STATE OF NEW HAMPSHIRE

PUBLIC UTILITIES COMMISSION

November 26, 2013 - 10:06 a.m.
Concord, New Hampshire

RE: **DE 12-347**
GRANITE STATE ELECTRIC COMPANY
d/b/a LIBERTY UTILITIES:
Least Cost Integrated Resource Plan.

PRESENT: Chairman Amy L. Ignatius, Presiding
Commissioner Robert R. Scott
Commissioner Michael D. Harrington

Clare E. Howard-Pike, Clerk

APPEARANCES: **Reptg. Granite State Electric Company d/b/a Liberty Utilities:**
Sarah B. Knowlton, Esq.

Reptg. PUC Staff:
Alexander F. Speidel, Esq.
Steven E. Mullen, Asst. Dir./Electric Div.
Leszek Stachow, Electric Division

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

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E X H I B I T S

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P R O C E E D I N G

CHAIRMAN IGNATIUS: Good morning, everyone. I'd like to open the hearing in Docket DE 12-347. This is Liberty Utilities' Least Cost Integrated Resource Plan, which was submitted on December 3rd, 2012. We are at the point today of having a hearing on considering the plan. I have no record of any intervenors in the file, and there's -- no one appears today. And, so, I think what I'd like to do, we'll start with appearances, and then I'd be interested in hearing from the Company or Staff what your plan for today is, in terms of witnesses, order of proceeding today.

So, let's begin first with appearances. Ms. Knowlton.

MS. KNOWLTON: Good morning, Commissioners. My name is Sarah Knowlton. I'm here today on behalf of Granite State Electric Company, which does business as Liberty Utilities. With me at counsel's table is Christian Brouillard and Stephen Hall, both from the Company.

CHAIRMAN IGNATIUS: Welcome.

MR. SPEIDEL: Good morning, Commissioners. Alexander Speidel, representing the Staff of the Commission. And, I have we me Les Stachow, and also Steve Mullen of the Electric Division.

CHAIRMAN IGNATIUS: Good morning.

MR. SPEIDEL: And, if I may, I would be happy to provide the succinct description of the proceeding today. The Staff and the Company have agreed that we would like to call, as a witness panel, Mr. Stachow and also Mr. Brouillard to the stand. And, there will be a series of general interrogatories regarding the content of the LCIRP, and also some of the Staff's suggestions for the next LCIRP filing, and also the Staff overall recommendation for the current LCIRP filing before the Commission. And, I think some of those questions will, of course, be engaged in by Ms. Knowlton through direct interrogatories, and myself through cross, and vice versa.

CHAIRMAN IGNATIUS: All right. Is that acceptable?

MS. KNOWLTON: That's acceptable. And, I would add that there is one document that the Company would propose to mark for identification as "Exhibit 1", and that's the Least Cost Integrated Resource Plan of Granite State Electric Company dated November 29th, 2012.

CHAIRMAN IGNATIUS: So marked, and that will be as "Exhibit 1".

(The document, as described, was herewith marked as **Exhibit 1** for identification.)

CHAIRMAN IGNATIUS: And, then, why don't we go ahead then with the panel, if you want to have people seated. And, Mr. Patnaude, you can swear them.

(Whereupon **Christian P. Brouillard** and **Leszek Stachow** were duly sworn by the Court Reporter.)

CHAIRMAN IGNATIUS: All right. Ms. Knowlton, do you want to proceed?

MS. KNOWLTON: Yes. Thank you.

CHRISTIAN P. BROUILLARD, SWORN

LESZEK STACHOW, SWORN

DIRECT EXAMINATION

BY MS. KNOWLTON:

Q.   I'll start with Mr. Brouillard. Good morning, Mr. Brouillard.

A.   (Brouillard) Good morning.

Q.   Would you please state your full name for the record.

A.   (Brouillard) Christian P. Brouillard.

Q.   By whom are you employed?

A.   (Brouillard) By Liberty Utilities, doing business as -- I'm sorry, Granite State Electric, doing business as

Liberty Utilities.

Q. What is your position with the Company?

A. (Brouillard) I am the Director of Engineering.

Q. And, in that capacity, do you have any responsibilities for Granite State Electric's Least Cost Integrated Resource Plan?

A. (Brouillard) Yes, I do.

Q. Would you describe those?

A. (Brouillard) Yes. The Plan was prepared under my direction, with assistance from individuals within -- within Liberty Utilities, and also within National Grid, under the terms of our Transition Services Agreement that we have with them.

Q. Would you describe, you indicated that there are a number of individuals at Liberty that participated in this plan, can you describe the functional areas from the Company that participated in its development?

