

STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION

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Concord, New Hampshire

RE: DE 09-054

NHPUC JUN11'09 PM 4:05

ELECTRIC UTILITIES:  
Residential Renewable Energy Generation  
Incentive Program. (Hearing to receive  
public statements)

PRESENT: Chairman Thomas B. Getz, Presiding  
Commissioner Graham J. Morrison  
Commissioner Clifton C. Below

Sandy Deno, Clerk

APPEARANCES: (No appearances taken)

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

ORIGINAL

**I N D E X****PAGE NO.**

Presentation by Mr. Ruderman (PUC Staff) 4

**STATEMENTS FROM THE PUBLIC BY:**

Danielle Hudson-Durkin 11

Thomas Palma 12

Michael Jackson 14

Meredith Hatfield 17

Mitch Sidd 21

Kim Frase 26

Mark Weissflog 30

Pat Coon 36

Brian Pellerin 45

Sam Pillsbury 47

Tim Roper 51

John Hassell 52

**P R O C E E D I N G S**

CHAIRMAN GETZ: Okay. Good morning, everyone. We'll open the hearing in docket DE 09-054. And, by way of procedural background, the New Hampshire Laws of 2008, Chapter 268, amended RSA 362-F, the Electric Renewable Energy Portfolio Standard, by requiring the Commission to make and administer a one-time incentive payment to a residential owner of a small renewable generation facility from the renewable energy fund. Pursuant to RSA 362-F:10, VI, the incentive payments for small residential energy facilities shall be made from the renewable energy fund up to a maximum aggregate payment of 10 percent of the fund per year. The payments will be a one-time payment of \$3.00 per watt of generation capacity, up to a maximum payment up \$6,000, or 50 percent of the system costs, whichever is less. And, the statute also requires the Commission to establish an application process.

An order of notice was issued on April 17 that scheduled a technical session that was held on May 15th, and also scheduled the hearing for this morning. The hearing today will be conducted in the nature of a rulemaking or legislative style hearing. We'll begin with turning to Staff, and I believe Mr.

1 Ruderman, the Director of our Division of Sustainable  
2 Energy, will give some background on the process and the  
3 substance of the statute, and then we'll give an  
4 opportunity for public comment. I notice we have a  
5 sign-up sheet already, and I'll just go through the names  
6 as they appear on the sign-up sheet, and I'll give  
7 everyone an opportunity to speak.

8 So, with that, we'll begin with Mr.  
9 Ruderman.

10 MR. RUDERMAN: Thank you very much, Mr.  
11 Chairman, and good morning, Commissioners. I want to  
12 share just a few observations before we get into testimony  
13 and hear from all the folks who have come today to  
14 participate in this hearing. What you have before you is  
15 a draft application form for residential renewable  
16 electrical energy systems that have already been installed  
17 in reliance on HB 1628. That was the legislation that was  
18 enacted by the Legislature last session creating the  
19 Residential Rebate Program for installations up to -- I'm  
20 sorry, under 5 kilowatts. And, what we're proposing to do  
21 here, essentially, is to develop two application forms.

22 At the outset of this process, I think  
23 we all thought it would be a fairly simple matter, we  
24 would just create a rebate form and we'd get the program

1 up and running by July 1st, when funding first becomes  
2 available. But what we discovered along the way is that  
3 we have really two groups of consumers here to assist with  
4 these rebates. And, one is the group that has relied upon  
5 HB 1628 and gone ahead and installed renewable systems.  
6 For the most part, we've heard from people who have put up  
7 solar electric panels on their homes. Well, those folks  
8 were relying on the text, excuse me, of HB 1628, and that  
9 statute is very -- provides very few details on system  
10 requirements. It just lists some very basic items. You  
11 know, make sure that it meets safety specifications, and  
12 two or three other basic factors, compliance with local  
13 zoning applications, things like that. So, the folks who  
14 have already installed these systems didn't have a lot of  
15 guidance.

16 But what we've discovered, in looking at  
17 other state programs, and in talking with all the  
18 stakeholders here, and hearing from them at the technical  
19 session and receiving their written comments, is that  
20 moving forward we really want to have a much more  
21 prescriptive process for installing solar electric or  
22 small wind or other renewable installations, so that the  
23 homeowners end up with a system that functions properly,  
24 that functions to its full potential, and so that we, the

1 State, have an ability to track those systems and to be  
2 assured that the public monies that are being invested in  
3 those systems are invested wisely.

4 So, we essentially have two  
5 applications. One, which will deal with systems that  
6 already have been installed, or will be in the very near  
7 future, before we've been able to get word out to the  
8 public that we're creating these new requirements for  
9 systems on a going-forward basis.

10 We are in the process of drafting a  
11 rebate form for these prospective renewable installations.  
12 And, we expect to have a draft of that document available  
13 within the next few weeks. So, what we're proposing today  
14 is that we would come back to the Commission, ask them to  
15 create a schedule for reviewing the prospective  
16 application, which would involve another technical  
17 session, more input from folks there, and through written  
18 comments, and then we would come back here for another  
19 hearing like today's and ask for the Commission's approval  
20 for these applications on a going-forward basis.

21 In general, we found the technical  
22 session and the written comments pertaining to the rebate  
23 form to be very helpful. We've made substantial revisions  
24 to the form. You could almost call it an "overhaul".

1 And, it was just incredibly useful to us to have in this  
2 room both homeowners who have done installations or are  
3 planning to do installations, and many of the installers  
4 who work in the field and know how these systems work, and  
5 can give us a sense of "Look, here are the practical  
6 things that we need to worry about. Here are the things  
7 you're missing in your application. So, the feedback  
8 resulted in a great number of changes, and we still are  
9 receiving feedback. We received one e-mail, I forwarded  
10 it this morning to the Commissioners. And, we'll continue  
11 to make revisions based on the feedback.

12 I do want to suggest that we establish a  
13 deadline for comments on this particular application.  
14 And, then, my proposal would be that we establish that  
15 deadline as a week from today, June 2nd. Because there  
16 obviously will be comments that we -- there will be issues  
17 that are discussed at today's hearing that may elicit  
18 additional written comments. And, we want to give folks a  
19 chance to get that in. But, at the same time, we also  
20 want to move forward and get this application approved, so  
21 that people can start filling it out in time for the  
22 July 1st date.

23 So, those are sort of my general  
24 overview comments. And, I'm happy to take any questions

1     you might have for clarification or we can get right into  
2     hearing from folks who are here today to give their  
3     comments. Thank you.

4                   CHAIRMAN GETZ: Well, let me just ask  
5     about process. You had mentioned another technical  
6     session. And, you also mentioned a deadline for written  
7     comments of June 2nd. How does -- Do they interrelate at  
8     all? I'm just concerned, on the one hand, is June 2nd  
9     enough time? But I understand your concern about "We  
10    don't want to take too long."

11                  MR. RUDERMAN: Right. I'm proposing  
12    that deadline solely for written comments on this  
13    application form that we're looking at today.

14                  CHAIRMAN GETZ: Yes.

15                  MR. RUDERMAN: Then, we would circulate  
16    a draft application form for prospective installations.  
17    And, there would be a whole separate timeline for people  
18    to give us their comments for a tech session, *etcetera*.  
19    So, no one would be precluded from commenting on the new  
20    application.

21                  CHAIRMAN GETZ: So, they're essentially  
22    parallel paths, and really don't necessarily interact in  
23    any way that one would slow down the other?

