

STATE OF VERMONT  
DEPARTMENT OF PUBLIC SERVICE

Comprehensive Energy Plan  
Energy Supply, Renewable Energy, Energy Efficiency  
Noble Hall, Montpelier, Vermont  
March 22, 2011

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1                   COMMISSIONER MILLER: Good morning. So  
2 you all don't know this, but you helped me win  
3 a bet today and so I want to thank you for  
4 that right off the bat.

5                   Dave Lamont, our planning director, when  
6 we were planning for this event told me that  
7 it would be lightly attended. In fact, I  
8 think, Dave, you said --

9                   MR. LAMONT: I said six.

10                  COMMISSIONER MILLER: -- six. I told  
11 him he was crazy and placed a bet with him.  
12 So then I had an extra incentive to get the  
13 invitation out and change the room to a larger  
14 size and draw all of you in. So it was just  
15 my secret plan to win the bet. So I  
16 appreciate it.

17                  I'm Elizabeth Miller. I'm Commissioner  
18 of the Department of Public Service, and I  
19 just want to welcome all of you here today.  
20 This is really our first -- this is literally  
21 the kickoff for our comprehensive energy  
22 planning process at the Department, and it's  
23 just really exciting to have so many people  
24 engaged with us here today to get us started.

25                  It's a real honor to be leading the

1 Department at this time because I really do  
2 view this as a critical process for the state,  
3 and while I'm excited to be in the leadership  
4 role at the Department I can't do it without a  
5 really great team, and so before we get  
6 started substantively I do just want to  
7 introduce all of you to the team from the  
8 Department that's here today and will be  
9 working on the energy planning process with  
10 me.

11 Dave Lamont, planning director, and Dave  
12 is a long time state employee, about 30 years,  
13 is that right, and is retiring from state  
14 government at the end of the month, taking the  
15 wise course to go into the private sector for  
16 a little bit of time, but is still available  
17 to the Department and will be helping us with  
18 the planning process going forward, and we  
19 really appreciate your leadership. So thank  
20 you, Dave.

21 Kelly Launder is also here. She's the  
22 assistant director of our planning department.  
23 She's back there. Just wave. There you go,  
24 Kelly.

25 Let's see. Andy Perchlik, who is

1 sitting right next to Dave, is the executive  
2 director of the Clean Energy Development Fund  
3 at the Department.

4 TJ Poor is our energy efficiency  
5 specialist. He couldn't be here with us today  
6 because of a family issue, but TJ is  
7 absolutely critical to the energy efficiency  
8 work that the Department does and is a key  
9 member of our team for this process.

10 Ed Delhagen, who is standing here in the  
11 blue shirt, is one of our energy program  
12 specialists at the Department. He's also a  
13 very experienced facilitator for energy and  
14 environmental issues both here in the state,  
15 nationally, and internationally as well, and  
16 when we were talking about this process Ed was  
17 one of the folks at the Department who came to  
18 me and said, you know what, I really want to  
19 work on this, and so I'm very happy to have Ed  
20 facilitate for us today and work with us on  
21 the program.

22 George Nagle. George, where are you?  
23 George is over here by the window, one of our  
24 utility planners in Dave's department, and  
25 finally Karin McNeill right here near the

1 entrance table. Karin is an energy grant  
2 specialist at the Department, and she is  
3 another individual who saw what we were doing  
4 and came to me and said can I be part of the  
5 team, and the answer of course was absolutely.  
6 Karin's been very helpful in the process. So  
7 that's the team. You'll see them today as we  
8 go forward, and I just wanted to introduce  
9 them right off the bat.

10 We can't do it all just at the  
11 Department, of course, and so just very  
12 briefly there are many state agencies and  
13 departments involved. Some of them are  
14 represented here today: Agency of Natural  
15 Resources, including the Department of  
16 Environmental Conservation, of course, is key,  
17 and we're lucky today to have the Deputy of  
18 ANR Chris Recchia with us over by the window  
19 here.

20 Agency of Transportation has been  
21 incredibly helpful. Gina Campoli, who I'm not  
22 sure if I saw her walk in, she will be here  
23 later today, has been meeting with us on the  
24 process.

25 Agency of Agriculture of course.

1 Secretary Ross and I have had a number of  
2 meetings on this subject and will be working  
3 closely with them going forward.

4 Agency of Commerce and Community  
5 Development with regard to all of the work  
6 force and economic policy issues in the energy  
7 plan will be a key partner.

8 The Agency of Human Services on  
9 weatherization and efficiency issues in  
10 particular; and, finally, Department of  
11 Buildings and General Services because the  
12 state must lead by its example in its own  
13 infrastructure, and the Department of  
14 Buildings and General Services has already  
15 been and will continue to be a key in that  
16 role.

17 It's not just the State, of course.  
18 It's also frankly all of you, and I just want  
19 to very quickly point out that in this room  
20 today we have folks representing a wide range  
21 of industries and organizations involved in  
22 energy planning, policy, and execution. We  
23 have representatives of our utilities here,  
24 various energy services companies and  
25 consultants, a number of public interest and

1 community organizations, the business  
2 community itself is represented, as well as  
3 many town energy committees, and I think it's  
4 important as we start this process to ensure  
5 that we're having a wide cross-section of  
6 folks in Vermont involved, and really that was  
7 the purpose of having all of you here today.  
8 So thank you.

9 The goal really for us is to get your  
10 feedback on our planning process and goals for  
11 the state energy plan. So Ed will discuss in  
12 more detail just very briefly the format  
13 today. We are going to have a few substantive  
14 presentations to lay the groundwork of where  
15 we are at the moment on energy resource and  
16 renewables issues. We're going to have an  
17 opportunity for breakout smaller discussions  
18 so that we really have a chance to hear from  
19 all of you, and then we're going to come back  
20 and have a facilitated group discussion to  
21 provide in the larger framework feedback from  
22 those that have come today, and, again, it's  
23 really setting the path for this planning  
24 process.

25 Today is just the beginning. We do have

1 future engagements planned. The kickoff  
2 meeting this afternoon on energy efficiency  
3 will be a part of that, as well as the  
4 meetings that we have planned on April 7th on  
5 transportation and land use issues. Those  
6 will also be held here in order to accommodate  
7 a number of folks who would like to attend.

8 We'll be offering after that web-based  
9 comment opportunity in the form of written  
10 surveys that you will be receiving. So  
11 anything that you feel you didn't follow up on  
12 or have a chance to submit today you will have  
13 that opportunity after this meeting.

14 We're also committed to making sure that  
15 as the process goes forward we have a chance  
16 for more technical engagement on issues.  
17 There are people in this room who are experts  
18 on biomass, on solar, on thermal, whatever the  
19 issue is there are experts in this room, and  
20 as we go forward we do want to have the  
21 ability to have meetings and discussions with  
22 you, and frankly welcome that. So please keep  
23 that in mind and feel free to contact the  
24 Department as this process goes forward.

25 We're aiming toward public hearings on a

1 new comprehensive energy plan draft this  
2 summer, and so again the process today is  
3 starting that off. The goal is October 15th.  
4 The Governor has asked for final  
5 recommendations on the state energy plan by  
6 that date.

7 So what is the Comprehensive Energy Plan  
8 just to kick us off and remind us why we're  
9 here. The statute requires that the  
10 Comprehensive Energy Plan include a  
11 comprehensive analysis and projections  
12 regarding the use, cost, supply, and  
13 environmental effects of all forms of energy  
14 resources used within Vermont, and that it  
15 contain recommendations for state  
16 implementation actions on those issues.

17 We are also using the Comprehensive  
18 Energy Plan to fulfill our electric plan  
19 obligations at the Department. That's a  
20 narrower section obviously just on electricity  
21 as opposed to all forms of energy usage, but  
22 we felt that given the integration with energy  
23 planning issues it was important to update the  
24 electrical plan at the same time and we will  
25 be doing that.

1           So why do we create a Comprehensive  
2 Energy Plan? The statutes answer that  
3 question, and so just to set us all on the  
4 path we do it to assure, to the greatest  
5 extent practicable, that Vermont can meet its  
6 energy service needs in a manner that is  
7 adequate, reliable, secure, and sustainable;  
8 that assures affordability and encourages the  
9 state's economic vitality, the efficient use  
10 -- and provides for efficient use of energy  
11 resources in a manner that's environmentally  
12 sound.

13           It's a lot of words, but I think it's  
14 really important to focus on that as we go  
15 forward. This is the path the Legislature has  
16 set for us in the planning process. In doing  
17 this we are to ensure that the state energy  
18 planning process is consistent with all state  
19 laws that touch upon the subject. So, for  
20 example, state statutes on greenhouse gas  
21 emission reductions must be taken into  
22 account. The SPEED goals that the Legislature  
23 has already set must be taken into account.  
24 The standard offer program, those are just  
25 some examples.

1           There's a few things that the  
2           Comprehensive Energy Plan does not do and I  
3           just want to lay those out because the  
4           question has already come up a number of times  
5           to me and I'm sure will come up going forward.  
6           It doesn't prescribe outcomes on specific  
7           pending projects. There is a, as you know, a  
8           Public Service Board process for specific  
9           pending projects and the state energy plan  
10          itself is forward looking, and so just, for  
11          example, on renewables the state energy plan  
12          will be addressing renewables, what the proper  
13          mix should be in-state versus out-of-state  
14          generation, what the trade-offs are, and those  
15          are things that one would expect and we expect  
16          the Comprehensive Energy Plan to address. It  
17          won't be going back and looking at, for  
18          example, pending projects such as Kingdom Wind  
19          which are in front of the Board right now, and  
20          by the time October 15th comes that process  
21          will be at whatever place that process is.  
22          The Comprehensive Energy Plan will not revisit  
23          or take a position with respect to Lowell  
24          different than the Public Service Board  
25          process has already engaged.

1           Similarly, on Vermont Yankee it's -- the  
2           Comprehensive Energy Plan will not be a  
3           document that will reanalyze the pros and cons  
4           of relicensing of that facility. The  
5           Comprehensive Energy Plan is -- the Governor I  
6           think has been very clear about should help  
7           Vermont plan for a post-Vermont Yankee future.  
8           The base case, as economists sometimes say, is  
9           Yankee we have that right now and we know what  
10          that energy path looks like for Vermont  
11          because we're going through it at this moment.  
12          What we need to plan for and what I am  
13          committed in leading the Department to plan  
14          for is the post-Vermont Yankee future. So  
15          just to be real clear at the outset that's the  
16          point of the document. It's forward looking,  
17          how do we get there in the State of Vermont.

18                 So overarching goals. The statute has a  
19                 lot of words, but I think it's important just  
20                 to kind of pull out the keys. First of all,  
21                 it has to address all energy sectors; not just  
22                 electricity, but home heating and  
23                 transportation as well. We have to strive for  
24                 the lower greenhouse gas footprints required  
25                 by state law, and we have to do it at a cost

1 that keeps Vermont regionally competitive to  
2 ensure economic vitality.

3 The stakeholder draft. When I sent out  
4 the invitation I provided a link to our web  
5 site which contains an old draft from the  
6 planning process that began back in about  
7 2007/2008 I believe. It was never finished.  
8 So just to kind of go through the history the  
9 Department hasn't actually adopted a  
10 Comprehensive Energy Plan since 1998. We did  
11 adopt an electric plan in 2005. That's the  
12 document that will also be updated in this  
13 process.