A. (Brouillard) Yes. We had representatives from our Energy Efficiency DSM Group, we also had representatives from our Energy Procurement Group. We had counterparts from National Grid in both of those areas, and also, you know, my counterpart and his direct reports in the distribution planning area.

Q. Were there particular sections of the report that were prepared by National Grid?

A. (Brouillard) Yes. For the most part, the report is based on the process that National Grid had instituted up to the sale. So, National Grid had a very driving role in the preparation of all of the material that you see in this report, albeit Liberty Utilities, you know, reviewed them, and also assisted National Grid in the assembly of all that material.

Q. Do you have a copy before you of the Plan that we've marked for identification as "Exhibit 1"?

A. (Brouillard) Yes, I do.

Q. And, that is the Plan that you supervised the production of?

A. (Brouillard) That is correct.

Q. And, are you familiar that we have a statute RSA 378:38 in New Hampshire that governs the submission of least cost plans to the Commission?

A. (Brouillard) Yes. And, I am familiar with the statute.

Q. In the preparation of the Plan, did you review that statute?

A. (Brouillard) Yes, I did.

Q. And, do you have an opinion about whether or not the plan, as submitted, complies with the statute?

A. (Brouillard) Yes. It's my opinion that the filing is indeed consistent with the adequacy requirements within that statute for a least cost integrated resource plan.

MS. KNOWLTON: I think, at this point, I'm going to turn to Mr. Speidel. It may be that there's -- he has some cross-examination questions for Mr. Brouillard, and may want to move to Mr. Stachow at this point. So, I'll turn it over to Staff.

MR. SPEIDEL: Thank you.

CHAIRMAN IGNATIUS: That's fine.

MR. SPEIDEL: Thank you, Ms. Knowlton.

CROSS-EXAMINATION

BY MR. SPEIDEL:

Q. Mr. Brouillard, does the phrase "wires versus non-wires planning alternatives" mean something to you?

A. (Brouillard) Yes, it does.

Q. Could you just describe it generally for the Commission?

A. (Brouillard) Yes. I'd be happy to. In the course of planning our -- well, analyzing our delivery system and planning for the future needs of the system, we typically look at what we'll call "wires alternatives", and that would involve some of the traditional reinforcements to the system, such as reconductoring of a smaller size conductor with something larger, replacement of electrical equipment that is likely to be loaded beyond its thermal ratings, you know, absent any action on our part, upgrading of transformer sizes as another example.

We also look at, and, again, as part of the process that was utilized by National Grid in prior years, we would take into account the opportunity to employ any non-wires alternatives, which might include energy efficiency, demand-side management initiatives, or even distributed generation, into that planning process, as a competitor, if you will, to some of the more traditional wires alternatives. We do have some screening criteria that we would employ as part of that process to ensure that we're making a like-to-like comparison between wires and non-wires alternatives.

Q. And, would you expect that, in advance of the next LCIRP filing, that there will be some level of informal consultation between the Company and Staff regarding such alternatives in the planning process?

A. (Brouillard) Yes, I would. And, we would look forward to that opportunity. I would further state that it was our plan all along that, as we came to the end of the Transition Services Agreement in the planning arena, that Liberty Utilities would be revisiting its own approach to planning and its planning criteria. And, in conjunction with that, we would also be looking at how the non-wires alternatives would best fit into the Liberty-centric process going forward.

MR. SPEIDEL: Thank you. Staff doesn't have any further questions of Mr. Brouillard. We could proceed with direct interrogatories of Mr. Stachow or the Commission could ask Bench questions of Mr. Brouillard or wait until after?

CHAIRMAN IGNATIUS: Why don't you go ahead and we'll take all of our questions as a group.

MR. SPEIDEL: Okay. Thank you, Chairman.

DIRECT EXAMINATION

BY MR. SPEIDEL:

Q. Mr. Stachow, could you please state your full name for the record please.
A. (Stachow) My name is Leszek Stachow.
Q. And, what is your position and role at the Commission?
A. (Stachow) I'm an Analyst in the Electrical Department.
Q. Did you review the filing that has been marked as "Exhibit 1"?
A. (Stachow) Correct.
Q. And, that would be the LCIRP filing?

A. (Stachow) I did.

Q. In general terms, Mr. Stachow, would you concur that the Company's filing generally comports with the standards of acceptance by the Commission under the LCIRP statute?

A. (Stachow) In general, yes.

Q. And, would you describe that as Staff's general position on this filing?

A. (Stachow) Correct.

Q. Are there certain suggestions that you would like to make for a future filing that would be worthy of the Commission's consideration and also the Company's consideration?

A. (Stachow) There are.

Q. Would you like to outline those now for us?

A. (Stachow) Certainly. Based upon Staff's reading of the report, we understand that distribution planning that was formally provided by National Grid engineers will now be embraced by Liberty Utilities itself. And, so, it would be helpful if the Company would be able to provide Staff with a detailed methodology of how it will go about carrying out this function.