24                  MR. RUDERMAN: Exactly.



1                   CHAIRMAN GETZ: Okay. Well, I guess my  
2 inclination is to maybe stretch out the time for written  
3 comment to maybe close of business on Friday, June 5th.  
4 That will give a few more days. And, then, I also want to  
5 make it clear to people that they have some time to give  
6 us something in writing, and especially written -- spoken  
7 components, oral comments, with respect to an application,  
8 sometimes it's not as clear if they can submit something  
9 in writing, making an actual proposed revision to the  
10 application itself might be more useful for us, especially  
11 if it's done in the kind of a "track change" format. So,  
12 June 5 works for you?

13                   MR. RUDERMAN: That works fine for us,  
14 yes.

15                   CHAIRMAN GETZ: All right. Then,  
16 anything --

17                   CMSR. BELOW: I do have one question.  
18 The revised form eliminates reference to any information  
19 about a facility meeting local zoning regulations, which  
20 might seem like an unnecessary requirement, except it's in  
21 the statute. And, we don't have the authority to change  
22 that statutory requirement until after December 31st,  
23 2010. So, was that just an oversight or is that somehow  
24 encompassed in the other questions?

1 MR. RUDERMAN: It wasn't an oversight.  
2 It reflects some of the discussion that we had here at the  
3 technical session, where the thinking was, in those towns  
4 that have zoning regulations and a building inspector, a  
5 building permit, which is Number 5, on Page 3 of the  
6 application, would suffice to verify that there's  
7 compliance with local zoning. Because, apparently, you  
8 can't get a building permit if you're in noncompliance  
9 with local zoning. And, the thought was that, in those  
10 communities, that would be a reasonable way to verify  
11 compliance. In communities in which there are no local  
12 zoning regulations, then it wouldn't be applicable,  
13 essentially.

14 And, I hope that covers the universe of  
15 situations. But, you know, if we hear differently today,  
16 then that's certainly an item that we're open to modify.

17 CHAIRMAN GETZ: Anything else before we  
18 give an opportunity for public comment?

19 MS. AMIDON: We're all set. Thank you.

20 CHAIRMAN GETZ: All right. Then, let's  
21 begin with Tressy Manning.

22 MS. MANNING: I didn't wish to speak.

23 CHAIRMAN GETZ: Okay. Thank you.

24 Danielle Hudson-Durkin.

1 MS. HUDSON-DURKIN: On the application  
2 for Section D, Number 2, the "Invoice by item and item  
3 cost", a lot of installers actually don't give an itemized  
4 invoice. It will be a sales order, but it won't be every  
5 single nut and bolt and everything that was used. It will  
6 be a sum of the total.

7 On Section F, Number 3, says "The  
8 Applicant understands that the program funds are limited  
9 and, as a result, there may be a delay in issuing the  
10 incentive payment based on the queue position of the  
11 applicant; and the applicant agrees that the system,  
12 interconnection and documents supporting the application  
13 may be audited by the Commission." I understand that the  
14 funding limit for this round is about \$400,000. And, if  
15 you divide that by about \$6,000 per system, that's roughly  
16 66 systems.

17 Are the rest of the applications that  
18 are going to be submitted going to be in line for funding  
19 for the next particular round and is that going to be on a  
20 first come/first serve basis?

21 CHAIRMAN GETZ: Well, those are  
22 questions we're going to have to answer.

23 MS. HUDSON-DURKIN: Okay. Okay. That's  
24 it. Thank you.

1 CHAIRMAN GETZ: Okay. Thank you.

2 Thomas Palma.

3 MR. PALMA: Good morning. I'm Thomas  
4 Palma, New Hampshire Electric Co-op. Nice to see you  
5 again. I have a few comments. Nothing on Page 1. On  
6 Page 2, under "Photovoltaic Systems", Number 11, it talks  
7 about "a roof" or "ground mounted" or "a pole mounted".  
8 "Ground mounted" and "pole mounted" are probably the same.  
9 You might want to just change that to "ground mounted".

10 And, under "Wind Systems", which is  
11 something we discussed at the tech session, on the Number  
12 3, there is a wind turbine that has been very popular,  
13 it's been put up in the Co-op territory, called a  
14 "Skystream". And, that happens to be rated as an AC unit.  
15 So, you might want to just go with the AC output of a wind  
16 turbine to keep things simple. Because otherwise you'll  
17 have two different -- each wind turbine will have two  
18 different ratings, an AC and a DC rating. And, there's  
19 also a rare type of turbine that isn't DC at all, it's  
20 completely AC. So, it's just a suggestion, maybe you want  
21 to go AC.

22 And, a second point would be, on Number  
23 4, "power rating", the manufacturers usually rate at  
24 different speeds. Two examples that we've seen at the

1 Co-op. One is Southwest Skystream was rated at 29 miles  
2 per hour, and the Bergey XL is rated at 31. You might  
3 want to have a -- and every wind turbine comes with a  
4 power curve. So, if somebody else came in with a rating  
5 at 20 miles an hour, it's really not apples-to-apples  
6 against these other units. You might want to just have a  
7 range of what you're rating at between 28 and 32 miles per  
8 hour, or some way to kind of corroborate all that data.  
9 Otherwise, someone will be at a disadvantage or at an  
10 advantage with a turbine that's rated very much lower than  
11 these two. And, like I said, these are the two most  
12 popular used in our program last year, which is probably  
13 our biggest year for wind turbines.

14 Number 13 under "Wind Systems", I would  
15 just add for "describe or attach wind study" "or  
16 analysis". Not every project gets a typical wind study,  
17 that people in the industry use as something, putting up a  
18 met tower and doing a six month or year long study. We  
19 normally see paper analysis instead. That's been our  
20 experience.

21 And, the last comment is on Page 4,  
22 number 16: "The PUC reserves the right to request system  
23 performance data for a period of five years." On these  
24 type of systems that have already been installed, some

1 will have data collection abilities already built in or  
2 they have purchased a data collection application or  
3 software application, and others will not. You might want  
4 to add "Rebate recipients are encouraged to install a  
5 revenue grade utility meter." Other than that, there's  
6 really no other way to collect data that's not built into  
7 the inverter or it's not built into a software program.  
8 And, that's all I have.

9 CHAIRMAN GETZ: Thank you.

10 MR. PALMA: All right. Thank you.

11 CHAIRMAN GETZ: Michael Jackson.

12 MR. JACKSON: Yes. Good morning.

13 CHAIRMAN GETZ: Good morning.

14 MR. JACKSON: I'm here to ask one -- a  
15 series of questions, actually. This particular incentive  
16 is geared towards, at the moment, new installations only,  
17 versus growing a system that's currently installed. We  
18 are a homeowner with a small system that was  
19 professionally engineered and installed according to all  
20 the codes and that type of thing. We've been on the Green  
21 Building Tour every since it was installed, and we'd like  
22 to expand it, and we'd like to take advantage of this  
23 incentive to do that. Is there a time frame that you  
24 would consider expanding systems? What is the overall

1 goal of this incentive? To add more watts, renewable  
2 watts to the system or to add more people that have  
3 renewable systems? The fact that we could expand our  
4 system very easily and readily seems to fall in the  
5 category of "adding watts to the system".

6 CHAIRMAN GETZ: Well, I think some of  
7 what we're trying to do is implement the statute, and part  
8 of the process of implementing the statute is to find out  
9 are there areas like you're posing? What's eligible?  
10 What's not? So, we have -- really collecting comment,  
11 trying to understand what's the reality out in the world  
12 of what people -- what projects they have, and then trying  
13 to make judgments about what qualifies under the statute  
14 and what doesn't. So, your comment is helpful in terms of  
15 the more detail we can get about what your particular  
16 issue is, in terms of adding, I take it to an existing  
17 system, whether that --

18 MR. JACKSON: Correct, we already have  
19 solar --

20 CHAIRMAN GETZ: -- whether that is  
21 something under the statute that we could provide a rebate  
22 to. So, and I think, like with the first woman who had  
23 some questions, these are questions we're going to have to  
24 determine through the process that we can't answer today.

