

1 STATE OF NEW HAMPSHIRE
2 PUBLIC UTILITIES COMMISSION
3

4 March 18, 2010 - 10:07 a.m.
5 Concord, New Hampshire

6 RE: DE 10-024
7 RENEWABLE ENERGY FUND:
8 Notice of Opportunity to Comment on
9 Additional Energy Incentive Programs.
(Hearing to receive public comments)

10

11 PRESENT: Chairman Thomas B. Getz, Presiding
12 Commissioner Clifton C. Below
Commissioner Amy L. Ignatius

13 Sandy Deno, Clerk
14

15 APPEARANCES: (No appearances taken)
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23 Court Reporter: Steven E. Patnaude, LCR No. 52
24

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I N D E X

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4 QUESTIONS BY:

5

Cmsr. Below 5, 18, 27, 53, 58, 60

6

Cmsr. Ignatius 14, 31, 44, 50

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Chrmn. Getz 60

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9 STATEMENTS FROM THE PUBLIC BY:

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Mr. Marrazzo 20

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Mr. Weissflog 23

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Mr. Steltzer 33

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Ms. Kroll 37

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Mr. Traum 48

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Mr. Sidd 51

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1 P R O C E E D I N G

2 CHAIRMAN GETZ: Okay. Good morning,
3 everyone. We'll open the public hearing in docket DE
4 10-024 concerning the Renewable Energy Fund. I'll start
5 with some procedural background for the record. On
6 February 9, 2010, we issued a notice of opportunity to
7 comment on additional renewable energy incentive programs.
8 In the order initiating this proceeding, we indicated that
9 we seek to determine what additional renewable energy
10 incentive programs for customer-sited renewable thermal
11 and/or renewable electric generation projects for
12 residential, as well as commercial and industrial,
13 customers should be offered. We noted that there were two
14 questions that needed to be addressed: The first is
15 "whether the entire balance in the Renewable Energy Fund,
16 not otherwise required for the Residential Rebate Program
17 and budgeted administrative expenses, should be reserved
18 for additional incentive programs for customer-sited
19 projects or whether some funds should be used for
20 renewable energy initiatives selected pursuant to an RFP?"
21 And, the second question to be addressed is "what
22 additional incentive programs might be established in
23 light of uncertain future funding levels?"

24 The order provided that a technical
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1 session would be held, and was held on February 26, 2010,
2 to allow interested parties to discuss issues, including
3 the appropriate level and form of incentive, content of an
4 application, requirements for qualification and other
5 relevant issues, and to explore the development of
6 additional renewable programs and the allocation of
7 available funds. The order provided that Staff, following
8 the technical session, would provide a set of
9 recommendations to the Commission.

10 And, the purpose of the hearing today is
11 to receive public comment on Staff's recommendations,
12 which were filed on March 15. And, I'll note as well
13 that, in addition to the opportunity for oral comment
14 today, we will provide until next Friday, March 26, for
15 parties to make written comments. And, the Staff
16 recommendations are on our website. And, we'll provide
17 notice of the deadline for written comments on our website
18 as well.

19 I'll also point out that, as of Monday,
20 we had received 16 comments with respect to -- after the
21 technical session that was held in this proceeding. And,
22 let me note that we have a sign-up sheet, and I will just
23 go through the names as they have been provided on this
24 sheet and give folks an opportunity to comment.

1 But, before we do that, I think

2 Commissioner Below had some questions for Staff.

3 CMSR. BELOW: Sure. I wondered if Staff
4 wanted to just sort of briefly summarize their
5 recommendations? Or, perhaps everyone -- I just want to
6 make sure everyone in the room had seen everything, the
7 proposed application form.

8 MS. AMIDON: The proposed application
9 form is provided here. And, many of the people that you
10 see here, Mr. Chairman and Commissioner Below, were at the
11 technical session that was held on this subject. I'd be
12 happy to summarize the recommendations that we included in
13 the letter that was filed on March 15th.

14 First of all, the Solar Domestic Heating
15 -- Water Heating Program was designed is to be a two-level
16 program. The first part of that would be the base
17 incentive offered by the Commission. And, the proposal
18 was to establish a limit of \$750, I'm going to look at
19 Barbara Bernstein, who is working on that, to make sure
20 I'm correct, for that program to come from the Renewable
21 Energy Fund.

22 The second part of that is a rebate
23 offered for energy-efficient appliances for certain
24 qualifying solar water heating systems that have been

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1 offered through the Office of Energy & Planning, with
2 funds coming from the American Recovery & Reinvestment
3 Act. That money is offered, as I understand, for a period
4 of two years. And, Eric Steltzer is here from the OEP, if
5 you have any specific questions regarding the
6 implementation of that portion of the incentive. Because
7 it is ARRA money, there are certain reporting requirements
8 that go along with it. So, the application is asking in
9 some detail whether, for example, the dwelling is 50 years
10 old and other information that the OEP will need to have
11 to report back to the Department of Energy.

12 The second recommendation goes generally
13 to the use of the remaining monies available through the
14 Renewable Energy Fund. And, as the Commission knows, one
15 of the issues raised in this docket is how we budget those
16 monies, given the fact there is some uncertainty as to the
17 future payments into the fund, which are called
18 "Alternative Compliance Payments", and which are made by
19 the utilities and competitive energy suppliers, in the
20 event that they cannot purchase a sufficient number of
21 renewable energy certificates in the market to meet their
22 Resource Portfolio Standard pursuant to RSA 362-F.

23 And, in that regard, we suggested that
24 the Commission consider allocating \$500,000 for the base

1 rebate for the Residential Solar Water Heating Program,
2 which is, again, separate from the OEP Efficient Appliance
3 Rebate, and allocate \$1 million for future commercial and
4 industrial programs, which we believe is not sufficient to
5 address their needs. And, for future receipts of money
6 into the Renewable Energy Fund, we would recommend that an
7 additional \$1 million be set aside for commercial and
8 industrial incentives.

9 Because the Commission is mandated by
10 RSA 362-F:10, Roman V -- I mean, V, it is a "V", to
11 provide rebates for residential installations of
12 photovoltaics and wind, the remainder of the money that is
13 not used we would suggest be allocated to that, given that
14 there was fairly robust participation in that program last
15 year. And, based on the technical session and the
16 discussion with the installers, we believe that there will
17 be similar robust participation as we go into the
18 construction period for 2010.

19 I think that summarizes our
20 recommendations. But, if the Commissioners have any
21 additional questions, between Ms. Bernstein and myself we
22 can answer them.

23 CMSR. BELOW: One thing your
24 recommendation doesn't quite address, but I just wanted to

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1 see if it would be consistent with your recommendations,
2 to the extent money has been set aside for administrative
3 costs per the legislatively approved budget, if we come in
4 under budget on those, and, of course, we'll know that in
5 a couple -- in a few months for fiscal year 2010, would
6 you recommend that any savings that are available there
7 likewise be allocated, in the first instance, to the C&I
8 Incentive Program, and perhaps to the 362-F:10, V program,
9 if needed? And, then, you know, if we still have a
10 surplus, we could start putting aside money for an RFP.

11 MR. BERNSTEIN: I think that that is our
12 thinking at this point in time.

13 CMSR. BELOW: Okay. And, in looking at
14 the application itself -- well, actually another big
15 picture question. You've recommended a half a million
16 dollars be set aside for the Residential Solar Water
17 Heating Program. And, could you just detail what
18 assumptions, based on the three different rebate levels,
19 you assumed the participation in that program would be?
20 Because, of course, as we know, the federal program, the
21 ARRA-funded program assumes a total of 660 systems, at
22 \$750 per system. And, I think we, obviously, want to try
23 to stretch whatever money we have to also cover a base
24 incentive for 660 systems, or perhaps more, but we

1 probably need to set aside enough for the 660, to ensure
2 that we can take full advantage of the federal money. Do
3 you have -- what assumptions did you make in sort of
4 matching the rebates and the incentives to the half a
5 million dollar budget you're recommending?

6 MS. AMIDON: The assumption at the
7 outset was that, first of all, we checked with the Office
8 of Energy & Planning to see if we had to match their
9 rebate, and -- through their agreement with the Department
10 of Energy, and we were informed that we did not have to do
11 that. So, what we did was we established a \$500 rebate,
12 which was recommended by a number of parties as being
13 reasonable for the first, I don't know what it would be
14 called, the "first panel", the "first collector", but for
15 that initial installation. And, the rationale for that
16 was the first installation is the one that probably gets
17 where the water gets the most use. As you get a larger
18 system, you really have to have the use in the household
19 to take advantage of the additional panels. So, on that
20 basis, we put the \$500 for the initial collector, I'm
21 using that term for lack of a better term, and then had an
22 increment of 250 for the second one, understanding that
23 most people would probably end with the second collector.
24 The third collector is -- would produce quite a large

1 system. You'd really have to have a lot of household use.
2 So, what we tried to do was design it so that it would
3 incent the initial installation, and not overcompensate
4 for the subsequent installations, because the chances are
5 that the initial installation would take care of the hot
6 water use. The larger systems being more infrequent and
7 less likely to occur, and then sort of averaged that out
8 to try to balance the \$500,000 budget for 660
9 installations.

