecast. Mr. Sansoucy said he has to use forecasts in his business. And, I would think that PSNH would have to use forecasts in
its business to make rational decisions.
And, so, I think this, one, it -- I
think the result undercuts the argument that Mr. Sansoucy had in his testimony about "\$300 million under-market value". And, I think it also supports the other approaches to determining cost-effectiveness that we describe in our testimony.

## BY MS. AMIDON:

Q. Mr. McCluskey, just to sort of break down this analysis to the bottom line, instead of getting a $\$ 300$ million under-market price, when you ran these numbers, which were provided in Ventyx by Mr. Sansoucy, you reached an over-market price of $\$ 274$ million, with -- using the design of the plant as determined as -- strike that -using the design of the plant that Mr. Sansoucy used in his analysis, is that correct?
A. (McCluskey) That is correct.
Q. Okay. And, then, Difference Run 2, you used the design of the plant as Laidlaw presented to the Site Evaluation Committee, is that correct?
A. (McCluskey) That's correct.
Q. And, you came up with approximately $\$ 334$ million over market, when you used the Ventyx forecast as a comparison, is that correct?

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1 A. (McCluskey) That's correct.
Q. Thank you. In the rebuttal testimony from PSNH, they claim that you testified that the required minimum purchase standards for renewable generation in the present RPS law only run through the year 2025. Did you make that assertion in your testimony?
A. (McCluskey) No. What I actually said was, and I quote, "The wood-fired IPPs have argued that there is no requirement for the purchase of RECs after 2005", I think it should have read "2025", "in the RPS. If this is correct, all of the RECs scheduled to be purchased during the 2026 through 2033 period will be in excess of the need absent modification of the RPS by the Legislature."
Q. And, when you said "quote", you were quoting from your testimony, is that correct?
A. (McCluskey) That's correct.
Q. Do you have anything else to add to the 2025 issue?
A. (McCluskey) Yes. If it was my position that the RPS law terminated in 2025, the market price and cash flow analyses that were described in my testimony would have ended before 2033. That is not the case. Those analyses run through 2033.

Further, I do not consider the 2025
$\square$ Page 206
issue to be the major issue in this case. The major issues, in my opinion, are the excessive REC prices and the requirement to purchase more RECs than is actually needed. Even these two issues, while they might appear different, come down essentially to the same issue, price. If the RECs were priced at the market, Staff wouldn't have a problem with the Company purchasing more than it needs. Because we think that they could resell the RECs in the market and customers would be indifferent. So, we could imagine a PPA that did obligate PSNH to purchase all of the RECs output from the facility, but they wouldn't be harmed if they were priced correctly. It's the fact that they are priced well above, in our opinion, the market prices that expose customers to significant costs if they don't need those RECs. So, I think the two issues that I've identified as being the critical issues in this proceeding actually come down to one issue, which is the appropriate price for RECs, in my opinion.
Q. Thank you. Moving on, do you recall Commissioner Below asking PSNH about Attachment 2 to the rebuttal testimony they filed?
A. (McCluskey) Yes. If you just give me one moment, so I could find that. Yes. The Attachment 2 was a chart,

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which is labeled "Laidlaw PPA energy price compares favorably to [the] wholesale electricity prices." And, this chart has two lines. It has the wholesale market energy prices varying over a seven year period from March '03 to December 2010. And, there's some significant variation in those prices. And, set into this prices is what I assume to be the Laidlaw PPA energy prices, which are actually shown in green. And, sometimes they are below the market energy prices, sometimes they are above. This chart, this comparison, I think is really troubling. It's a weird chart, to have prices that relate to some future period, compared with prices from a historic period. Typically, when you're doing some analysis, you're comparing the prices for this period with what you expect the market price to be over that same period. To have a chart which compares those future prices with historic prices is something that I've never seen before. But there's something about this chart that's even -- two things about it that I think is a little troubling. One is that the PPA has a 20 year term. And, so, they drop onto market energy prices over a seven year period. And, how they did that I don't know. So, if they picked out seven years from the PPA, we don't know what
seven years, but, if somehow they have comprised the PPA prices into this seven year period, it's not clear from the chart.

The other thing is it says this comparison is "Laidlaw PPA energy prices". And, as you may recall from Staff's Exhibit 3, if you care to look at that, --
Q. Is it an exhibit to your testimony?
A. (McCluskey) No. This is Staff Exhibit 3. And, what it is, it's a copy of Mr. Labrecque's Attachment RCL-1.
Q. Thank you.