1 MR. JACKSON: Do you know a time frame  
2 that these questions will be answered?

3 CHAIRMAN GETZ: Well, --

4 MR. JACKSON: Because the application  
5 process is coming up, and July 1st is the time frame. Is  
6 there -- will we know in time, basically, that we could  
7 apply for this rebate?

8 CHAIRMAN GETZ: Well, that will be part  
9 of the -- the application process will lay out who's  
10 eligible and under what circumstances. So, that would be  
11 the goal, so we could -- you know, before the, you know,  
12 before the first of July, and/or the other -- well,  
13 there's going to be two application processes to make  
14 those determinations. So, the best I can tell you is  
15 we're going to do our best to address the issue as quickly  
16 as possible. But, to the extent you or anyone else has  
17 these other types of issues about what qualifies and what  
18 doesn't, the more we can get on the record today and the  
19 more we can see in written comments, then the better  
20 situated we will be to try and put together application  
21 processes to try to answer these questions that clearly  
22 wasn't contemplated in the statute, and we have to figure  
23 out, try to determine what can be covered and what can't.

24 MR. JACKSON: Thank you.



1 CHAIRMAN GETZ: Did you have other  
2 pieces or that's the big part for you?

3 MR. JACKSON: That was the big part. We  
4 want to expand, we want to be able to take advantage of  
5 this. And, was wondering if it applies to expansions,  
6 and, if not, when that would be a consideration? Thank  
7 you.

8 CHAIRMAN GETZ: Thank you. Meredith  
9 Hatfield.

10 MS. HATFIELD: Good morning,  
11 Commissioners. Meredith Hatfield, for the Office of  
12 Consumer Advocate. I would like to begin by thanking  
13 Staff very much for all of their work on the application  
14 that's before you today. I attended the technical  
15 session. And, while I can't say I understood all of the  
16 comments, I found it very helpful. I also wanted to thank  
17 all of the participants, both the residential owners  
18 themselves and all the installers who have taken the time  
19 to help the Commission to craft the application.

20 We do have some comments that do lend  
21 themselves, as the Chairman suggested, to written  
22 comments. So, we will be providing those next week. But  
23 I did want to highlight just a couple of thoughts that the  
24 OCA has.

1                   Beginning on Page 1 of the application,  
2                   in the bolded text, the last sentence states that "This  
3                   application is only for those facilities that began  
4                   operation by July 1, 2008 through August 31, 2009." We  
5                   thought that the Commission might like to set a deadline  
6                   for those, for these applications to be filed, so that you  
7                   weren't seeing an application under this particular part  
8                   of the program two years from now. And, it would probably  
9                   be good to send a message to people that, if you are  
10                  intending to apply for this, and you are intending to  
11                  install by August 31, '09, that within, I don't know, the  
12                  installers maybe could give you a time frame, three  
13                  months, six months, nine months, something like that, that  
14                  might be helpful to the Commission.

15                  Although the language about the fact  
16                  that this is "subject to available funds" does appear  
17                  later, we think it's good to have it in several places.  
18                  The end of this paragraph might be a good place to say  
19                  something like "subject to available funds" and "first  
20                  come/first serve", just to send that message clearly.

21                  Also, the last sentence currently refers  
22                  to "systems that will be installed after August 31 of this  
23                  year" that there will be -- and it doesn't really say  
24                  there will be another application. So, it might be good

1 just to make it a little bit more clear that there will be  
2 a separate application that you must file prior to filing  
3 your incentive payment, just to kind of set people up to  
4 understand that going forward there would be the two-phase  
5 kind of approach. Might be helpful just to make reference  
6 to that here.

7 In Section A, one thing that came up at  
8 the technical session that I thought was a very  
9 interesting comment, is that the Commission might think of  
10 this application not only as a way to determine who will  
11 receive the incentive, but also as a way to collect some  
12 data. And, to that end, we thought it might be helpful,  
13 at the end of that section, to add a question or two about  
14 whether people net meter. Again, this wouldn't impact  
15 whether or not they receive the incentive, but it just  
16 might be interesting to know if people are, for the past,  
17 the people who have already installed, are they net  
18 metering? And, people who are planning to install, are  
19 they going to?

20 Under Section B, the first sentence  
21 refers to a "residence". There was some discussion about  
22 this at the technical session. We were wondering should  
23 it be "primary place of residence"? I don't think the  
24 statute is clear on that. So, the Commission could

1 consider whether or not you want to provide funds for  
2 second residences or not.

3 Turning to the second page, under  
4 Section C, "System Information", the third question asks  
5 "whether all major components are new?" And, then, it  
6 says "if NO, subtract the cost of used items". We aren't  
7 familiar with whether or not this is a common practice.  
8 But we didn't know why, if someone was able to purchase a  
9 used item, why they would not be able to receive an  
10 incentive for that? Seems like a good idea to reuse  
11 things, if possible.

12 Turning to Page 3, in Section D, this is  
13 "Attachments Required". The first one is a "Signed  
14 contract with the installer". And, we want to make sure  
15 that this program is available for do-it-yourselfers. So,  
16 we wanted to make clear that this isn't a -- that you  
17 would not be precluded from seeking the rebate if you did  
18 not use a professional installer. And, that doesn't say  
19 that it's required, but it does seem to suggest that it  
20 is.

21 And, we will, as I said, we will file  
22 those comments, as well as a few small other suggestions  
23 that we have, in writing. Thank you.

24 CHAIRMAN GETZ: Thank you. John

1 Hassell, had a question mark?

2 MR. HASSELL: I have no comments yet.

3 Thank you.

4 CHAIRMAN GETZ: But you might at some  
5 point?

6 MR. HASSELL: So, essentially, no.  
7 Essentially, no.

8 CHAIRMAN GETZ: Okay. Thank you. Mitch  
9 Sidd?

10 MR. SIDD: Hi. I'm Mitch Sidd. I  
11 represent Clear Mountain Solar, based in Claremont, New  
12 Hampshire. Chairman and members of the Commission, I,  
13 too, want to thank the Staff for streamlining this  
14 process. I know it's arduous, and they have done a great  
15 job on it. I just have a few comments.

16 Originally, we were talking about a  
17 two-part application, so there would be a reserve, and  
18 then there would be the final application. Reading this,  
19 I guess I'm not clear on what happened with that as part  
20 of the technical session. That's my first question.  
21 Because my biggest concern is leveling the playing field.  
22 We have big fish, we have little fish. We're not bottom  
23 feeders. And, my customers shouldn't be any less  
24 available to get the incentives as somebody or some

1 company that has a big staff and pouring out the papers  
2 really quick. That's a real concern of mine. And,  
3 there's a lot of guys like me out there. That have a  
4 small company, and we have customers, and we want to give  
5 them the best of the incentives also. So, that is a  
6 concern. I don't know how that's going to be addressed or  
7 how it can be, but just a concern. Because, you know,  
8 we're all in this for the same reason, and it's not to  
9 make the money, it's to get the renewables out there. I  
10 don't want to get too political here.

11 On Section D, when it says the -- Number  
12 4 there, and Number 3, Number 3 and Number 4, I'm kind of  
13 confused as to, if it was Number 3, why would you need  
14 Number 4, and, if you had Number 4, why would you need  
15 Number 3? This has to do with the authorization for  
16 interconnect. And, I guess that's it.