10 CMSR. BELOW: Right. But I guess what
11 I'm saying is, how many do you assume would be at the
12 base, presumably 660 systems at the basic \$500 rebate
13 program? How many do you assume might be a two-panel or a
14 20 to 30,000 -- 30 million, 20 to 30 million BTU size
15 system? And, how many more than 30 million BTUs?

16 MR. BERNSTEIN: As we've done some more
17 research with the installers on this, what we've been told
18 is that most are going to go with one panel. And, that a
19 few would end up going with a second one, if that worked
20 for them. And, the third, we'll probably have the least
21 amount of those. And, one of the reasons why we wanted to
22 try to structure it this way was the desire to be able to
23 try to accommodate those individuals who want to do
24 thermal, want to, you know, use the system for radiant

1 heat. So, that was our reasoning for trying to design
2 that in that way, so that we don't preclude people who
3 want to take that extra step.

4 CMSR. BELOW: Okay. But you don't have
5 the specific numbers?

6 MR. BERNSTEIN: You know, I know that
7 they were broken down.

8 CMSR. BELOW: Okay.

9 MR. BERNSTEIN: And, I don't have those.
10 I'm sorry.

11 CMSR. BELOW: Okay.

12 MS. AMIDON: However, we could provide
13 that for the Commission and to the service list for this
14 docket after the hearing, if you'd like us to do that?

15 CMSR. BELOW: I think that might be
16 helpful.

17 MS. AMIDON: Okay. We will do that.

18 CMSR. BELOW: In looking at the form
19 itself, on Page 3, there's a note that the "incentive
20 pre-approval [would] expire 12 months from [approval]."
21 And, then, there's a footnote below that "This does not
22 include the \$750 additional rebate" for the ARRA funding.
23 And, on the previous page, there's a note that the ARRA
24 funding rebate -- that the "application must be completed

1 in total by February 17th, 2012", which would still
2 presumably allow 12 months, except the 12 months doesn't
3 expire for those. And, I just wondered if we might need
4 some clarification for applications, if, for the 750
5 additional rebate, if there's some absolute deadline for
6 when those need to be completed, and essentially the Step
7 2 application made to receive those funds?

8 MR. BERNSTEIN: Okay. We will
9 definitely get those clarified. The reason that we went
10 with the February date was that we wanted 45 days to get
11 processing completed before the April deadline. But the
12 ARRA funds have to be spent by that April deadline.

13 CMSR. BELOW: By April?

14 MR. BERNSTEIN: What is that?

15 CMSR. BELOW: Some date in 2013? In
16 April 2013, correct?

17 MR. STELTZER: In regards to -- sorry.
18 February 17th is the date that the funds needed to be
19 expended by for the Stimulus.

20 MR. BERNSTEIN: In 2012.

21 MR. STELTZER: In 2012. I'm sorry, if
22 that wasn't the question, I --

23 CMSR. BELOW: No, it is the question.
24 And, it's just important to clarify this. You're saying

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1 the ARRA funding has to be actually expended, checks cut,
2 by February 17th, 2012?

3 MR. STELTZER: Correct.

4 CMSR. BELOW: So, the note on Page 2 of
5 the application, that the "application must be
6 completed...by February 17th, 2012", that might need to be
7 amended, if we actually have to -- because the application
8 would be just to get pre-approval.

9 MS. AMIDON: I think that we can address
10 that. What we wanted to allow, and maybe we didn't make
11 it clear, is that individuals could apply for the Part B
12 ARRA-funded rebate for an energy-efficient appliance, and
13 they didn't have to receive the PUC rebate, the base
14 rebate, in order to do so. However, in discussions with
15 OEP, they pointed out that the information that we
16 requested in the Part A application would be useful in
17 meeting their reporting requirements with the Department
18 of Energy. So, even if, and if this is confusing we can
19 provide additional information in the form to make it less
20 confusing, even if a person applied only for the Part B
21 ARRA-funded rebate, the information needed in the Part A
22 part of the application would still need to be provided to
23 the OEP.

24 CMSR. BELOW: Okay.

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1 CMSR. IGNATIUS: Ask another question on
2 dates, while we're on that subject, and not jump back to
3 it later. And, Mr. Steltzer, you may know better than
4 anyone here. Is the ARRA deadline of February 17, 2012 a
5 deadline for the approved application and check to be
6 written or a deadline for installation of the rebate --
7 excuse me, of the collector itself?

8 MR. STELTZER: Yes. By February 17th,
9 the funds need to be expended by that date. In my
10 understanding of this application, in a two-tiered step
11 process, in order to get the rebate, you must be
12 pre-approved, and then supply a second form, which
13 supplies information on the exact installation date. So,
14 the only situation that would arise is were that system to
15 also be installed prior to February 17th.

16 CMSR. IGNATIUS: I'm not sure I followed
17 that. You have to -- we know that, by February 17th,
18 2012, you need to have applied and been approved in the
19 first stage. You have to have a scheduled installation
20 date. Do you also have to have some sort of certificate
21 of completion of the installation in order for the rebate
22 to be issued?

23 MR. STELTZER: Yes. That is part of
24 Part 2 of the application process.

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1 CMSR. IGNATIUS: So that sounds like, if
2 "expended" means that final stage of installation being
3 complete, then we're really quite a bit earlier in the
4 process for the final determination of who's going to be
5 issued rebates, is that correct?

6 MR. STELTZER: I think this point of
7 when -- of the date and when the last application could be
8 applied for Part 1 of the rebate process is important, and
9 it is needing to occur at a prior date prior to
10 February 17th. To that point, what I would say is some of
11 our comments that OEP supplied to the Commission Staff
12 about this issue was largely that it -- it mentioned that
13 the rebates had to be used within a 12-month period of
14 time. And, we were concerned that, with just that
15 language, a consumer might apply for it, say, in December
16 or November of 2011, and they would expect to get that
17 rebate past February 17th. And, so, the intent of adding
18 in those dates was to rectify that situation so it was
19 clear to consumers that Stimulus funding, unlike the
20 Renewable Energy Fund, doesn't necessarily have that
21 12-month criteria, if it meant that that 12-month criteria
22 went after the February 17th date.

23 CMSR. IGNATIUS: That's helpful. Do you
24 know if there's been any effort to encourage people in

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1 Washington administering the ARRA money to consider
2 "expended" as meaning "assigned to the person who's going
3 to be doing the installation to the residential facility
4 that's going to be doing the work", so that you don't
5 require actual installation by that date, but that you
6 sort of set that aside, it's spent for all practical
7 purposes, because you've designated it to that approved
8 application?

9 MR. STELTZER: There has been some
10 discussions about the definition of "obligated" versus
11 "expended". And, I think, in my understanding of that
12 interpretation, if a project has not been completed and
13 funding has not gone to the applicant, that would be
14 "obligated", and only once funding has actually been
15 received by that party that has applied for it would it be
16 "expended".

17 CMSR. IGNATIUS: All right. So, they
18 have looked at this. You've poked around to see if there
19 is a way to stretch that deadline further, and it sounds
20 like the "February 17th, 2012" really is spent in the
21 final sense, and not just obligated or set aside?

22 MR. STELTZER: Correct. It is expended
23 in the hard sense. And, the intent of this program
24 throughout the country, and New Hampshire is taking a

1 little different approach to this program than other
2 states are, in that we're not offering it towards typical
3 white goods, such as freezers and refrigerators, and so
4 there will be a little more longevity to this program.
5 However, we did do quite a bit of research to determine
6 how much interest there was -- what the demand was within
7 the marketplace within this two-year period of time, and
8 that's how we arrived at that 660 number. So, I do feel
9 comfortable that that number could be met by that
10 February 17th, 2012 deadline to expend the funds.

11 CMSR. IGNATIUS: All right. One final
12 thing, if I may, just on deadlines. If we get to that
13 point, February 17th, 2012, and there is a pot of money
14 that still has not been -- checks have not been cut to
15 cover the full amount, is it clear what happens next with
16 that money?

17 MR. STELTZER: It is not clear.

18 CMSR. IGNATIUS: If there's an
19 opportunity to lobby our friends in Washington to have
20 that program remain, either extend the dates or be rolled
21 into other similar programs, such as the other half of
22 this rebate program, I would hope that people take
23 advantage of any opportunities to pressure for that or to
24 notify other stakeholders, including the Commission, to

1 see if there's a way to extend it, if it turns out that
2 New Hampshire and other states have some small pot of
3 money that still hasn't been expended at the deadline.