14 The 2008 process the Department started  
15 did provide a draft and in that draft which  
16 we've provided in the link, and there's some  
17 hard copies here today, the staff did attempt  
18 to include all of the details required by the  
19 statute and has been working very hard on  
20 updates actually since 2008. It was my  
21 judgment coming in that many of you had not  
22 had a chance to see that work and that it was  
23 important to get that draft and that old work  
24 out there because, indeed, there are a number  
25 of both factual material in it as well as

1 ideas that deserve attention and will  
2 certainly be informing our process going  
3 forward, but it's just a starting point. It's  
4 not the draft that will come out this summer.

5 In fact, we're looking for input from  
6 you today on how, if at all, to use that  
7 former work product, whether it's by way of an  
8 appendix for reference to the plan that we  
9 create or actually an editing process of that  
10 document. I think there are opinions. We're  
11 looking for input on that today.

12 There's a -- real quickly there's a lot  
13 of other state activity going on that touches  
14 upon the energy planning process. I probably  
15 don't need to list all of them that are up  
16 here on the board, but the Legislature is  
17 currently looking at energy legislation. Any  
18 new statutory mandates will of course have to  
19 be considered in the energy planning process.

20 It's my understanding the Legislature is  
21 also planning on its own public engagement  
22 process. There's a joint hearing coming up on  
23 March 31st. I'm not exactly sure whether they  
24 are doing morning or afternoon, but you can  
25 find it on the legislative calendar, Senate

1 Natural Resource and Senate House Natural  
2 Resource, both Senate and House will be having  
3 that public hearing.

4 There's other climate initiatives  
5 obviously going on at the cabinet level, as  
6 well as interagency, such as the climate  
7 neutral working group. We actually have an  
8 annual report of that group that will be  
9 issued very shortly cataloging the efforts to  
10 date.

11 The state agency energy plan which  
12 exists is in the process of revision and  
13 updating. VTrans is going through its own  
14 planning process including climate reduction  
15 goals. The Agency of Agriculture of course  
16 has a number of energy initiatives for our  
17 working farms, and Commerce and Community  
18 Development is working on green energy jobs  
19 initiatives. We have those processes in mind,  
20 and we're trying to integrate and harmonize as  
21 much as possible.

22 We're also aware of many examples of  
23 great work that's already been done by frankly  
24 the folks that are here today. I can't  
25 possibly list of all of them, but we are

1 cataloging and reviewing those. Renewable  
2 Energy Atlas, for example, some of you may  
3 have had a chance to look at. It's a fabulous  
4 tool and it's something that at the Department  
5 we'll be looking at as we engage in the  
6 planning process. A number of organizations  
7 have come out with their own ideas and plans,  
8 and those are things that we want to draw upon  
9 where possible to frankly not reinvent the  
10 wheel in this Department for work that you all  
11 have already done that deserves to be a part  
12 of the process.

13 The State ultimately doesn't implement  
14 the entire plan. The State sets the policy,  
15 and it's really important that the business  
16 community, the energy services companies, the  
17 communities have a role in the planning  
18 process because frankly it's at that level  
19 that it will be implemented.

20 So thank you for coming. Appreciate  
21 everybody's attention and opportunity to  
22 comment today. I'm going to go ahead and turn  
23 it over to Dave; is that correct? Are you  
24 going to go next? Ed, Ed is going to go next  
25 and tell us quickly about the day before we

1 turn to the substance. Thank you.

2 MR. DELHAGEN: Thanks so much,  
3 Commissioner Miller. Thank you all for coming  
4 today. It's a honor to be here and working  
5 with you on helping us build the Comprehensive  
6 Energy Plan for the State of Vermont.

7 As we get started today I would like to  
8 give everyone a little bit of a sense of what  
9 we're going to be doing, what we're planning  
10 for the rest of the activities. Before we do  
11 that I would kind of like to get a sense of  
12 who is here. So if you would just by show of  
13 hands give me a sense how many people here are  
14 representative of local government. Raise  
15 your hand. Okay.

16 How many people are representative of  
17 community groups? Maybe the local energy  
18 groups and what have you. Okay.

19 How many people here work with utilities  
20 or power generators? Okay. A lot.

21 How many folks work with units of local  
22 government, state government, federal  
23 government? Okay. Several in that space too.  
24 Nice diversity.

25 Non-profits. Okay. Lot of non-profits.

1                   How about academic institutions;  
2                   universities, colleges, schools and what have  
3                   you?

4                   COMMISSIONER MILLER: They are in class.

5                   MR. DELHAGEN: We have a nice  
6                   distribution.

7                   AUDIENCE: Manufacturers.

8                   MR. DELHAGEN: Who else did I miss? Who  
9                   else is here that we might have missed? Any  
10                  folks who are not here from Vermont? Okay.  
11                  Fantastic. Great.

12                  Okay. So we have a couple of different  
13                  pieces to go through right now. First slide.  
14                  Okay. So here we have an agenda for today.  
15                  Boy, that came out microfiche. People should  
16                  have a copy of the agenda. The paper's on the  
17                  desk.

18                  This basically is our outline for today.  
19                  The first part we have already gone through.  
20                  In a moment we'll go through some objectives  
21                  what we're going to try to cover here during  
22                  the course of the day. We'll then move into a  
23                  series of short presentations by DPS staff and  
24                  by the Clean Energy Development Fund. They  
25                  will provide some context and background for

1 our conversation.

2 After that we're going to move into  
3 small group discussions, and we have about 50  
4 people in the room right now so we'll break  
5 into small groups. There are a series of  
6 breakout rooms down below and we'll spend  
7 about half an hour, 45 minutes maximum  
8 providing an opportunity to share your  
9 thoughts.

10 We have some focus questions that will  
11 help guide those conversations, but the  
12 conversation obviously won't be limited to  
13 just those points. We're here to listen to  
14 you and hear your points of view and that  
15 should give you more opportunity to engage.

16 After that we'll come back together for  
17 a large group conversation, and again we'll  
18 try to see if we can draw out some ideas on  
19 the process on goals and your specific  
20 thoughts on both the Comprehensive Energy Plan  
21 itself and the process that we're trying to  
22 move through to bring it to fruition.

23 We'll wrap up somewhere in the ball park  
24 of 11:45 and then plan on time for lunch at  
25 noon. How does that sound, everyone? Good.

1 Okay.

2 A couple of housekeeping pieces. If  
3 you're already here and you have not had a  
4 chance to move around, they have restroom  
5 facilities over here on the side, and that's  
6 -- I believe that's where there's some water  
7 and other places where you can store  
8 materials, if you want to hang your coats if  
9 you haven't already done that.

10 Okay. As we move into the day's work I  
11 would like to suggest some working agreements  
12 just so we can have a most productive  
13 conversation possible. Try to stay focused on  
14 this morning's conversation which deals with  
15 the topic of energy supply and renewable  
16 energy. That by itself is a very large topic,  
17 but we also recognize some people may not be  
18 able to attend some of our subsequent  
19 meetings. So if this is the only time you can  
20 be here and you feel you need to talk about  
21 other aspects of the plan, please we welcome  
22 your comments, but to the greatest extent  
23 possible we're going to try to focus on  
24 consideration today on energy supply questions  
25 and renewable energy.

1           Later on this afternoon we'll delve into  
2 questions having to do with energy efficiency,  
3 and as Commissioner Miller said, on April 7th  
4 we'll talk to the questions of transportation  
5 and land use.

6           We have a lot of people in the room. By  
7 my gauge we have about 50 folks in here or so.  
8 So I'll ask folks to try to keep your comments  
9 brief, minute or two, to allow room for other  
10 people to participate.

11           Again, this is the beginning of the  
12 process. There will be more opportunities for  
13 people to share their comments. There will be  
14 more opportunities to provide written comments  
15 to the Department throughout the next couple  
16 of weeks and months.

17           Once we get started and ask folks to try  
18 to keep one person at a time so I don't have  
19 to figure out where the whole conversation is  
20 flowing, and then we'll do our best -- we've  
21 started more or less on time, and we'll do our  
22 best to end right at noon so that people can  
23 move on with their lunch break. Does that  
24 sound like a set of working agreements we can  
25 all work with? Yup. Okay.

1 Great. That brings us to our first  
2 presentation. We're going to turn the  
3 conversation over to Dave Lamont who is the  
4 director of the planning and resources  
5 division here at the Department of Public  
6 Service, and he's going to share a couple  
7 thoughts and then you can introduce Andy.

8 MR. LAMONT: Again, thank you all and  
9 regarding the bet I admit I lost, and this  
10 whole planning thing has always been a  
11 challenge for me so I don't know what I was  
12 thinking, but I'm actually glad I lost. I'm  
13 glad you're all here and hopefully we can have  
14 a productive discussion.

15 So I'm going to go over some of the  
16 background of energy use in Vermont and give  
17 you, you know, just the basics which you  
18 already know, but I think it will give us a  
19 common platform to kind of focus our  
20 discussions or round our discussions.

21 AUDIENCE: Will these presentations be  
22 available online?

23 COMMISSIONER MILLER: Yes. We'll post  
24 them on the web site.

25 MR. LAMONT: All right. So here's our

1 basic energy supply pie and it's got some pies  
2 in it, but it's really interesting because  
3 it's kind of a third, a third, a third. We  
4 have a third residential and process, third  
5 commercial and industrial, and a third  
6 transportation, and of that we've got -- if  
7 you look at the residential sector, we've got  
8 a lot of electric use, some oil use, little  
9 bit of renewable. Transportation obviously  
10 mostly all gas petroleum use, and if we look  
11 at our commercial and industrial sector, very  
12 much a lot of electricity use in that sector  
13 and some other fuels. So it's a mix of fuel,  
14 a fair amount of electricity, a fair amount of  
15 dependence still on oil and a little bit on  
16 natural gas.

17 If we look at our history of  
18 consumption, I think it's interesting. Even  
19 here in Vermont our consumption of energy  
20 continues to increase, and this goes up  
21 through 2005 and I expect it drops off a  
22 little bit as we hit into the economic  
23 recession that we're in, but nonetheless we  
24 see it increasing, and if we look at -- if we  
25 look at the electricity sector, you can see

1 that is growing quite a bit, and if we look at  
2 transportation, that seems to be growing quite  
3 a bit.

4 So despite our efforts and despite our  
5 ethics, nonetheless, our energy use is growing  
6 and we're continuing to put not only a burden  
7 on our supply chain and a burden on the  
8 environment in terms of emissions, and I want  
9 to paraphrase George Carlin here a little bit  
10 and say that you know it's interesting. If  
11 you think about how much energy the average  
12 person uses, it's really interesting when you  
13 think half the people use even more than that.  
14 So it's -- his comment was how stupid the  
15 average person was and goes on from there, but  
16 nonetheless it applies to energy. We're all  
17 guilty. We all do it. Somebody is making up  
18 the components of this chart, somebody in this  
19 room and elsewhere within Vermont.

20 A while back the Governor did a climate  
21 change report and this is one of the outputs  
22 of that. This is the base case report, and in  
23 terms of looking at carbon emissions going  
24 forward and as you can see on the bottom  
25 that's the electric -- down here is our

1 electric future, and this is essentially the  
2 high emission scenario where essentially all  
3 the electric -- all of our expiring contracts  
4 were essentially replaced with emitting  
5 sources, but potential for a big increase in  
6 carbon emissions from the electric sector.  
7 Some of this with the new Hydro-Quebec  
8 contract is now non-emitting. So I think  
9 assuming that contract gets approved by the  
10 Board that will go down, and you see  
11 residential, commercial and industrial pretty  
12 flat in terms of use, not a lot of projected  
13 savings there the base case, and I think  
14 that's what we're all about here, trying to  
15 change the base case.

16 And transportation as well. I think  
17 you'll see a slight increase in  
18 transportation. As the stock of vehicles  
19 turns over vehicles will get more efficient  
20 even under a base case scenario so we will use  
21 less energy for transportation. The housing  
22 stock, on the other hand, much longer  
23 turnover, much more difficult to achieve kind  
24 of end-of-life savings or replacement types of  
25 savings in that sector.