17 CHAIRMAN GETZ: Well, let me just ask  
18 Mr. Ruderman. Did you want to address the general issue  
19 of how we got to where we are, in terms of the evolving  
20 considerations of what types of applications? I guess the  
21 original question was going to the fact that you thought  
22 there were going to be --

23 MR. SIDD: Right, I thought there was a  
24 two-part process to this.

1 MR. RUDERMAN: Sure. I'd be happy to  
2 address that. That concept is still at the heart of what  
3 we see as the application process moving forward. So, in  
4 other words, for systems that have already been installed,  
5 we can't do a pre-application requirement --

6 MR. SIDD: Sure. Right.

7 MR. RUDERMAN: -- and then a  
8 post-installation completion. But, moving forward, what  
9 we're going to say to folks is, "Look, if you want to put  
10 one of these systems in, you need to fill this application  
11 out first, and you need to get, well, I'll just call it  
12 for now "pre-approval"." So that, before you install your  
13 system, we know about it, we're able to verify that you've  
14 got everything lined up properly and you're doing the  
15 installation in accordance with the program guidelines.  
16 And, then will be a second phase, once that system is  
17 installed, essentially, you know, the applicant will say  
18 "The system is installed. We'd like, you know, Phase 2  
19 here, the verification of completion."

20 MR. SIDD: Uh-huh.

21 MR. RUDERMAN: And, at that point, we  
22 would send someone out, someone on our staff, to the site,  
23 to verify the system --

24 MR. SIDD: Right.

1 MR. RUDERMAN: -- is operating in  
2 accordance with the application. And, assuming that it  
3 is, it then gets checked off, and then the rebate check  
4 will be processed.

5 MR. SIDD: Right. So, after August --

6 MR. RUDERMAN: So, we're still sticking  
7 with the two parts.

8 MR. SIDD: Sure. So, after August 31st,  
9 that's when the --

10 MR. RUDERMAN: Or whatever date.

11 MR. SIDD: Right.

12 MR. RUDERMAN: And, I -- yes. And, I  
13 should say, we chose August 31st, you know, I don't want  
14 to say "randomly", but there wasn't a lot of science  
15 behind it. And, we really figured we'd leave that to the  
16 discretion of the Commission, depending on the timing of  
17 things and how they play out. But we want to give fair  
18 notice to people ahead of time --

19 MR. SIDD: Sure.

20 MR. RUDERMAN: -- that the system will  
21 be changing, and you will need pre-approval before putting  
22 a system in if you want to get a rebate.

23 MR. SIDD: Uh-huh.

24 MR. RUDERMAN: Another issue that's come



1 up and that you alluded to, and Danielle of groSolar also  
2 talked about, is how do we process the applications? Who  
3 gets priority? And, our assumption right now, for both of  
4 the applications, is that we would work with a first  
5 come/first serve principle. So, for applications  
6 submitted in response to -- let me rephrase that. For  
7 the, you know, retroactive applications, essentially what  
8 we're looking at today, whoever's got their system  
9 installed and completes an application, that's the point  
10 at which they're eligible for the rebate, and that  
11 determines where in line you are. So, really what's  
12 relevant is when you get in that completed application.

13 MR. SIDDD: Uh-huh.

14 MR. RUDERMAN: And, moving forward, we  
15 also propose to work on a first come/first serve basis.  
16 To the extent that we run out of funds, I think the  
17 logical policy is that those who are in the queue, did not  
18 get a rebate, are then first in line for the next batch of  
19 funding that comes in. And, that seemed to be pretty  
20 consistent with the feedback we got at the technical  
21 session. There was talk about a reserve, but nobody  
22 really had much of an explanation of how it would work or  
23 why we needed it, and why that would be preferable to just  
24 a first come/first serve system. So, that's sort of an

1 overview of where we are with those terms.

2 MR. SIDD: Okay. Okay. And, again, I  
3 just want to talk about fairness, that's all. Thank you.

4 CHAIRMAN GETZ: Thank you. And, I'm  
5 sure you understand, and probably most everyone else who  
6 has been following this, the completing factors of we're  
7 having to create a retroactive looking-backward process  
8 and a forward-looking process. And, during this whole  
9 time, for the last year, it's not been clear really how  
10 much money was going to be available. And, that's only  
11 becoming clearer day by day. So, it is a complicated  
12 process, and we're trying to make it as fair as possible  
13 in every way we can. So, the next -- with have another  
14 question mark, Eric Steltzer?

15 MR. STELTZER: No comment. Thank you.

16 CHAIRMAN GETZ: Well, that's all I have  
17 who signed up. A few people came in, I think, maybe  
18 after. Is there anyone else who would like to make a  
19 comment? Well, in the very back of the room. Sir, if you  
20 could come up. And, if you could just identify yourself  
21 for the record.

22 MR. FRASE: Yes. Thank you. It's Kim  
23 Frase, from Frase Electric. I've got a question that, I  
24 don't know, maybe it's been touched upon, and maybe you've

1     answered it, but it was a little unclear to me. So, the  
2     retroactive rebates or incentives are from July, last July  
3     to this coming August. So, the form, the application you  
4     to fill out for that, is that available now or not?  
5     That's not available till this July, right?

6                   MR. RUDERMAN: It's not available until,  
7     as a result of this proceeding, we get a final approved  
8     form approved by the Commission, which I anticipate will  
9     be ready and available before July 1st, though, I don't  
10    want to speak for the Commission. But, certainly, the  
11    goal is, if the funding comes in July 1st, no later than  
12    that date we should have this application available, and  
13    preferably we'd have it available in advance of that.

14                  MR. FRASE: All right. So, that might  
15    allude to what this gentleman was talking about. It's  
16    going to be a race to the money, in other words, for  
17    everyone to get the application in to get first in line.  
18    But, for me, personally, I've got, you know, my own system  
19    that I'm going to install in the next couple weeks that  
20    now is going to be, I guess, qualified in the retroactive  
21    form. But I have customers interested in doing this that,  
22    well, they could fall under retro -- well, they won't fall  
23    under retroactive, because they're not going to do it  
24    unless they know they have money. So, I guess they're

1 going to have to wait until after July 1st, until after  
2 the new application to fill out for the next -- now,  
3 that's the next batch. Now, is the \$400,000, is that the  
4 correct amount roughly that we're looking at for the  
5 retroactive, correct?

6 MR. RUDERMAN: The 400,000 is only an  
7 estimate. Our funding --

8 MR. FRASE: Approximately.

9 MR. RUDERMAN: Yes. Our funding won't  
10 come in until July 1st. And, that's our best guess now.  
11 But it could be 500,000. You know, hard to say. That  
12 funding will cover everything back to last July 1st and  
13 then everything forward. So, essentially, it's two  
14 program years, which is sort of an anomaly that resulted  
15 from the way the law was passed. Essentially, they  
16 created a rebate program before --

17 MR. FRASE: That's my problem.

18 MR. RUDERMAN: -- before it was funded.  
19 But, I mean, one comment I have about, you know, "this  
20 will only fund 66 systems" is I think it highly unlikely  
21 that we're going to have 66 applications for systems that  
22 have retroactively been installed. I mean, based on the  
23 number of contacts that I've had, --

24 MR. FRASE: Okay. Well, that was my

1 other question.

2 MR. RUDERMAN: -- and, again, I can't  
3 make that promise and say it's an impossible scenario, but  
4 my guess is we're not looking at numbers that high.

5 MR. FRASE: Okay. Well, with the state  
6 incentive and with the Co-op's incentive, it's pretty  
7 attractive in my area, which is the Electric Co-op. All  
8 right. So, then, the money is available or the  
9 application is available after you have it, it's in July  
10 something, for the next batch. When they fill out the  
11 application, those applicants will then know -- will they  
12 then know how much, if they made the -- I mean, I have a  
13 lot of customers who would be interested in doing it if  
14 they knew they had the money, before they actually had the  
15 money, as long as they knew it was there. So, they're not  
16 going to have to wait, they're not going to be a retrofit  
17 -- or, a retroactive also, are they? We will know, come  
18 this July, we'll know, till 2010, how much money is  
19 available and who made the list, correct?

