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STATE OF NEW HAMPSHIRE

PUBLIC UTILITIES COMMISSION

June 27, 2014 - 10:12 a.m.
Concord, New Hampshire

NHPUC JUL11'14 PM 4:24

RE: DRM 14-095 RULEMAKING:
Puc 2500 - Renewable Portfolio
Standards Rules.
(Hearing to receive public comments)

PRESENT: Chairman Amy L. Ignatius, Presiding
Commissioner Robert R. Scott
Commissioner Martin P. Honigberg

Sandy Deno, Clerk

APPEARANCES: (No appearances taken)

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

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P R O C E E D I N G

1
2 CHAIRMAN IGNATIUS: Good morning. We're
3 here this morning for a public hearing on a rulemaking
4 that the Commission has been working on for a while now.
5 It's our Docket DRM 14-095, addressing our Puc rules 2500.
6 And, I'm glad there's so many people here today. We want
7 to hear from you, your position on the draft rules. What
8 you like, what you don't like, and if you have any
9 proposed language to fix problems that you perceive in
10 what's been drafted. We're always happy to hear that.

11 We're going to go through the list and
12 take comments from people who want to speak. When we do,
13 it will be best if people come to the seat in front and
14 speak, so that there's a microphone. That helps the court
15 reporter tremendously. We want to remind people that,
16 because we're having a stenographer take it down, we can't
17 have people talking two times -- two people talking at
18 once. He's very good, but he's not that good. And, so,
19 we really need to become orderly about speaking. Doesn't
20 have to be too formal, but it does have to be in a way
21 that the court reporter can take it down.

22 If you haven't planned on speaking, but
23 something occurs to you, we'll obviously take your
24 comments today. And, just the fact that you didn't fill

1 out the form first shouldn't preclude you from speaking.
2 Just let us know. And, if there are things that you
3 decide you want to bring to our attention after the
4 hearing today, we'll be accepting written comments as
5 well. Mr. Sheehan, what's the deadline for comments?

6 MR. SHEEHAN: Just started looking. I
7 will get it to you.

8 CHAIRMAN IGNATIUS: All right. Thank
9 you. So, why don't we begin then with, unless anyone has
10 a need that they need to speak right away and you've got
11 another commitment you need to get to, raise your hand if
12 you're in that boat. Otherwise, we'll just start working
13 our way through the list.

14 CMSR. HONIGBERG: Can I just say, if you
15 have something to read, and you're going to read it, slow
16 down, so the court reporter can get it. Okay? Thank you.

17 CHAIRMAN IGNATIUS: The first person, is
18 it Mr. Gerry, is that the correct pronunciation?

19 MR. GERRY: That's me. Yes.

20 CHAIRMAN IGNATIUS: And, you're already
21 seated in front of the microphone. It had that you were
22 listed from Clean Energy Solutions, and didn't, since you
23 didn't have the form, it didn't say if you want to speak
24 or not. Did you want to address the Commission?

1 MR. GERRY: Yes. I have a few comments.

2 CHAIRMAN IGNATIUS: All right. Then,
3 why don't we begin with you, so we don't make you get up
4 and move and you get re-seated.

5 MR. GERRY: Okay. I'm Doug Gerry, from
6 Clean Energy Solutions. I have a small solar company. We
7 don't amount to a lot. We do a handful of systems each
8 year. And, we're very interested in the solar thermal
9 RECs that would be available. I wanted to just -- I've
10 been reading on the website as to different ideas as to
11 how they would accumulate the RECs. And, it appeared to
12 me that a good method to do that could be with a Btu
13 meter. And, this is not new to anybody in this realm.
14 But there were some concerns about tank storage and tank
15 losses, a lot of other things. It seems as though, to
16 keep it simple, you measure the water temperature in, the
17 water temperature out. A meter would measure the volume
18 and a brain puts it together and calculates the Btus.
19 That eliminates concerns over losses elsewhere. Also, if
20 somebody is accumulating heat, and it's not used, why
21 perhaps that shouldn't be rewarded.

22 So, this just appeared to me to be a
23 simple way. I wish I was speaking last, because I'd
24 probably get more education. I don't know how many people

1 are really speaking on the solar thermal end of it, from
2 solar systems. There are not as many going on these days.
3 Photovoltaic wins the cake most of the time, and PV is a
4 great way of storing energy, it would just go on the grid.
5 We have to store it in a place, like a tank or a ledge or
6 something. And, so, there needs to be an accurate way to
7 measure that.

8 So, I'm sure I'm going to be educated,
9 and somebody else will probably come up with some better
10 methods. The calculation method works. It just seems as
11 though this was an easy method. I looked up a meter,
12 because this is not a new thing being done, they use these
13 meters to calculate in apartment houses and heat being
14 used when they can't -- they only have one place to
15 generate the heat and not individual boilers and so forth.
16 So, it's not new to this world. The inaccuracies, what
17 they would be would probably be in the meter itself, and
18 they look like they're either one or two percent. So,
19 that can go either way. Sounded like a good option. And,
20 somebody smarter than me is probably going to tell or make
21 a -- have a better way.

22 I realize that a lot of this is about
23 biomass today and other areas, and lots of things that are
24 way bigger than this little thing. But I'm so glad that

1 the State of New Hampshire has this program, and that
2 they're considering solar thermal for it.

3 Other areas have moved into this, a lot
4 easier place to give RECs in Massachusetts and Vermont,
5 where they can meter it easily. It's not as easy to do
6 this. So, I looked up a meter. It looked like it was
7 about \$1,500. It can be Web-monitored. So, that's a
8 pretty easy take.

9 And, so, that's really all I had to say
10 about it.

11 CHAIRMAN IGNATIUS: Thank you.

12 MR. GERRY: Thank you.

13 CMSR. HONIGBERG: Mr. Gerry, everybody
14 else was asked to provide an e-mail address. Do you have
15 an e-mail address that you want to give us?

16 MR. GERRY: I do. Yes. It's
17 *doug@cleanenergysolutions.biz*.

18 CHAIRMAN IGNATIUS: Thank you. Then,
19 why don't we go back to the list. And, we're going to ask
20 you, Mr. Gerry, to maybe scoot over one seat, so people
21 can get in and out of that chair.

22 MR. GERRY: Yes.

23 CHAIRMAN IGNATIUS: The next person,
24 I'll give you, and the one after that, so you know you're

1 coming up, would be first Andrew Keller, from New
2 Hampshire Solar Garden, and then, after him, Scott
3 Nichols, of Tarm Biomass.

4 MR. SHEEHAN: And, madam Chair, while
5 we're waiting, the date was July 9th, which is the end of
6 the public comment -- I mean, the written comment period.
7 And, second, there's a Matthew Davis on the phone
8 listening to us, that is participating just by listening.
9 He didn't plan on speaking, as he has provided written
10 comments.

11 CHAIRMAN IGNATIUS: Thank you.
12 Mr. Davis, can you hear us?

13 MR. DAVIS: Yes, I can.

14 CMSR. HONIGBERG: That sounded like a
15 "yes".

16 CHAIRMAN IGNATIUS: We're having trouble
17 hearing you. But, as long as you can hear us, that's
18 good. Thank you.

19 CMSR. SCOTT: Do we know who Mr. Davis
20 is with?

21 MR. SHEEHAN: Yes. He's with the New
22 England Geothermal Professional Association.

23 CMSR. SCOTT: Thank you.

24 CHAIRMAN IGNATIUS: And, we do have your

1 letter that you submitted, Mr. Davis, on June 24th in our
2 file. So, thank you for doing that.

3 And, I didn't ask Staff, did you want to
4 do any kind of preliminary overview or setup before we
5 begin with comments?

6 MR. SHEEHAN: We had not planned to.
7 Looking around, there's a pretty educated group here. I'm
8 not sure we needed to. Thank you.

9 CHAIRMAN IGNATIUS: Good. Thank you.
10 Then, Mr. Keller.

11 MR. KELLER: Thank you. I actually
12 wanted to check on just clarifying the subject of today's
13 hearing. It was under my -- it was my understanding that
14 there was some discussion about the Commercial and
15 Industrial Rebate Program as part of this hearing, is that
16 correct?

17 MS. NIXON: It's part of these rules,
18 yes.

19 CHAIRMAN IGNATIUS: Yes. I'm getting a
20 nod from the person who works most heavily on the rules,
21 and that it would be a good thing to address.

22 MR. KELLER: Great. I just didn't want
23 to speak out of turn. Again, my name is Andrew Keller,
24 from New Hampshire Solar Garden. We primarily focus our

1 attention on the newly formed Group Net Metering law
2 that was passed, with a focus on community solar
3 development. I'm here representing my company that I
4 founded that, in the last six months, is focused solely on
5 putting together community solar projects around the
6 state.