1           There's many, many uncertainties. I'm  
2           not going to read these, but that's the issue  
3           with planning for energy is that it's so  
4           uncertain because there's so many factors that  
5           are just out of our control in the energy  
6           sector that decisions that you make today you  
7           really don't know what they are going to be in  
8           the future, and so you have to do the best you  
9           can with the information that you have and  
10          that's what kind of this whole planning  
11          process is really all about.

12           We do have a potential game changer, and  
13           I think this is kind of interesting this whole  
14           development of shale gas which has a number of  
15           implications especially in the electric  
16           industry, and I think the biggest is -- is the  
17           fact that it's likely that these huge deposits  
18           of gas that have been found in Pennsylvania,  
19           and I realize there are some environmental  
20           issues with extracting it, but I think there's  
21           the potential -- well but there's  
22           environmental issues with all forms of energy,  
23           and I think if the potential I think for  
24           keeping prices down in the electric sector is  
25           large because within New England and for that

1 matter within the rest of the country a lot of  
2 our electricity is driven by natural gas, and  
3 to the extent electric prices are lower that's  
4 good for things like electrification of  
5 vehicles, electrification of other home and  
6 industrial processes, but it's not good for  
7 renewables because renewables in some sense  
8 have to compete in this market, and so to the  
9 extent that the kind of the base clearing  
10 price, energy prices are lower makes it more  
11 difficult for renewable electric supplies to  
12 compete, but it is good for fuel substitution  
13 kind of things.

14 I think it also has the potential to  
15 alter somewhat the climate debate in that to  
16 the extent that this kind of gas can be used  
17 as a substitute for coal, this may provide  
18 some impetus and some value in terms of  
19 offsetting coal use and looking at the impacts  
20 of other electric generation on the climate.

21 So I think it's a real potential game  
22 changer. I think we have to see how it plays  
23 out and see what the results are, but it's  
24 there and it will be a force going forward.

25 There's also other issues of uncertainty

1 that, again, planning in an era of uncertainty  
2 is who knew months ago or a year ago gas  
3 prices were low, everybody was happy, things  
4 were good. Now we've got the events in the  
5 Middle East really have an effect on these  
6 things. So a lot of times these things happen  
7 that are just out of our control, and we  
8 really have to plan to have a robust and an  
9 energy future that is able to withstand the  
10 various pressures that we know are out there,  
11 and as well as the uncertainty that we see  
12 going forward.

13 Looking at the electric side we have a  
14 -- because of the new -- because of our new  
15 Hydro-Quebec contract, which is this right  
16 here, this gray bar, we fulfill a substantial  
17 amount of what I call or what we call the  
18 white space going forward, and the white space  
19 is the uncommitted resources out there. I  
20 think I've got the Commissioner to realize the  
21 white space is not a problem but an  
22 opportunity, and again that's another thing  
23 we'll look at here, how we want to fill this  
24 white space, but as a state we do have --  
25 compared to other states we have a fair amount

1 of committed resources.

2 On the electric side customers know what  
3 roughly two-thirds or half of their power is  
4 going to be going forward for a fairly long  
5 time. That's unusual within the other New  
6 England states. So we're fortunate that we've  
7 maintained our utility structure the way it  
8 is. We have resources that have been procured  
9 for the benefit of ratepayers and we'll  
10 continue to do so out into the future.

11 So, again, there are many reasons to  
12 plan for a thoughtful energy future, and I  
13 think that to the extent we can craft together  
14 a rational energy future, one that's robust  
15 and can withstand some of these pressures, I  
16 think that's what this process is all about,  
17 and hopefully we can devise policies that will  
18 accomplish that goal.

19 So, again, thank you for coming and I'm  
20 going to turn it over to Andy who is the  
21 Director of the Clean Energy Development Fund  
22 to talk about the renewable energy in Vermont.  
23 So thank you.

24 MR. PERCHLIK: All right. As Dave said,  
25 I'm the Director of Clean Energy Development

1 Fund. I'm not officially a member of the  
2 Department of Public Service yet. That's why  
3 I get to use a cool background.

4 This is not supposed to be a thorough  
5 investigation of all renewables, but just a  
6 quick overrun of what are we talking about.  
7 Renewables. There's still some debate what we  
8 should call renewables and what we should or  
9 shouldn't. So this will give you a quick idea  
10 what we're looking at when we talk about  
11 renewables.

12 You know in that sense this is -- the  
13 Comprehensive Energy Plan it's not just about  
14 electricity. We're talking about electricity  
15 and thermal usage, whether that's process heat  
16 or just heating our homes and businesses  
17 throughout the winter. So this gives you a  
18 quick rundown of the five basics; biomass,  
19 geothermal, hydro, solar, and wind, and then  
20 some subgroups in there, and these are, you  
21 know, things that can be discussed as part of  
22 the energy plan as we move forward.

23 This is -- Dave kind of had some of this  
24 on his pie chart, but I think it was very  
25 important. Simple pie chart to look at.

1 Electricity is about 40 percent. Gets a lot  
2 of the attention, but it's just 40 percent,  
3 but about half of that electricity is  
4 renewables. So we're doing pretty good on  
5 electricity, but even if we got to a hundred  
6 percent of our electricity from renewables, we  
7 would still have to deal with the 61 percent.  
8 Only about five percent of that non-electric  
9 energy is getting -- we're getting it from  
10 renewables at this point, and these are all  
11 averages.

12 So if you do the math, that comes to  
13 about 23 percent of our total energy. Since  
14 so much of our electricity is renewable we're  
15 at about 23 percent of our total energy which  
16 actually I was surprised that it was that  
17 high. That's including out-of-state. So this  
18 is including Hydro-Quebec to get to that 23  
19 percent.

20 You know the two main legislative goals  
21 around renewable energy, and there's a goal  
22 and requirement. The goal is this 25 percent  
23 by 2025, although to be clear that goal is  
24 focused around in-state. So we wouldn't be so  
25 close to meeting that goal because the 23

1 percent that I talked about includes  
2 Hydro-Quebec. To reach the legislative goal  
3 of 25 by '25 would be to meet it with in-state  
4 resources.

5 AUDIENCE: You said residential is 2  
6 percent renewable and commercial is 11 percent  
7 renewable, transportation is zero. How do you  
8 get to 23 percent given that earlier we saw --

9 MR. PERCHLIK: That was the non-electric  
10 renewables, those figures. So, you know,  
11 those pie charts Dave had, he had electricity  
12 remember the industrial was 66 percent. Well  
13 half of that 66 percent of electricity is  
14 renewable because of the HQ contract and the  
15 in-state renewables we have with hydro and  
16 others.

17 The SPEED requirement is the five  
18 percent growth in renewable energy by 2012.  
19 It looks like we're going to meet that goal or  
20 that requirement, and we can get into  
21 specifics if you want.

22 So I'm going to go through the five  
23 different renewals pretty quick here. There's  
24 some basic facts that I threw out there on  
25 each of the five renewables where we are.

1 Biomass is 6 and a half percent about. We  
2 have quite a bit of electric generation  
3 already going. We have several CHP plants  
4 recently like Middlebury College, Green  
5 Mountain College have done this. We have  
6 older ones like at the North Country Hospital,  
7 or we have industrial places like lumber  
8 mills. We have a lot of schools, we have  
9 colleges, many state buildings that are using  
10 wood as heat. We still have a lot of  
11 residential use of cord wood. We have pellets  
12 are increasing. I couldn't find any recent  
13 quick pellet data to throw up there, but we  
14 know it's increasing quite quickly.

15 Farm methane about three megawatts right  
16 now. This is going up. We have several more  
17 that are going to be in construction this  
18 spring and summer, and I think it won't be too  
19 long where we'll be five megawatts of farm  
20 methane digesters, and you can consider most  
21 of those farm methane digesters and combined  
22 heat and power because most of the heat is  
23 being used on the farm.

24 More biomass, biodiesel. There's real  
25 active efforts underway to increase in-state

1 uses of biodiesel, not about importing palm  
2 oil from Indonesia, but actually using our  
3 agricultural base to meet our agricultural use  
4 for diesel fuel. And then we have landfill  
5 methane, the three ones there about 12  
6 megawatts of electricity we're getting from  
7 landfill right now.

8 Geothermal, not a lot going on with  
9 geothermal. Way under one percent of thermal  
10 load. I don't even know if we have over a  
11 hundred so I said dozens. There's -- we don't  
12 even have good record keeping about geothermal  
13 use in the state, but there's some examples of  
14 big projects. The State Office Building in  
15 Bennington is going to be putting a very large  
16 geothermal system to heat and cool that entire  
17 state building. Champlain College has put in  
18 a really successful geothermal heating cooling  
19 unit. NRG Systems in Hinesburg, and there's  
20 other examples out there. No electricity,  
21 remember, from that table at the beginning.  
22 Only for heating and cooling.

23 Similar we're talking about PV for  
24 electricity and solar thermal for heat. It's  
25 still a very tiny percent of our electric

1 load. Maybe even less than .1 percent at this  
2 point. We have a lot of PV for our state. We  
3 have 719 net metered systems at last count and  
4 we have more coming in every week. I  
5 predicted by the end of 2012 we would have  
6 about another megawatt of kind of residential  
7 small scale systems going in. We have one  
8 megawatt system that was installed last year,  
9 but there's another 4.4 megawatts scheduled to  
10 be constructed this next spring and summer,  
11 plus some other kind of medium-sized projects.

12 On the thermal side we have around 500  
13 solar systems in the state today. These are  
14 usually smaller scale, home.

15 AUDIENCE: Are the, for instance, the  
16 top bullet there about .1 percent, does that  
17 include the projects that are due to go online  
18 this year or are those in addition?

19 MR. PERCHLIK: It would be in addition  
20 to that, but it's not going to change much.  
21 The capacity factor's so low that it's going  
22 to be hard to get over one percent. We have  
23 to be pretty aggressive. There's the old  
24 Grandpa's Nob turbine.

25 So right now wind is a -- isn't much

1 more than solar at this point since we don't  
2 have a lot installed. We have .2 percent of  
3 load today. We have -- there's a picture of  
4 the Searsburg facility. That's a 6 megawatt  
5 facility. Then I've listed the three that  
6 have been granted conditional CPGs; Sheffield  
7 has met their conditions. There's still an  
8 appeal going on, and then we have Deerfield  
9 and Georgia Mountain, and then in the  
10 permitting process we have Lowell, and there's  
11 145 net metered systems, but only going -- all  
12 those together only 1.4 megawatts, and if you  
13 build all that, if you build all of the wind  
14 projects that got CPGs plus Lowell and kept  
15 those included, the net metering, which is  
16 pretty small on a capacity factor, it's about  
17 six percent of our total electric load we  
18 could meet with wind if all that was built.

19 AUDIENCE: And are you talking about  
20 capacity or --

21 MR. PERCHLIK: Capacity, and I figured  
22 it at 28, and then these are just some of the  
23 questions. This is -- that was just the quick  
24 run down of the five renewables that we're  
25 looking at, and there's a whole bunch of

1 questions about all these renewables and we're  
2 not here to tell you what they are, but to  
3 hear what you guys think about all these  
4 renewables and how we make these trade-offs  
5 and how we go forward and do we go forward,  
6 should we be promoting renewables or should we  
7 not, and, if so, how do we do it and how do we  
8 do these trade-offs and balances that we're  
9 going to look at.