4 MR. STELTZER: We could certainly do
5 that, if that situation does arise.

6 CMSR. IGNATIUS: Thank you.

7 CMSR. BELOW: Okay. Well, it seems
8 clear that we probably need to clarify this a little
9 further on this matter. On Page 4, the 18th term and
10 condition references that, "because [part] of the program
11 is funded by [ARRA], the Commission is required to include
12 information on the age of the dwelling where the system
13 will be located." That's actually only true, looking at
14 the form, it appears to be only the case if someone
15 completes the Part B of the form.

16 MS. AMIDON: Thank you for pointing that
17 out, because that's an oversight, and we missed that in
18 the Part A.

19 CMSR. BELOW: Okay.

20 MS. AMIDON: You are correct.

21 CMSR. BELOW: So that could be further
22 clarified on that point?

23 MS. AMIDON: Yes.

24 CMSR. BELOW: Okay. And, on Page 6,

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1 this is pretty minor, but, on Page 6, we're still in the
2 prospective part of the application, before the thing is
3 installed. So, under Electrician" and "Plumber", it's put
4 in the past tense, but that might be in the future tense.
5 Where it says "if your installation utilized an
6 electrician", and, under "Plumber", it also says "utilized
7 an electrician", I presume that should mean "plumber". It
8 might say "if you plan to utilize an electrician or a
9 plumber for your installation", would that be a better
10 way, to put that on Page 6?

11 MS. AMIDON: Yes, I think that's a good
12 change.

13 CMSR. BELOW: Okay. And, there have
14 been a few comments on Page 18, relative to the reference
15 to the "PV watts" as being more, you know, it's really
16 geared towards PV installations. And, I don't know if
17 you've had a chance to look into that, but is that
18 reference still appropriate or is there a way that the --
19 does the PV watts optimal annual production translate to
20 solar hot water in a meaningful way? And, perhaps others
21 who are here may have additional comment on that. I just
22 wondered if you had any thoughts on the comments that have
23 already been made on that issue?

24 MR. BERNSTEIN: Commissioner, I'm

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1 looking forward to hearing what other folks have to say.

2 CMSR. BELOW: Okay.

3 MR. BERNSTEIN: I have, for the most
4 part, heard that the way we have it is a good way to go,
5 but then there's others. So, I look forward to that
6 discussion.

7 CMSR. BELOW: Okay. I think that's all.

8 CMSR. IGNATIUS: Nothing further. Thank
9 you.

10 CHAIRMAN GETZ: Okay. Then, we will
11 turn to the folks who have signed up to speak today. And,
12 the first on the list is Mr. Monroe? Am I reading that
13 right? Oh. Marzano?

14 MR. MARRAZZO: Marrazzo?

15 CHAIRMAN GETZ: Could be.

16 (Laughter.)

17 CHAIRMAN GETZ: Matt.

18 MR. MARRAZZO: Good morning. I'm here
19 to talk about the commercial program or possible
20 commercial program. My name is Matt Marrazzo. I'm the
21 General Manager from Townline Equipment, in Plainfield,
22 New Hampshire. We were founded in 1971 and have operated
23 in the State of New Hampshire ever since. We've been a
24 full sales and service solution for farmers, contractors,

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1 and homeowners for almost 40 years now, 40 years now. We
2 currently employ 30 people, maintain a base of about 6,000
3 active customers, and have recently put finishing touches
4 on a brand new \$3 million facility.

5 Currently, we are in the process of
6 seeking funding support for a proposed 80 kW solar PV
7 system to be placed on the roof of our building. This
8 system will generate approximately half of our current --
9 our current power needs and save our business about
10 \$12,000 a year in electricity costs. A renewable energy
11 project like this will require a significant amount of
12 up-front investment, with the payback coming over a longer
13 period of time. There are some solid federal incentives
14 out there; but, simply put, we need state funding in order
15 to have an investment like this make sense for our
16 business.

17 We are here today to express our full
18 support for the PUC Staff's recommendation of setting
19 aside \$1 million for a C&I incentive program. Modest as
20 the amount may be, it's important that businesses in the
21 State of New Hampshire be afforded an immediate
22 opportunity to apply for incentives for renewable energy
23 projects. As ratepayers in the State of New Hampshire, it
24 is only fair that businesses are given a renewable energy

1 incentive similar to the residential opportunity put forth
2 by the mandatory program embodied in RSA 362-F:10, V.

3 With respect to how a commercial
4 incentive program could be set up, we suggest a tiered
5 rebate plan for commercial and industrial systems of up to
6 100 kW. The first 1 to 25 kW would be eligible to receive
7 maybe \$1.25 per installed watt; from 26 to 75 kW, the
8 incentive could be \$1.00 per installed watt; and, from 76
9 to 100 kW, the incentive could be 50 cents per installed
10 watt. While we realize that allowing larger systems to
11 apply for incentives might affect the total number of
12 commercial customers served, systems in the 50 to 100 kW
13 range are installed at a lower cost per watt than smaller
14 systems and are a more efficient use of the dollars
15 available in the Renewable Energy Fund.

16 Commercial and industrial customers
17 interested in installing renewable energy systems present
18 a tremendous opportunity for the future of renewable
19 energy in the State of New Hampshire. Businesses who
20 invest in green technologies will not only reduce their
21 own carbon footprint, but they will also have the ability
22 to connect with, inform and influence their customers on
23 the importance of renewable energies. Strong businesses
24 almost always know how to market themselves well, and

1 there should be no doubt that businesses that make
2 renewable energy investments will help spread the word
3 about the benefits of renewable energy to the thousands of
4 customers that they serve in the State of New Hampshire.

5 In closing, we hope that the Commission
6 will decide to support the setting aside of \$1 million for
7 a C&I incentive program and we look forward to a program
8 being launched in the near future. Thank you very much
9 for your time.

10 CHAIRMAN GETZ: Thank you.
11 Mr. Weissflog.

12 MR. WEISSFLOG: Good morning,
13 Commissioners. My name is Mark Weissflog. I'm President
14 of KW Management. We're a commercial/industrial
15 electrical contracting outfit out of Nashua, New
16 Hampshire, and have been installing solar, wind
17 geothermal, and a variety of other systems in New
18 Hampshire for about 12 years. We have 13 employees, and
19 have just hired a new employee, the first time in about a
20 year and a half that we have added to our payroll, which
21 is a bright sign. And, we are here to complement the
22 Staff's recommendations. It was a great job that they did
23 in the technical session, and it looked like they listened
24 to just about everybody that was there and incorporating

1 their recommendations.

2 I'm in agreement with most of the solar
3 thermal applications. And, the only question I had was in
4 the tiered monetary incentive opinion that they presented
5 shows a dollar amount, while the application shows a BTU
6 amount. And, while I would -- had supported the BTU
7 recommendations initially, I think it over-complicates the
8 application and is more subjective than just a straight
9 per collector incentive.

10 So, and the other thing I would like to
11 see, which was discussed at the public hearing, I would at
12 least like to see a question added to the application that
13 asks the applicants if they're planning or have installed
14 a data monitoring system on the solar thermal system.
15 And, that's a valuable data point that was added to the
16 electrical, the solar electric application. And, in
17 recent weeks, that has come to light that that may be
18 helpful in answering some questions, if we go to trying to
19 market and sell our RECs at a residential level. Many of
20 those meters are already installed.

21 At a solar thermal level, the
22 application states that the Commission can go back over
23 the next ten years and try to collect some production
24 data. Without any knowledge of any systems out there that

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1 have that data collection point, it would be difficult for
2 them to gain that knowledge.

3 In regards to the C&I program, while the
4 \$1 million is a fair amount of money for the State of New
5 Hampshire, we'd obviously like to see more. But, given
6 that the Staff's recommendation is to try to allocate
7 monies in an appropriate manner, we're in full agreement
8 with those amounts.

9 We would like to see that, when the
10 Staff does provide recommendations to the Commission, that
11 they don't cap those systems at anything under than what
12 our current net metering standard is, which, obviously, is
13 100 kW. With a tiered program, that would be conducive to
14 installing both, incentivizing smaller systems a little
15 more and larger systems possibly a little less, not -- in
16 no means do we want to say that larger systems need any
17 less financial support, it's just that we want to
18 incentivize both types of systems, so we can get to our
19 goals of 25 at '25.

20 And, the only last comment I have is in
21 regards to the Renewable Energy Fund itself. I am a
22 strong believer that the legislative direction that the
23 Commission has regarding the least cost to consumer
24 option, meaning that most of the utilities can find their

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1 compliance standards and purchasing out-of-state renewable
2 energy credits is a major problem for this state. We find
3 ourselves in the State of New Hampshire, let's say,
4 starting out late in this incentive market, and we are now
5 taking our RPS monies and incentivizing other states a
6 little more aggressively. They have had programs, in some
7 cases, well over a decade, have had the time and the money
8 to invest into their solar and renewable infrastructure,
9 and now we're taking our ratepayer monies and
10 incentivizing them even more.