7 I have a stack of C&I rebates here to
8 show the Commission of the work that we've done to date,
9 which represents about two and a half megawatts of
10 community solar projects that have some levels of approval
11 at the local and state level. And, what we found is that
12 the Group Net Metering rules -- rulemaking process has
13 defined that only one meter will be allowed on a piece of
14 land. And, the current C&I Rebate Program was recently
15 changed, I believe, back in December of 2013, to allow for
16 multiple meters per piece of land, to allow for property
17 owners that might have three separate meters, but are the
18 same -- on the same piece of -- parcel of land, to allow
19 for multiple rebates to be utilized to help develop solar
20 on, let's say, a fire station, a police station, and an
21 administrative building for a town, for example. Whereas,
22 prior to those changes, you had to pick a winner. One of
23 those locations would have to choose where the solar array
24 would go, and then the other facilities wouldn't have that

1 luxury.

2 I'm here today just providing feedback
3 that the Group Net Metering rules, again, only allow now
4 one commercial meter to be installed on a piece of land,
5 which then limits the amount of projects that can be
6 installed utilizing the C&I Rebate Program. So, I'm here
7 hoping to ask for some consideration that those two
8 programs could work maybe in more parallel, whereas right
9 now they're working kind of against each other.

10 What we would ask for is that the C&I
11 Rebate Program have the cap raised from 100 kilowatts up
12 to a megawatt. What I have here in these completed C&I
13 pre-approval applications for the PUC to consider,
14 represents towns, non-profits, agricultural landowners,
15 private properties, wastewater treatment plants, and
16 landfill opportunities. And, our goal out in the market
17 is to allow towns to utilize land that otherwise wouldn't
18 be of value to them. And, without some consideration and
19 change under the current C&I Program, the largest
20 community solar project that would be economical, to make
21 sense in New Hampshire, would only be 66 kilowatts. So, I
22 think, in the spirit of seeing more solar and more
23 renewables developed in our state to support the goals
24 that we have, we would ask for that consideration in the

1 process. Thank you.

2 CHAIRMAN IGNATIUS: Thank you. Okay. A
3 question, Commissioner Scott.

4 CMSR. SCOTT: Thank you, Mr. Keller.
5 Also, at least I have a copy of the e-mail you sent to
6 Mr. Ruderman. I just wanted to clarify. So, you started
7 by talking about the number of allowed meters, but it
8 sounds like your ask really is to increase the limit,
9 correct?

10 MR. KELLER: That is correct.

11 CMSR. SCOTT: So, it's not necessarily
12 to allow or require more meters per parcel?

13 MR. KELLER: No. I think that, again,
14 the Group Net Metering final rulemaking process has taken
15 place. And, it allows for only one commercial meter to be
16 installed on one piece of land. So, not having the total
17 kilowatt-hour, the total limit of an array have an
18 adjustment, it won't matter if one rule says that you can
19 do -- follow multiple meters, because, when you do a Group
20 Net Metering project, you can only attach one anyways.

21 CMSR. SCOTT: Okay.

22 MR. KELLER: So, you would be limited to
23 one.

24 CMSR. SCOTT: Thank you.

1 MR. SHEEHAN: If I may clarify, the
2 Group Net Metering has just started. We filed the initial
3 proposal a week or two ago. So, we will have this hearing
4 in that later this summer. So, it's in process, but it's
5 not final yet.

6 CHAIRMAN IGNATIUS: How would people
7 know when the similar sort of hearing for the Net-Metering
8 rules would be held?

9 MR. SHEEHAN: The rulemaking notice, I
10 think we sent it, it was the end of the week, it was
11 either last week or the week before, and it's on our
12 website. And, the Docket is 13-311. And, it's on the
13 front page of the website, you can get to that. And, I
14 don't have the date offhand, but it's in August, I
15 believe.

16 CHAIRMAN IGNATIUS: All right. Maybe
17 even before the hearing is done, if somebody can track
18 that down and make sure people know that date. Mr. Dean,
19 do you have a date for us?

20 MR. DEAN: August 27th, I believe.

21 MR. SHEEHAN: That sounds right. Thank
22 you.

23 CHAIRMAN IGNATIUS: All right.

24 MR. SHEEHAN: And, another response to

1 Mr. Keller. The proposed rules in front of us do raise
2 the cap from -- propose to raise the cap from 100 to 200.
3 And, I understand he's asking to raise it from 100 up to 1
4 megawatt for the reasons he expressed.

5 CHAIRMAN IGNATIUS: Thank you. All
6 right. Thank you, Mr. Keller.

7 Our next speaker will be Scott Nichols,
8 followed by Charlie Niebling. Let's go off the record.

9 (Brief off-the-record discussion
10 ensued.)

11 CHAIRMAN IGNATIUS: All right. So,
12 we're back on the record. So, next we have Scott Nichols,
13 from Tarm Biomass.

14 MR. NICHOLS: Good morning. Thank you.
15 My name is Scott Nichols. My company is Tarm USA,
16 Incorporated. We do business as Tarm Biomass. We are
17 located in Lyme, New Hampshire. I am going to speak today
18 about thermal RECs, and the relationship of thermal RECs
19 to my business specifically. I realize that you are
20 having to handle a large number of different energy
21 technologies in your considerations, and also a huge
22 diversity of sizes of -- or outputs from these
23 technologies.

24 The output class that I am most

1 interested in talking about, or the one that affects my
2 business the most, is the output class from 100 kW per
3 hour to 300 kW per hour. This is the range of boiler
4 outputs that we are finding tremendous growth in. In
5 fact, it's sustaining my business at the moment. The
6 residential biomass market is not great, but the
7 commercial market, small commercial and school market,
8 municipal market is very good. It's at that size class,
9 that 100 to 300 kW size class, where the technology begins
10 to make financial sense.

11 The program, as defined, allows for us
12 to use a fuel-based verification, which I support. The
13 problem I have is that the method of fuel verification is
14 too expensive. This size class of boilers that begins to
15 make sense and drives my business so much, at this size
16 class, the equipment that's being required or advised is
17 simply more than people will spend to get the RECs in
18 return. And, which is unfortunate, because the large
19 number of these boilers that are going into the field
20 represent quite a lot of alternative energy production,
21 and from what I can see in the industry is where there is
22 the most growth.

23 One of the things that we have in our
24 boilers is the ability to monitor fuel intake with the

1 onboard equipment. The proposal requires that we get
2 external equipment to measure the fuel. I would like to
3 see, since we're already requiring an independent
4 verification, I would like to see it possible for
5 proprietary equipment produced by the manufacturer of the
6 boiler, in my case a boiler, be allowed. We have a
7 process where we can measure the fuel input, weigh it,
8 plug that amount into the program, and then it actually is
9 measuring every turn of the auger, every pulse. It
10 actually doesn't measure the turn of the auger, it
11 measures pulses of power to the auger. And, it knows
12 exactly how much of a pulse produces how much of an auger
13 turn, and therefore how much fuel is being delivered into
14 the boiler.

15 Your default deficiency is very low,
16 much lower than what these boilers produce. And, I
17 understand that, because we don't have a very good -- we
18 don't have boilers that can be tested to the ASE process
19 right now for efficiency. But this means of measuring the
20 output -- or, the input to the boiler, in conjunction with
21 the very low efficiency that the -- that is allowed under
22 the REC Program or the proposed REC Program, I think is a
23 good way to go. And, it makes it affordable for these 100
24 to 300 kW per hour boilers.

1 CHAIRMAN IGNATIUS: Mr. Keller
2 [Nichols?], do you happen to know the section of the rules
3 that requires this external verification, just so we could
4 look at the language as you're talking?

5 MR. NICHOLS: I did not bring that piece
6 of paper up in front of me.

7 CHAIRMAN IGNATIUS: Okay. That's all
8 right. Go ahead. And, maybe that Staff has that. And,
9 if not, we can find it at any another time.

10 MR. NICHOLS: Okay. So, also, at this
11 size class, right now it's required that there's quarterly
12 verification, independent third party verification. I
13 would ask that that become a one year or annual
14 verification.

15 And, the last thing I'd like to ask is
16 that the percentage of efficiency, the default efficiency,
17 if ASE is not possible, is very low. And, we think that
18 next year, early in 2015, EPA, the federal EPA, is going
19 to have a new test procedure for boilers, what they're
20 calling "residential boilers". But that test method will
21 still be available for the size of boilers that I'm
22 talking about. And, it's an annualized average fuel
23 efficiency. And, I would hope that New Hampshire could
24 adopt that efficiency number, when EPA does finalize their

1 test method, because I think that's going to be more
2 accurate and more fair in the long run. It's not ASE, but
3 it is a federally recognized, or it will be a federally
4 recognized efficiency standard.