20 MR. RUDERMAN: We should have a better  
21 sense of that.

22 MR. FRASE: So, next year it will be --  
23 in another month it will be much clearer.

24 (Mr. Ruderman nodding head

1 affirmatively.)

2 MR. FRASE: Okay. That's -- so, at  
3 least, all right, at least I can get some people on board,  
4 if they know they have this money. Okay. Thank you.

5 MR. RUDERMAN: That's the goal.

6 CHAIRMAN GETZ: Thank you. Another  
7 gentleman at the back table, did you want to speak, sir?

8 MR. WEISSFLOG: Mark Weissflog, KW  
9 Management. We've been installing photovoltaic systems in  
10 New Hampshire for about 12 years. I just had a few  
11 comments.

12 Starting on Section C, three items,  
13 actually, I think that should be added just for the  
14 beginning process of data collection is a "calculated  
15 energy" -- or, excuse me, "Calculated System Efficiency",  
16 "Calculated Energy Output" or "Annual Energy Output  
17 (AEO)", and then "Has a single revenue grade one-hour  
18 meter been installed?", with a "Yes" or "No". And, those  
19 three items are typically, since we can't go back, but if  
20 somebody has installed those one-hour meters, and if  
21 somebody has predicted performance, that's something the  
22 Commission can use to kind of start collecting data,  
23 rather than waiting two years or another year. And, it  
24 gives some valuable information on potential installers

1 that aren't installing systems correctly or individuals  
2 that aren't installing systems correctly.

3 Secondly, and this is just to elaborate  
4 on Tom Palma's comment on wind systems, I also believe  
5 that either the Commission should choose a wind speed that  
6 equalizes all wind turbines, rather than relying on the  
7 manufacturer's data. The two turbines that Tom mentioned,  
8 the Bergey XL and the Skystream, have both re-rated their  
9 turbine. Skystream was rated at about 22 miles an hour at  
10 1.9 kW. When all these incentives have started, they have  
11 now changed that to 28 miles an hour for a 2.4 kW rating,  
12 allowing them to -- their customers to collect more  
13 incentives. Secondly, Bergey was rated at 28 miles an  
14 hour, it is now rated at 31 miles an hour. So, those  
15 increased ratings equal increased incentives. And, while,  
16 with solar electric modules they all have standard test  
17 condition performance ratings, so they're all equalized or  
18 apples-to-apples comparison. Wind turbines are not. So,  
19 I think it's in the Commission's best interest and the  
20 citizens' best interest to rate it at a single wind speed,  
21 so that we're not taking the manufacturers at their, let's  
22 say, at their will. And, at the same time, it will be --  
23 more accurately depict what that performance for that  
24 annual energy output is on the wind turbine side.

1                   CHAIRMAN GETZ: Could you go explain a  
2 little more about how -- how would we do that rating?

3                   MR. WEISSFLOG: Well, you could just  
4 choose a wind speed, whether it be 23 miles an hour or  
5 26 miles an hour, something that most all wind turbines  
6 have a rating for. When you're looking at the  
7 manufacturer's data, they usually provide a graph or a  
8 chart on their predicted annual energy output based on a  
9 specific wind performance. That, and their actual rating,  
10 which is normally around their furling speeds, would then  
11 allow you to, again, more accurately determine what the kW  
12 rating is, and, at the same time, be more accurate in what  
13 the annual energy output might be for the consumer. There  
14 seems to be a problem with many small wind turbines that  
15 are installed in New England not being able to perform or  
16 produce even 50 percent of the predicted performance.  
17 And, that's pretty much across the board. So, I think  
18 it's a lot better for consumers to understand those  
19 apple-to-apple comparisons, rather than just  
20 manufacturer's data.

21                   CMSR. BELOW: The statute has a phrase  
22 that says "incentive payment of \$3.00 per watt of nominal  
23 generation capacity". And, we've sort of wondered in this  
24 context what "nominal generation capacity" means. What do



1     you think that means in the context of wind? What would  
2     be -- and, it also refers to a "maximum total peak  
3     capacity of less than 5 kilowatts" as a constraint on  
4     what's eligible, but --

5                 MR. WEISSFLOG: Well, that's a difficult  
6     question. For solar, there are a couple of landmarks, in  
7     standard test conditions, DC rating is something that most  
8     of the industry uses when they're predicting performance.  
9     However, that is not peak generation. Peak generation may  
10    be 10 to 20 percent higher than that, due to some climate  
11    or weather anomalies, very cold temperature, high wind  
12    speeds, a lot of solar resources over a thousand watts per  
13    meter square. So, you might have some days, very few,  
14    that actually out-perform that standard test condition.  
15    But, typically, on a solar module, standard test condition  
16    is what's used, because it's an equalizer. It's an  
17    apple-to-apple comparison of all solar modules.

18                Wind turbines do not have that. They  
19    typically just go by their own manufacturer's rating.  
20    And, because of the incentives, they have driven those  
21    numbers up, those mile per hour numbers up, to allow their  
22    consumers to get a better incentive. But that rating, the  
23    high end of a wind turbine is typically what the  
24    manufacturer rates it at. Although, most of the time it

1 still has a little left in it. So, it's the difference  
2 between its rating speed and its furling speed, when it's  
3 actually going to be slowing itself down so that the rotor  
4 doesn't over-rotate. So, that there is some added  
5 capacity, for a 10 k, it might go up to 12 or 12 and a  
6 half kW. For the Skystream, it might even hit 2.8 kW.  
7 However, those are very infrequent events, and only in  
8 high wind conditions.

9 CMSR. BELOW: What kind of furling  
10 speeds might be typical for these residential scale wind  
11 turbines?

12 MR. WEISSFLOG: The lower 30 mile an  
13 hour range is typically when most wind turbines start  
14 slowing themselves down.

15 CMSR. BELOW: Thank you.

16 CHAIRMAN GETZ: I believe you had some  
17 other --

18 MR. WEISSFLOG: Yes, one other comment.  
19 One of the things that would be very helpful, and is  
20 something that the PUC might be able to partake, is data  
21 on how many systems have been installed to date. And, if  
22 it hasn't been done yet, that would be something that  
23 would be pretty invaluable to figure out how much money  
24 has been expended. Because it would be my estimation that

1 we're pretty close to bumping the budget already, just by  
2 some anecdotal data, that I've spoken with individuals.  
3 We do have in the order of 40 to 60 systems, I think, that  
4 have been installed in the State of New Hampshire in the  
5 last year. So, it's very possible that it's going to be a  
6 race for the money. That that one day, it is going to be  
7 -- whatever that first day that you're going to collect  
8 applications is going to be a banner day businesswise at  
9 least at the PUC.

10 CHAIRMAN GETZ: We've got plenty of  
11 business lately.

12 MR. WEISSFLOG: And, that's all I have.  
13 Any other questions?

14 CHAIRMAN GETZ: What are you suggesting  
15 in that respect?

16 MR. WEISSFLOG: Just some, let's say,  
17 off-line data collection from installers and utilities, to  
18 see how many systems have actually been interconnected in  
19 the last year and how many systems are going to go  
20 proposed between now and July 1st. And, that should be  
21 pretty easy to try to validate, just by talking with some  
22 installers and talking with utility systems, so that  
23 there's some perception as to how many systems are out  
24 there.