11 So, I think, if it's -- it's not within
12 your power, but it's in the legislative power to take some
13 of those RECs and mandate that the RECs be spent in New
14 Hampshire, 50, 75 percent of them, at least for the next
15 few years, allowing either REC payments in New Hampshire
16 or, and if they're not available, which they probably
17 aren't, would then mandate the utilities to pay their
18 Alternative Compliance Payments, which would shore up the
19 fund and allow those programs to continue.

20 One thing that was testified, or at
21 least at the public hearing when we did have a discussion,
22 is maintaining the continuity of the programs. For
23 businesses to hire and plan into the future, we need to
24 have a stable incentive plan. And, I think New Hampshire

1 has taken the money that they do have and expended them
2 well, and we've seen some substantial growth. In years
3 gone by, we might get one or two PV systems a year in New
4 Hampshire. And, what we see now, at least for ourselves,
5 we see a multitude of residential and commercial interest.
6 That said, if we want to provide long-term sustainable
7 jobs, we need monies that will allow that program to
8 continue for years to come.

9 CMSR. BELOW: Yes. Mr. Weissflog, thank
10 you for your comments. Have you installed residential
11 solar hot water systems?

12 MR. WEISSFLOG: Yes, we have.

13 CMSR. BELOW: Do you have a sense of how
14 many, what portion are single collector versus the portion
15 that might use two or three or even more collectors?

16 MR. WEISSFLOG: Well, two factors come
17 into that. Normally, there are two collectors. We
18 install very few single collector systems. Single
19 collector systems would typically run in a 40 square foot
20 range, a 4 by 10 collector; a little larger than a
21 standard two-collector system would be about 64 square
22 feet; and the three-collector systems would typically be
23 96 square feet. And, with the tank sizing, matching about
24 a gallon per square foot of collector area. So, our

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1 experience in the past has been two collectors typically
2 is a family of three to four, possibly five, and a
3 three-collector system would be somewhere around a family
4 of five or six. Single collectors afford hot water, at
5 least have a solar fraction of 0.5, for one or two people
6 in the household, depending upon their hot water needs.
7 So, those are typically matched to the occupancy and the
8 hot water use. But it's been our experience that two or
9 three collectors would be more prevalent.

10 CMSR. BELOW: So, I'm a little curious.
11 You said a two collector system would be typically about
12 64 square feet, perhaps, with the range you use or
13 something.

14 MR. WEISSFLOG: Right.

15 CMSR. BELOW: But a single would be 40.
16 So, a single panel system would have a larger panel than a
17 typical two panel system, which would be somewhat smaller?

18 MR. WEISSFLOG: That's right, in
19 relationship. However, when you're looking at the cost
20 difference between a one- and a two-collector, typically,
21 all you're adding is the collector itself. The piping,
22 the insulation, the controls, the pump center, and even
23 the tank, typically, we install a 60 or 80 gallon tank at
24 that point, even the tank may match the two-collector

1 system. So, what you're doing is the cost just for the
2 installation and other materials is what's being added to
3 that two-collector system, and you're doubling or at least
4 a third more energy produced.

5 CMSR. BELOW: And, so, in looking at
6 Page 3 of the application, are you suggesting that perhaps
7 the BTU ranges, do those sort of match the one, two, three
8 panel outputs? Or, are you suggesting it might be simpler
9 to describe the number of collector panels with presumably
10 some minimum size per panel that's consistent with what's
11 available?

12 MR. WEISSFLOG: I think that would be a
13 good recommendation. When you're looking at actual BTU
14 output, you're inputting some valuable weather data, but
15 it's estimation at best. There are collectors out there
16 that do have smaller cross-sectional areas. So, if you
17 go, and if I might add manufacturers' names, but Velux
18 systems have 27 square feet per collector. So, for a
19 two-collector system, you're only at 54 square feet. And,
20 while they're typically very architecturally pleasing and
21 lots of architects like them, they do offer a smaller
22 square footage area. So, if you're looking at two 4 by 8s
23 or two 4 by 10s, for example, you know, you're going from
24 54 to 64 to 80 square feet of collector area. Again,

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1 typically always matched to the use of the building, not
2 just arbitrarily installing a solar thermal system that
3 maximizes an incentive or rebate.

4 CMSR. BELOW: Okay. Are you concerned
5 that, you know, these small incremental incentives, 125 or
6 250, does that -- that doesn't seem like it would be big
7 enough to cause someone to make a big overinvestment for
8 such a small incentive?

9 MR. WEISSFLOG: Well, I would -- I
10 probably would differ from that opinion. When you're
11 getting the difference between a two- and a
12 three-collector system, again, the incremental cost
13 difference may be \$1,000 to \$1,500. And, if it's the
14 energy that they're looking to harvest, it's already
15 pretty cost-effective to do the system, because they're
16 using, you know, a family of five or six is using a fair
17 amount of hot water at that point. So, yes, you're adding
18 a small incremental incentive, except the energy savings
19 is there for a very little cost adder to the entire
20 system. So, most of those individuals, we wouldn't
21 present them typically with an option for a two or
22 three-collector system, because we need to hit the solar
23 fraction of at least 0.5, and normally we design between
24 0.6 and 0.7 for solar thermal systems. So, I don't think

1 it would make them change their decision.

2 CMSR. BELOW: Okay. And, do you think
3 the estimated investment numbers on Page 3 are reasonable
4 or would you suggest tweaking those at all?

5 MR. WEISSFLOG: No, those are
6 reasonable. There are some lower and there are some more,
7 so, it's an average.

8 CMSR. BELOW: Okay. Fair enough. Good.
9 Thank you.

10 MR. WEISSFLOG: Thank you.

11 CMSR. IGNATIUS: I've got just, I think,
12 one question, Mr. Weissflog.

13 MR. WEISSFLOG: Sure.

14 CMSR. IGNATIUS: At the start of your
15 comments, you said that it would be a good idea to insert
16 on the form that -- to ask whether data monitoring system
17 -- whether a data monitoring system had been installed.
18 Are you asking that one be required for people to do that
19 or simply to know whether or not they have done it?

20 MR. WEISSFLOG: I would say just to know
21 whether or not they did it. On the solar electric
22 application, it's just a question, "is there a data
23 gathering point?" And, it's not required, nor is it paid
24 for. And, the same I think should apply to the solar

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1 thermal system. Because, in the future, if you did choose
2 to try to gather some production data, and, more
3 importantly, usage data, solar electric systems, if they
4 aren't using the energy they're producing, they're net
5 metering that power typically, and they're getting full
6 credit for that energy being produced. Well, the solar
7 thermal systems, it's very typical for the June, July,
8 August, September time frame to over-produce as much as
9 30, 40, 50 percent of the system's capacity, however, that
10 does not get utilized. So, if you just monitor the
11 thermal output of the collectors into the tank, you're
12 going to see a lot of energy, but that energy actually
13 doesn't get used in the building. So, through some
14 controls processes, it gets actually dissipated or other
15 things happen with it.

16 But I would say no monies be provided
17 for that, because those systems are in the \$1,000 range,
18 probably, to get some good data acquisition. It would be
19 a great idea if the Commission had extra money. However,
20 we live in New Hampshire, so that's not going to happen.
21 But those data points could be valuable in future
22 programs, and to account for how those funds were expended
23 and how useful those funds were.

24 CMSR. IGNATIUS: Thank you.

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1 CHAIRMAN GETZ: Thank you. Mr.
2 Steltzer.

3 MR. STELTZER: I do have written copies
4 for you all as well for you.

5 (Mr. Steltzer distributing documents.)

6 MR. STELTZER: For the record, my name
7 is Eric Steltzer, Energy Policy Analyst at the Office of
8 Energy and Planning. And, I supplied to you our written
9 comments in support of the Commission Staff's
10 recommendations. We support their prioritization for
11 rebates, both for residential, as well as for commercial
12 sector, and we support the funding levels that they have
13 proposed, including the \$1 million towards C&I. And, if,
14 potentially, there is an amount from the Renewable Energy
15 Fund in June's allocation -- excuse me, July's allocation,
16 that an additional \$1 million be placed into that account
17 as well.

18 Regarding the Renewable Energy Fund
19 budget for solar thermal, I did speak earlier that we did
20 do quite a bit of work with meeting with stakeholders to
21 determine what that demand was. And that, in those
22 discussions, we did come up with this value of around 660
23 units, which represents around \$500,000 the PUC Commission
24 Staff has put that amount in there, and those rebates are

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1 at a little bit lower level, so that would give a little
2 bit, over this two year period of time would give even a
3 little bit of a buffer to ensure that these rebate
4 programs are -- don't have gaps, and that there is
5 consistent rebate available to support the small business
6 sector within the state.