5 CHAIRMAN IGNATIUS: And, you thought
6 that might be adopted by the Feds next --

7 MR. NICHOLS: February of 2015 is what
8 they're saying. But they have delayed and delayed and
9 delayed, as you probably know.

10 CHAIRMAN IGNATIUS: All right. Thank
11 you.

12 MR. NICHOLS: And, that concludes my
13 remarks. Thank you.

14 CHAIRMAN IGNATIUS: Questions?
15 Commissioner Scott.

16 CMSR. SCOTT: Thank you. Thank you for
17 coming today, this morning. On that last point, are you
18 suggesting we somehow incorporate that
19 yet-to-be-determined method into the rule, the current
20 rules, or are you just suggesting that we look at that
21 when it happens and make a change then?

22 MR. NICHOLS: I'm not enough of a policy
23 guy to know which makes more sense for you. I would
24 trust -- I would probably trust that you could write it

1 into the rule now, that you could accept the EPA New
2 Source Performance Standard for residential boilers when
3 it is finalized. But it could, as a default position or a
4 fallback position, you could certainly revisit it.

5 CMSR. SCOTT: Thank you. As you're
6 aware, there are nuances in how -- in what we can do and
7 when. So, thank you. On your -- you talk about
8 "proprietary internal equipment". Would that be -- are
9 you suggesting that would be subject to the same
10 verification, the same tolerances, if you will, and that
11 that would be -- how would that be done? Does somebody
12 come to the facility, is that what you're suggesting?

13 MR. NICHOLS: Yes. It's already
14 required that this third party person comes to verify the
15 fuel, the fuel use and the measuring equipment. So,
16 because there is already this third party verification, I
17 see no reason why, since there's a backup based on fuel
18 use, why we couldn't use the onboard equipment, which, in
19 many cases, may be more accurate, because it's actually
20 measuring a variable rate auger, rather than a -- and it's
21 measuring every pulse of the auger, rather than trying to
22 measure an amount of fuel per hour.

23 CMSR. SCOTT: Okay. Thank you.

24 CHAIRMAN IGNATIUS: Thank you very much.

1 We appreciate your testimony.

2 MR. NICHOLS: Thank you.

3 CHAIRMAN IGNATIUS: Next is Charlie
4 Niebling, and after that will be Ted Vansant. Welcome.

5 MR. NIEBLING: Good morning,
6 Commissioners. Whoops. Good morning, Commissioners. I'm
7 Charles Niebling, with the consulting firm Innovative
8 Natural Resource Solutions. Thank you very much for the
9 opportunity to comment on the Puc 2500 rules. Hats off to
10 Commissioners and Staff for all the hard work that went
11 into this draft. I know it's been a lot of work. And, I
12 just want to acknowledge the Staff, because they have been
13 extremely helpful over the last several months, as we've
14 contemplated the draft and what it means for potential
15 parties. They have been very responsive, and we
16 appreciate that.

17 I'll submit written comments before
18 July 9th, but I do have -- I'll submit something in
19 writing today, too, just because, you know. I think most
20 of my recommendations have to do with making the process
21 to comply less costly and less complicated, particularly
22 for smaller systems. You'll see, as I go down the list of
23 recommendations, that's really what I'm trying to
24 accomplish. And, my interest really is, I want to see the

1 thermal provision flourish. I want -- I want people to
2 hold it up as a great example of something New Hampshire
3 did, and other states to emulate it. I don't want to see
4 this class drowning in ACPs. I want as much high
5 technology to qualify as possible. And, that's my goal.
6 That's my motivation here.

7 The first comment relates to the size
8 threshold for small thermal sources, which is 2502.25 and
9 2502.35. The 150,000 Btu threshold is too small. At 44
10 kilowatt, at that level, too few smaller projects will
11 qualify for less expensive metering protocols as allowed
12 for in the draft rule. If you factor in the cost of the
13 quarterly independent monitoring requirements, the cost of
14 the auger meter or "totalizer", as it's been referred to
15 by people I've been talking with, the administrative
16 expenses to comply, the time to apply with the PUC, to --
17 *etcetera*, it's quite significant. And, I've come up with
18 some math here, and I'm not going to belabor you with the
19 math. But, when I take the compliance cost and translate
20 it into a size system that the costs would break even with
21 REC revenue, T-REC revenue at \$15 a megawatt-hour, you
22 have to be around 178 kilowatts to break even, or 600,000
23 Btu, roughly. And, I just don't think you're going to get
24 anybody taking advantage of this mechanism under 150,000

1 Btu. There's simply no advantage or incentive to do so,
2 given the compliance costs.

3 I'd like the Commission to think about
4 increasing that threshold to 3 to 500 kilowatt. And, the
5 reason is that, with the estimated compliance and hardware
6 costs, and adding some buffer to allow for a meaningful
7 net revenue over cost on an annual basis, that's where I
8 think you're going to start to see interest in this
9 provision. As an alternative, as hopefully a less
10 expensive alternative to the Btu metering, the heat output
11 metering that is currently required as proposed for
12 everything above 150,000 Btu.

13 I know that the Commission and the Staff
14 is very attentive to the statutory verbiage "shall be
15 metered". And, it occurred to me the other day that
16 pellet fuel that is delivered to a consumer in the state
17 is metered, by virtue of the fact that any truck
18 delivering bulk fuel is subject to certification annually
19 by the Bureau of Weights & Measures. They have to be able
20 to prove to the customer that they're delivering exactly
21 the amount of fuel that they say they are, just as any
22 entity that sells anything that weighs something in the
23 State of New Hampshire is required to do.

24 And, perhaps a less expensive

1 alternative to fuel input metering would be to allow the
2 entity, depending on where you ultimately draw the line
3 between small and large, to submit receipts for fuel
4 delivery, to do so under affidavit, to require submission
5 of something from the company doing the delivery that
6 their truck has been certified by the Bureau of Weights &
7 Measures, and then to use receipts of fuel delivery as a
8 proxy for fuel input. Then, subject to the same formula
9 that's in the draft rule, to estimate heat output with the
10 application of the default boiler efficiency, parasitic
11 load, *etcetera, etcetera*.

12 Again, my goal here is to find a less
13 expensive way for people to comply, that is going to be
14 95 percent of what expensive metering is going to get you,
15 and stay true to the legislative directive of metering.

16 All right. That's Issue Number 1.

17 Issue Number --

18 CHAIRMAN IGNATIUS: Mr. Niebling?

19 MR. NIEBLING: Yes.

20 CHAIRMAN IGNATIUS: Before you go on,
21 the description that Mr. -- I think it was Mr. Nichols
22 just gave of --

23 MR. NIEBLING: Yes.

24 CHAIRMAN IGNATIUS: -- sort of

1 accomplishing some of that proxy by the initial input of
2 fuel, and then --

3 MR. NIEBLING: Yes.

4 CHAIRMAN IGNATIUS: -- also kind of a
5 calculation based on certain heat pulses --

6 MR. NIEBLING: Yes.

7 CHAIRMAN IGNATIUS: -- that you could
8 then work up what the fuel consumption was.

9 MR. NIEBLING: Uh-huh.

10 CHAIRMAN IGNATIUS: Does that system
11 make sense to you as well?

12 MR. NIEBLING: Yes. It does. I guess
13 what I'm looking for is, for systems that meet the
14 definition of "small thermal sources", 2502.25 or 35, that
15 you allow for the greatest flexibility in proving how much
16 heat you're generating. Give people the widest latitude.
17 Which, in effect, you do, because there's this sort of
18 default provision where you can petition the PUC for
19 something else, for some other approach. But I think it
20 would be preferable to sort of specify what is allowed,
21 rather than require people to go through a petitioning
22 process for some alternative protocol.

23 CHAIRMAN IGNATIUS: And, is the
24 description that he gave something that might be on units

1 larger than the ones you're talking about?

2 MR. NIEBLING: Well, I do agree that I
3 think you do need to draw the line somewhere. And, above
4 that line you really -- having accurate, calibrated Btu
5 metering is an appropriate requirement. I think that's
6 okay. So, it really comes down to where you draw the
7 line. What's "small"? That's really the question.
8 What's "small" and what's "large"? And, I think the draft
9 rule now is just way too small, and nobody is going to do
10 it. And, there's just -- there's no net revenue from at
11 least based on my estimation of what it's going to cost to
12 comply at that level.