10 COMMISSIONER MILLER: Thank you. Ed is  
11 going to send you off on your group.

12 MR. DELHAGEN: Thank you, Dave and Andy.  
13 Okay. We're going to try to get back on our  
14 schedule. We're a little bit beyond right  
15 now, but we're going to be breaking up into  
16 some small discussion groups, and we have a  
17 set of focus questions that we would like to  
18 get your input on.

19 When we head into our breakouts you'll  
20 find in your area some yellow sheets that have  
21 some questions on them. These are what we're  
22 going to try to focus on, and those questions  
23 basically deal with what are the top one or  
24 two concerns or aspects of energy supply and  
25 renewable energy to consider in the state's

1 energy future over the next ten years, and  
2 what options do you see can help Vermonters  
3 meet their energy needs in the future, and  
4 then a final one, which Liz was framing at the  
5 beginning, should the State set additional  
6 goals or targets for energy areas, and, if so,  
7 what targets and through what mechanisms  
8 should they be encouraged or required.

9           These are some pretty open-ended  
10 questions that we're looking for some feedback  
11 on, and if you would like to, there will be  
12 forms in each of the breakouts for you to use  
13 if you want to write down some specific  
14 comments and then submit them. That's for  
15 your option. You don't need to do that unless  
16 you want to, and if you would like to take  
17 these with you and then fill them out and send  
18 them in, you can do that as well.

19           In each of the groups will be a  
20 facilitator who will be capturing notes and  
21 bringing those notes back and that will be  
22 part of our record for our conversation, and  
23 we have about 60 people in the room right now  
24 so I'm going to try to break us up into  
25 relatively even numbers. We'll have roughly

1 12 or 13 per group. Try to encourage folks to  
2 bring a diversity into your group. So if you  
3 came here with three or four or five folks, I  
4 encourage you split up and find different  
5 groups so we don't have everybody sitting in  
6 one group, and find that the conversation will  
7 be richer if we have a diversity, and we saw  
8 at the beginning we have a lot of people with  
9 different organizations and different points  
10 of view here so we would encourage that  
11 conversation.

12 So to break out all breakout rooms are  
13 in the lower area. When you head out through  
14 these doors go down the stairs and there's a  
15 library room and there are a series of rooms  
16 attached to those. Your facilitator will help  
17 you find your particular space, and I'm going  
18 to try to do this relatively easily here.  
19 Just going to use rows. So this first row  
20 here will go with Karin. Where is Karin?  
21 Okay. Karin, come on over so everyone can see  
22 you.

23 Second row will go with George. George,  
24 want to hold your hand up. Everyone from row  
25 two, this is row two right here, everyone see

1 George. Okay.

2 Row three will go with Andy who was just  
3 here. You all know Andy. Row four will go  
4 with Dave. Okay. Row five will go with Kelly  
5 right here. Row six will go with me. This  
6 group here we're going to split and have folks  
7 from this front area here go to one. You guys  
8 can go to row two. You guys can go to three.  
9 This group can go to four, this group five,  
10 and back you can go to six.

11 So it's going to be relatively loosey  
12 goosey.

13 (Small group discussions. Recess.)

14 MR. DELHAGEN: Thank you so much.  
15 Sounded like there were some great  
16 conversations. I heard a lot of chatting in  
17 all the groups. We're off and running  
18 catching a lot of good feedback. If you did  
19 fill out one of these yellow forms, I'll place  
20 a box by the door. Please make sure that you  
21 put your comments in this box so we can get  
22 them, and again if you have additional  
23 thoughts, please feel free to take those forms  
24 with you and send them back to us.

25 We're going to move into a larger

1 conversation, and I've posed a set of focus  
2 questions for us to consider, and these  
3 questions are a little bit more detailed and a  
4 little more specific than what we started with  
5 in our small group, and we recognize that some  
6 folks may have other comments and other  
7 thoughts that you would like to share with us  
8 and we certainly welcome those.

9           These are a few questions that have been  
10 very much on our minds as we think about the  
11 Comprehensive Energy Plan, and as we talked  
12 about and as Commissioner Miller identified at  
13 the beginning, there are many different  
14 aspects and facets for us to consider and many  
15 choices to be made.

16           So there are questions that we have in  
17 front of us, should give us an opportunity to  
18 start to dig a little bit deeper and get a  
19 sense what your thoughts are, what your  
20 comments are. So, for example, one of the  
21 questions is how much emphasis should the  
22 state place on carbon as a driver for energy  
23 policy versus other criteria for energy  
24 development such as cost?

25           Second one is if you had to choose

1           between in-state renewables -- renewable  
2           supplies with higher costs or out-of-state  
3           non-renewable options with lower costs, what  
4           would you choose? And some of these are  
5           intended to try to tease apart your thinking  
6           so we can get a better sense of what your  
7           thoughts would be for us moving forward as a  
8           state.

9                     And the third one is if cost  
10           effectiveness is an important criterion, what  
11           should be included in price. Should that  
12           include things like externalities like carbon,  
13           other resource costs; for example, the lost  
14           heat from -- that you are going to have to  
15           make up for switching out an incandescent  
16           light bulb. So there are a lot of factors  
17           that can be brought into place.

18                     So these are a handful of questions to  
19           get us going, and I would like to start -- I  
20           have asked a couple folks to help us get going  
21           on this and provide some of their thoughts.  
22           Again, if you have other things you would like  
23           to speak about, please when you speak I would  
24           ask you to identify yourself, and if you're  
25           here with an organization and you would like

1 to represent that please do so, so our court  
2 reporter can capture your name and  
3 organization. Okay. All right.

4 Johanna, how about if we start with you,  
5 share a couple comments.

6 MS. J. MILLER: I'm Johanna Miller. I'm  
7 the energy program director at the Vermont  
8 Natural Resources Council, and VNRC also is  
9 coordinator of the Vermont Energy and Climate  
10 Action Network with several organizations, and  
11 VCAN is the umbrella of about a hundred  
12 community energy groups in Vermont, and when,  
13 again, talking with Liz and Ed, and the VNRC  
14 is very excited about the public process  
15 you're going through right now. We have our  
16 roots in planning and land use and sustainable  
17 solutions for the State of Vermont, and we  
18 have long advocated for a Comprehensive Energy  
19 Plan to guide us forward to figure out how the  
20 State of Vermont is going to thoughtfully meet  
21 our energy needs, and so we participated in  
22 the 2008 draft.

23 We commented on that with some of our  
24 colleagues and other organizations, and I just  
25 would like to just comment on how radically

1 different this process is. It's a public  
2 engagement process where you are asking us to  
3 provide our input, and I just want to say  
4 thank you so much for the leadership that  
5 you're already demonstrating, and we are glad  
6 to partner with you and be here with all of  
7 you in this room who have some valuable ideas  
8 to add to the equation.

9 So broadbrush overview, and I would also  
10 say that we're starting from really solid  
11 places. There's been a lot of work done, as  
12 Commissioner Miller articulated, and we have a  
13 really solid foundation to work from  
14 including, you know, the existing drafts of  
15 the plan. Those are recommendations. Now we  
16 need implementation strategies.

17 The Governor's Climate Change  
18 Commission, which was a couple year effort  
19 that brought together lots of stakeholders and  
20 good thinkers, they came up with a set of 38  
21 policy recommendations that I would suggest  
22 would be a really strong foundation to start  
23 from as far as prioritizing where the State is  
24 going to put its investments and where the  
25 state is going to prioritize public policy.

1 Those -- so we have a strong foundation to  
2 start from.

3 With regards to another thing with the  
4 Comprehensive Energy Plan is that VNRC wants  
5 to see increased development in efficiency and  
6 renewables, and we know there's a better way  
7 forward, and I think the Comprehensive Energy  
8 Plan will also help us get away from site  
9 fights.

10 In our small group discussion we talked  
11 about it was mentioned for a wind siting  
12 process, something that either says where we  
13 shall not build or where we might look to  
14 incentivize development. I think that's a  
15 great point.

16 VNRC has also been working on biomass  
17 projects, and this is another issue that's big  
18 for communities across the State of Vermont.  
19 A Comprehensive Energy Plan will help us get  
20 away from the first-at-the-trough scenario.  
21 So it's not just the people who are there with  
22 the ideas first, it's the best ideas that are  
23 going to move forward. So I think that's  
24 really important.

25 So Ed asked just to comment on a couple

1 of these. I'm really looking forward to  
2 hearing all of your comments, but I think with  
3 the first answer to the question I would say  
4 is how much emphasis the state places on  
5 carbon I think would be significant. As  
6 Commissioner Miller noted, we have state goals  
7 and we are so far from meeting our current  
8 reduction goals that we have to place an  
9 emphasis on carbon, and that's going to be --  
10 it's going to have to be by necessity the wave  
11 of the future.

12 So if you had to choose between in-state  
13 renewable supplies with higher costs or  
14 out-of-state with lower costs, I would say  
15 again renewables and energy efficiency is  
16 going to be the wave of the future, but the  
17 Department of Public Service also went through  
18 a very robust process in 2007 where it asked  
19 Vermonters to answer that and other questions,  
20 and Vermonters answered. They said that they  
21 want to see development of in-state renewable  
22 supplies even if they had to pay more. So,  
23 again, we have a foundation to start from and  
24 we should.

25 And, lastly, this is a relevantly

1 important question and we talked about it in  
2 our small groups just moments ago, but yes  
3 without a doubt externalities should be  
4 included in cost, and how we do that, that is  
5 a big question. So I'm looking forward to  
6 hearing from you all, and I really want to  
7 just thank you again for what you're doing.

8 MR. DELHAGEN: Okay. Thank you. We  
9 have asked some other folks who share  
10 different points of view to try and help get  
11 this conversation rolling. So I've asked Doug  
12 Smith from Green Mountain Power to share a  
13 couple comments as well.

14 MR. SMITH: Good morning, folks. I'm  
15 Doug Smith. I manage energy resource planning  
16 and rates at Green Mountain Power, and I  
17 appreciate the opportunity to speak.

18 First, just this Comprehensive Energy  
19 Plan is a very educational document and a  
20 constructive one. Just on the form and  
21 structure of that document I think a comment  
22 that GMP has is the Department will want to  
23 spend a good bit of emphasis on what you might  
24 call the executive summary or teasing out what  
25 the highlights are. There's a ton of good

1 information in there, but I think a common  
2 theme that my colleagues had, and it sounded  
3 like some of you folks, was there's so much  
4 there what's the top priorities; the top, I  
5 don't know, five or eight themes, in  
6 particular, actionable items that in the next  
7 five years look like the ones that in your  
8 views would be the ones to hit, help to tease  
9 that out visually and in the narrative and  
10 that will be constructive. Leave a lot of  
11 details in there and we wouldn't recommend  
12 pruning them out, but a streamlining of the  
13 message upfront would be helpful.

14 Secondly, it was impressive to see a  
15 number of the slides that the Department  
16 presenters put up to kick off this discussion.  
17 It really captured current events in a number  
18 of ways. In the power markets and in the  
19 portfolios on the electric side, I'm an  
20 electric planner, there's a lot that's been  
21 going on in Vermont with respect to  
22 procurement of new long term resources,  
23 renewables, most of them low emission, stable  
24 prices. We have a good core of portfolio  
25 building and I think you captured that.

1 I do want to emphasize one thing Mr.  
2 Lamont said about the transformation of the  
3 electric industry. More generally power  
4 prices are down and experts are telling us  
5 they are going to stay down in part as a  
6 result of the natural gas technology  
7 developments that he mentioned.