7 Regarding the commercial and industrial
8 space -- rebate program, we certainly would encourage the
9 Commission to move quickly on the development of that
10 program. It's going to be important to hit that this year
11 for the summer construction period. And, we would
12 encourage the Commission to set up a similar proceeding,
13 as has happened here with the Solar Thermal Rebate
14 Program, where there would be an opportunity for public
15 comment, a technical session, as well as a public hearing.
16 And, at that time, we can delve deeper into the specific
17 questions that were being arisen a little bit in this
18 proceeding here, with the cost of those systems and how
19 much the rebates should be, what is the sizing of those
20 systems, and can get further into detail, once the
21 Commission Staff is able to come up with recommendations
22 on their application.

23 We also recommend for the Commission to
24 consider distributing the Renewable Energy Fund

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1 proportionately to the sectors that are putting the
2 funding into the account. That would set a precedent that
3 is similar to the CORE Energy Efficiency Programs and for
4 that to be considered.

5 Two other things I'd like to address as
6 well is, one, the start date of this program, and then to
7 a little bit of a discussion on the "solar collector"
8 definition. Regarding the start date of the program, the
9 Department of Energy has certainly put a big push on the
10 states to set a specific date. They have already given us
11 the requirement to have this program up and going by
12 April 22nd. It would be our suggestion for the Commission
13 to consider a start date of April 19th for this program.
14 The rationale behind that is (a) it would certainly meet
15 the April 22nd deadline. The second aspect of it, though,
16 is that a number of other states, approximately 15 or 20
17 other states will be starting their program that week, in
18 correlation with Earth Day. And, it would be great to
19 have both of New Hampshire's programs go forward on that
20 date, to get the additional publicity that will be
21 centered around this program. So, we offer that for your
22 consideration.

23 Regarding the "collector" definition, I
24 will certainly defer to folks within the industry. And, I

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1 like the idea of the definition of "collector", rather
2 than assigning it to a BTU, the consumers get lost in
3 BTUs, especially when you go over two decimal places or
4 comma periods. So, that is certainly admirable. The one
5 caution I would add to that is, to come up with a
6 definition of "collector", specifically in New Hampshire,
7 a number of these systems that are being installed are
8 evacuated tubes, as opposed to single flat plate
9 collectors. And, when you go over to evacuated tubes,
10 excuse me, the manifold, which is what the tubes actually
11 connect to, can vary in size. And, so, it could be said
12 that, though someone wouldn't want to do this, but a
13 larger manifold could be deemed one collector. On that
14 same note, you could also have one manifold be a smaller
15 collector, and then install another second manifold that's
16 a smaller collector, to have the same BTU output as a
17 single collector, but then be deemed two collectors and
18 get an additional rebate. So, there is a potential for
19 people to push the system a little bit with that, so just
20 to add some caution to how that definition comes out.

21 But we certainly appreciate the
22 opportunity to participate in this docket and for our
23 opportunity to provide these comments to you. Any
24 questions at all?

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1 CHAIRMAN GETZ: Thank you, Mr. Steltzer.

2 MR. STELTZER: Thank you.

3 CHAIRMAN GETZ: Ms. Kroll.

4 MS. KROLL: Good morning, Mr. Chairman
5 and members of the Commission. For the record, my name is
6 Heidi Kroll. I'm with Gallagher, Callahan & Gartrell.
7 And, I'm here today on behalf of the Granite State
8 Hydropower Association. I'm also here today on behalf of
9 Paul Worsowicz, who is a colleague of mine at Gallagher,
10 Callahan & Gartrell. And, I just flag that because, on
11 behalf of one of his clients, he did file comments in this
12 docket last Friday. And, when I checked the docketbook
13 last night that you have online, I didn't notice that they
14 were posted there yet. So, I just wanted to call the
15 Commission's attention to those comments. And, I do have
16 a hard copy of that as well, which I would be happy to
17 pass in.

18 CHAIRMAN GETZ: Please.

19 MS. KROLL: But getting back to the
20 Granite State Hydro Association, by way of background, we
21 are a voluntary trade association for the small scale
22 hydropower industry. We have approximately 45 members,
23 representing around 50 megawatts of hydropower. And, I
24 did actually just take a look at this yesterday, of those

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1 45 facilities, 31 of them are under one megawatt.
2 Thirteen of them are between one megawatt and five, and
3 only one is above the 5-megawatt mark. And, I mention
4 that simply to advise that these are very small-scale
5 facilities. There may be a misperception out there that
6 this is kind of big business, big utility/big industry,
7 and that is not the case at all. Most of the members of
8 the hydro association are very small. And, in general, I
9 think that's true of these very small-scale types of
10 facilities that are located throughout the state.

11 The Granite State Hydropower Association
12 did file written comments back at the technical session
13 that was held, I believe, on February 26th. A
14 representative, Steve Hickey, a representative of the
15 Association attended that technical session. And, again,
16 I didn't see that those comments were actually posted in
17 the docketbook online last night when I checked. But I do
18 know that he's corresponded with Barbara Bernstein via
19 email with an electronic copy. And, again, I do have a
20 hard copy that I would be happy to pass in.

21 So, I just wanted to highlight a few
22 comments that the Granite State Hydropower Association
23 made in its written remarks. And, we do appreciate the
24 opportunity to be here to speak today.

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1 Since the Renewable Energy Fund has been
2 established, as you well know, the Commission has
3 concentrated solely on distributing the funds to support
4 the installation of residential wind and solar facilities
5 over other technologies and sites by giving those
6 technologies exclusive access to the Fund, and this has
7 been a concern to the Granite State Hydropower
8 Association, because their members currently don't have an
9 opportunity and would not have an opportunity to access
10 the Renewable Energy Fund unless there were an RFP. The
11 rebate programs that are currently being offered and that
12 are being considered for the C&I sector, while certainly
13 worthy, is a limited sector of potential renewable energy
14 projects that might come before you and that you might see
15 if you issued an RFP.

16 And, Granite State Hydropower
17 Association has been active in the Legislature, the
18 discussion on this issue as well, simply seeking an
19 opportunity, not a guarantee, obviously, to get money out
20 of the Fund, but simply an opportunity, an equal
21 opportunity, to compete against other business types of
22 customers for grants from the Fund. We're certainly not
23 advocating that the residential sector be denied the
24 opportunity for rebates for solar and wind. We certainly

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1 supported those provisions when they came up in the
2 Legislature a number of years ago. Originally, those
3 provisions for that rebate program were to allocate up to
4 10 percent of the RPS fund to solar and wind programs.
5 And, I believe it was just last year in the legislative
6 session that that 10 percent cap, in terms of how the Fund
7 would be distributed, that that cap was removed. And, my
8 understanding is that it now reads something to the effect
9 that it's "at the Commission's discretion", or that they
10 have the flexibility, in terms of funding that program.

11 And, the concern, I guess, with the
12 Granite State Hydropower Association, and I think this is
13 across all other types of projects that don't fit into a
14 cookie cutter rebate type of program, is that a priority
15 is being placed on certain sectors and certain
16 technologies, and we're not opening it up to a competitive
17 process. We believe that it -- there would be benefits
18 from a more broadly based competitive RFP process, so that
19 we could have an objective means of determining whether
20 the -- and how the Renewable Energy Fund is being used to
21 support the best mix of renewable energy projects in New
22 Hampshire. And, it would expand beyond the residential
23 sector, beyond solar and wind, and permit the commercial
24 sector and other businesses that propose or have existing

1 renewable energy projects with an opportunity to fairly
2 compete for the funds.

3 Let me see here. Yes. I guess I would
4 just say that, in closing, because I know that you have
5 other things to do with your time today, that it's really
6 important to make sure that there is some diversity in how
7 these funds are being spent, that we have some assurances
8 and some benchmarks to know that the monies are being
9 spent cost-effectively. And, an RFP, as you know, from
10 applying it in other processes, including the RGGI
11 process, it's a good way to have kind of a score sheet,
12 and make sure that you're kind of not putting all of your
13 eggs in one basket, but rather spreading the opportunity
14 around for different types of projects.

15 From the Granite State Hydropower
16 Association, to give you some examples of what sort of
17 proposals we might make to you if you were to issue an
18 RFP, as you know, Class IV requires that the facilities
19 have upstream and downstream fish passages. There are
20 many small-scale hydro facilities in New Hampshire that
21 don't have those fish passages, and therefore do not
22 qualify for Class IV RECs. That criteria in Class IV was
23 a compromise made, it was a very important factor for the
24 environmental community here in New Hampshire, to make

1 sure that those fish passages are on facilities that are
2 eligible to generate RECs.