13 CHAIRMAN IGNATIUS: And, your
14 recommendation for what a good threshold should be for
15 2502.35 would be what?

16 MR. NIEBLING: 300 to 500 kilowatt, or a
17 million to a million seven [1.7 million] Btu per hour.

18 CHAIRMAN IGNATIUS: Thank you.
19 Commissioner Scott.

20 CMSR. SCOTT: And, I know you have more
21 to say, to talk about, but it sounds like you're leaving
22 this point, so I wanted to catch you before you did.

23 MR. NIEBLING: Thank you.

24 CMSR. SCOTT: Is that correct?

1 MR. NIEBLING: Yes.

2 CMSR. SCOTT: So, two questions on that
3 end. If we were to allow these things more flexibility,
4 are you still saying you would want the lower limit
5 increased?

6 MR. NIEBLING: Yes.

7 CMSR. SCOTT: Okay. And, why is that?

8 MR. NIEBLING: It's still pretty
9 expensive to comply with the quarterly independent
10 monitoring. Probably everyone in this class is only going
11 to participate through an aggregator. They're going to
12 charge a cost to provide that service. I don't know what
13 that cost would be or will be. The process for applying
14 with the PUC for registering with GIS takes time. So,
15 there's -- if time is money, there is a cost associated
16 with that. And, I just think it's too low, you know.

17 CMSR. SCOTT: Because the follow-up on
18 that question is, so, it sounds like it will be, if we
19 left it where it was, I'm not saying we will, it would be
20 self-selecting. What you're saying is, the economics
21 won't make sense for those small units, I think, --

22 MR. NIEBLING: Correct.

23 CMSR. SCOTT: -- because of the
24 administrative cost. And, I would argue, so, what's the

1 harm of keeping it a lower number, so, if somebody did
2 want to go down that path, you know, if they did the full
3 analysis, from what you're saying, if nothing changes, it
4 wouldn't make sense, they wouldn't do it. So, what --

5 MR. NIEBLING: Well, there are other
6 costs, besides the hardware costs. That's the reason.
7 Now, I've -- in my analysis that I put together for
8 purposes of this morning's hearing, I assumed a hardware
9 cost, that is the auger odometer, and the software that
10 downloads that information to a real-time database and an
11 internet interface, so that it can be communicated
12 electronically. That's expensive. But, if you're not
13 requiring that, you still have -- you're still going to
14 have compliance costs. And, I guess what I'm saying is,
15 those costs, at some threshold, those costs may make the
16 incentive or the net revenue generated simply
17 unattractive. And, obviously, where that is is going to
18 vary, depending on what you ultimately require.

19 CMSR. SCOTT: So, in that context,
20 wouldn't that be -- what I'm getting at is, rather than
21 the Commission set the limit based on our presumption that
22 this would happen, wouldn't market forces cause that to
23 happen? And, if so, why, what's the harm if --

24 MR. NIEBLING: So, in other words, not

1 have a limit at all and allow any?

2 CMSR. SCOTT: Or, have this threshold
3 where it is, if we left it where it was, the market forces
4 dictated, well, effectively, only something over three
5 times that size would make sense to participate, what
6 would be the harm of having it lower?

7 MR. NIEBLING: Oh, I see your point.
8 Well, I can guarantee you, if you keep it at 150,000 Btu,
9 and you require Btu meters, anything above that, there's
10 not going to be any involvement in the program up to a
11 certain, you know, wherever that threshold may be. I'm
12 quite certain of it. So, do you want to exclude a whole
13 class of potential projects, including those that
14 Mr. Nichols just spoke about, by requiring Btu metering?
15 I hope not. I hope that, as we talked about a couple
16 years ago at the stakeholder meeting, I hope we find a New
17 Hampshire solution. Which means things -- different
18 things to different people. But I guess I'm looking for
19 something that gets you 99 percent of the way there, in
20 terms of the accountability, but makes it accessible to a
21 much larger population of potential projects, and not just
22 biomass, but other projects as well.

23 CMSR. SCOTT: Thank you. And, I hope I
24 didn't derail your presentation.

1 MR. NIEBLING: No. No. I'm sorry to be
2 taking a lot of time here.

3 The second one is the monitoring and
4 verification frequency, which is 2505.09(i)(2), which
5 currently requires quarterly verification, or monitoring
6 and verification, and also requires that that be done by a
7 PE, a New Hampshire licensed PE. To have a PE visit your
8 site four times a year is an expensive proposition. And,
9 I ask, why is it necessary that it be done on a quarterly
10 basis? Why not make it annual, and then allow the
11 generator to do it on a more frequent, up to quarterly
12 basis, if they choose to have the PUC certify their T-REC
13 output on a more frequent basis than annually. Why is
14 that necessary? So, if you're a little guy, and you just
15 want to do it once a year, and pay a PE to come in and
16 bear that expense, why not make it -- why does it have to
17 be quarterly? I'm not sure I know the answer to that.

18 MR. SHEEHAN: If I may interject, the
19 smart people to my left are telling me that GIS requires a
20 quarterly reporting. So, it's, really, we're piggybacking
21 on that. So, I'm not sure we have the flexibility. But
22 we'll certainly look at it.

23 MR. NIEBLING: But don't they -- don't
24 they respond to whatever the statutory and regulatory

1 signals are from the individual states? And, can't they
2 amend their rules, pursuant to what New Hampshire adopts
3 by statute or rule, for thermal?

4 CHAIRMAN IGNATIUS: It sounds like
5 something that Staff will take a look at.

6 CMSR. HONIGBERG: I'm not sure it makes
7 sense to get into a debate among the people out there. I
8 think we get the point that you've made and that Mr.
9 Nichols made.

10 MR. NIEBLING: Okay. I wasn't debating,
11 I was just asking a question.

12 CMSR. HONIGBERG: No. I just think
13 that -- the message was as much for the people to your
14 left as it was for you.

15 MR. NIEBLING: Okay.

16 MR. SHEEHAN: For everyone's benefit,
17 after this public hearing, we are going to have a tech
18 session, and we can iron out some of this stuff and find
19 some details.

20 CHAIRMAN IGNATIUS: Good.

21 MR. NIEBLING: Let's see. The
22 qualifications of the independent monitor. Currently, a
23 licensed PE is required for thermal. If it's electric, a
24 licensed electrician, certified energy manager, certified

1 building analyst or certified mechanical professional, a
2 PE or a home energy rater as certified by RESNET are
3 qualified under current rule. And, I'm wondering why the
4 same breadth of qualifications wouldn't also -- couldn't
5 also apply to thermal, just so that you're not necessarily
6 stuck with a licensed PE. And, I would include in that
7 list a plumber, a licensed plumber, perhaps.

8 The fourth issue is -- oh, I'm sorry,
9 that was 2505.09(d)(1).

10 The fourth is some sort of inconsistent
11 language around combined heat and power under 100
12 kilowatt, which is 2505.04. Under Section (f)(2) of
13 2505.04, it seems to read that to require a small CHP
14 system is to have a stack test annually, and this would be
15 cost-prohibitive to small CHP systems, and would force any
16 owners away from adding efficient electric generation to a
17 thermal project, like a back pressure steam turbine or
18 ORC. And, our recommendation here is that the rule should
19 be changed so that whatever is required for biomass
20 thermal would also apply to biomass CHP, at that small
21 scale.

22 And, then, there is the certification of
23 the CHP, which is 2505.08(a)(1), says the need to provide
24 "proof that the system meets the requirements of

1 2505.02(c)". I think that just needs to be clarified.
2 There's some -- just kind of some mixed-up language or
3 expectations, particularly with respect to NOx emissions,
4 which is not a requirement for any biomass thermal system
5 under 30 million Btu.

6 I think my point here, it's a little bit
7 technical, is just to -- we want rules that are going to
8 encourage people to maximize their output efficiency by
9 combined heat and power, if possible.

10 And, the last item has to do with NOx
11 reporting. And, I believe this issue has already been
12 brought to the attention of Staff by Littleton Regional
13 Hospital. There is some inconsistencies between
14 2505.02(d)(16) and 2505.04(b)(1). And, I'm fairly certain
15 the Staff is already aware of that. But I just wanted to
16 reinforce the fact that there should not be a NOx
17 reporting requirement for systems under 30 million Btu.
18 But the rules seem to suggest that there is.

19 CHAIRMAN IGNATIUS: Thank you.

20 MR. NIEBLING: So, that's the extent of
21 my comments. Thank you very much.

22 CHAIRMAN IGNATIUS: Thank you. All
23 right. No other questions. Thank you, Mr. Niebling.
24 Next up will be Mr. Vansant, followed by Mr. Button.