My second comment relates to the filing itself. Although the filing fulfills the requirement, as I understand it, of the statute, it reads as a report and less as a methodology that is applied and informs Liberty Utilities in its planning. I would like that the Company provide a detailed process for a diagram that indicates who is involved in each stage, the inputs that are involved in that stage, the outputs that come out of that stage, the period of time under which it takes place, so that I have a full understanding of each step of the planning process, who's involved, and the input and the output variables.

Q. Is that limited to the capacity planning process or does it interrelate to all of the planning processes?

A. (Stachow) I had indicated "capacity planning", but my concern is that, when I read the report, I can see primarily how this report informs the internal distribution planning process at the Company. And, that is all I'm looking for.

I might add that I have carried out a discussion last week with Public Service of New Hampshire over the same matter, and that particular technical discussion has been extremely helpful in getting a clearer understanding of how the planning process is pursued.

My third concern, which relates to the

second, is to see how demand-side and supply-side options are integrated into the Plan, and to understand how the impact of environmental, economic, and, I think perhaps to maybe a lesser extent, health-related impacts inform the decision-making process. That's it.

MR. SPEIDEL: Thank you. The Staff would like to make the panel, including Mr. Stachow, available for questions from the Bench.

CHAIRMAN IGNATIUS: Thank you. Ms. Knowlton, other questions?

MS. KNOWLTON: I had -- I just had one question for Mr. -- well, for either of the witnesses.

CROSS-EXAMINATION

BY MS. KNOWLTON:

Q. The Plan that was submitted contains a detailed section on the energy efficiency programs that are approved as part of the CORE docket here at the Commission. To the extent that the Company were to identify energy efficiency measures in the future that might be a competitive alternative to a wires side option, would the Staff, you know, be willing to work in a flexible manner with the Company, in order to have that energy efficiency solution considered as an option?

A. (Stachow) By all means.

Q. And, I think the concern that you might imagine that the Company might have is that we have a fairly prescriptive process for approval of energy efficiency measures as part of the CORE Program. And, we're trying to understand how Staff might view those coming together, given that separate approval process. So, any insight that you can provide on that, Mr. Stachow?
A. (Stachow) Not at this time.

MS. KNOWLTON: Okay.

CHAIRMAN IGNATIUS: All right. Are there questions? Commissioner Harrington.

CMSR. HARRINGTON: Yes. Just a couple of questions.

BY CMSR. HARRINGTON:
Q. Just getting back to the energy efficiency programs, the ISO is proposing some major changes to the Forward Capacity Market in the form that they're referring to as the "Performance Enhancement", or "PI FCM", and that could be implemented coming up in the future. And, it will make some major changes to the M&V programs for energy efficiency programs. Has the Company looked into this and figured out what the impact might be of those changes?
A. (Brouillard) That isn't my particular area of

expertise. Rather, I am, you know, gathering, really, the results of the energy efficiency programs on a historical basis, and then using that information as a tool to plan forward. But, you know, recognizing that that will take place, I would anticipate that we'd see a more robust contribution of energy efficiency towards further reducing the embedded demand levels that we use in our forecast.

Q. But what I was referring to was, and now I think, and don't quote me on the exact hours, but, generally, the energy efficiency programs are measured on their performance, I think it's from 1:00 to 5:00 during the summer months, and then 5:00 to 7:00 p.m. during the winter months, and the rest of the time they don't have to show what they do. Under this new proposal, they would have to show what they -- how much they reduce energy 24/7/365. And, if, for example, there was a factory that let's just say it was closed on Sundays and didn't use or used very little power, so they wouldn't have their energy efficiency from their new light bulbs or new motors that were more efficient, they would be susceptible to penalties during those times, because they weren't delivering the lower amount of energy, or they would also have to expand their M&V

programs substantially. There's been a lot of discussion on the cost associated with doing that, and whether it would even be worth to continue in the Forward Capacity Market. And, of course, if they don't continue in the Forward Capacity Market, then that would be a loss of some revenues, which would cut down on the expansion of -- potential expansion of energy efficiency in the future. So, maybe that's something we need to address at least in the next plan. It's not going to be implemented for a little bit, but it's something that's generally there.

Also, just a different question now. There was talk about, you said, I was trying to catch all of this when you were talking then, about "demand-side versus supply", and then -- and something with "environmental impact" you wanted them to cover. Can you give us a little more? I wasn't quite sure what you were getting at there.

A. (Stachow) My concern is to understand the decision-making throughout the distribution, specifically, distribution planning process, and I want to understand how environmental concerns, economic concerns, and health-related concerns as itemized in the statute inform the decision-making process and how the ultimate decisions are prioritized.