8 Just to give you some sense that shale  
9 gas, which provided a percent or two of the  
10 country's natural gas a few years ago, is up  
11 to about 20 right now and is probably headed  
12 higher. It's not a cure all. GMP is not  
13 planning its portfolio based on flat electric  
14 prices in the future. Okay. I'm just telling  
15 you though that now we are looking at prices  
16 like five, six, seven cents a kilowatthour for  
17 more than a few years, a decade of power.  
18 That's a lot different than it looked a couple  
19 years ago. A lot cheaper. We were looking at  
20 8, 9, 10 cents a kilowatthour for renewable,  
21 for gas fired or other emitting power sources.  
22 That's a material change.

23 With respect to renewable procurement,  
24 finally, the portfolios -- I liked the chart  
25 the Department showed. Vermont right now is

1 on a path -- or I'll stick with my company,  
2 GMP. We're on a path to be about 15 or 16  
3 percent what you might call premium or class  
4 one renewable in the sense that other states  
5 classify new renewable sources. So that's  
6 wind, new hydro, biomass, solar. That will  
7 put us and I think a number of other utilities  
8 in the state in a leading position relative to  
9 what other utilities in the region are doing.  
10 So we're -- we've got more to do, but we're  
11 off to a good start.

12 With respect to the questions I'm not  
13 going to swing at all of them, but a couple of  
14 thoughts. First, with respect to emphasis on  
15 carbon, clearly GMP believes that is a  
16 material and important emphasis. The  
17 touchstone themes of our energy plan are the  
18 cost, carbon, and reliability. Now I mention  
19 them altogether because our plan entails a  
20 balance, and I think one of the themes that we  
21 would put to the Department is to emphasize a  
22 balance in terms of the various criteria. I  
23 think state statute encourages us to do that  
24 as well as common sense.

25 So a balance between lowering our carbon

1 and keeping our electric carbon footprint low  
2 and the costs incurred to do that. I think  
3 that would be our main message. Those wind  
4 projects, Hydro-Quebec purchases, the ones  
5 Dave Lamont mentioned earlier, those are our  
6 examples of how to do renewables cost  
7 effectively, and that's a message we would  
8 also offer to do that, focus on the least  
9 costly ones first.

10 Utility ownership of renewable power  
11 sources can be a cost effective way to get  
12 benefits from renewables not just over like a  
13 10 or 20-year contract, but even longer than  
14 that, and that's a good -- I think a  
15 constructive theme for you all to consider as  
16 well.

17 One thing I need to bring up though in  
18 closing on the carbon, maybe this is a little  
19 bit technical or wanky, but I think it's  
20 important. The current renewable guidance of  
21 statute in Vermont, so-called SPEED program or  
22 rubric, entails the sale of renewable energy  
23 certificates from new renewable power plants  
24 developed in the state. That is a policy that  
25 is intentioned, posing, if you will, with a

1 policy that I'm hearing a lot of folks in this  
2 room emphasize which is we need to keep the  
3 carbon down. It's a tradeoff the state will  
4 need to make.

5 The Public Service Board is having a  
6 proceeding on that topic, but if I had to pick  
7 sort of one item that's in the front of the  
8 public policy realm, it would be what are we  
9 going to do with the SPEED program? Is it one  
10 in which Vermont sells the renewable energy  
11 certificates and basically supplies renewables  
12 to other states, or is it one where we retire  
13 them here and basically claim a very low  
14 emitting high renewable portfolio.

15 The last comment I had for you was on  
16 the second question, if you had to choose  
17 between in-state renewables and out-of-state  
18 which one? Well we've been choosing in our  
19 own planning a lot of in-state renewables.  
20 You're all familiar with the Kingdom Community  
21 Wind project, which we think is a really cost  
22 effective option for our customers. Solar and  
23 hydro expansions as well. We have a lot going  
24 on, but so in general, if it's not all that  
25 much more costly than standard power from the

1 grid, in-state renewable looks good but not at  
2 any cost, and in these circumstances I think  
3 it's important, as Mr. Lamont said earlier, to  
4 keep in mind that we can develop a  
5 constructive power portfolio with a reasonable  
6 pace of acquisitions of new renewable sources.

7 From a power portfolio perspective we  
8 don't need to fill in all that white gap on  
9 the chart immediately. If we keep up a  
10 reasonable pace of renewable procurement, we  
11 can balance the cost and not have what I call  
12 undue electric rate pressure and really get to  
13 a very diverse power supply that I think the  
14 stakeholders in Vermont want. Thank you.

15 MR. DELHAGEN: Great. Thank you so  
16 much. We have one other set of introductory  
17 comments we asked to help kind of feed our  
18 conversation and set some foundation, and this  
19 is from Renewable Energy Vermont and Martha  
20 Staskus is going to share some thoughts.

21 MS. STASKUS: First and foremost, I want  
22 to reiterate again, I've heard it from several  
23 folks, thank you. Thank you for doing this.  
24 It is a pent-up energy, no pun intended, but  
25 glad to see it happening. Glad to see a

1 pretty rapid timeline will give us some  
2 foresight moving forward, and that sort of  
3 leads to our -- the Renewable Energy Vermont  
4 represents energy efficiency, and we are  
5 concentrated on businesses and we're  
6 concentrated on creating jobs. So a lot of  
7 our focus is for long term creating certainty,  
8 reducing uncertainty so that we can promote  
9 businesses, create more jobs, and that we  
10 think will be effective. You have to forgive  
11 me. I've been out of town since last night so  
12 I'm trying to get back into the groove here.

13 Another thing we would like to see we  
14 recommend the promotion of in-state renewables  
15 not only for the cost, we also think it will  
16 help in considering -- and I hope that the  
17 Department of Health is a part of this process  
18 in bringing the concerns for creating -- it  
19 will help reduce health costs as that  
20 discussion goes forward, and I'm just going to  
21 keep it real short here, Ed.

22 We are encouraged with what's going on.  
23 We thank you for doing this. We also would  
24 like to encourage and support, as I've heard  
25 it stated earlier, walking the walk. Having

1 these -- the state look at renewables, solar  
2 projects, reducing the cost of electricity at  
3 the state facilities I think will be extremely  
4 effective. I'll leave it at that.

5 MR. DELHAGEN: Okay. Great. So we have  
6 heard a couple of opening themes, conversation  
7 about renewables, reflections on carbon, and  
8 pricing points. I would like to turn it over  
9 to other members of the room. Very much like  
10 to hear your comments.

11 Again, these are some of our focus  
12 questions. You can talk to one or all, or if  
13 there's other points you want to talk to as  
14 well, but I would ask you to put your hand up.  
15 Kelly is going to try to -- keep the mike --  
16 please keep the mike close enough so we can  
17 get good audio here.

18 MR. CERALDI: My name is Ted Ceraldi and  
19 I'll speak now as an architect. Are there any  
20 other architects in the room? I'm surprised.  
21 I'm really surprised.

22 The international community worked on  
23 the national building code a number of years  
24 ago. I helped work on that. Presently by  
25 2012, I don't know if this has anything to do

1 with this or not, by 2012 there will be an  
2 international rebuilding code and this is  
3 worldwide. This will preclude a lot of the  
4 issues with regard to carbon, with regard to  
5 energy use, with regard to how assembly  
6 structures are built in this country. I  
7 suggest that we adopt that as a state.

8 I also suggest that we implement  
9 retrofitting buildings to come into  
10 conformance with that, and as such we will  
11 save enough energy to preclude putting in any  
12 additional energy plants in this state. Thank  
13 you.

14 MR. RENSTROM: One of the things -- my  
15 name is Eric Renstrom (phonetic). I'm from  
16 Mad River Valley, and one of the things nobody  
17 has really talked about with carbon is what it  
18 is all about, and there's only one state  
19 province in North America has done anything  
20 really about it in a big way and that's  
21 British Columbia.

22 Now about four years ago they introduced  
23 a carbon tax and that was thought of as being  
24 a bad thing because retroactive or regressive,  
25 sorry, and -- but it turned out it wasn't, and

1 it worked very, very well in British Columbia,  
2 and the people, the legislators that brought  
3 about the carbon tax in British Columbia got  
4 re-elected the next term. It was that well  
5 received and it works. It makes it so it  
6 costs you to burn -- to use carbon, and that's  
7 the only way that you're really going to work  
8 is to hurt your pocketbook and then you'll do  
9 something about it.

10 Also, I was at a meeting not too long  
11 ago with our state representatives and federal  
12 representatives and they all admitted we're a  
13 very small state, but we can set an example,  
14 and I think that's what we have to do here,  
15 and it will tell the rest of the country that  
16 states like California and Vermont are doing  
17 something about it. Thank you.

18 MR. DELHAGEN: Thank you.

19 MR. WALKER: I'm Bob Walker. I'm  
20 Director of Sustainable Energy Resource Group.  
21 I appreciate that comment. I think part of  
22 our problem that's gotten us into this mess we  
23 are in now we've undervalued energy and the  
24 associated costs with using it, and that  
25 that's something we really need to look

1           closely at not only carbon, but the  
2           environmental devastation that's taking place  
3           with the shale oil extraction. We can't  
4           continue to try to make our society live on  
5           non-sustainable, non-renewable sources of  
6           energy. We need to factor in all the true  
7           externalities.

8                         I think that a carbon tax would be a  
9           good way of increasing the tax on  
10          non-renewable or, excuse me, non-renewable  
11          heating fuels or all fuels, and using those  
12          monies to help pay for some incentivizing  
13          renewable projects and efficiency projects.  
14          We can look at offering payments to cover  
15          these costs and then paying them back through  
16          the on-bill payment to the utilities to help  
17          pay back some of these costs so the fund is  
18          there to keep paying for some of these  
19          programs as we go forward.

20                        We really need to include all the  
21          externalities, carbon and others included, and  
22          certainly we need to support in-state  
23          renewables as much as possible so that we are  
24          keeping the money in-state and not flowing out  
25          of the state.

1 MR. DELHAGEN: Way in the back.

2 MR. MARKOWITZ: Paul Markowitz. I do  
3 energy consulting on issues here in Vermont,  
4 and I'm going to repeat what I said during the  
5 small group because it really went to these  
6 questions of criteria, and I think the  
7 catch-22 is as human beings we make decisions  
8 based on short term criteria. Really what we  
9 need is an energy plan based on long term  
10 impacts and criteria, and what I'm talking  
11 about is, you know, oh energy prices, oh the  
12 pump went down so I'll go out and get my gas  
13 guzzler, oh energy prices go back up now I got  
14 to get my hybrid.

15 So I think as a state we have a  
16 responsibility to figure out how to  
17 incorporate the whole range of criteria and  
18 it's not just carbon or externalities, but  
19 like the job creation impacts of in-state  
20 renewables, the multiplier effect. Those  
21 dollars staying in the local economy and  
22 strengthening the local economy. Reviewing  
23 our vulnerability to supply disruptions.  
24 There's a huge amount of benefits to  
25 developing our in-state resources even if they

1 cost more.

2 Then, of course, you have to say how do  
3 you explain that to the ratepayers or people  
4 paying at the pump, et cetera, and I think you  
5 have to figure out somehow that you know to  
6 incorporate those non -- what are they -- are  
7 not described particularly dollar value, but  
8 we need to come up with some type of matrix  
9 where they are fully incorporated as we're  
10 making long term energy decisions.

11 The other thing I just want to add is  
12 that I think we need to keep in mind issues  
13 about scale and efficiency, and in particular,  
14 you know, if you look -- a woman came through  
15 last month from northern Australia and they  
16 are shifting -- doing an amazing job in terms  
17 of shifting away from heating homes and  
18 buildings with oil towards biomass, wood chips  
19 and wood pellets, combined heat and power.