1 MR. VANSANT: Thank you. My name is Ted
2 Vansant. I'm the Regional Director for RGS Energy. And,
3 we're a company that's been designing and building solar
4 PV projects for over 20 years in New Hampshire. And, I
5 live in New Hampshire, and have been selling into all of
6 New England, mostly in the commercial solar PV realm. I
7 wanted to thank the Commissioners and Staff for all their
8 support of solar PV. And, I know everybody has been doing
9 a lot of hard work and great work in support of solar.
10 So, it's great to see the increase of solar projects in
11 New Hampshire.

12 And, the Staff has been very responsive
13 as well, and I think that's unique. That's not the case
14 in other states. So, again, thank you very much, because
15 it's, you know, really a pleasure to do business here, and
16 sometimes pull your hair out elsewhere.

17 I have two comments. One is, I support
18 the proposed increase for the C&I rebates from 100 to 200
19 kW, and would request possibly a higher cap. And, I say
20 that with some uncertainty, because I understand that, you
21 know, if we put a higher cap on the per project C&I
22 rebate, we could use up the funds in the C&I Rebate
23 Program quickly with a few large projects. And, so, I
24 understand that's been an ongoing challenge for the Staff,

1 and will continue to be. I'm not sure what the answer is,
2 but I think we could possibly go higher than 200 kW.
3 Maybe 500 kW, maybe up to a megawatt. I don't know the
4 answer, but I welcome the opportunity to work on creative
5 ways to solve that problem.

6 Secondly, my second comment, with full
7 disclosure, I haven't suggested this to the Staff or
8 anyone at this point, it just kind of popped into my mind
9 this morning. But I realize that, in New Hampshire, to be
10 able to develop a commercial solar project, you have two
11 mechanisms for rebate grant funding. One is a C&I grant,
12 which is competitive and annually put out, and the other
13 is a C&I rebate, which allows you to get it ongoing at any
14 time.

15 And, I guess I wonder if it makes sense
16 to have both those mechanisms. The grant is somewhat
17 arbitrary and more difficult to get. And, it seems to me
18 like, if we took the money out of the grant program that
19 was allocated to solar, I mean, maybe the grant program
20 makes sense for other technologies, but, if you took a
21 certain amount of funds out of that that could be
22 allocated to solar PV and put it in the C&I Rebate
23 Program, that could bolster the C&I Rebate Program, allow
24 for more projects, allow for better, more consistent

1 funding for the industry, and be more in line with I think
2 what's happening in other states.

3 So, those are my two brief comments.

4 CHAIRMAN IGNATIUS: Thank you. All
5 right. We appreciate your comments, and trying to think
6 creatively about how to get this money out as effectively
7 as possible.

8 MR. VANSANT: Thank you.

9 CHAIRMAN IGNATIUS: Next is Mr. Button,
10 and then we have Mr. Olson, who you, wonderfully, you
11 checked off "yes", "no" and "maybe". And, so, --

12 MR. OLSON: I wanted to keep my options
13 open.

14 CHAIRMAN IGNATIUS: I guess so. So, you
15 have Mr. Button's testimony to think about it. We can
16 also come back to you later, if you want. And, after that
17 would be Mr. Saltsman.

18 MR. BUTTON: Good morning. Thanks for
19 having me. My name is Paul Button. I own a small energy
20 auditing firm in Manchester, New Hampshire. And, I've
21 also developed a set of aggregate pools as an independent
22 monitor for the PUC. Last year, I was able to report 385
23 megawatt-hours of power from the Sun in New Hampshire,
24 belying what some of the contention is that solar doesn't

1 work in this state, which it absolutely does.

2 But I have to admit to being a little
3 surly this morning. Excuse me. Seventy-five percent of
4 my business, that I've been pushing on that for about
5 three years now to try and get these aggregate pools to
6 stand, 75 percent of that business just left the state.
7 And, the primary reason why is because of the poor value
8 of the renewable energy credits.

9 So, I know that your decisions in
10 rulemaking policy is driven by the Legislature. So, I
11 believe that some of my comments this morning, referring
12 to RSA 362, are germane. And, if you don't agree, please
13 tell me right now and I won't say anything.

14 CHAIRMAN IGNATIUS: Well, I think we'd
15 love to hear it, as long it doesn't overtake the hearing.

16 MR. BUTTON: No, no, no. It's very --

17 CHAIRMAN IGNATIUS: These things are all
18 interrelated.

19 MR. BUTTON: I'm a man of few words.

20 CHAIRMAN IGNATIUS: Please. We'd like
21 to hear it.

22 MR. BUTTON: Okay. So, first of all, we
23 need to reinstate an ACP that has some sting. And, this
24 will also raise the value of the RECs. We need to rewrite

1 RSA 362, to remove the legalized larceny of allowing the
2 utilities to take RECs for free. Or, we can simply repeal
3 RSA 362, remove New Hampshire from RGGI, and give the
4 utilities everything they want. The mess will be fixed,
5 and we can change the name of our state to "New Ohio".

6 So, some suggested changes to the Puc
7 2500 directly. I would suggest to remove the need for
8 individual independent monitors, of course, that would put
9 me out of business, by creating a State level agency to be
10 the central self-reporting nexus, vis-à-vis Mass. DOER.

11 (Court reporter interruption.)

12 MR. BUTTON: DOER, D-O-E-R. So,
13 this position --

14 CMSR. HONIGBERG: And, for the reporter,
15 that's an acronym, right? D, capital D, capital --

16 MR. BUTTON: Yes. Department of Energy
17 Resources, I believe. And, this could be either a PUC- or
18 an OEP-based position. Remove the required initial site
19 visit or fold it into the duties of the above-mentioned
20 position. Further streamline the REC eligibility
21 application form, basically, un muddy the process. I'd
22 also ask to remove the requirement for notarized
23 documentation. The Master Electrician's license number or
24 the NABCEP certification number should suffice to formally

1 document the installation.

2 And, that's the end of my comments.

3 CHAIRMAN IGNATIUS: And, Commissioner
4 Scott.

5 CMSR. SCOTT: Thank you for your
6 comments. I just want to tease out a little bit. So,
7 your first statement was, you had -- somebody in your
8 aggregation business has left the state. So, they were
9 here, installed?

10 MR. BUTTON: Yes.

11 CMSR. SCOTT: And, they're no longer
12 trying to collect RECs?

13 MR. BUTTON: Correct.

14 CMSR. SCOTT: Okay.

15 MR. BUTTON: They've gone to
16 Massachusetts.

17 CMSR. SCOTT: Okay. So, the REC
18 generation business, if you will, has gone to
19 Massachusetts?

20 MR. BUTTON: The aggregator has decided
21 to certify -- now I'm lost for words -- he wants to sell
22 them in the State of Massachusetts. So, he's registering
23 them in Massachusetts. So, he's created a completely
24 different business entity in Massachusetts. He got a new

1 aggregator number. The number that I've been working with
2 is no longer valid as of the end of this quarter.

3 CMSR. SCOTT: Thank you. I understand
4 now. I thought you meant the physical systems left the
5 state. I understand now.

6 MR. BUTTON: No, no, no. No, just the
7 RECs.

8 CMSR. SCOTT: Thank you.

9 MR. BUTTON: Uh-huh.

10 CHAIRMAN IGNATIUS: Mr. Button, I know
11 you've been involved in this business for quite a while,
12 and you've been helpful in EESE Board meetings and
13 others, --

14 MR. BUTTON: Yes, ma'am.

15 CHAIRMAN IGNATIUS: -- in understanding
16 the relationship between the policy goals and what's
17 really happening out in the field. Of the different ideas
18 that you are throwing out right now, and we'll leave New
19 Ohio out of it, but what are the short-term things? Even
20 if you were to advocate a change in putting more of the
21 monitoring function into a State agency, that's not
22 something that would happen right away, even if it's the
23 right way to go. So, on the short-term, what would you
24 want to see done at this stage? I mean, with the existing

1 legislation, are there things that we could be doing or
2 any adjustments in the programs under our jurisdiction
3 that we could do? It sounds like, you know, a specific
4 would be to take out the requirement of a notary
5 statement. I mean, that's a small change. But are there
6 any other of those sort of specific, smaller items we
7 could do, even before you get back to the legislative
8 session next year?

9 MR. BUTTON: I think that the rule is
10 pretty robust as it stands right now. Maybe some wording
11 here and there, just, you know, clarify -- clarification
12 type stuff. Where I'm trying to read the rule and going
13 "What's does that mean?" "What's that mean?" So, then,
14 the other complaints I've had, from installers and from
15 clients, before the aggregators get involved, and I've
16 convinced some of the aggregators to take on the kind of
17 onerous task of applying for eligibility and applying for
18 NEPOOL status. So, again, and that one statement I made
19 where, you know, just try to un muddy the process.