1 CHAIRMAN GETZ: All right. Okay. Thank  
2 you. Someone in the front row?

3 MR. COON: Good afternoon. My name is  
4 Pat Coon. I'm from a company called Revision Energy.  
5 We're the leading installer in the State of Maine. We do  
6 about half of all rebated systems, both solar thermal and  
7 solar electric in the state. So, I come today with a  
8 little broader comments. And, if I'm getting off topic,  
9 please feel free to shush me and focus on the rebate  
10 application as it stands.

11 I want to make a few comments about  
12 what, in Maine's experience, has contributed to a good  
13 rebate program. And, these are general comments, and  
14 please feel free to move me along. The first and most  
15 important thing is that the dollar amounts leverage  
16 investment. The whole idea of the rebate is it's  
17 leveraging private investment. If the dollar amounts are  
18 too small, they're just giveaways to people who would have  
19 done the system anyway. If they're too big, you're  
20 wasting public money. And, that's been the biggest  
21 challenge that Maine has had is finding what those right  
22 levels are.

23 The second thing, from an installer's  
24 perspective, is we're a -- we employ people who install

1 solar systems. If we have any stops and starts in the  
2 funding, what happens is, as soon as there's the whiff of  
3 a change, all action stops. We have to wait until clarity  
4 comes. And, it puts installers in the awkward position of  
5 either having to not tell their customers what's going to  
6 happen, lie to the PUC about what did happen, or lay off  
7 employees, who need to eat irregardless of the incentives.

8 So, that's a key one, is making sure  
9 that the incentive levels as much as possible can last for  
10 long periods of time, which your challenge is, it goes  
11 indirect conflict with number one, which is making sure  
12 the dollar amounts are right.

13 Three is that the process is easy to  
14 navigate, so that people can wrap their heads around all  
15 the details quickly. So, Web pages that are well laid out  
16 and defined is critical.

17 The fourth is that, one of the things  
18 that a lot of the conversation in the PUC hearings in  
19 Maine revolved around the importance of a very high  
20 standard for installers. And, Maine adopted, for its  
21 solar electric, something called a "NABCEP certification",  
22 which may or may not be something you want to consider  
23 down the road.

24 And, the fifth comment I would make in

1 general is you get what you incentivize. A 2-kilowatt  
2 system is on the very small end of what makes sense for  
3 solar electric installations, because of the economies of  
4 scale. You still have to get a crew, you still have to  
5 get on the roof, you still have to wire an inverter, you  
6 still have to do all the paperwork. And, the cost of the  
7 inverter, which is what converts the energy, tends to be  
8 very proportionally large in the 2-kilowatt systems. So,  
9 as you move forward, you might consider not capping that.

10 Those are my general comments about what  
11 makes a good rebate program.

12 CHAIRMAN GETZ: Can I ask you a  
13 question, --

14 MR. COON: Yes, please.

15 CHAIRMAN GETZ: -- before you go onto  
16 the -- I assume you're going onto the application itself.  
17 But do you have an opinion about the \$3.00 per watt  
18 rebate, up to a maximum payment of 6,000, or 50 percent?

19 MR. COON: Yes. To jump-start the  
20 industry, that's exactly what Maine did, and with very  
21 similar dollar amounts. And, that's what it took to get  
22 the industry started. As we move forward, I would much  
23 rather see, from that leveraging perspective, I think a  
24 better number would be a lower dollar amount on a larger

1 array size, that doesn't stop people at 6 kilowatts, but  
2 as low as \$1.50 or \$2.00 a watt is enough to incentivize  
3 people. And, if you can keep the dollar amount low, you  
4 have a better chance of stretching out over the year. So,  
5 anywhere from \$1.50 to \$2.00, but the don't stop at  
6 2 kilowatts.

7 CHAIRMAN GETZ: Thank you.

8 MR. COON: Okay. I apologize. I'm not  
9 going to get to the application just yet. My next  
10 comments are around solar thermal systems, which aren't  
11 specifically in the application, but they are, and there's  
12 an "other" box. And, I want to make some comments around  
13 the benefits of solar thermal. We install solar electric  
14 systems and solar thermal systems. What we found in the  
15 State of Maine, and it's very similar in New Hampshire, is  
16 that high mass oil boilers require between three-quarters  
17 and a gallon of oil a day during the nonheating season.  
18 They're making hot water out of oil in these applications  
19 at thermal efficiencies in the 15 to 20 percent range in  
20 most residential applications. Horribly inefficient.  
21 And, it also coincides with when we have the most  
22 sunlight. So, a properly sized solar thermal system can  
23 save, at a bare minimum, very conservatively, 200 gallons  
24 per year of oil. That's the equivalent of 8,200

1 kilowatt-hours of energy, at a cost of about \$11,000.

2 Now, to convert that same dollar amount for photovoltaics,  
3 it's about one-fifth. So, for the same investment, you  
4 can save five times the amount of energy when using solar  
5 thermal to offset oil. That's a huge, huge argument for  
6 incentivizing solar thermal.

7 Now, back to the right place in the  
8 lever. It's a crazy place to put the lever for solar  
9 thermal. You don't need \$6,000 to incentivize solar  
10 thermal; more like \$2,000. But the way the rebates seem  
11 to be heading, solar thermal would be eligible for a  
12 \$6,000 rebate, which is about three times too much.

13 Now, there's a similar issue in rating  
14 solar thermal collectors as wind turbines. As has been  
15 said, solar electric systems are rated by instantaneous  
16 output, which, using weather data, is very simple to --  
17 it's easy to translate into kilowatt-hours per year.  
18 Solar thermal systems don't have any instantaneous output  
19 rating. You can't open a book, find a table, look at a  
20 warranty that claims Btu's or kilowatts per hour  
21 instantaneously. So, if you're going to figure out how to  
22 put solar thermal rebates into, and we have a couple of  
23 clients already who are ready to apply for solar thermal  
24 projects, but we don't have any way of telling you what



1 the kilowatt-hour rating on a solar thermal system is.  
2 What we do have is something called "SRCC ratings".  
3 Everybody who gets tax credits has to go through a third  
4 party rating agency called the "SRCC". That body puts out  
5 a table that has, based on a certain temperature  
6 differential and amount of sunlight, how much you'd expect  
7 to collect in that collector per day. Now, we can  
8 translate that daily production, if we take the right box,  
9 we can calculate what an average production for the course  
10 of the year would be, and incentivize it that way. What  
11 the State of Maine ended up doing was just on dollar  
12 amounts, because these systems are so efficient they just  
13 -- they didn't feel the need to rate them. So, they  
14 capped the residential system at anywhere from \$1,500 to  
15 \$2,500, depending on how much money there was in the fund.  
16 And, I have a question, which is "what should we do for  
17 solar thermal applications right now?"

18 CMSR. BELOW: Well, just one thing about  
19 the statute. The statute fortunately did create a  
20 authority in another section, VIII, says "The Commission  
21 may, after notice and hearing, by order or rule, establish  
22 additional incentive or rebate programs for customer-sited  
23 thermal and renewable energy systems." So, we were given  
24 express authority to set up a thermal incentive for solar

1 hot water, for instance. And, Jack can speak to the plans  
2 for that.

3 CHAIRMAN GETZ: Yes. And, some of the  
4 problem has been the debate, there is some debate about  
5 what does the statute mean, in terms of the 10 percent set  
6 aside rebate versus our authority to create new rebate  
7 programs. And, that's what we're -- part of what we're  
8 trying to work our way through. But, I don't know, Jack,  
9 did you have anything further?