Q. Okay. That's -- I guess that's where I'm having a little confusion. We have a Renewable Portfolio Standard, which says that the Company has to buy so much qualified renewable energy. There's obviously environmental laws in effect on both the state and federal level. So, are you saying that the Company should go beyond that and do some additional analysis as to, if they buy power in the portfolio is going to come from a nuclear plant, that they should be saying "well, what's the impact of the potential long-term storage of nuclear waste on the environment?"

A. (Stachow) No, I'm not. What I'm saying is that I need to have a clear understanding of how those elements are factored in to the transmission planning process itself.

Q. So, you're assuming that they are factored in?

A. (Stachow) I am indeed.

Q. Okay. And, what if the Company were to say simply "we comply with the environmental laws and the Renewable Portfolio Standard laws, and we could always solicit our power based on the agreement that we have, which is basically to get all legal power at the lowest price we can for our customers"?

A. (Stachow) I would consider that acceptable.

CMSR. HARRINGTON: Okay. Thank you. That's all I had.

WITNESS BROUILLARD: If I could just ask for a clarification? You mentioned the "transmission planning process". Just to clarify, that Liberty Utilities doesn't own any transmission assets. We're -- our transmission service is provided by National Grid. So, I'm assuming that you meant the "distribution process" in the general term?

WITNESS STACHOW: I thought I had said "distribution process", perhaps I was misled.

CMSR. HARRINGTON: Yes. Yes, you did say "transmission", and I thought you meant "distribution".

WITNESS STACHOW: My apologies.

BY CMSR. HARRINGTON:

Q. I was referring more to, not so much the distribution system planning, but you were talking about "demand-side" and "supply-side", so, you're talking about acquisition of the power that they buy?

A. (Stachow) Not at all.

Q. Okay. Well, then, you've got me completely confused then. You're talking simply about the -- let me get back to that. When you were talking about it in the beginning, you said something about "balancing" or "knowing more about demand-side versus supply", that was where I thought you were heading towards how they procured the power to distribute to their customers.

A. (Stachow) I'm accepting the fact that the process by which power is procured is beyond the scope of my analysis here.

Q. Okay. So, you're just referring to the environmental impacts of their distribution system then?

A. (Stachow) That's correct.

Q. As far as where they run the wires or whatsoever?

A. (Stachow) Yes.

CMSR. HARRINGTON: Okay. All right. That helps a little bit. All right. Thank you.

CHAIRMAN IGNATIUS: Commissioner Scott.

CMSR. SCOTT: Good morning.

BY CMSR. SCOTT:

Q. Either one of you, I -- well, actually, for the utility, I suppose. Obviously, this report was prepared in November last year. And, I assume you didn't have a crystal ball to see the gas spikes and everything that happened over last winter. Well, if you did, I assume you'd be on Wall Street and not here.

Given all that, you understand what I'm talking about, though, the big spikes we saw last winter due to the gas pipeline constraints?

A. (Brouillard) Right.

Q. With that, I was just curious, would that, if you had knowledge of that, I understand this was presented before that, would that have any impact on your analysis and the LCIRP that you submitted?

A. (Brouillard) Not likely. And, the reason I say that is most of -- well, not most of, the bulk of our focus is on identifying the need to reinforce the delivery system and, to a large extent -- to a great extent, that is, you know, independent of the, you know, of the market forces behind the gas supply. There's certainly a link to economic activity that we'll see trickle through eventually. But, if we look back in the past historically, we can see a relatively stable load growth pattern that, you know, absent any impact of spot loads, it is rather predictable.

Q. Okay. And, one of the reasons I asked is, obviously, in RSA 378:38, it does talk about "provisions for diversity of supply sources". So, again, it was just an open question. Okay. Thank you. In Mr. Speidel's -- Attorney Speidel's questioning, it almost implied, when he asked "moving forward would you use a collaborative consulting process with Staff before the next submission", and, of course, the answer was "yes". That begged the question, was there no -- I know you worked with National Grid more closely on this submittal, but was there no collaborative process with Staff for this submittal?

A. (Brouillard) Going back, you know, the short historical version is we, and I'm not an attorney, but we did have an open docket that was covered in the 2010 time frame, while we were under National Grid ownership. And, it's my understanding that there was a meeting with Staff in that time frame. Then, the docket was stayed as part of the sale docket. And, subsequently, in the December of 2011 time frame, we also met with -- we also met with Staff to discuss the forward plans for filing this, this particular docket. So, there were a couple of meetings, you know, that had occurred in the preparation of this document.

CMSR. SCOTT: Okay. Thank you. That's all I have. Thank you.

CHAIRMAN IGNATIUS: A few questions about items in the Plan itself that I wanted a little more explanation of. And, I may just go in order. We'll see if that makes any logical sense.