20 CHAIRMAN IGNATIUS: Can you think of any
21 of the specifics in that REC eligibility process that are
22 most difficult to comply with that we could look at?

23 MR. BUTTON: No. Only after you learn
24 how to do it, and you do it a couple of times, and after a

1 while you go "Okay, so, now I know what to expect. You
2 need to get the inverter make and, you know, the size and
3 the types of panels that are going up there", and things
4 like that. And, this is, again, been part of an education
5 process, where I've been trying to get installers
6 educated, because some folks have not even heard of RECs,
7 and they have been around for years. And that, I think,
8 is, again, the work of, you know, maybe in the political
9 arena, where these RECs have remained one of the state's
10 best kept secrets. And, I think it's because certain
11 people want to keep it that way. And, they have cut
12 themselves a pretty sweet deal, low ACP, less value on the
13 RECs, and they get to take 20 percent of the unclaimed,
14 unprotected RECs for free. I mean, that is -- it's
15 outrageous.

16 CHAIRMAN IGNATIUS: You said that we
17 should "remove the initial site visit". Is that in the
18 thermal rules requirement or is that in a different, in
19 the REC eligibility?

20 MR. BUTTON: In the photovoltaic. I'm
21 qualified to do photovoltaic.

22 CHAIRMAN IGNATIUS: So, that's in our
23 existing requirements for REC eligibility for PV?

24 MR. BUTTON: For -- correct. And, so,

1 you know, New Hampshire can turn into a pretty large
2 state, especially when you get up into the North Country.
3 And, there's like 150 miles of just where you see nothing.
4 So, I certainly can't drive -- you know, I actually like
5 to get paid for my services, and I just feel bad, I really
6 feel bad charging people to do an initial site visit. If
7 the installer knows what has to go into the installation,
8 then he can certainly tell me "Yes, I put this type of
9 meter in." "Well, take a picture of it and send it to me,
10 and I'll look it up." And, if it's valid, it's valid.

11 And, it's just there's a lot of
12 misunderstanding, and there's a lot of ignorance,
13 basically. And, I don't mean that in a pejorative way. I
14 mean that the information just hasn't been put out there
15 for people to know what they're -- and, so, right now,
16 given the value of the REC, the minimum size system that
17 makes sense for anybody to participate is about three and
18 a half kilowatts. That's pretty small. But some people
19 don't even know about the rebates, unless the installers
20 tell them. And, so, slowly, but surely, every installer
21 that I meet I say "Hey, you know what "REC" is?" "No."
22 "Do you know you get a rebate for this?" "Oh, really?
23 No, I didn't know that." Anyway, just make it part of
24 their sales pitch and give people some incentive to go

1 forward.

2 And, so, the utilities have created a
3 situation where they can continue to prop up their --
4 their lies, I'm not going to mince words, and it's
5 actually driven a couple of people away from even thinking
6 about doing solar. They go "I got to sit on the system
7 for seven years before it pays me back?"

8 So, we had one client in 2012. It is a
9 seasonal farm out in Hampton. And, he closes the farm
10 down after Halloween, and basically shuts everything down,
11 the refrigerators, storefront freezers, everything. And,
12 I didn't hear from him like all winter. And, I'm kind of
13 concerned, because I needed his quarterly report. And, he
14 came back about April, and I got a phone call, he's all
15 excited, because he said he would be able to -- he got a
16 chance to look at his electric bill. And, so, with the
17 net-metering, he was going to be able to run the entire
18 farm for the entire season for nothing, except the deliver
19 charge. And, I got him to join National Power, too. So,
20 saving there, too.

21 So, this is -- this is what I'm in the
22 business to do. And, I'm not looking to get rich. As a
23 matter of fact, I just flattened my rates to a flat rate
24 of \$40 a year. So, for me, it's not a huge money-making

1 situation. It's a philosophical intent.

2 CHAIRMAN IGNATIUS: Thank you very much.

3 MR. BUTTON: Thank you.

4 CHAIRMAN IGNATIUS: The next person up,
5 Mr. Olson, do you want to wait?

6 MR. OLSON: I think my comments are more
7 in the nature of clarification, and can be addressed
8 either in the technical session or in a discussion with
9 Staff. So, I'll pass.

10 CHAIRMAN IGNATIUS: All right.

11 MR. OLSON: Thank you.

12 CHAIRMAN IGNATIUS: Then, Mr. Saltsman?

13 MR. SALTSMAN: That would be my comment
14 as well. Just for clarification, do we have a date for
15 the technical session?

16 CHAIRMAN IGNATIUS: That will be this
17 afternoon. On these rules?

18 MR. SALTSMAN: Yes.

19 CHAIRMAN IGNATIUS: The tech session
20 will be following this hearing.

21 MR. SALTSMAN: Immediately following the
22 hearing?

23 CHAIRMAN IGNATIUS: Yes.

24 MR. SALTSMAN: Okay. Thank you.

1 CHAIRMAN IGNATIUS: All right. Then,
2 Mr. Albrecht, followed by Mr. Willing.

3 MR. ALBRECHT: Good morning. My name is
4 Ray Albrecht. I'm from near Albany, New York. Although,
5 I would make the point that my wife is from New Hampshire.
6 So, I have a very strong family connection here. I am a
7 consulting engineer, a licensed Professional Engineer.
8 And, I've spent several decades on the subject of
9 combustion, renewable thermal fuels, boiler systems,
10 residential through commercial and small industrial.

11 And, basically, I'm looking to share
12 with you the experience of several engineering society and
13 national, federal government efforts relating to boiler
14 efficiency and emissions testing, and then to really focus
15 on the subject of thermal metering, and the, you know,
16 choice between direct and indirect metering.

17 To be specific, these experiences have
18 been gained through the American Society of Heating,
19 Refrigerating, and Air Conditioning Engineers, commonly
20 referred to as "ASHRAE". There's a number of technical
21 committees, 6.1 for boiler systems, 6.10 for fuels and
22 combustion. Also, several standards, as we see 103 and
23 155, relating to residential and commercial national
24 boiler efficiency standards. So, I've been deeply

1 involved with the subject of efficiency measurement and
2 thermal metering over the years, okay?

3 And, to make a long story short, based
4 upon, you know, decades of experience in this subject, I
5 would highly encourage you to allow for broader use of
6 what we're calling the indirect approach to thermal
7 metering. In other words, looking at boiler operation,
8 hours of operation of augers for pellet-type operations or
9 gallons of fuel for boilers that might be burning
10 biodiesel, which is an equally meritorious form of
11 renewable thermal energy.

12 Several of the speakers have talked
13 about raising the threshold of firing rate to allow for
14 the simpler approach. The current threshold under the
15 rule, as we've already heard several times, is 150,000
16 Btus per hour. My suggestion to the New Hampshire PUC
17 would be to go all the way up to a level that allows
18 facilities, such as schools and municipal buildings, to
19 participate in this program, that allows installations
20 where the taxpayer is paying for the fuel to get into this
21 program. I think it would substantially increase the
22 economic benefits. Just looking at it from a hardcore
23 taxes paid perspective, if you can bring those facilities
24 into the program, the benefit/cost of the program would be

1 a real winner, okay?

2 CHAIRMAN IGNATIUS: Can I ask you, sir?

3 MR. ALBRECHT: Sure.

4 CHAIRMAN IGNATIUS: What would the level
5 be that you think is appropriate?

6 MR. ALBRECHT: My suggestion would be,
7 actually, 3 million Btus per hour. Or, if you wish to
8 think in metric terms, you could call that "1 megawatt",
9 or, you know, 1,000 kW of capacity. That is very close to
10 the peak loads that we see in many of the larger
11 school-type facilities. And, if you were to bring it to
12 that level, but put a cap at that level, that would also
13 encourage folks to adopt better practices for
14 biomass-fired boiler installation and operation by using
15 smaller-size systems that are actually partially
16 undersized, so that they would run more continuously, that
17 means efficiency goes up, emissions go down. And, so, the
18 payback to the taxpayer becomes even more robust. All
19 right?