3 So, as an example, you know, there might
4 be a proposal to come forward to seek a grant to help pay
5 for upstream and downstream fish passages, that would
6 allow a facility to then become qualified for Class IV,
7 generating more RECs in that class, and lowering
8 compliance costs for ratepayers. Because, presumably,
9 there would be RECs out there in Class IV at a higher
10 supply, and therefore a lower price, rather than making an
11 ACP payment.

12 Another example is potentially doing
13 some upgrades and investment at the facilities that could
14 increase their output. And, again, you're generating more
15 RECs or at the very least producing more renewable power,
16 which you know is a clean, non-polluting, local. We
17 certainly do employ local folks at all of these places.
18 And, they also serve to provide recreational facilities,
19 boat launches and that sort of thing, for local
20 communities. They certainly do a lot of cleaning up the
21 rivers with their facilities as well.

22 So, you know, in closing, I would just
23 say that we would really hope that, we understand that
24 this is a balancing act with this Fund, that the funds are

1 tight, and the Commission has faced this challenge before,
2 as an example, with energy efficiency programs. I think
3 everybody would agree that you could pour a lot more money
4 into those programs, and that any particular program could
5 benefit from more money and there's always a higher demand
6 that those programs are able to serve, and yet hard
7 choices need to be made about how to equitably distribute
8 money. We certainly agree with the comment that
9 Mr. Steltzer made about, you know, trying to allocate the
10 funds on a proportional basis as the money is paid in.

11 So, getting back to the point about
12 "making hard choices", the residential solar/wind program
13 has certainly been well-funded. That we support having \$1
14 million go to the C&I sector. Right now it's being
15 proposed as a rebate. One option may be to take that \$1
16 million, plus the other 950,000 that Staff is proposing go
17 further into the residential solar and wind and pool those
18 two sources, that you'd have roughly 2 million, or a
19 little shy of that, that might be able to go to an RFP
20 process.

21 We offer these suggestions very
22 respectfully. We are very interested in participating in
23 an RFP process. And, I will say that a number of -- most
24 of the Granite State Hydropower members do not qualify

1 currently for Class IV RECs, because they don't have the
2 upstream and downstream fish passages. And, so, this is
3 -- this fund is a way for them to kind of participate in
4 the process and help the state meet its goals, both with
5 25 by '25, as well as other important goals.

6 So, with that, I would be happy to try
7 to answer questions.

8 CMSR. IGNATIUS: I do. Ms. Kroll, the
9 fish passage issue has been around for a number of years.
10 Is there a ballpark figure of what it costs to install a
11 fish passage?

12 MS. KROLL: Certainly, I can check up
13 with the Association members and ask. Don't hold me to
14 this, because I don't know if this is accurate or not, but
15 my understanding is that they can run around \$100,000. I
16 don't know if that is for both an upstream and a
17 downstream, or just one side or the other. So, I'd be
18 happy to take that question to the Association and reply
19 by the deadline of next Friday.

20 CMSR. IGNATIUS: Well, it's a bit
21 secondary to what we're doing today.

22 MS. KROLL: Sure.

23 CMSR. IGNATIUS: But I am curious, when
24 we've talked about it over the years in the Legislature,

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1 it hasn't really known -- thought about what the real cost
2 would be. And, I guess another question on that is, are
3 there some hydro dams where you simply couldn't put in a
4 fish ladder no matter what the cost, being able to fund
5 it, something about the topography or the fish, I don't
6 know?

7 MS. KROLL: I'm not an expert in that
8 area. So, I'd be happy to try to get an answer for you.
9 It strikes me there's probably a case out there at least.

10 CMSR. IGNATIUS: Well, that's --

11 MS. KROLL: And, probably, you know, and
12 potentially some more that may be true.

13 CMSR. IGNATIUS: The second issue I
14 think is getting way, way far away from where we are, so
15 don't worry about that.

16 MS. KROLL: Yes.

17 CMSR. IGNATIUS: But I am curious if
18 there's sort of a general sense of a ballpark for these
19 kinds of installations.

20 MS. KROLL: Sure. Absolutely.

21 CMSR. IGNATIUS: The other thing is,
22 I've checked our records here, and we'll obviously go and
23 double check and make sure that things have been put on
24 that have been received. But we don't have record of

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1 either of Mr. Worsowicz's or is it the Isaac you said --
2 or, Fraser, I'm sorry?

3 MS. KROLL: Mr. Worsowicz's was on
4 behalf of the Ossipee -- I'm sorry, the Aggregate
5 Manufacturers, that was submitted to Debra Howland last
6 Friday via e-mail, and we did get a read receipt on that.

7 CMSR. IGNATIUS: All right. Mr. Hickey
8 was the other one.

9 MS. KROLL: Mr. Hickey was with Granite
10 State Hydropower Association. And, I'd be happy to file
11 my hard copy that I have with me today, and certainly also
12 refile electronically.

13 CMSR. IGNATIUS: If you can do that,
14 that would be helpful. They're probably in process.

15 MS. KROLL: Sure. I understand there is
16 some lag, yes. And, I guess I would just add on the point
17 about the Aggregate Manufacturers. As you'll see in the
18 letter, and I would encourage you to read what
19 Mr. Worsowicz filed last Friday. They had put in a
20 proposal back in December of 2008, one of their members
21 had, Ossipee Aggregates, up here in Ossipee, New
22 Hampshire, has a very large parcel of land that has been
23 used over the years for various mining activities. And,
24 there are certain portions of that parcel that are no

1 longer being mined. They have been reclaimed to kind of
2 restore it, I guess, if you will. But there still are
3 these big, vast open spaces of land that have been, you
4 know, have an industrial use, and a history of getting
5 along very well with neighbors, with local zoning and
6 planning and that sort of thing. And, they were looking
7 at that site as a potential wind site. It's also
8 strategically located near some power lines and rail lines
9 and that sort of thing. And, there is just a lot of very
10 promising and beneficial aspects to the site. And, they
11 had met both with PSNH and New Hampshire Electric
12 Cooperative representatives, and were interested in
13 getting potential for a grant out of the Renewable Energy
14 Fund to help them pay for the wind study. And, they went
15 forth with that wind study. We had a correspondence from
16 Mr. Ruderman, who had just taken his position at the time,
17 that they had received the proposal that we had put in,
18 would take it under advisement when an RFP process would
19 come along. So that the client did go forward with a wind
20 study, and this has kind of put everything on hold,
21 because they're not sure of what's happening with the
22 Fund, the grant money, that sort of thing.

23 So, I just call it to your attention as
24 an example of a type of creative, innovative, intriguing

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1 type of proposal that you might receive if you issue an
2 RFP. And, a sister company of theirs, Boston Sand &
3 Gravel, has been very active, both on environmental funds,
4 as well as installed a solar panel array at its
5 Massachusetts facility and participated in the Governor's
6 administration down in Massachusetts running similar sorts
7 of programs. So, they're in this mindset of trying to
8 incorporate renewable and other environmentally proactive
9 programs throughout their membership. So, I just wanted
10 to call that to your attention as well. So, thank you
11 very much for the opportunity.

12 CHAIRMAN GETZ: Thank you, Ms. Kroll.
13 Mr. Traum.

14 MR. TRAUM: Thank you, Mr. Chairman and
15 Commissioners. Kenneth Traum, on behalf of the Office of
16 Consumer Advocate. And, I'll be extremely succinct here.
17 The OCA supports the Staff's recommendations. And, we'd
18 just like to thank not only the Staff and OEP, but also
19 all of the others who provided valuable comments at the
20 technical session and in writing, particularly those that
21 have hands-on experience in installing these type of
22 facilities. You know, hearing from the people that
23 actually do things I think really helps the process. And,
24 that's all I wanted to add at this point.

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1 CHAIRMAN GETZ: Thank you. Ms. Amidon,
2 did you have anything further?

3 MS. AMIDON: The only thing I have to
4 make is a point of clarification on the public comment.
5 As you recall when the order of notice was issued,
6 opportunity was made in the order of notice for comment to
7 be provided to the Executive Director e-mail address here
8 at the Public Utilities Commission. And, I have worked
9 with the Assistant to the Executive Director to make sure
10 that those comments were included in the public comment
11 portion of the docket. So, while you will, if you look in
12 the docketbook as we normally have, all correspondence
13 would appear in the upper part of the docket. The public
14 comment that you will see in this docket will appear in
15 the lower portion or the public comment section. And, I
16 know I worked with the Assistant to the Executive Director
17 to get Mr. Hickey's comments in there. So, we've been
18 working diligently to make sure that any comment we've
19 received by e-mail is in there. And, I believe I checked
20 it two days ago, and it appeared that those comments had
21 been successfully added.