20 I forget what the numbers are, but they  
21 are on the path toward eliminating fuel oil as  
22 a heating source in their region and there's  
23 absolutely no reason why Vermont cannot do  
24 that. Let's replace our fuel oil trucks with  
25 fuel pellet trucks. These are job creating

1 opportunities using available resources. So  
2 thank you.

3 MR. DELHAGEN: Back of the room.

4 MR. GUYER: I'll come up here a little  
5 bit farther. My name is Frank Guyer and I'm a  
6 former legislator from South Burlington and I  
7 am deaf in my left here. Right ear I can hear  
8 a little bit out.

9 Just to give you a little bit of my  
10 background I was trained as an energy manager  
11 in South Burlington School District. I saved  
12 20 percent of the energy costs or \$120,000 in  
13 one year. I was taught by a company out of  
14 Texas. I was told to go to the Legislature,  
15 teach the Legislature how to turn off the  
16 lights and save energy. I found that a lot  
17 more difficult.

18 So what I did was I quit the Legislature  
19 and now I've gone back to start my own team,  
20 Guyer Energy Team, and basically doing a pilot  
21 project for the State of Vermont to teach  
22 people to shut off lights.

23 Now as a legislator I can talk in  
24 soundbites or I can talk for an hour. You  
25 don't want to hear the hour. So the soundbite

1 is this, is what I tell everybody, is save  
2 Vermont, shut off the electric faucet, shut  
3 down Vermont Yankee in 2012.

4 What do I mean by shut off the electric  
5 faucet? Would you walk out of a bathroom and  
6 leave the water faucet running? I don't think  
7 so. When you walk out of a bathroom and leave  
8 the electric light on it's the same as leaving  
9 the electric faucet running. It's money down  
10 the drain. Okay.

11 The State of Vermont uses -- that's my  
12 soundbite. Okay. The State of Vermont uses  
13 about 20 percent of the energy that is created  
14 by Vermont Yankee to heat and light empty  
15 rooms. What I teach is try to teach young  
16 people because mostly old people, folks your  
17 age, have a lot of bad habits and I have bad  
18 habits. Trying to get us to shut off lights  
19 is very difficult. So I try and teach young  
20 people, elementary school kids, the same way  
21 we taught them that cigarettes were bad we  
22 teach being afraid of the dark is bad.

23 So what we do is teach them to tell  
24 their parents shut off their lights you're  
25 wasting energy. You're killing the polar

1 bears. You're doing all those things that are  
2 going to kill us in the long run. Okay. So I  
3 have to start with the elementary schools.

4 You folks I would love to teach you and  
5 have you change your behavior. It's not as  
6 easy as it might sound, and every dad who  
7 knows that, they have been trying to tell  
8 their kids shut off the lights, you know, ask  
9 their wife shut off the lights pretty near  
10 impossible.

11 So I'll leave it at that. I can give  
12 you the hour explanation of how I teach people  
13 to shut off lights in empty rooms some other  
14 time.

15 MR. DELHAGEN: Thank you for those  
16 comments.

17 MR. FRANCIS: Hi, I'm Clay Francis. I'm  
18 the clean energy advocate with VPIRG. One  
19 thing Paul mentioned was talking about how we  
20 can decrease our dependency on fuel oil, and I  
21 just want to let you guys know that today  
22 we're going to have a special release or  
23 report that I just wrote. It's called Clean  
24 Heat. There are copies available at the table  
25 here to discuss about the next 20 years what

1 we can do to reduce our dependency on fuel  
2 oil. If there are reporters in the room, the  
3 official release is Thursday. So please wait  
4 if you don't mind.

5 Consider that, but there's also a report  
6 on electricity that VPIRG did. So trying to  
7 think about how we can attack these two very  
8 important sectors; electricity, also thinking  
9 about the residential fuel usage. So if  
10 anybody would like to see those reports, they  
11 are there and I would be more than happy to  
12 discuss those on an individual basis. Thanks.

13 MR. MOORE: Okay. So this is a little  
14 VPIRG corner. I'm James Moore. I work with  
15 VPIRG on energy issues as well. I'm really  
16 glad that the Department's embarked on this  
17 process. I will say that everybody in the  
18 room knows we've seen lots of energy plans and  
19 documents over the last five years, most of  
20 which have sat on the shelves after they have  
21 been written and have collected a tremendous  
22 amount of dust.

23 So what I would like to encourage the  
24 Department to do is really put a focus on the  
25 implementation pieces and the actions. I mean

1 that's what this will ultimately be judged by.  
2 So I think along those lines we would stress a  
3 regulatory structure that puts the incentives  
4 in place to allow the businesses small and  
5 large in Vermont to actually be the drivers of  
6 the plan.

7 You know we have very limited public  
8 dollars to put towards this. I think if we're  
9 actually going to get to where we need to go  
10 it's going to be the businesses here in  
11 Vermont that make that possible and do it most  
12 cost effectively. That's it.

13 MR. DELHAGEN: Couple more in the middle  
14 here. We haven't hit the middle. Go out to  
15 Indiana.

16 MR. GROSS: Hi. Dave Gross, East  
17 Hardwick. I am a Commissioner on the Hardwick  
18 Electric Department, but I'm not speaking for  
19 them based upon that experience with them.

20 On the incentive question I think it's  
21 very important that the state fund the  
22 incentive independent of expecting utility  
23 collections. We're a non-profit utility and  
24 whenever there is a mandatory price that we  
25 have to purchase power, even though it's a

1 small percentage of our power from a utility  
2 or net metering, we absorb that cost, but  
3 we're a non-profit so we pass that on and  
4 divide it amongst our ratepayers. The net  
5 effect is that the least economically  
6 advantaged members of our rate population pay  
7 for this, and you can argue don't necessarily  
8 receive all the benefit from it, and the  
9 perfect example is net metering sounds very  
10 good, but a great portion, especially in  
11 Hardwick, of our costs are maintaining our  
12 transmission lines. Well somebody manages to  
13 zero out for a year they are connected to our  
14 grid, but they pay nothing for overhead costs.

15 So the State I know has gone ahead in  
16 the legislation and made statements, but  
17 actually what they have done is a lot of cost  
18 shifting to the economically disadvantaged  
19 population, and I think a lot of your plans  
20 going forward really need to look to say who  
21 is actually paying for this, and what I would  
22 really recommend if it's a good idea, great.  
23 The State writes the check and then they can  
24 figure out how they are going to raise the  
25 dollar for it.

1 MR. DELHAGEN: Couple hands up in the  
2 front again.

3 MR. JENNINGS: I'm James Jennings of  
4 Northern Power Systems. I live in Duxbury and  
5 I have a professional hat on, but also my  
6 personal hat. We just had a 23.8 percent  
7 increase in our electric rates on the first of  
8 January. So that's also weighing on my mind.

9 So affordability is certainly an issue,  
10 but from a wind perspective there's a couple  
11 things; places where the wind blows, places  
12 where it does not blow, and one of the things  
13 I would like to see is incentives of whatever  
14 kind that encourage things that make sense. I  
15 don't want to see incentives that start that  
16 have people thinking about putting up wind  
17 turbines where the wind is 4.2 meters per  
18 second.

19 So to make that happen, one, is to make  
20 sure that the incentives accelerate what make  
21 sense rather than lower the bar to things that  
22 make progressively less and less sense, and  
23 that's as a taxpayer, ratepayer those things  
24 are important, but also as someone in the wind  
25 industry we have to have renewable energy that

1 produces. Again, capacity factors matters.

2 One other thing about Vermont. Vermont  
3 is a rural state. In fact, it's the most  
4 rural state in the United States. It's got  
5 the highest percentage of the population  
6 living in small towns. With that comes a grid  
7 that's going to have spidering out fairly  
8 small.

9 I would like to put in a word for  
10 distributed generation and encouraging it to  
11 avoid -- I mean the large power plants have  
12 efficiency, true, but if you have more big  
13 plants, you also need to upgrade a lot of the  
14 transmission lines. Distributed generation  
15 can help support -- provide grid stability and  
16 it can bring power to where it's consumed in  
17 our small towns.

18 One other -- two aspects to make that  
19 happen. One is permitting and the other is  
20 aggregation. If you can have people not see a  
21 utility, an industrial wind farm, but if it's  
22 something they can participate in locally,  
23 whether it's 15 or 20 neighbors, one that  
24 gives them an economic stake in it, but the  
25 other thing that's important is it brings a

1 lot more consciousness to the power they are  
2 generating and the power they are using.  
3 There's a lot of energy systems that will have  
4 screens so you can see how much energy is  
5 consumed, how much is produced, and the  
6 awareness of what you're consuming will do an  
7 awful lot for efficiency for shutting lights  
8 off and so forth.

9 COMMISSIONER MILLER: Can I just ask a  
10 question, and it kind of gets to the gentleman  
11 from Hardwick as well.

12 In looking at encouraging distributed  
13 generation or helping with net metering which  
14 has some benefits, but addressing your cost  
15 point do you have ideas on exactly how the  
16 costs should be socialized or shared? The  
17 gentleman over here suggested state  
18 legislation, which I assume you would want  
19 through general fund collection rather than  
20 through utilities was your idea, or I think I  
21 also heard an idea about a charge on net  
22 metering customers related to the overhead  
23 costs of the utility perhaps.

24 Are there any ideas to encourage  
25 distributed because one of the things I

1 continue to hear is bringing three phase  
2 power, for example, to certain locations in  
3 order to help with distributed generation has  
4 a significant cost, upfront cost, and even if  
5 we want to encourage the generation for other  
6 reasons, how do we get past that cost barrier,  
7 and so I'm sorry to get down in the weeds, but  
8 any specific ideas are welcome.

9 MR. JENNINGS: That's a great question.  
10 One thing I would like to see is the ability,  
11 if there's consumers who put in a request,  
12 whether it's a business or a group of people,  
13 a neighborhood that wants to have some local  
14 renewable energy, to allow the utility to put  
15 it in for them and maybe charge a premium for  
16 it. So they can do that on a bill. So this  
17 way it's not the case that people are buying  
18 power from separate sources.

19 People are used to getting an electric  
20 bill and they are also used to getting  
21 renewable energy is the way to combine those  
22 as opposed to creating PPAs that create some  
23 third party they are billing; who are they,  
24 where is it from. Again, if there was a way  
25 to administratively, if it wasn't a nightmare,

1 to allow a business or group of people to get  
2 together and go to their utility and say we  
3 would like to buy renewable power that is in  
4 our community.

5 MR. DELHAGEN: That generates  
6 conversation.

7 COMMISSIONER MILLER: I was trying.

8 MR. BERNSTEIN: You did good, Liz. It's  
9 interesting how contradictory we are in our --  
10 I wear two hats. I'm Barry Bernstein,  
11 President of the Board of Washington Electric  
12 Co-op. So we passed our 23.81 percent to our  
13 members to cover our costs, and on that hat I  
14 just want to say a couple things.

15 One is if you go over the small scale  
16 distributed generation, which I happen to  
17 support, and we do your idea and we say okay  
18 we're going to do it but it's going to cost  
19 you 75 cents a kilowatthour, you're not going  
20 to be as happy about absorbing those costs  
21 because that's some of the reality how we  
22 socialize those. So it's a really big  
23 question.

24 I want to drop over to my friend Doug  
25 Smith over at Green Mountain Power. I think

1 you definitely have to break this down into  
2 some short term reachable goals, five years  
3 what can we do. I support renewable a hundred  
4 percent, but I'm going to tell you we're  
5 already getting static and will get static for  
6 the 55 cents a month that's going to go onto  
7 the electric bill for renewables for the clean  
8 energy fund as we do for the energy efficiency  
9 charge that's on our bills, and I support both  
10 of them, but you know we have to be able to  
11 somehow convey to a lot of Vermonters who want  
12 the same things we do, but when it comes to  
13 paying for them have a really difficult time  
14 absorbing it; and we just had a public hearing  
15 on our rate case and it doesn't always  
16 translate equally.