20 So, I want to just douse a little bit of
21 cold water on some of the claims that are made by
22 manufacturers of metering equipment, who, even though
23 their equipment is frequently tested to the international
24 standards that have been referenced as having accuracies

1 in the range of 2 percent or 3 percent, or, you know,
2 there are different classes of efficiency. The problem is
3 is that those efficient -- those accuracy ratings are
4 established during very carefully controlled laboratory
5 test conditions. In other words, the equivalent of
6 measuring automobile gas mileage under perfect, ideal
7 conditions. And, that's not what we have, especially in
8 the world of boiler operation, where your heating loads
9 are constantly changing and where boilers are
10 unfortunately severely oversized, they operate at very low
11 part-load conditions much of the time, and with changing
12 heat load, temperatures changing constantly, it's really
13 exceedingly difficult.

14 So, what I would encourage you to
15 consider is the experience, which is now being implemented
16 in the development of federal national regulations,
17 efficiency regulations for commercial-size boilers, is
18 that it's really a situation where this indirect
19 measurement approach is not just "just as good" as direct
20 metering, but, under most circumstances,
21 counterintuitively, it's actually better, okay, in terms
22 of the end result.

23 So, I would really urge you to
24 reconsider that. And, we've already had dialogue with

1 the, you know, the PUC Staff on that subject over the last
2 couple years, and fully understand their concerns and, you
3 know, needs for documentation, all right? To bolster
4 their thinking and consideration, I would urge that the
5 regulations include the onsite testing of boiler
6 efficiency or the use of certified boiler efficiency
7 ratings under the upcoming federal regulations. And, we
8 are expecting regs for residential, and then further down
9 the road for commercial boilers in the future as well. I
10 think you can piggyback on those, on the federal work that
11 will be coming into play.

12 So, that's basically my simple message,
13 just to follow the KIS principle, you know, "keep it
14 simple". All right.

15 In New York State, and other states, you
16 know, the need to bring facilities under the tent, where
17 it's taxpayer dollars being used to pay for the fuel,
18 really is of great importance, whether it's schools,
19 municipal buildings, sometimes publicly owned or supported
20 hospitals, that really is necessary to make the program an
21 overall success.

22 CHAIRMAN IGNATIUS: Thank you very much.

23 MR. ALBRECHT: And, I'll be glad to
24 continue trying to provide technical assistance to the

1 Staff here.

2 CHAIRMAN IGNATIUS: All right. That's
3 helpful. Commissioner Honigberg.

4 CMSR. HONIGBERG: Very near the end of
5 your remarks, you may have answered the question. But
6 what I was writing is you were talking about the accuracy
7 being "as good" or "even better". Has that been tested?
8 Are there studies that have been done that measure the --
9 what you said?

10 MR. ALBRECHT: In the world of gas and
11 oil-fired equipment, where the numbers of units, the
12 resources for research are orders of magnitude greater
13 than the subject of solid biomass, --

14 (Court reporter interruption.)

15 CMSR. HONIGBERG: Subject of solid
16 biomass.

17 MR. ALBRECHT: Than the subject of
18 biomass. Yes, there are published reports. I believe I
19 may have shared some of those a year or two back with PUC
20 Staff. Lawrence Berkeley National Laboratory, and then
21 Pacific Gas & Electric, out on the West Coast, have been
22 primary funders of that, with -- under the auspices of the
23 U.S. Department of Energy. We know the subject very well.
24 And, fortunately, the idea of using what we call the

1 "indirect" approach has really gained traction.

2 CMSR. HONIGBERG: Thank you.

3 CHAIRMAN IGNATIUS: All right. Thank
4 you very much.

5 MR. ALBRECHT: Okay. You're welcome.

6 CHAIRMAN IGNATIUS: Appreciate your help
7 this morning. The next speaker would be Chuck Willing.

8 MR. WILLING: Should I move up to that
9 microphone?

10 CHAIRMAN IGNATIUS: Yes, you might as
11 well. And, that was it for people who had stated an
12 interest in speaking. There are a few people who have
13 come since the sheet was passed out. Mr. Fontaine, do you
14 have anything you want to address?

15 MR. FONTAINE: No.

16 CHAIRMAN IGNATIUS: Okay. Or, if anyone
17 was a "no", who's decided to be a "yes", just let me know.
18 Yes, sir. All right. We'll come to you afterwards. So,
19 Mr. Willing.

20 MR. WILLING: Okay. My name is Chuck
21 Willing. I'm with Rath, Young & Pignatelli, and I'm here
22 representing Androscoggin Valley Hospital. The hospital
23 has been using oil-fired boilers for heat for many years,
24 and is replacing those, and actually has replaced those

1 with biomass-fired boilers that will provide heat. They
2 just came on line, they just completed a stack test, and
3 they're hoping to qualify for thermal RECs. I believe
4 we're the type of project that the program was intended to
5 address.

6 Like some of the other speakers, we're
7 most interested in making sure that the qualification and
8 compliance process is as simple as it can be, doesn't
9 require anything more than it needs to require. We
10 understand that there need to be requirements, just want
11 to make them as simple and easy to comply with as
12 possible.

13 I have a few comments, I'm going to
14 reserve to very specific detailed comments until the
15 written comment stage. First, on emissions reporting, it
16 appears that every biomass project, including ours, would
17 be required to file quarterly affidavits about emissions
18 to the Commission, as well as to the Department of
19 Environmental Services. We would ask you to consider
20 whether that the emissions reporting process might be
21 scaled back to mirror what the air permitting reporting
22 process is, in its most simple form, perhaps annual
23 reports that are given to the Department could be also
24 given to the Commission. But we'd ask that you consider

1 not requiring much, if any, more than that.

2 We also, with regard to the stack
3 testing, we've just completed a stack test, we believe
4 that's going to be the one and only stack test we're going
5 to have to complete under the air permitting process. I
6 think, based on the rules, that that's also all that's
7 required for qualification for RECs. But I wonder if that
8 could be made more clear in the rules, and we could
9 suggest language at the time that the written comments are
10 given.

11 Finally, under -- in the realm of
12 emissions reporting, the statute talks about "Best
13 Management Practices" as determined by the Department.
14 For a project in our size category, it appears that that
15 is in lieu of testing for NOx emissions. Though, the way
16 the statute reads, we are required to pass a stack test
17 for particulate matter, and then meet the Department's
18 Best Management Practices standard. I just want to make
19 sure, as the rules get finalized, that that dual
20 requirement gets preserved, and there aren't NOx
21 requirements piled on top of that.

22 Finally, just in the realm of emissions
23 reporting, the language in the rules reads that the stack
24 test has to be conducted in the upper 10 percent of I

1 think its normal operating conditions. We just started.
2 So, we're not quite sure what -- and I think actually the
3 word is "typical". We're not sure what "typical" is.
4 And, we're hoping that, if the stack test is conducted in
5 the upper 10 percent of the capacity, that that would be
6 sufficient. I'm sure it would be.

7 For metering, it's my understanding that
8 we're planning to read our meter manually, which would
9 make reading it every hour cumbersome. Wondering if daily
10 reading of meters would be sufficient?

11 Next topic, independent monitor.
12 Obviously, this is an area that could involve a potential
13 expense to our project, as well as other projects. I'm
14 wondering if, when the Commission Staff responds to
15 comments, if they might take the opportunity to clarify
16 the role of the independent monitor on this. We
17 understand that, for areas we're hoping it will work,
18 we're going to do -- take the reading, do the calculations
19 within the staff of a hospital, then send out our
20 calculations and data to be checked by the independent
21 monitor, who will then either give the report back to us
22 to submit or will submit it on our behalf. If the role is
23 that limited, it's acceptable to us. But, if the
24 Commission is envisioning a broader role for the

1 independent monitor, then that's going to add the expense
2 to the operation of the project. And, we hope that
3 wouldn't be the case.

4 CHAIRMAN IGNATIUS: And, what's your
5 expectation of what the independent monitor would be doing
6 when they receive your reported readings and calculations?
7 Just to make sure you did it right?

8 MR. WILLING: Yes. To make sure that
9 the calculations are correct. Perhaps do the calculations
10 for us. But we're hoping it would really be, you know,
11 you e-mail it or send it to them, and they send it right
12 back to you. And, there's not a process that would
13 involve a lot of charges or costs.

14 CHAIRMAN IGNATIUS: And, it's as much a
15 sanity check to say --

16 MR. WILLING: Yes.

17 CHAIRMAN IGNATIUS: -- "Those numbers
18 look funny. What's going on there?"

19 MR. WILLING: Right. But we were
20 wondering also what is the role of the independent
21 monitor? I assume it is to help replicate the system
22 integrity of electric metering, which doesn't fully exist
23 with thermal metering, and, in addition, there's a
24 conversion that needs to happen. So, I assume the monitor

1 is there as kind of a check on that. But, if something
2 more is envisioned or if something different is
3 envisioned, maybe you could let us know.