22 The only other thing, I was going to
23 request the Commission, but the Commission already
24 suggested, that there be an opportunity for written

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1 comment, and so I appreciate that. And, again, I was
2 going to request that the Commission consider an
3 April 19th effective date for the Solar Hot Water Heating
4 -- or, the Solar Water Heating Program, to coincide with
5 the other efforts being done by other states and the
6 publicity surrounding Earth Day. If you have any other
7 questions, I'd be happy to take them.

8 CMSR. IGNATIUS: One thing, the
9 suggestion that there be a real definition of "collector",
10 in some way to be sure that we're using terms that can't
11 be either manipulated on purpose or mistakenly used and
12 get people going off in the wrong direction. Is there any
13 -- I guess I'd encourage, particularly looking to
14 Mr. Weissflog and others who are in this business, if
15 there are any kind of standard definitions that you know
16 of that will help make it clear, and not let people get
17 confused or do something to manipulate the application, I
18 think would be very welcome.

19 MS. AMIDON: Well, we have valued the
20 input from the installers, and, certainly, we will look to
21 them to help us with those definitions so that we don't
22 cause confusion or the potential for manipulation of the
23 money in the Renewable Energy Fund.

24 CMSR. IGNATIUS: Thank you.

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1 CHAIRMAN GETZ: Thank you. Is there
2 anything further this morning? Sir.

3 MR. SIDD: Commission Staff, please be
4 bear with me, I'm just getting my voice back. Thank you
5 for doing this work. This is great. And, last year was
6 great with the PV. There's just two things I really want
7 to hit hard.

8 CHAIRMAN GETZ: Could you identify
9 yourself for the record.

10 MR. SIDD: Oh, I'm sorry. I'm Mitch
11 Sidd. I have a store in Claremont, New Hampshire, and a
12 solar store in Enfield, New Hampshire. And, I'm part of
13 the USA Solar Store group. I've done over 200 hot water
14 installs myself, been in this for a while. And, this is
15 the point I want to get to. I'm primarily an evacuated
16 tube installer. So, when we talk, on Page 3, about the
17 definition of "collector panels", I don't do panels, I do
18 tubes. We have to stick to the BTUs. The BTUs are rated
19 by the SRCC and other rating corporations. That puts
20 apples to apples. If we talk about "collectors", we talk
21 about "panels", "how many panels", typically, my system
22 for domestic hot water is 12.7 million BTUs a year. So,
23 it fits into that first category. When I do space
24 heating, then it's four collectors, and I'm well over the

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1 third category. So, I just want to make that -- it just
2 has to be really clear as to what you're basing the
3 incentive on. Because, like this gentlemen said,
4 collectors, well, manifolds, you can attach more
5 manifolds. I can put 16 and 8 together. So, is that two
6 collectors or is that one collector? We have to stick
7 with the BTUs. That's my opinion on that. And, then,
8 there's really no if, ands, or buts. And, we don't decide
9 BTUs, it's decided by independent bodies. That's the main
10 point I want said on that.

11 And, the second thing I want to say, and
12 Barbara and I talked about this through the emails, Part
13 B, when it says "replace a hot water system", let me get
14 to that, says "residents who are replacing an existing
15 domestic hot water system", generally speaking, most of
16 the systems are preheating, what people have in their
17 homes. So, we don't go in and take out their boiler and
18 put in a solar. We always need something to make up the
19 heat during the off -- during November, December, January.
20 So, Barbara and I talked about this, maybe the wording can
21 be changed a bit, where it doesn't say "replacing", it's
22 an adjunct to the existing system, to cut down on all the
23 fossil fuel or electric use or whatever is needed.

24 Those are just my two comments.

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1 CMSR. BELOW: Sure. On the latter
2 point, you might want to talk after the hearing with
3 Mr. Steltzer from OEP. I think this is driven by
4 something that's in federal law.

5 MR. SIDD: Right.

6 CMSR. BELOW: That DOE can't even
7 change. And, the issue is that you have to, at least some
8 point in the process, disconnect the existing system, so
9 that it complies with the requirements of the federal law
10 that you're replacing. But, that being said, that there
11 may be limits, in terms of how we can format the
12 application. My impression is that doesn't preclude the
13 reuse of the system once it's been disconnected.

14 MR. SIDD: Well, that was my fear. That
15 it wouldn't preclude that, right.

16 CMSR. BELOW: Right. And, that's an
17 option under the application, to indicate what the system,
18 if it's going to be recycled or reused or what. But, in
19 any case, back on your first point, you said you've
20 installed about 200 solar hot water systems yourself. Has
21 that been in New Hampshire or is that all over?

22 MR. SIDD: Well, I first started in
23 Vermont, and now I'm in New Hampshire. So, that's
24 combined in the last five and a half years.

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1 CMSR. BELOW: Okay. And, you say you
2 primarily do evacuated tube systems.

3 MR. SIDD: Correct.

4 CMSR. BELOW: Which, of course, have
5 different pros and cons. But one of those is that the per
6 square foot can produce more output particularly in cold
7 weather, is that --

8 MR. SIDD: Exactly. Yes. Yes. And, by
9 the way, the solar fraction that we get to is 0.7 on a
10 year-round basis.

11 CMSR. BELOW: And, you said the bulk of
12 your systems are actually about, in this -- would fit in
13 the smaller category, I think you said "12.7 million BTU
14 per year" would be the rated output on a typical?

15 MR. SIDD: Correct.

16 CMSR. BELOW: And, is that meeting the
17 needs of both a one- and two-family household, but also --

18 MR. SIDD: No. That's a single family,
19 a family of three or four. We size it according to the
20 load and according to the house, because not everybody
21 lives in the house forever. So, we don't want to have an
22 undersized system for the house. So, if it's two baths,
23 you know, three to four, or, even if it's two baths, with
24 two occupants, we're still going to do -- the tubes I use,

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1 it's a rack of 16, and with that is an 80 gallon tank and
2 all the circulators and all the stuff that goes with it.
3 And, that's pretty much a standard for that family. And,
4 they do receive that solar fraction. Because the tubes
5 have other advantages over the flat plates, and I'm sure
6 you don't want to get into that right now. And, it really
7 optimizes solar cells much better than a flat plate would,
8 typically.

9 CMSR. BELOW: And, so, your
10 recommendation is to stick with the BTU basis?

11 MR. SIDD: Yes.

12 CMSR. BELOW: But your observation is --
13 so, can you say that -- you said the "vast majority", like
14 can you give a rough percentage? Would that be --

15 MR. SIDD: For domestic and space
16 heating?

17 CMSR. BELOW: Yes. How many you do that
18 are in the small range versus --

19 MR. SIDD: Right. Well, it was
20 interesting, last season was very different, because
21 everybody thought the oil price was low. So, I did more
22 space heating than I did domestic hot water. The year
23 before was primarily domestic hot water, because we were
24 getting \$3.00, \$4.00 a gallon of oil. So, it really has

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1 to do really based on the price of oil.

2 So, I would say last season, to answer
3 your question, I probably did, out of all the systems,
4 maybe 40 percent space heating and 60 percent domestic hot
5 water. Where the year before I would say it was
6 80 percent domestic hot water and 20 percent space
7 heating.

8 CMSR. BELOW: And, so, that would
9 basically suggest that, if last year you did roughly
10 60 percent for, did you say --

11 MR. SIDD: Domestic.

12 CMSR. BELOW: Just for domestic hot
13 water, --

14 MR. SIDD: Uh-huh.

15 CMSR. BELOW: Those would tend to be in
16 the small --

17 MR. SIDD: Yes.

18 CMSR. BELOW: -- the basic incentive.

19 MR. SIDD: Yes.

20 CMSR. BELOW: And, the roughly
21 40 percent you did that included space heating
22 applications?

23 MR. SIDD: Right. And, that would
24 exceed, that would be four of those collectors. So, four

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1 times the 12.7 million. So, it would exceed that last
2 category, it would be 48 plus million BTUs for space
3 heating.

4 CMSR. BELOW: Okay. That's helpful.
5 Thank you.

6 MR. SIDD: Okay. All set?

7 CHAIRMAN GETZ: Thank you.

8 MR. SIDD: Thank you.

9 CHAIRMAN GETZ: Anything further? Sir.

10 MR. ADAMS: Thank you. I wasn't going
11 to make a comment, but I saw something here. And, my name
12 is Peter Adams. I'm with Plymouth Area Renewable Energy
13 Initiative, known as PAREI. And, on Page 10 of the
14 discussion paper, on 1, 1.a there, it looks like there's a
15 discussion as to what SRCC rating system you're going to
16 use. I see a question mark there. I just want you to
17 understand that OG100 and OG300 are very, very different
18 things. OG100 rates the panel or the collector you're
19 going to use and that's it; OG300 rates the entire system.
20 When we've been looking at OG300 -- we've put in about 115
21 systems in the last three and a half or four years, we
22 very often try to utilize what is already in the house and
23 make it as efficient as possible by not throwing out good
24 components of your system. With OG300, very often we

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1 would have had to throw everything out from the current
2 house and start again, because you need the tank and
3 everything needs to be OG300. And, also, I believe that
4 OG300 precludes using oil as a backup, and so that really
5 throws out many, many, many people. You'd have to change
6 to electric or propane, I believe.