WITNESS McCLUSKEY: Do you have that,
Commissioner?
BY THE WITNESS:
A. (McCluskey) And, on this attachment, they show the PPA energy prices beginning at $\$ 83$, and rising over time, based on some assumptions about how fuel costs are going to change. Then, if you look at the chart, it actually starts in March ' 03 at below $\$ 60$. There's no $\$ 60$ figure in Mr. Labrecque's Attachment RCL-1, which, as I said, is Staff Exhibit 3. So, it makes you wonder, did they -- are these fuel prices, as opposed to energy prices? Did they subtract out the O\&M? Is that what they did? Even that doesn't fit, because, if

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you subtract out the O\&M, you would start at just above $\$ 60$. Clearly, this price is below $\$ 60$.

So, I find this chart very troubling.
So, what I did was I prepared an additional chart. And, would you like to hand that out?
BY MS. AMIDON:
Q. Let me just ask you, this chart is entitled "Laidlaw PPA Energy Prices Compare Unfavorably to Historic Wholesale Electricity Prices." And, it has a line on the left-hand side that jogs up and down, and then a line over at the right that rises continuously?
A. (McCluskey) That's correct. And, I will explain in a bit more detail what's going on in this chart.

MS. AMIDON: Please mark that for identification as "Staff 15". Thank you.

CHAIRMAN GETZ: So marked.
(The document, as described, was herewith marked as Staff Exhibit 15 for identification.)

## BY THE WITNESS:

A. (McCluskey) So, in order to get away from imposing on -- imposing future prices on a chart that shows historic prices, what I did, I reproduced the market energy prices, what I'm showing here is those market

| 1 | energy prices, the average annual price. So, there's |
| :--- | :--- |
| 2 | less variability. A particular monthly price might be |
| 3 | higher or lower than the line that I'm showing here. |
| 4 | But, on average, the average annual prices over that |
| 5 | seven year period look like what I'm showing here in |
| 6 | red. And, then, I plot, after a four year gap, |
| 7 | assuming the PPA is going to start in 2014. So, the |
| 8 | first Laidlaw energy price is \$83, and then it rises at |
| 9 | a uniform rate of 2.5 percent. That's why we're |
| 10 | looking at essentially a straight line. But I think |
| 11 | the important thing is -- so, just visually, you can |
| 12 | see that the Laidlaw PPA energy prices are generally |
| 13 | higher. And, depending on what year you look at, |
| 14 | sometimes somewhat -- quite a bit higher than where |
| 15 | average annual market energy prices have been over the |
| 16 | last seven years. |
| 17 | So, I think this -- this gives a better |
| 18 | visual, if you want to compare the future with history, |
| 19 | which I think is not a very good idea, but this is -- |
| 20 | this is the kind of thing that I would look at. So, |
| 21 | I've just changed the title, changed one word from |
| 22 | "favorably" to "unfavorably". |
| 23 | BY MS. AMIDON: |
| 24 | Q. Mr. McCluskey, would you address PSNH's argument that |

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3 A. (McCluskey) Yes. Leaving aside the fact that the
"absent approval of the PPA, PSNH cannot meet its requirements under the RPS law."

Company testified that it can meet its requirements with short-term -- in the short-term REC market, I believe it is simply wrong if it is referring to long-term contract purchases.

In late 2010, NSTAR requested approval from the Mass. DPU to enter into a contract for renewable power providing a total of 30 megawatts of renewable generation supply and associated Class I RECs at a fixed energy and REC price over a contract term of ten years. This was presented in the testimony of a chap called James Daly for NSTAR, dated July 2nd, 2010, in DPU Docket 10-71. The important thing is, this contract was the winning bid from an open competitive bid process that produced a total of 52 bids, representing 35 individual projects, and
1,180 megawatts of renewable capacity. I think these facts demonstrate that there is an abundance of renewable generation for Class I projects out there, if you simply have the appropriate competitive solicitation.

Now, this particular contract was from interesting aspect to that that you wanted to discuss, regarding changes in laws and the effect on customers?
A. (McCluskey) Yes. Mr. Daly's testimony to the DPU stated that "NSTAR's customers are not obligated to pay for RECs if, as a result of a change in law, the facility falls to qualify as a Class I resource."
Q. Thank you.
A. (McCluskey) Which is very different from the PPA that's currently before us.
Q. At Page 28 of PSNH's rebuttal, PSNH claims that neither of the two proposed biomass plants, Clean Power Development and Concord Steam, that made unsolicited offers were superior to the PPA negotiated by Laidlaw. That is I think at Line 29, at Page 28 of PSNH's