4 Then, finally, with regard to
5 discounting, there is one discount for parasitic load. We
6 assume that the term "parasitic load" refers to the use of
7 that term in the ANTARES report from last fall. If it
8 means something else, maybe that could be clarified, or
9 possibly the term "parasitic load" could be defined in the
10 rules.

11 That's all I have for comments.

12 CHAIRMAN IGNATIUS: Thank you very much.
13 All right. No other questions for you. Thank you. Sir,
14 in the back, why don't you come forward and give us your
15 name. And, when you're introducing yourself, why don't,
16 since we don't -- oh, maybe you already filled out your --

17 MR. ORIO: No, I did arrive a little bit
18 late.

19 CHAIRMAN IGNATIUS: Okay.

20 MR. ORIO: I apologize. My name is
21 Martin Orio. And, I represent the New England Geothermal
22 Professional Association.

23 CHAIRMAN IGNATIUS: Can we get an e-mail
24 address while we've got you here, to get in touch?

1 MR. ORIO: Absolutely. It's
2 *martin.orio, o-r-i-o, @negpa.org.*

3 CHAIRMAN IGNATIUS: All right. And,
4 your colleague, Mr. Davis, is it, is on the phone?

5 MR. ORIO: He very well may be. I'm not
6 sure. I haven't heard him speak. He's the strong, quiet
7 type.

8 (Laughter.)

9 MR. ORIO: So, I just wanted to, again,
10 as many others this morning have done, thank the PUC for
11 the efforts and the energies to get us to the point where
12 we can start moving forward. We're excited about that.
13 And, we saw some good language in the draft in that
14 regard.

15 I did want to echo some of the comments
16 that I heard earlier from some of the other useful
17 renewable thermal energy stakeholders. Immediately, and
18 in a very general sense, protecting the spirit of the law.
19 And, I understand there are some external features, like
20 the ones that Mr. Button mentioned. We feel that's very
21 important. I do get, I don't know if you could call it
22 the "reward" or the "punishment" of making my way
23 throughout New England and getting involved in legislative
24 opportunities like these. And, I can say that the rest of

1 New England is watching, and they're looking to adopt
2 those things that we do so well here in New Hampshire.

3 So, I did want to suggest that
4 increasing the minimum size of the project that does not
5 require the draconian -- somewhat draconian measurement
6 protocols, which we understand and appreciate are
7 important, would be a welcome consideration. The notary
8 feature, again, along with that capacity flexibility might
9 be -- being considered might also help to encourage
10 further adoption. I think, even though we're talking
11 about relatively small loads and small project
12 opportunities, as we increase that cap a little bit, we're
13 going to start seeing some small commercial opportunities,
14 some larger home opportunities, that might otherwise, as
15 another gentleman so eloquently put, just not happen.
16 And, you know, it kills me to think that we're fighting to
17 push the price of the alternative compliance payment down,
18 instead of making this more robust, which I feel is headed
19 in the right direction.

20 Lastly, I just wanted to add a technical
21 comment with regards to those larger systems, that
22 identified the requirement of a stamp from a PE, and
23 encourage you to also consider the CGD, or Certified
24 GeoExchange Designer, which is actually, with all

1 deference to our fine PEs here in the state, a lot more of
2 a technically focused individual, with the similar
3 credentials. The CGD is maintained and managed by the
4 AEE, the American Energy Engineers. And, that list is
5 readily available to those who search the AEE site. In
6 fact, in many cases, a CGD stamp is required alongside the
7 PE stamp for larger ground source projects. And, so, I
8 think it's another professional designation you might
9 consider for those larger requirements.

10 And, thank you. That precludes my
11 comments -- that concludes my comments.

12 CHAIRMAN IGNATIUS: Commissioner Scott.

13 CMSR. SCOTT: Thank you for coming and
14 giving your comments. I want to take another stab at
15 understanding the -- you may remember of my discourse
16 with -- I don't know when you walked in, I apologize. I
17 had a back-and-forth with Mr. Niebling over "what would be
18 the harm of the lower threshold?" In that, I understand
19 that there's -- cost/benefits may not be there for the
20 lower ones, the administrative costs could --

21 MR. ORIO: Right.

22 CMSR. SCOTT: -- potentially outweigh
23 the benefit of getting the RECs.

24 MR. ORIO: Yes.

1 CHAIRMAN IGNATIUS: So, I understand
2 that. But my -- I don't know exactly where to set it to.
3 And, I was trying to understand what's the harm of, if you
4 set a low threshold, but the economics at this point don't
5 make sense, so, those people won't do it, won't the market
6 just decide where it makes sense to do it? Or, are you
7 concerned that the people would start the process and then
8 realize that the administrative cost is too expensive and
9 hurt the program?

10 MR. ORIO: Sure. Yes. You know, I
11 think that, again, it's more a message of -- it's more an
12 issue of promotion and immediate availability and
13 understanding of the program to those smaller users. I
14 can tell you that, even if we end up, you know, that we're
15 sending a check for 50 cents, you know, through the
16 aggregator to that homeowner, it's still a good thing,
17 because it's validation. It allows the public and the
18 end-user or those considering being end-users to start to
19 say "Hey, what is this? Why does it make sense?" And,
20 then, we see the quantification in the form of that
21 payment opportunity.

22 But, again, at the end of the day, if
23 they do that math, and they say "Well, gee, this is great.
24 I'm doing the right thing. It's going to cost more money

1 than the replacing the electric resistance heater. But
2 does it make sense for me moving forward?" And, I would
3 suggest that the answer, making it a little bit more
4 compelling, you're making it a little easier on that
5 smaller level, yes. But, you know, it goes hand-in-hand
6 with protecting -- well, maybe I shouldn't say
7 "protecting", but being more evenhanded with the REC
8 marketplace, and the ACP is part of that, obviously.

9 So, I can't answer your question as
10 directly as I might like to, Mr. Scott. But, again, we're
11 excited that the door is now open. We have a basic
12 technique for some of the smaller stuff. And, so, we will
13 be starting an aggregation service and working with our
14 smaller users.

15 But, again, I think that, you know, you
16 have a whole swath of getting into that small commercial
17 that will really be anxious and interested in taking
18 advantage of this kind of opportunity. You know, that
19 homeowner is expecting "oh, I'll be here for five years."
20 That business owner, not so much, and, in fact, looking a
21 lot more long term. And, I think it offers a much larger
22 opportunity for the adoption of what the law's spirit is
23 intended to be, in saving energy and carbon here in the
24 Granite State.

1 CMSR. SCOTT: Thank you.

2 MR. ORIO: Thank you.

3 CHAIRMAN IGNATIUS: Thank you very much.
4 Is there anyone else who had not expressed an interest in
5 speaking, but would like to?

6 (No verbal response)

7 CHAIRMAN IGNATIUS: I say this at my
8 peril, but is there anyone who did already speak, but has
9 just something they really need to add?

10 (No verbal response)

11 CHAIRMAN IGNATIUS: Okay. I've scared
12 it out of you.

13 (Laughter.)

14 CHAIRMAN IGNATIUS: The next steps in
15 all of this will be a technical session, after probably a
16 quick break. We won't -- the Commissioners won't be here
17 for that, but all of you are encouraged to stay and work
18 with the Staff and continue to talk about some of the
19 details here.

20 There is an opportunity for submitting
21 further comments through written submissions by, what did
22 we say that was? July 9th. That can be done by e-mail or
23 a letter to the Commission. And, any time you're
24 commenting on something, if you can tie it back to the

1 particular rule, that's helpful. If you even have
2 language recommendations, that's always helpful. But
3 that's the next step, obviously, is, for the Staff, is to
4 continue to work with the rule language and feed the
5 policy considerations into it. And, the rulemaking
6 process is fairly strict about how we write things. So,
7 we've got to get the words right in order to have the
8 rules be adopted.

9 And, then, once it goes in a final
10 proposal to the legislative committee that looks at all of
11 this, there's an opportunity again for a hearing in front
12 of the legislatures -- legislators. So, if we end up with
13 issues that you still think should be changed, that's one
14 final opportunity to make your pitch at that point.

15 But, you know, our hope is that we get
16 as much of it resolved by agreement, certainly, any of the
17 technical glitches or inadvertent inconsistencies are the
18 kinds of things that ought to be ironed out. And, if
19 there's ways to help to make it a robust program that
20 encourages participation, without running afoul of the
21 statute, that's, obviously, our hope in all of this.

22 So, we appreciate your involvement this
23 morning, and hope that the tech session this afternoon or
24 after a quick break is going to be effective. And, thank

1 you.

2 (Whereupon the hearing was adjourned at
3 11:36 a.m., and a technical session was
4 held thereafter.)

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