17 I want to switch over to my other hat  
18 which is I install thermal biomass heating  
19 systems in New England. We just converted the  
20 National Life Insurance Company from oil to  
21 biomass and they are going to divert 200,000  
22 gallons of oil in one year. It's a big deal.  
23 Okay. The question is with limited dollars,  
24 the Legislature not wanting to raise taxes in  
25 the right way, we have to somehow come out of

1 an energy plan with some weighing what the  
2 options are and where we want to put our money  
3 first. Do you want to put it into 2,000  
4 houses? Do you want to put it into 200 small  
5 windmills on people's houses? Do you want to  
6 put them into one Sheffield or one Lowell  
7 project that each one of them has impacts and  
8 we haven't been able to get past a way of  
9 having each other listen to each other at  
10 these meetings.

11 You know I'm an anti-nuclear person.  
12 You go to one of these wind meetings and you  
13 think you just stepped into the pro-nuclear  
14 hat. So it's a bit of a struggle. I'm glad  
15 you're doing this too. Thanks.

16 MR. DELHAGEN: We had several in this  
17 quadrant over here.

18 AUDIENCE: I'm not sure I should be  
19 speaking, but I live on grid, but I'm net  
20 metered zero. I pay a connect charge every  
21 month so I am paying into the grid to keep  
22 that transmission system operating. Maybe it  
23 needs to be more. Maybe, but it's distributed  
24 generation. I'm helping keep rogue blackouts  
25 from happening.

1           Bigger issue than I can handle, but  
2           should the utility companies not be trying to  
3           sell kilowatts? Should they be reconfigured  
4           so that we're all in the same game together,  
5           but that's bigger than I can --

6           MR. DELHAGEN: Back over here.

7           MR. FORWARD: I'm Jeff Forward. I'm a  
8           renewable energy and energy efficiency  
9           consultant. I'm also the town energy  
10          coordinator for Richmond where I wear lots of  
11          hats.

12          A couple of things. I wanted to follow  
13          up on what Barry is saying relative to using  
14          biomass for heat. You know biomass is a  
15          limited resource, although it's probably our  
16          largest indigenous resource, and we should be  
17          prioritizing how we use that. We can offset a  
18          great deal of fuel oil cost effectively and it  
19          will become more cost effective as fuel oil  
20          prices go up which they undoubtedly will.

21          I also wanted to have you think about  
22          where else you might be able to find dollars.  
23          One of the advantages to the Comprehensive  
24          Energy Plan as opposed to the electric or  
25          national gas plans the Department has

1 traditionally been able to develop it looks at  
2 all fuels, and I think we should look to the  
3 example of Efficiency Vermont that's been  
4 really successful at doing demandside  
5 management and applying that model to some of  
6 our other fuels.

7           You know it's not anathema to think  
8 about a tax on fuel oil that helps us reduce  
9 its use. You know there's good synergy there.  
10 There may even be good synergy between -- on  
11 putting a tax on gasoline to fund refueling  
12 stations that are either natural gas or  
13 electric, you know, but it's not something  
14 that, you know, would come up in the electric  
15 plan likely, and this is a place to do it.

16           The last comment that I would have it's  
17 kind of structurally. In the 1990's we had a  
18 very active state energy office that was  
19 housed in the Public Service Department and we  
20 did a lot of stuff. The efficiency utility  
21 idea came out of the state energy office. The  
22 energy codes, we didn't have a residential  
23 energy code in the early 1990's, and that idea  
24 came out of very similar planning exercise to  
25 this and was advanced and implemented through

1 the state energy office.

2 It's really a good function for state  
3 government to have an energy office that's  
4 housed in the agency that also regulates  
5 utilities. I think it's the only one in the  
6 country that does that and it really is  
7 useful.

8 So I would encourage state government to  
9 think about staffing state employees more  
10 strategically than just trying to cut  
11 employees, and the state energy office is a  
12 good place to do it.

13 MR. GORDESKY: Thank you. Ben Gordesky.  
14 I work for DC Energy Innovations, solar  
15 installers. I'm also here, like everybody  
16 else, for myself. So I manage to wear two  
17 hats.

18 So well, first of all, I think that  
19 carbon is certainly a very important driver  
20 for the energy policy. As far as in-state  
21 versus out-of-state I think certainly in-state  
22 would be better, but I think it does make  
23 sense to look region wide.

24 My issue with Hydro-Quebec is not that  
25 it's out of state or out of country. It's

1 just the way the very, very large scale hydro  
2 systems were constructed and the environmental  
3 devastation that went on with it. At this  
4 point I'm not putting up a fight about using  
5 Hydro-Quebec, but I would look to that as a  
6 temporary stop gap measure on our way to  
7 getting -- we're about to get off Vermont  
8 Yankee and then the next step will be to get  
9 off Hydro-Quebec, and I'm thinking just on the  
10 electricity side here so I realize there's a  
11 whole thermal side to not addressing -- to the  
12 energy picture in general.

13 As far as the incentivizing as far as  
14 making renewable energy happen since that's  
15 part of what I do for a living is the  
16 incentives need to be stable. I think that's  
17 -- I think most people in the business would  
18 agree that there's been a lot of ups and downs  
19 and changes and threats the program would end.  
20 It needs to be stable as far as incentives go,  
21 but the other -- there's two other pieces.  
22 There's the economic -- the economics of a  
23 project and then there's the financing of a  
24 project.

25 So the financing of the project -- well

1 I'll start with the economics, that renewable  
2 portfolio standards, I probably said this in a  
3 few venues, but it seems to be a very  
4 effective way to make renewable energy  
5 projects economical, and for anyone who is not  
6 aware that utilities are required to have a  
7 certain percentage of their portfolio in  
8 renewable energy or buy renewable energy  
9 credits if they don't have the generation  
10 sources they own themselves, and in  
11 Massachusetts, for example, even in a  
12 residential system you can get 35 cents per  
13 kilowatthour for your -- for the solar part of  
14 your solar electricity, and that's in addition  
15 to the net metering benefits.

16 So if you know what your electric rates  
17 are 35 cents is two or more times your  
18 electric rate. So that's huge, and from what  
19 I've heard, and some of the utility people  
20 might correct me if they think I'm wrong, but  
21 the increase in utility rates this causes is  
22 between minus a half to plus one percent. So  
23 it's like basically almost a very little  
24 change in utility rates in the states that  
25 have adopted it.

1           Every state in New England other than  
2 Vermont has adopted some form of RPS. I think  
3 it's almost half the states in the United  
4 States have adopted this. In those states --  
5 New Jersey is a very big state for solar.  
6 It's not because New Jersey has a better solar  
7 resource than we do, and Massachusetts is a  
8 very big state for solar and that's not  
9 because they have a better resource than we  
10 do. It's because of RPS.

11           So the other piece is the financing and  
12 the PACE programs are a great way of tackling  
13 that, and I really appreciate all the efforts  
14 of some of the non-profit groups here in  
15 trying to get something going in the  
16 Legislature to stop this legal obstacle that  
17 the mortgage companies have put in the way of  
18 PACE programs.

19           I live in Burlington so our power  
20 program was already to roll and then this  
21 happened, and Chris Burns at BED told me that  
22 if the Legislature achieves what they are  
23 trying to do, that January 2012 he could  
24 finally roll out some programs. I mean that  
25 deals mostly with the residential or smaller

1 community scale. Obviously for big one  
2 megawatt projects or wind farms the PACE  
3 program is really what's going to feed the  
4 financing of that, but I think those things  
5 together would make a huge difference in the  
6 renewable energy history. Thank you.

7 MR. DELHAGEN: Okay. That was many  
8 comments. Thank you. Do try to keep the  
9 comments relatively brief. We know there's a  
10 lot to be said, but there are also a lot of  
11 other folks here who have thoughts.

12 As we move on I'm going to encourage  
13 folks to try to share some information on a  
14 few of the other important points and sections  
15 that are covered in the Comprehensive Energy  
16 Plan. We have many folks here working in the  
17 world of biomass and biofuels. We have had a  
18 lot of conversation on electric and that's  
19 important, but please let's hear from other  
20 folks in some of the other non-regulated  
21 spaces as well.

22 MR. METHENY: Thanks. Good morning  
23 everyone. My name is Hawk Metheny. I'm the  
24 New England Regional Director with the  
25 Appalachian Trail Conservancy.

1           First of all, I would like to extend  
2           apologies to the folks that were in the  
3           breakout room earlier. There was a similar  
4           comment. Regarding question two about  
5           in-state renewables versus out-of-state  
6           non-renewables the question states with higher  
7           costs, and on in-state renewables what I'm  
8           going to focus on a little bit here is the  
9           concern about the impact on Vermont's  
10          landscape that maximum industrial wind  
11          development would look like cumulative  
12          impacts, and with that we encourage the  
13          Department here to consider having influence  
14          or creating statewide siting criteria for  
15          industrial wind.

16                 Right now each project is analyzed  
17                 independently and individually without taking  
18                 the whole system as a whole, and Vermont has  
19                 an opportunity to be a leader in this need.  
20                 Other states are doing it similarly, and  
21                 frankly some of them are kind of floundering  
22                 trying to figure out what the maximum buildout  
23                 would look like.

24                 So that's an opportunity here that given  
25                 the ethics in the state about preserving the

1 landscape along with developing renewables to  
2 become independent I would think people in  
3 Vermont would be behind that, and at least I  
4 would hope so. Thank you.

5 MR. WHITE: My name is Netaka White.  
6 I'm the environmental program director at  
7 Vermont Sustainable Jobs Fund. Thank you to  
8 the Department and each of you on the team for  
9 organizing this event, and I know you've got a  
10 lot of work in front of you over the next few  
11 months. I'm at your disposal. Give me a  
12 call. We can talk about how to update the,  
13 well, so far inadequate section on biofuels.  
14 It's a good start, but there's a lot of new  
15 information and updates around what's going on  
16 in the state, particularly the farmer's  
17 ability to produce fuel at a very cost  
18 competitive rate and be able to provide feed  
19 at the same time for dairy and livestock.

20 So that's all very encouraging progress.  
21 I think, as I mentioned in the group this  
22 morning, our farms over the next ten years  
23 could virtually replace all of the diesel,  
24 that's roughly 6 million gallons, with  
25 biodiesel. It's not pie in the sky, but it

1 would take certain policy levers to help  
2 encourage that and nothing more than just  
3 showing a commitment by the state to help  
4 farms be fuel independent or self sufficient  
5 would be something I would like to encourage  
6 and give a shout out for.

7 To address the carbon question I  
8 encourage the Department to lean heavily on  
9 the work on the Governor's Climate Change  
10 Commission. The report that came out is deep  
11 and broad, and there was quite a bit of  
12 research and process that went into that, and  
13 from that work we could look at how carbon as  
14 a driver will play in any of the energy  
15 technologies that are necessary to meet the  
16 whole portfolio.

17 Another piece of work to point to, and  
18 Paul Markowitz I think alluded to this but  
19 I'll give it a name, the group on rural  
20 development several years ago did a year-long  
21 energy analysis looking at primarily  
22 renewables but also the role of non-renewables  
23 in the mix, and came up with a matrix that  
24 pointed out all the various drivers; carbon,  
25 job creation, various impacts at different

1 efficiencies of using any one resource for a  
2 particular application.

3 So we looked at different scales of wind  
4 development, different scales of biomass and  
5 biofuel development, whether it's electric or  
6 CHP or what have you, and that work is  
7 available and I would encourage you to use it  
8 also as a resource.