BY CHAIRMAN IGNATIUS:

Q. If you turn to Page 10, it says in that top paragraph that "Studies are ongoing, but it appears significant pipeline infrastructure upgrades are necessary." Can you provide a little more detail on what you're describing there?

A. (Brouillard) That particular area of the report was prepared by our Energy Procurement arena. And, I apologize, but that's not -- that's not my area of expertise. So, I don't feel qualified to comment on that particular section of the report.

Q. In general, can you give me a sense of how those infrastructure upgrades might be factored in to your -- to your integrated resource planning?

A. (Brouillard) Yes. As we -- to the extent that that has an impact on the price of gas, the price of electricity, and also, you know, the general impact on the economy driven by any pipeline constraints, we would expect to see that trickle through eventually, either in the form of reduced demand directly or in the form of reduced economic activity, which would translate into reduced demand. I would expect to, if that continued, we would expect some impact on -- see some impact on our power supply area forecast for the two areas going forward being somewhat tempered due to those two factors.

Q. On Page 20, there's a reference in the end of Section 5, regarding demand-side resources, that talks about "smart metering systems", and -- although you didn't discuss smart metering. What is the status of metering within Liberty? Do you have efforts to advance the amount of smart metering deployed?

A. (Brouillard) We currently have no plans to escalate any smart metering systems at this juncture. We do have an AMR system that we use. And, there's some limited -- very limited time-of-use metering that's out there, really, on a legacy basis. But we currently have no plans to expand a smart metering program.

Q. So, there's no expectation of going to a time-of-use system?

A. (Brouillard) I think we'll be looking to, as we alluded to somewhat a little later on in this report, particularly when it comes to electric vehicles, there's probably going to be an opportunity there to consider, you know, with Staff and with the Commission, opportunities for a time-of-use rate off of smart metering. It's projected, based on our discussions and analysis with National Grid, it's projected that that would have quite a significant impact to lower the effect of electric vehicles on demand on the electric grid. So, that would certainly be something that, you know, going forward, as we see the electric vehicle, you know, begin to penetrate into the delivery system, that we'd like to take a look at.

Q. Well, let's jump ahead to your forecast. And, the report itself, the Plan itself has a lengthy 30-40 page attachment, so I'm not asking you to go through all the detail there. But what are the -- what are the high points, sort of major findings on your power forecasting?

A. (Brouillard) It's worthwhile noting some of the, you know, some of the splits. We're about 200 megawatts overall demand in Granite State, roughly an even split between Granite State East, which is mostly Salem and Pelham, and Granite State West, which is driven predominantly by load in the Lebanon/Hanover area. The more robust areas are Pelham has grown at around a three percent rate, and the Lebanon area has grown somewhat over two percent. The drivers there being the loads at the hospital and Dartmouth College.

Overall, it's been, you know, I'll say

relatively -- relatively predictable. If you look over time, you know, the growth rate is somewhere in the two percent range. There are some, you know, there are some pluses and minuses along the way. But, I think, going forward, just taken in aggregate, it's a relatively predictable forecast, absent any, you know, significant spot loads that might come into being. And, we do take spot loads into account. We don't just -- we don't just base our forecast for system reinforcements just based on the raw PSA. We do add to that any spot loads that we're aware of. And, as part of the forecast, we also take into account the econometric data. We take into account the, you know, housing starts in the area. We take into account the impact of weather. Interesting to note that I believe 2011 was actually an extreme weather case year, based on the weather data out of the Concord Weather Station. So, that would be a, you know, 1-in-20 year scenario that we actually had in 2011. 2012, the forecast was down about 4 percent, in terms of actuals, from what we had seen the prior year. So, there is some, you know, as I said, there are some pluses and minuses along the way.

We also take into account some of the --

in addition to the county level data, we take into account town usage data within New Hampshire itself, to further drive down the power supply area forecast down to a feeder, a circuit level, if you will, so that we can couple that information with the thermal ratings of the equipment that's on those circuits.

Q. In light of some of those spot loads, it makes me think that distributed generation is a useful tool. And, in the Plan itself, on Page 21, it says that there's "relatively modest amount of DG applications within your territory." And, in the next line it says "The decision to install and run DG systems is made by customers based on economic, environmental, and operational drivers." But, in fact, the utility could be making its own investments in DG under our state statute. I don't know if you're aware of that. But 374-G allows for some degree of investment by a utility. Do you know if there's any consideration of any distributed generation driven by the utility, rather than awaiting a customer's request?