10 MR. RUDERMAN: Just a little bit. I  
11 mean, there is ambiguity in the statute. And, it caused  
12 us, in response to inquiries like yours, to go back and  
13 research the legislative history. And, what we found is  
14 that the prime sponsors of the legislation really intended  
15 HB 1628 to apply to electrical systems, and not to thermal  
16 systems. It doesn't mean they didn't want to see thermal  
17 systems rebated at some level. But, in that particular  
18 bill, it didn't seem to be part of their intent to create  
19 a rebate that would cover both electrical and thermal.  
20 But, as Commissioner Below pointed out, they gave us the  
21 authority in that statute to create additional rebate  
22 programs. And, we're already beginning to work on those,  
23 in part, because, by rule, that we established here at the  
24 PUC, subsequent to that legislation, we've laid out the

1 authority for the creation of a rebate program that will  
2 cover both thermal and electrical systems, and up to a  
3 much larger scale. So, it would include residential, but  
4 possibly commercial or industrial applications as well.  
5 So, that's the separate process that's going to be playing  
6 out here. It's a little bit behind schedule --

7 MR. COON: Okay. So, it doesn't have  
8 anything to do with this process, the --

9 MR. RUDERMAN: No. No.

10 MR. COON: Okay.

11 MR. RUDERMAN: And, again, I know there  
12 was some confusion about that. And, there is some who  
13 look at the law and argue, you know, if you read --

14 MR. COON: If you had Class I and Class  
15 II renewables, seems like solar thermal wouldn't fit in.

16 MR. RUDERMAN: Exactly. And, I think it  
17 was a flaw in the drafting of the language. I think the  
18 intent didn't match necessarily or it wasn't clearly  
19 enough expressed. But the Commission certainly recognizes  
20 the value of solar thermal. And, we have every intent, as  
21 that process unfolds, to include it in a new rebate  
22 program.

23 MR. COON: Yes. And, just, again, I'm a  
24 big fan of photovoltaics, and our company does a lot of

1 photovoltaics. But as we -- the conversation in the  
2 legislative hearings in Maine was very much centered  
3 around the fact that, for \$12,000 out-of-pocket expenses,  
4 working Maine families could actually afford to offset a  
5 significant amount of their oil. Whereas, you know,  
6 pre-rebate \$16,000 worth of photovoltaics saves about \$30  
7 a month worth of electricity. So, in terms of return on  
8 investment, solar thermal hands-down. So, we will wait to  
9 see.

10 So, and as you get into that -- well,  
11 we'll talk about as you get into it. A couple of other  
12 minor points. Maine had a huge problem with wind, with  
13 wind systems, and their failing to meet their rated  
14 capacity. To the point that -- the challenge is, you say  
15 "Well, this windmill is rated at this curve." Well, it's  
16 very, very site-specific. And, you put the turbine in the  
17 wrong place, and the biggest problem is you don't get it  
18 up high enough. To give you some sense, there are very  
19 few places in New England, on a residential scale, that  
20 are going to have wind speeds in excess of 8 miles an  
21 hour. They're rated at 23 miles an hour. So, you can see  
22 there's -- and, on top of that, some systems just don't  
23 work at all.

24 At first, Maine did not require the

1 annual one year of actual wind speed data. And, after a  
2 year of, honestly, what it was is the PUC was blasted by  
3 complaints from people who had invested good money on wind  
4 systems that just didn't work, they finally said "Okay.  
5 We're tired of taking these phone calls. Yes, it's a  
6 bummer. You've got to put an anemometer up for a year to  
7 actually prove." And, as somebody who sells renewable  
8 energy systems, we looked very hard at wind. We put up  
9 enough, we put up about a half a dozen systems. And,  
10 after data reading, we realized that, really, it just, in  
11 my estimation, is not an applicable technology for New  
12 England, because of the topography. On some certain very  
13 specific sites, it is. But, for the vast majority, it  
14 isn't. And, that's it.

15 CHAIRMAN GETZ: And, did you have  
16 something about the application itself?

17 MR. COON: Not directly.

18 CHAIRMAN GETZ: Okay. Then, any  
19 questions?

20 CMSR. BELOW: No.

21 CHAIRMAN GETZ: Okay. Thank you.

22 MR. COON: Thank you.

23 CHAIRMAN GETZ: Other? Sir.

24 MR. PELLERIN: My name is Brian

1 Pellerin, from Freedom Renewable Energy. I have one  
2 comment about the solar thermal systems. Again, given the  
3 ambiguity, I would ask that they may be considered in the  
4 first application process. I was at the technical  
5 session, and we talked a lot about it. We've got quite a  
6 few customers that are expecting some type of rebate. I'm  
7 not sure exactly what, you know, how much that is.

8 CHAIRMAN GETZ: Customers who have  
9 already put in solar thermal?

10 MR. PELLERIN: Put in or actually have  
11 contracts where we're putting them in now. So, that would  
12 be one comment. The other comment I would have is  
13 advocate some transparency in the process itself. In my  
14 past career, I did a lot of traveling, and I used to sit  
15 in the gate waiting for an upgrade. And, when they got to  
16 the point where they actually listed it, it made  
17 everything a lot easier, because you could see right away,  
18 you know, who was in line where. And, it just made it a  
19 lot easier from a fairness perspective. So, maybe through  
20 the Web or some way you could create some transparency for  
21 this process, I think it would help a lot.

22 CHAIRMAN GETZ: You mean an actual, like  
23 a waiting list queue?

24 MR. PELLERIN: Yes. Absolutely. You

1 don't have to put people's names, you can put initials or  
2 maybe towns, or I'm not sure how you'd structure it, but  
3 just some way where people could go to see how long the  
4 list is, how many people are on it. Because that's  
5 certainly questions I get now from my customers, "How many  
6 people are on the list?" I have, obviously, no idea.  
7 Thank you.

8 CHAIRMAN GETZ: Thank you. Anyone else  
9 who would like --

10 MR. PILLSBURY: Good afternoon,  
11 everybody. Sam Pillsbury, Helios Solar, out of Brentwood,  
12 New Hampshire. We install solar electric, solar thermal  
13 systems as well. And, we do combination of systems,  
14 cogeneration systems, where they will produce both your  
15 domestic hot water and electricity in the same square  
16 footage on the roof, if you will. A couple of questions  
17 and a comment.

18 On the qualifications for the solar  
19 electric size, you had a kW cut-off at 5, 5 kilowatts.  
20 Now, is that an array nameplate -- I'm sorry, an inverter  
21 nameplate rating, or is that the actual DC array size?

22 MR. RUDERMAN: I think that's the actual  
23 STC DC rating.

24 MR. PILLSBURY: Of the inverter?

1 MR. RUDERMAN: No.

2 MR. PILLSBURY: I'm sorry.

3 MR. RUDERMAN: Of the panels themselves.

4 MR. PILLSBURY: Okay. That's my  
5 concern. Because as you -- oops, sorry. That's with --  
6 we see with the varying weather conditions and whatnot,  
7 say an array size of 5 kilowatts will not actually produce  
8 5 k, especially after you factor in all your line  
9 loss/inverter inefficiencies and whatnot. So, my comment  
10 was to possibly base that on the inverter nameplate  
11 rating, versus the actual array size.

12 In concern with my cogeneration systems,  
13 where I'm producing both your domestic hot water and  
14 electricity, will those systems be applicable for these  
15 rebates or is it just the photovoltaic portion of the  
16 system, the cost of the photovoltaic portion that will be  
17 available?

18 MR. RUDERMAN: My reading of the law is  
19 it would just apply to the photovoltaic portion of the  
20 system.

21 MR. PILLSBURY: Okay.

22 MR. RUDERMAN: On the other hand, if you  
23 have someone who installs photovoltaics, and then  
24 separately solar thermal, the solar thermal will be



1 eligible under the other rebate program that we were just  
2 discussing that has yet to be created.

3 MR. PILLSBURY: Absolutely. And, I'm a  
4 huge proponent of the solar thermal. It makes the most  
5 sense in New England, as far as efficiency return on  
6 investment.