| Page 229 | Page 231 |
| :---: | :---: |
| MS. AMIDON: Okay. Thank you. <br> CHAIRMAN GETZ: Okay. Thank you. Then, <br> I presume we'll take up on next Tuesday with Mr. Frantz's direct. <br> But I do want to address the request from the Mayor of Berlin. But did you have something? <br> MS. HATFIELD: I do, Mr. Chairman. I <br> apologize, but I wanted to let you know now that the OCA has a legislative hearing that we need to attend on Tuesday, at 2:00, that just so happens to be a bill amending the RPS statute. So, we would hope that we would be finished by then. But we just wanted to let you know that now, so that, to the extent it's possible, if we could try to schedule around that. And, if you can't, I understand, but I just did want to let you know. <br> CHAIRMAN GETZ: Okay. Well, then that is I guess more basis for what I'm about to say. I'd say that we would resume here next Tuesday, at 9:00 a.m. The goal, of course, is to get through all of this testimony. So, effectively, we are not going to grant the City of Berlin's request. It was late-filed, it wasn't provided to any of the parties. I think it's impractical under the circumstances. And, if anything, to accommodate a request of this nature would probably make this proceeding last <br> even longer. <br> So, we will resume here next Tuesday. <br> And, if we can schedule our day in a way that works around the legislative obligation, then we'll do that. <br> MS. HATFIELD: And, then, this may be premature, but I at least have been thinking about whether the Commission was going to either require briefing of certain issues or offer it. And, I don't know if you want to tell us anything about that now. But one idea that I have had was that it might be possible, if the Commission did want briefs or wanted to offer the option, that the parties could try to work together to identify any issues that people think need to be briefed, because it just might make the briefing schedule be able to be shorter, if we all agreed. And, I don't have anything to propose at this time, but I just wanted to offer that it might be useful, rather than you needing to do that, we could try to do it. <br> CHAIRMAN GETZ: well, we haven't reached any conclusion on that. If you all want to talk between now and next Tuesday and come up with a recommendation, then we would certainly entertain it. Did you have something, Mr. Shulock? <br> MR. SHULOCK: Yes. It was just a simple | procedural question. Was this marked as an exhibit? <br> MR. BOLDT: Staff 15 is my recollection. <br> MS. AMIDON: Yes, Staff 15. <br> CHAIRMAN GETZ: Yes, that is <br> Exhibit Staff 15. Anything else today? <br> (No verbal response) <br> CHAIRMAN GETZ: Okay. Then, we're <br> recessed. And, we'll see you next week. Thank you, everyone. <br> (Whereupon the hearing was adjourned at 5:07 p.m. and the hearing to reconvene on February 8, 2011, commencing at 9:00 a.m.) |