A. (Brouillard) I'm not aware of anything at this point in time in New Hampshire. I wouldn't preclude that from happening. But I'm not aware of anything that's, you know, that's immediately in the pipeline where we would see an immediate impact on something of this nature. I do know that, when we were part of National Grid, that was part of the forward thinking. There were several installations within Massachusetts that were in that particular category. So, you know, given an opportunity, it could potentially become something that we could look at going forward. But, again, I'm not aware of anything immediately in the pipeline.

Q. And, in the planning to look at that, how would the possibility of a company-driven DG investment be handled? How does it fit into your planning process?

A. (Brouillard) When we -- when we do develop our forward planning approach beginning in 2014, I would suspect that, if there were an opportunity to do something like that, we would look, you know, as we were discussing earlier in the energy initiatives front, we'd probably look to selectively apply something like that in an area where it would ultimately provide customers with, you know, with the greatest benefit. That is, with the greatest possibility of deferring facility additions. We would need to keep in mind the size of such a facility. I mean, for instance, when we're adding a feeder position, that adds, you know, about 8 to 10 megawatts of capacity into an area. A one-megawatt solar installation is, you know, quite substantial in terms of the area that it occupies, and the impact on the feeder, you know, the capacity factor, and, you know, there are other issues that all come into play that we would want to calculate out in great detail.

Q. And, I know you're not a lawyer, and I wouldn't expect you to have the statute memorized. But, just for your own thoughts back in the office, you should take a look at 374-G:4, II, which allows an electric utility to invest in distributed generation up to "a maximum of 6 percent of the utility's total distribution of peak load measured in megawatts." So, see what the options are, how far you could go with that, if it's the right thing, and reduces peak load, or if it offsets another more costly investment.

A. (Brouillard) Thank you.

Q. In the plan, turning to the next page, Page 22, there's a reference at the top of the page that PV systems have been running at about -- I'm sorry, it's the very bottom of 21, at about "20 to 25 percent of their ratings". And, you also mentioned "wind systems", but I didn't see any measurement of their performance. Do you know how the wind systems have been running?

A. (Brouillard) I don't know specifically for New

Hampshire. But I would -- my guess would be that it's in the, you know, in a similar range, perhaps a little bit more, given that, you know, it's less impacted by cloud cover. So, somewhere between 25 and 50 percent.

Q. You said 25, between 25 and --

A. (Brouillard) Twenty-five and fifty, somewhere in that general range.

Q. Fifty percent would be extremely high for the --

A. (Brouillard) It would be.

Q. -- facilities that we've reviewed. Mr. Stachow, a question to you. I was interested in your thoughts about seeing real process flow and understanding how the mechanics of the planning process work, because we've seen, I think through no fault of the utilities, these plans are created, but they don't seem to translate into day-to-day operational guidelines. Is it your sense that a utility can develop a solid planning methodology that it can really stick to or is it -- are these things at best good concepts, but then reality hits every day and people makes the decisions they have to make, given conditions in the market and in their operations?

A. (Stachow) My own experience from the industry suggests that a utility would normally define its planning process through the form of some business process engineering. That is to say, it would have to indicate which departments are involved in the process, what inputs they would need to receive, in what schedule of time, who would be reviewing the information, what would be the output of that process, how that would move to the next stage. And, so, that it would be possible, if one had mapped out that process, to be able to target instantly the person or the people who are involved in making the decision at that level, and also ask them to see specific outputs of that process at each stage, so that one could see how the process evolved.

For example, if you have a series of projects that you have identified, then, one useful thing for Staff would be to understand how those projects are prioritized, and what cost/benefit analysis has taken place around them, and to what extent they have been conditioned by, for example, environmental or economic considerations.

As it turned out, in the discussion with PSNH that I mentioned earlier, once the president of that division had sat down and thought about it himself, he was able to lay out a very detailed process that explains every step, and raised the Staff's comfort that the evaluation process taking place around the planning was indeed there. Whereas, reading a narrative account of a least cost plan, that is more for informational purposes than as a document that is a live document that informs planning, may not necessarily give you that level of granularity.

Q. The discussion that Mr. Brouillard and I had about distributed generation just a moment ago, how do you see something like that fitting into a planning process? Is that -- is there room for the ability to identify individual spot loads that could benefit from a distributed generation installation that could forestall a more expensive larger system investment?

A. (Stachow) Of course, it depends upon how that planning process in that given company takes place. The simple answer is "yes, of course." But then that has to be mitigated by other issues; issues of reliability, issues of urgency, issues of capacity. There may be a whole host of issues that need to be taken into account to determine whether that distributed generation might be of interest at that particular point in time. So, yes, of course, it should be considered. But whether, in a given instance, it is the appropriate solution remains to be seen. And, clearly, when there are issues of reliability and safety that take precedence, they may direct the Company to act otherwise.

Q. And, a planning process should enable all of those discussions to feed together to get to the right result?

A. (Stachow) Correct. And, my concern, and, therefore, my recommendation, is an effort to try and make that process transparent as much as possible.