7 Other than that, my only comment was, as  
8 Mr. Coon had said, maybe decrease the dollar per watt and  
9 increase the system size availability. A 5 k system is a  
10 small residential home, and most of the people that are  
11 actually looking to move forward with these projects have  
12 a higher energy demand. So, you know, looking at our  
13 neighbor to the south, in Massachusetts, they have a  
14 graduated incentive program, based on the size of the  
15 system, up to 5, up to 25, up to 50, 100 kilowatt systems.  
16 So, just something to look at. Other than that --

17 CHAIRMAN GETZ: Of course, it's an issue  
18 of, on the statutory 10 percent set aside program, we have  
19 a whole lot less discretion than we would in setting up  
20 our own rebate program.

21 MR. PILLSBURY: Yes, I just heard about  
22 the 10 percent. What's happening with the other  
23 90 percent?

24 CHAIRMAN GETZ: Well, we're taking care

1 of the 10 percent statutory requirement first of the  
2 programs that qualify --

3 MR. PILLSBURY: Are you looking to  
4 increase it down the line or --

5 CHAIRMAN GETZ: Well, it's a question of  
6 trying to make sure we expend the funds that come in, you  
7 know, reasonably quickly. And, it's certainly looking  
8 like there's a lot less money that's coming in now than  
9 was expected last year, when this whole thing started.  
10 So, --

11 MR. PILLSBURY: Understood. Understood.  
12 There was another comment earlier about a question on if  
13 it was not the primary residence of the renewable energy  
14 customer. Just a thought on that. I know there's a lot  
15 of vacation homes, talking about the lakes up north, a lot  
16 of people coming in from out-of-state looking to spend  
17 money. I would discourage limiting them, you know,  
18 disabling them from taking advantage of this rebate. If  
19 it's out-of-state dollars that are coming in, say somebody  
20 from Massachusetts wants to put a solar system on their  
21 vacation home up on Winnepesaukee, I think it would be an  
22 excellent idea to, you know, welcome that revenue  
23 generated by the sale of that system. I think it  
24 shouldn't be limited to only the primary residence. The

1 more renewables we get in the state, the better. Thank  
2 you very much. That's all I have.

3 CHAIRMAN GETZ: Thank you. Sir.

4 MR. ROPER: Thank you. I'm Tim Roper,  
5 with groSolar. I just wanted to first thank the  
6 Commission and everybody here for the process. This is  
7 great to be able to be involved in this. And, just make  
8 one quick comment on an earlier comment. It was suggested  
9 that the photovoltaic system should be permitted to be  
10 rebated with used equipment. While I fully support  
11 recycling and reusing equipment, I seem to have read  
12 something in the documentation about, to qualify, it was  
13 expected that the system be in its location for at least  
14 ten years, or at least there was an expectation, correct  
15 me if I'm wrong about that. Somewhere in there I read  
16 that. There's no guarantee, with used equipment, that  
17 that system will be functioning for ten years. Most of  
18 the photovoltaic modules carry a 25 year warranty on them.  
19 And, that's for the initial owner or a potential second  
20 owner with the system in place. And, most photovoltaic  
21 inverters carry an 10 year warranty on them as well. So,  
22 I just submit that it makes a lot more sense to require  
23 new equipment for these rebated programs.

24 CHAIRMAN GETZ: Thank you.

1 MR. ROPER: Thank you.

2 CHAIRMAN GETZ: Anyone else who would  
3 like to comment this morning?

4 MR. HASSELL: May I?

5 CHAIRMAN GETZ: Please.

6 MR. HASSELL: I just have a couple of  
7 quick comments. With regard to the comment just made on  
8 used equipment, I agree that used equipment does not --  
9 cannot perform as well as new equipment, and particularly  
10 when you get to the edge of the warranty period and you  
11 have difficulty getting it repaired. That's one of my  
12 prime businesses is repairing systems, because nobody else  
13 repairs them. But I do want to discourage you somewhat  
14 from requiring new equipment across the board. A perfect  
15 example, I just replaced a water pump for one of my  
16 customers who has been off grid for 27 years. He still  
17 has the same panels. And, I tested his panels, and they  
18 have lost about 3 percent of their capacity, and they're  
19 well beyond warranty. The same thing with his inverter.  
20 His inverter has been in his house for well over ten  
21 years. So, this stuff, by and large, is pretty reliable.  
22 So, I would discourage just excluding used equipment off  
23 the top. I mean, there should be some qualifiers,  
24 perhaps. But I wouldn't go for new equipment across the

1 board. That's one comment.

2 Also, under "Wind Systems", your items  
3 number 5, 6, 7, and 8, all regards -- are all tied to the  
4 tower. And, those of you, my wind colleagues, here will  
5 know that this really isn't very useful information as to  
6 whether or not the system is going to work. As my  
7 colleague here says, if you don't do the right type of  
8 wind survey, when it's over, you end up with a \$20,000  
9 lawn ornament. And, you really don't want that. So, if  
10 you're looking for whether or not the system actually  
11 produces anything, a wind survey of some kind that says  
12 "yes, it's appropriate for this area", would be better  
13 than asking for the height of the tower. The height of  
14 the tower is meaningless, unless you know the heights of  
15 the trees, the topography, and how much wind is there, how  
16 high it's got to be above the treeline, so on and so  
17 forth. So, there is more information that you need in  
18 order to determine if wind is correct.

19 And, one final comment, part of this,  
20 and I don't want to get political here, but part of the  
21 incentive program is to create a process by which we can  
22 get more renewable energies used in this state. The end  
23 result, of course, is to reduce our dependence on other  
24 forms of nonrenewable energy. There's been a lot of talk

1 about having the systems metered and having the public  
2 utilities, the utilities be able to collect data that says  
3 "yes, we're getting this renewable energy in." And,  
4 that's okay. It says that we're -- the tax rebate program  
5 or the rebate program is providing an incentive so that we  
6 are generating more renewable energies in the state. But,  
7 my question is, how much does that reduce the amount of  
8 fossil energy that the utilities have to use? In other  
9 words, if we're producing all this power, what is the  
10 benefit to the utility? I'm not criticizing utilities  
11 here by any means, I'm just -- or trying to put an onerous  
12 comment on them. But, if you're using X amount of fuel to  
13 create this amount of energy, yet you're getting this  
14 certain percentage of that energy from renewable  
15 resources, does it actually reduce your cost for the fuel  
16 that you're using to produce it? So, if you're asking  
17 things to come back from the installers and users of these  
18 systems, it might be a good idea to ask the utilities "are  
19 we really saving any money by doing this?" That's all.  
20 Thank you.

21 CHAIRMAN GETZ: And, your name is John  
22 Hassell from --

23 MR. HASSELL: Oh, I'm sorry. I'm John  
24 Hassell, from Be Green Solar, Benton, New Hampshire. I'm

1 the CFO, CTO, Chief Engineer, everything.

2 CHAIRMAN GETZ: Thank you. Anyone else?  
3 Does Staff have anything further this morning?

4 MR. RUDERMAN: Nothing to add.

5 CHAIRMAN GETZ: Okay. Then, let me just  
6 ask this question. Mr. Patnaude, did you get all the  
7 names you need for the record?

8 MR. PATNAUDE: I'm going to get them  
9 after.

10 CHAIRMAN GETZ: Okay. All right. Well,  
11 that's up to you then. All right. If there's nothing  
12 else this morning, then we will close the hearing, take  
13 the matter under advisement, and look forward to the  
14 written comments that are due by the 5th. Thank you,  
15 everyone.

16 (Whereupon the hearing ended at 11:21  
17 a.m.)

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