DAY 4 - February 1, 2011
DE 10-195 PSNH/LAIDLAW BERLIN BIOPOWER

|  | 153:2 | 1.6 (6) | 21 | 227:11 |
| :---: | :---: | :---: | :---: | :---: |
| \$ | \$400 (2) | 144:17,22,22;145:9; | 12C (1) | 2.07 (1) |
|  | 15:19;72:6 | 227:21;228:6 | 87:24 | 53:11 |
| \$1 (1) | \$45 (1) | 1.8 (4) | 13 (4) | 2.5 (16) |
| 153:16 | 125:7 | 144:17;227:21,22; | 51:3,10;87:15;198:4 | 25:1,4;29:13;47:13, |
| \$1.6 (1) | \$50,000 (1) | 228:7 | 1-3 (1) | 14,18,21,22,24;48:13; |
| 200:5 | 108:22 | 1:10 (1) | 174:3 | 76:3;78:7;121:22; |
| \$1.65 (1) | \$500 (1) | 135:19 | 130 (1) | 123:14,16;209:9 |
| 53:8 | 101:2 | 10 (105) | 22:6 | 2:00 (1) |
| \$100 (2) | \$6.60 (1) | 7:6,8,10;8:4,18;9:4,10, | 1-32 (2) | 229:10 |
| 141:7;152:18 | 103:12 | 20,21;10:5,13;11:2,6,8, | 213:5,15 | 2:30 (1) |
| \$11 (1) | $\$ 60 \text { (4) }$ |  | 135 (2) | 135:17 |
| 162:5 | $207: 19,20 ; 208: 2,2$ | 17:12;22:6;33:12;40:11; | 22:6;46:7 | 2:40 (1) |
| \$120 (3) | $\$ 83 \text { (2) }$ | 42:21,23;46:12;53:2,17; | 13C (1) | 135:20 |
| 22:1,18;153:21 | 207:16;209:8 | 54:7,9;56:16,18;57:4,12, | 88:1 | 20 (27) |
| \$135 (3) | \$9 (1) | 17,19;58:4,5,9,13,19; | 14 (9) | 21:18;23:1;24:10; |
| 22:15,18;46:13 | $94: 22$ | 59:1,3,4,6,15;60:18,18, | 87:19;178:9;194:2,24; | 48:14;52:19;54:11; |
| \$136.7 (1) | $\$ 93 \text { (1) }$ | 19,22;65:6;67:14,20; | 195:4;197:17;198:5,10, | 111:20;128:5;129:16; |
| 214:12 |  | 69:4;70:19,22,23,24; | $18$ | 137:22;141:18;150:22; |
| $\begin{gathered} \$ 14(\mathbf{1}) \\ 153: 24 \end{gathered}$ | [ | $71: 4,5,9,11,12,14,16,16$, 17,$20 ; 72: 12 ; 73: 1 ; 89: 8$, | $\begin{aligned} & 15 \text { (18) } \\ & 46: 12 ; 96: 22 ; 113: 13, \end{aligned}$ | $\begin{aligned} & \text { 157:5;170:18;172:21; } \\ & \text { 173:9,9;179:15;180:1, } \end{aligned}$ |
| \$143.1 (1) |  | 21,21;96:22;101:23; | 13;115:19;126:22; | 14;194:4;197:12;200:4, |
| 214:13 | [from] (1) | 102:6;107:6;112:10; | 127:1;166:20,20,24; | 20;202:11;206:21; |
| \$144.08 (1) | 185:16 | 116:1;118:10;120:4; | 170:1,2;197:23;208:15, | 227:13 |
| 36:6 | [sic] (1) | 121:1,3,7,9,10,15,23; | 18;231:2,3,5 | 200 (1) |
| \$156 (1) | 97:24 | 122:3;132:5;148:24; | 15,000 (1) | 109:2 |
| 214:5 | [the] (2) | 149:15,18;150:4,16; | 27:5 | 2000 (1) |
| \$156.4 (2) | 143:22;206:2 | 152:20;153:4;178:19; | 16 (4) | 76:1 |
| 214:5;216:1 | [would] (1) | 195:9,22;196:8;197:5, | 163:20,23;169:14; | 2004 (1) |
| \$162 (1) | 162:4 | 10;199:2,5 | 170:17 | 147:7 |
| 215:24 | 0 | 10:57 (1) | 162 (1) | $2005 \text { (3) }$ |
| $\begin{gathered} \$ 2(\mathbf{1 )} \\ 139: 7 \end{gathered}$ | 0 | 100 (4) | $17 \text { (9) }$ | $2008 \text { (3) }$ |
| \$25 (1) | $03 \text { (3) }$ | $18: 19 ; 41: 14 ; 42: 12$ | $52: 14 ; 102: 24 ; 105: 1$ | $42: 6,9 ; 195: 8$ |
| $125: 4$ $\mathbf{\$ 2 6}$ (4) | $\begin{aligned} & \text { 145:20;206:5;207:19 } \\ & \mathbf{0 3 - 1 6 6}(\mathbf{1}) \end{aligned}$ | $\begin{gathered} 127: 10 \\ \mathbf{1 0 - 1 9 5}(2) \end{gathered}$ | $\begin{aligned} & 140: 2 ; 165: 17,20 ; 168: 6 ; \\ & 170: 17 ; 222: 20 \end{aligned}$ | $\begin{array}{\|l\|}  \\ 2009(25) \\ 62: 1 ; 67: 10,15 ; 68: 1, \end{array}$ |
| $\begin{aligned} & \$ 26(4) \\ & 148: 8,9,17,21 \end{aligned}$ | $\begin{gathered} \mathbf{0 3 - 1 6 6 ( 1 )} \\ 146: 19 \end{gathered}$ | $\begin{aligned} & \text { 10-195 (2) } \\ & 5: 3 ; 135: 22 \end{aligned}$ | 170:17;222:20 <br> 17th (2) | $\begin{aligned} & \text { 62:1;67:10,15;68:1, } \\ & \text { 20;69:23;73:12;76:1,10, } \end{aligned}$ |
| \$27 (2) | 04-048 (1) | 104 (1) | 191:13;193:13 | 13;77:20,23,24;85:8; |
| 91:17;93:24 | 42:18 | 103:1 | 18 (4) | 87:17;121:17,18,20,23; |
| \$274 (1) | 08/'09 (1) | 105 (1) | 141:11;170:17; | 122:13;150:4;158:15; |
| 203:13 | 38:5 | 102:21 | 173:24;178:9 | 167:4;195:7;196:15 |
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