CHAIRMAN IGNATIUS: Commissioner Harrington.

BY CMSR. HARRINGTON:

Q. I just wanted to follow up on something that Chairman Ignatius brought up. And, that is talking about the distributed generation. And, the reason I wanted to bring that up is because we seem to be approaching what could be a very dramatic change in the Forward Capacity Markets. Going into FCA 8, which will be held this February, there's the possibility, depending on what happens with these recent filings made at FERC, that we could see capacity prices go from FCA 7 prices at less than $3, to as high as $11. That's a huge amount of money. I mean, if you think about that, that's for -- if you had a one-megawatt distributed resource, that's

$132,000 in reduction in capacity payments for the year from that one resource. And, that's because capacity payments are determined by the peak hour of the year. Whatever the highest peak hour for the year is, normally going to happen in the summertime, in July and August, whatever your load is at that particular time, that's your -- the percentage of that is that's your share of the capacity payments for the entire year. So, it may be a, you know, a time to revisit some of the planning on this with energy efficiency that could be -- that could be peak trimming or distributed generation that could do the same. Because, with that kind of money involved, you know, cutting off a few hundred megawatts through various methodologies, or even 10 megawatts or 20 megawatts is a lot of money, if you can, you know, only if it coincides with that hour that you're being measured by. So, going -- you know, just the Company should be aware and should actively be pursuing, following what happens in FCA 8, because it could be significant enough to have a major change in your planning process going forward with this kind of additional money. We're looking at the possibility of, in New England as a whole, seeing capacity payments go up by over three and a half billion dollars in one year. And, that's a lot of money. So, if there's anything the Company can do planningwise to mitigate the possibility of that, and it might not happen, but it's possible, it would be something that I think would be worthwhile. And, either way, we're getting into an era where we're now seeing a lot of retirements, we're seeing Brayton Point, we've seen Salem Harbor, even Vermont Yankee, now we're losing nuclear plants. There's probably going to be more oil plants that go down in the future, if the systems don't run that often. So, I think we're going to go from a time of capacity surplus, where the floor price was basically setting in, to a time of possible capacity shortages, which means the prices could go up substantially. And, I think the Company should be planning for some wide variation in forward capacity costs. I mean, it could be FCA 9 or 10, we could see a new resource set the price for the entire zone, for the entire region, which could mean we'd be up over $15 a kilowatt-month. So, those are things I think the Company needs to be actively planning for.

I'm looking through your section in here on forward capacity market, you do a nice narrative on how it came about and what it does, but there's nothing really looking to the future. And, the future is not certain, but there's certainly a potential for very, very large increases in capacity payments, which would be worthwhile having a planning process that takes that into account.

A. (Brouillard) Thank you.

CHAIRMAN IGNATIUS: One question on that, before we go to Commissioner Scott.

BY CHAIRMAN IGNATIUS:

Q. I think there's a typo on Page 7, in talking about the forward capacity auctions. That bottom paragraph, the third line down says that FCA 7 is scheduled for "February 2013", and then two lines below that it says that FCA 8 will be "in February 2013".

CMSR. HARRINGTON: That's '14.

CMSR. SCOTT: Fourteen.

BY CHAIRMAN IGNATIUS:

Q. So, that second one should be "2014"?

A. (Brouillard) Yes. I believe that should read "2014".

CHAIRMAN IGNATIUS: Thank you. Commissioner Scott, questions?

BY CMSR. SCOTT:

Q. Back to the "distributed generation" discussion, again, this is -- I'll put this in the category of "moving forward", not necessarily looking back. Obviously, in the last legislative session, there was a law change regarding net metering. I was just curious if the utility had any thoughts yet on what impact that will have?

A.   (Brouillard) Yes. We have been certainly following that legislation. My discussions with my counterparts in Massachusetts, who, of course, already have a net metering provision, they saw a substantial increase in the amount of applications that they had for DG, roughly over a five-year period, beginning at around 2007, 2008, they saw about a fivefold increase in the applications that they had, primarily, they believe, driven by net metering. It indeed not only presents an opportunity, but also, you know, presents an obligation, in terms of the, you know, the amount of the -- the time frame, the turnaround, the technical studies, depending on which tranche, if you will, of, you know, whether it's a small, medium, expedited type review, or, you know, a rather complex technical review, mostly driven by the size of the proposed installation. And, they have seen some rather significant sized installations, developers, you know, coming in, buying, leasing fields, constructing photovoltaic arrays, you know, in the field, and then tying into the delivery systems. So, these are some of the, you know, some of the forward-looking that we've done, based on the experience that they have had in Massachusetts. And, again, we anticipate a significant uptick in the amount of applications that we will have here in New Hampshire.