7 So, as you were looking at that, if that
8 is still an issue, I would say OG100 allows you to be more
9 flexible with the system when you're putting it in, and it
10 also brings the cost of the system way down, because you
11 very often could be re-utilizing some parts of that
12 household system that are already in place. OG300, when
13 we were doing our analysis, would have, you know, really
14 brought up the cost of the system in many cases.
15 Sometimes you do have to replace everything, but very
16 often you don't.

17 So, that was my comment.

18 CMSR. BELOW: Would OG300, would people
19 often use that in brand-new construction?

20 MR. ADAMS: Yes. Yeah, if you're going
21 to do brand-new construction, you're obviously going to
22 follow OG300. What we're looking at is, we're all about
23 efficiency and, you know, using as little resources in
24 every possible way. And, very often, we have been putting

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1 in systems that are OG300, because that's what it asked
2 for. But there have been many systems that were probably,
3 I would say 30 out of the 115, that we utilized a lot of
4 the household systems, a super store tank that's already
5 there that's two years old, in perfectly good shape, but
6 was not rated to be OG300, obviously, because -- and,
7 there's many other things in the OG300 that they're not
8 taking into account, is the length of the run of the house
9 and other things. So, if there -- you know, it needs to
10 become more comprehensive, if they're going to do that, to
11 be able to really rate how the system is going to work, I
12 think.

13 So, OG100 keeps it a little simpler.
14 It's, you know, the collectors are very easily rated.
15 And, the other problem with OG300 right now, the
16 manufacturers aren't --

17 (Interjection by the court reporter.)

18 MR. ADAMS: -- are not up to speed with
19 getting rated with OG300.

20 CHAIRMAN GETZ: I think that's his way
21 of saying "slow down".

22 MR. ADAMS: I'm sorry. OG300. Sorry.
23 So, when we went to look at what of our systems are rated,
24 there -- none of them were. I mean, Apricus that we put

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1 in, many of them is rated under one of the -- one of the
2 water tanks' superstore did their rating, and then sort of
3 brought the collectors in. But, you know, Thermomax,
4 there's a bunch of them that the last time I looked still
5 were not even rated at OG300, so would be totally
6 precluded from, if you used OG300 at this point.

7 CHAIRMAN GETZ: But, from your
8 perspective, if it were one or the other --

9 MR. ADAMS: 100 I believe would be
10 simpler, and would allow for the ability to, you know,
11 utilize portions of a system of that OG300 may not allow
12 you to do.

13 CMSR. BELOW: I think the intent of the
14 statement, based on the federal requirements, is that it
15 be either one or the other. So, maybe this just needs to
16 be clarified that it's just seeking confirmation that it's
17 going to have an SRCC rating under either system.

18 MR. ADAMS: Well, keep in mind that
19 OG100 is the collector. So, OG300 includes that. But,
20 so, in other words, to be 300, you know, everything, all
21 the collectors have to be rated OG100, what you're adding
22 on is the rest of the system for OG300. So, --

23 CMSR. BELOW: Ah. So, just the first
24 part of the question refers to your system must meet one

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1 of these qualifications, and it's really your collectors
2 or your system need to meet one or the other?

3 MR. ADAMS: Correct. Well, if you say
4 the word "system", you're talking about OG300.

5 CMSR. BELOW: Okay.

6 MR. ADAMS: So, the word "system" in
7 there is saying, you know, your -- I would say, if you
8 wanted to go with OG100, you would say "the collector
9 needs to be rated at OG100" or that SRCC rating.

10 CMSR. BELOW: Okay. And, could I also
11 just ask your opinion on a couple of these other
12 questions. Using a BTU output rating versus trying to
13 define it in terms of panel square footage or when you get
14 into tubes which have a different kind of output per
15 square footage and things like that, do you have an
16 opinion on that?

17 MR. ADAMS: Well, I do. They are -- the
18 collectors are very different things. If you -- when
19 you're putting it on the roof, or wherever you're putting
20 it, you're based on space that you have, the run to the
21 balance-of-system, down to your tank in the basement,
22 things like that. So, you're going to make decisions
23 based on where you are, how much space you have. And, so,
24 you're going to choose either an evacuated tube system or

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1 a flat panel system, and they're rated very differently.
2 And, so, I think, if you're talking about, although BTUs
3 can be confusing to some people, it's a big number, but --
4 and it really is the only way to match it apples to
5 apples. One -- there are certain collectors that put out,
6 you know, one half of what an evacuated tube would put
7 out, but there are bigger collectors that put out, you
8 know, half of what, you know, I mean, so it depends on the
9 size of the collector, the size of the flat panel. And,
10 so, you're really not talking apples and apples, if you're
11 talking about just a collector being there.

12 I think it is confusing, you know, when
13 you look at those big numbers. But, you know, it's very
14 easy. And, what I'm hoping is that most people will be
15 going to an installer to do this and will be able to get
16 those numbers very easily. You know, very few individuals
17 will be filling this out themselves, I believe.

18 CMSR. BELOW: And, in that regard, from
19 your experience, because most of the systems you've been
20 involved with probably are -- have been in New Hampshire,
21 is that correct?

22 MR. ADAMS: Yes, they're all in New
23 Hampshire. That's correct.

24 CMSR. BELOW: In your experience, how

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1 many fall into each of the three kind of BTU category
2 outputs shown on Page 3?

3 MR. ADAMS: Well, the way we design a
4 system is a little different than that. The one thing
5 that we say is "we design a system for 100 percent
6 capacity summertime whatever you get in the winter." If
7 you get, you know, a half percent -- half capacity in the
8 winter, that's fine. And, the reason is, because a bigger
9 system, if you're going to put a bigger system in, to do
10 all your domestic water and to heat your facility, to heat
11 your house, what you have is a lot of waste in the
12 summertime. You've either got to cover the system or dump
13 the -- you know, build a swimming pool, you know, to dump
14 the heat into. So, the cost per BTU goes way up if you're
15 going to waste it seven months out of the year. So, what
16 we say is -- that's the first thing we say to someone.
17 And, we say "you can put your money elsewhere into other
18 renewable, you know, put more insulation in, do other
19 things". You know, as opposed to go spending another 5 to
20 \$10,000 on solar that you're going to waste, you know,
21 you're going to have to dump a good portion of the year.

22 When we have put systems in, we've only
23 put in -- we now just put our second system in that's for
24 space heat out of 115. And, that is someone that wanted

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1 -- just built a house in Sandwich that really wanted to be
2 totally free of any oil deliveries or propane deliveries,
3 she really is trying to do that. But she will be dumping
4 a vast amount of her heat in the summertime, but that was
5 a decision that we made.

6 The other system that we put in, we
7 didn't make it any bigger, we just made it so it could
8 divert into space heating in the wintertime. So, the
9 woman doesn't get as much heat in her domestic water, she
10 just heats some rooms instead. But, in the summertime,
11 switches it back, so that it just goes into her domestic
12 water. That's the way she chose to use her heat. But we
13 didn't make it any bigger so that the BTU cost would stay
14 low.

15 CMSR. BELOW: But my question I guess
16 is, for -- excluding the two that have space heating, for
17 all the domestic hot water uses, are they typically under
18 20,000 BTU, or in this 20 to 30 thousand -- million?

19 MR. ADAMS: I would say 20. They're
20 right around 20, I would say, the majority. And, I'm
21 trying to figure out, the AP-30, which is what we put in
22 most of with Apricus, I believe does right around
23 20 million BTUs a year. So, that's -- And, that's the
24 most of what we put in. We put in three or four that have

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1 been, you know, 120 or 90 tube systems, but only a few of
2 those. Again, it's because we don't want them to overheat
3 in the summertime -- we don't want them to overheat and
4 have to dump heat in the summertime. That just raises the
5 cost of the BTU.

6 CMSR. BELOW: Okay. Thanks.

7 MR. ADAMS: Thank you.

8 CHAIRMAN GETZ: Okay. Anything else?

9 (No verbal response)

10 CHAIRMAN GETZ: All right. Hearing
11 nothing further, then we will close this hearing. We'll
12 await the opportunity for additional written comments and
13 then we will issue an appropriate order as soon as we can.
14 Thank you, everyone.

15 (Whereupon the hearing ended at 11:30

16 a.m.)

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