Q. So, for future plans, do you, I'm not sure I know the answer to this, this is probably unknowable, but does the utility wait for these projects, people to come forward, or do you -- you know, are you proactive or reactive, I guess? And, I'm not sure I know if there is a right answer, I was just curious.

A. (Brouillard) At this point, I would anticipate that we'll begin in some reactive mode. And, there's some advantage to that, in that we can begin to get a feel for whether or not the impact will be the same as experienced in Massachusetts or not. And, as we get a feel for that, and recognizing, you know, the comments earlier on opportunities for the Company, you know, we can, you know, we can certainly take that into account. Again, for my own perspective, I'm most interested in, you know, what the impact on -- of PV is going to have on the demand of individual circuits, and in particular areas. You know, one megawatt, even at, you know, even at 25 percent, nonetheless is, you know, can be significant. It may represent, you know, perhaps a year's worth of load growth on a particular circuit. So, that, in my mind, is an opportunity for deferral for a year.

CMSR. SCOTT: Thank you.

WITNESS BROUILLARD: You're welcome.

CHAIRMAN IGNATIUS: I had one other question, just notes, when, Mr. Stachow, when you were testifying, I didn't follow an answer, and I want to be sure the record is clear.

BY CHAIRMAN IGNATIUS:

Q. You had talked about an interest in a detailed process, and describing the inputs and outputs in a planning process. And, then, I think Mr. Speidel asked "is this to deal only with capacity planning or with more than capacity planning?" And, I wasn't sure if your answer was a "yes, more than capacity planning" or "no, capacity planning is all you're talking about"?

A. (Stachow) Yes, more than.

CHAIRMAN IGNATIUS: Thank you. Any further questions from Commissioners? All right. Any redirect from either Ms. Knowlton or Mr. Speidel?

MS. KNOWLTON: I have none.

MR. SPEIDEL: I have none as well. Thank you, Chairman.

CHAIRMAN IGNATIUS: All right. Thank you. Then, the two of you are excused. Thank you very much for your testimony this morning. Is there any objection to striking the identification on Exhibit 1 and making it a full exhibit?

(No verbal response)

CHAIRMAN IGNATIUS: Seeing none, we'll do that. Is there anything else we should take up before final closing remarks?

(No verbal response)

CHAIRMAN IGNATIUS: Doesn't appear any. So, Mr. Speidel, do you want to begin?

MR. SPEIDEL: Yes. I will make a very brief closing statement. I would like to thank the Company for its cooperation through the review process and the discovery process that the Electric Division engaged in with Liberty regarding this LCIRP. As mentioned by Mr. Stachow, there is an understanding that this is something of a work-in-progress, as is every LCIRP. There's a hope that the next LCIRP will incorporate enhancements and suggestions from Staff, designed to provide more of a value-added product that the Company could even use for perhaps its own internal use, on the basis of some of the management concepts and ideas that Mr. Stachow was describing.

And, we do support the acceptance by the Commission of this LCIRP as adequate under the terms of the statute, in that it does address all of the major issues that the statute requires the Commission to consider. And, for that, we thank you.

CHAIRMAN IGNATIUS: Thank you. Ms. Knowlton.

MS. KNOWLTON: Thank you. As Mr. Brouillard indicated, this is very much a transitional IRP. This was prepared in conjunction with National Grid, under its Transition Services Agreement with Liberty. And, based on when this plan was filed, we're already almost one year into the Plan. The Company very much looks forward to the opportunity to establish its own process for planning independent of National Grid. And, it will take into account the recommendations of the Staff, as well as the Commission, as it develops the process, not just in process, but the content of, you know, what we will consider going forward. And, certainly, am mindful of the Staff's concerns and testimony about perhaps the need to have a confluence of planning that happens for business, internal operational purposes, with the statutory requirements that we submit a plan to the Commission. So, we'll be mindful of that as we put together our own process on a going forward basis.

The testimony demonstrates that the Plan is adequate and that it meets the statutory requirements governing least cost planning. We request that the Commission find the Plan adequate, and also, in any order on the Plan, indicate the date for the filing of the next plan, which I believe would be two years from the date of the Commission's order on this Plan.

And, with that, you know, we thank the Staff, and we'll continue to have discussions with them as we move forward to our next plan on that process. And, thank the Commission for its time today.

CHAIRMAN IGNATIUS: Thank you. And, I appreciate people trying to think creatively about how best to make this sort of a document really meaningful, not just satisfy terms of the statute, but operationally, in an extremely complex area. So, thank you for that this morning. Thank you, Staff, for the sort of new ideas you're bringing to it.

Unless there's anything further, we'll

take this under advisement. And, we are adjourned.

(Whereupon the hearing was adjourned at 11:00 a.m.)