9 One last point on carbon. I applaud the  
10 work of the Department being engaged in the  
11 low carbon fuel standard. That is a regional  
12 -- northeast regional process that's underway  
13 and a lot can be gained from that, and  
14 particularly any policy that gets implemented  
15 in Vermont related to biofuels that we should  
16 be looking at the life cycle carbon analysis  
17 that work has been done nationally. We don't  
18 have to reinvent that, but to dip into it and  
19 take from it as we look at how we might  
20 incentivise or popularize certain biofuel  
21 pathways.

22 There are some that are not -- that are  
23 very carbon intensive or potentially so.  
24 Others that are very non-carbon intensive, and  
25 again that work is out there to be drawn on

1 for this plan. Thank you.

2 MR. DELHAGEN: Okay. Keep it coming.

3 Who's next?

4 MR. SAVAGE: I'm Andrew Savage with All  
5 Earth Renewables in Williston. Just wanted to  
6 address point number two and it's kind of come  
7 up a little bit in terms of cost.

8 I guess I would urge the Department  
9 through process to consider the broader  
10 economic benefits of local renewables. Just  
11 to give an example when we are installing it's  
12 a 2.2 megawatt solar farm like we're working  
13 on in South Burlington right now or a simple  
14 single or double tracker behind a barn or  
15 Vermont home, what happens when we're making  
16 those installations is we're manufacturing a  
17 product. We're creating jobs in Williston.  
18 We're also partnering with non-traditional or  
19 traditional construction businesses like  
20 Engineers Construction Incorporated or JA  
21 Morrissey who receive products from companies  
22 like NSA Industries in St. Johnsbury or  
23 Grenin's Soldering in Bristol.

24 There's a pretty significant economic  
25 benefit to the state, and so when we're taking

1 a look at in-state renewables versus  
2 out-of-state non-renewables we really look at  
3 the big picture benefit to the state in terms  
4 of economic development and the multiplier  
5 effects that go along with that. So I think  
6 any process that can help capture that big  
7 picture so that Vermonters aren't actually  
8 choosing between essentially a false choice,  
9 whether they are looking at five or six cent  
10 per kilowatthour power would be very helpful.  
11 So thanks very much.

12 MR. PATT: I'm Avram Patt, Washington  
13 Electric Co-op. I wanted to address a  
14 question that the Commissioner asked a little  
15 while ago that was in response to a couple of  
16 other comments, and this has to do with who  
17 pays and the sort of the equity of who pays  
18 for increased costs for renewables and  
19 in-state generation.

20 I don't have an answer for that, but I  
21 think that the plan really can't avoid this  
22 question and needs to hit this one squarely  
23 because as we move towards smaller scale  
24 renewables, people doing it on their own,  
25 people doing it in groups, community scale

1 wind projects, people having the option of  
2 time-of-use rates, all of these things tend to  
3 break apart the socialized payment system that  
4 the utility structure has now, and makes it  
5 possible for those that have the resources,  
6 the money, the location, the work schedule to  
7 take advantage of these, to take advantage of  
8 these, and some of the costs get passed on to  
9 everyone else.

10 So we need to find a way to make sure  
11 that as we move towards the kind of choices  
12 and small scale renewables that we're not  
13 unduly making some people pay that and other  
14 people getting all or most of the benefit.

15 Again, I don't have -- there's no easy  
16 answer for that, but if you have a task force  
17 assigned to that, I'll send my comments to  
18 them.

19 MR. DELHAGEN: Yes.

20 MR. LAMONT: We're looking for a  
21 Chairman.

22 AUDIENCE: Hi. I think we have to put a  
23 tax on carbon to drive the market. They did  
24 that in Germany and a lot of sustainable  
25 industries got started. Politically

1 unpopolar, but we can do that and it's the  
2 right thing to do. Really our goal should be  
3 zero carbon economy. I mean that's the sane  
4 and rational response to climate change. We  
5 need to get away from putting so much carbon  
6 in the air, and seems like we're talking about  
7 responding to the climate crisis but in a way  
8 that's not really up to the scale of the  
9 problem.

10 So I encourage us all to really knuckle  
11 down and work on this in the coming years.  
12 And, finally, I've heard a lot of play talk  
13 about shale gas today, and having studied that  
14 recently I would like to say hydrofracking is  
15 crazy in terms of polluting the water supplies  
16 and bringing up radiation from the  
17 substructure and maybe Vermont could pass  
18 something to not do that here.

19 MR. FERLAND: I'm Brad Ferland. I'm  
20 with the Vermont Energy Partnership and I also  
21 thank the Department for this process.

22 Just want to point out a few things that  
23 we've observed with electricity supply. One  
24 is that Vermont currently has the lowest  
25 carbon emissions with regards to electricity

1 of the whole country. We're either first or  
2 second. So we right now have a portfolio that  
3 is about as good as it gets.

4 The other thing that I think will be  
5 significant to keep an eye on is that any  
6 intermittent power that replaces base load  
7 power is going to require base load power, and  
8 if the base load power, if it's not nuclear or  
9 hydro, it's very likely to be carbon driven.  
10 So you can see an increase in your carbon  
11 emissions; and, lastly, automobiles seem to be  
12 as big a problem, bigger problem than  
13 electricity supply right now in terms of  
14 carbon, and if Vermont is going to go the way  
15 of electric cars, it seems impractical to me  
16 to have electricity supply. It's carbon  
17 emitting. It's counterintuitive. Thanks.

18 MR. DELHAGEN: Okay. We're going to  
19 head towards wrapping up here. So we have  
20 several more comments.

21 MR. LEVIN: Hi, I'm Matt Levin. I work  
22 for Vermonters for a Clean Environment. I  
23 mentioned this in the small group. It's a  
24 daunting challenge to figure out how to  
25 balance all these different comments, and so

1 with that in mind I want to repeat something  
2 that I said to the Commissioner before we  
3 started and also follow up on what James Moore  
4 said from VPIRG.

5 I think there's a lot of value in  
6 focusing on implementation and reasonable  
7 goals trying to balance the need for guidance  
8 on a day-to-day year-to-year basis with 5, 10,  
9 20-year ideas, and so, again, so what I said  
10 to the Commissioner in terms of the plan  
11 itself at this point we probably suggest a  
12 shorter more streamlined plan. So someone  
13 else said put a lot of good ideas in the  
14 executive summary.

15 It's very challenging for the Department  
16 to get so much right. For those of us who  
17 have gone through the 2008 draft, which the  
18 folks are working very hard to try to update,  
19 any of us could go through and find all sorts  
20 of things where facts are no longer accurate,  
21 or some might take one of the things as bias  
22 or another, and it may for the process in  
23 answering these very difficult questions, sort  
24 of goes against what I'm suggesting, it may be  
25 a shorter plan that doesn't try to go so deep

1 into all of these details may help all of us  
2 in the long run rather than trying to wrestle  
3 them all to the ground in the next four, five  
4 or six months.

5 So a more holistic comment for you all  
6 to consider. Thanks.

7 MR. DELHAGEN: Thank you. Back here.

8 AUDIENCE: Really quick. The question  
9 -- obviously we had a lot of discussions how  
10 do we fill our energy gap, and I think one of  
11 the things we can't take our eye off of that  
12 increasing use of energy in Vermont as in the  
13 world is not sustainable and needs to be  
14 turned back down, and we need to focus on  
15 efficiency and reducing waste and that's where  
16 we're really going to have success.

17 And going to Hardwick again, one of the  
18 nice things and a thing on Efficiency Vermont,  
19 we have increased the number of our  
20 ratepayers, about three percent every year,  
21 but our delivered energy is going down by  
22 three percent. You say well more people less  
23 energy and that is Efficiency Vermont right  
24 there. If we can do a similar thing in  
25 Vermont, take that energy usage down and still

1 have an increase in population, we're well on  
2 our way to a solution.

3 MR. DELHAGEN: Okay. We have one or two  
4 more questions and I have a question I want to  
5 pose to Mr. Lamont.

6 MS. NOTTERMANN: Just a couple things.  
7 Some of this I did say in our small group  
8 talking about long term goals, and really in  
9 this plan it needs to be set out in one and  
10 two-year increments because that's how we're  
11 really going to get somewhere. People will  
12 see the results.

13 Another huge component has to be  
14 education around all the fuels we use. We'll  
15 support town energy committees who are really  
16 on the ground educating the public, and then  
17 in relation to the architect whose name I  
18 can't remember at this point, green building  
19 code, something that's been going through my  
20 mind.

21 I'm sorry. I didn't say who I was.  
22 Nancy Nottermann with Central Vermont Regional  
23 Planning Commission, energy coordinator, but  
24 anyway green building codes it feels like  
25 there needs to be a concerted effort to really

1 retrain the people who are contractors in this  
2 state to really implement green building codes  
3 in new buildings and retrofits and connect  
4 that on the town level with the kind of  
5 permits and supplying energy.

6 MR. CERALDI: Just a point about green  
7 building codes. They are fine. The mandate  
8 is for me to practice that as an architect  
9 licensed in this state and a number of other  
10 states. However, enforceability becomes an  
11 issue in many towns because there aren't  
12 planning commissions, there aren't building  
13 departments, and that's going to be an issue.  
14 So how that's enforced is something that's  
15 going to have to come down from the state, and  
16 if my town has to put in a building  
17 department, we certainly can't afford one.  
18 Thank you.

19 MR. DELHAGEN: We have time for one more  
20 in the back.

21 MR. JOHNSON: Kerrick Johnson. Well as  
22 the last one who got here perhaps this is  
23 appropriate that I'm the last sort of comment.

24 Thank you very much, Commissioner. I  
25 apologize for my lateness, but we were

1 attending a session where people were looking  
2 for the electric industry to do more for  
3 telecommunications. I'm sorry. Kerrick  
4 Johnson with Vermont Electric Power Company,  
5 VELCO, your friends in the transmission  
6 industry.

7 I think a few things and good points I  
8 heard to kind of unite these three questions.  
9 James and a few other folks I think made good  
10 points. One is that plan integration and  
11 consistency, we have to come up every three  
12 years with a statewide transmission plan. It  
13 endeavors to look 20 years out and give people  
14 an idea where we need to build transmission.  
15 We submitted our first one in 2009 and  
16 essentially -- honestly it was essentially  
17 obsolete on the day it was delivered because  
18 events overtake your planning documents. So  
19 to the degree we can utilize online services  
20 and make this as dynamic a plan as possible, I  
21 would propose that would be a good thing.

22 Secondly, we have had to -- we  
23 essentially quintupled our assets over a  
24 six-year period. So we know about our land  
25 use impacts. Those are serious, serious

1 things. We like to think we build them in  
2 harmony with Vermont's working landscape, but  
3 people have different points of view.

4 So to the degree whether it's in-state  
5 utility scale renewables or out-of-state  
6 renewables they are going to have to be  
7 connected somehow to the grid unless it's off  
8 the grid, and we love off-the-grid people, but  
9 just be aware when you talk about costs  
10 frequently what happens is a transmission  
11 component isn't considered and how you're  
12 actually going to connect them, and I think we  
13 need to.

14 And then I think lastly I'll just say  
15 Vermont we have to decide what we can  
16 accomplish in our borders, but we're part of a  
17 regional grid and there are forces happening  
18 outside of Vermont that are going to directly  
19 impact our sources here and who we're seeking  
20 to build stuff through Vermont because many  
21 people view Vermont as kind of a geostrategic  
22 asset. We're between renewable resources, the  
23 supply and the people who want to use them.  
24 So what do we see, how do we extract the most  
25 value for Vermont, and what role we can play.

1           We'll be willing to help you in any way  
2 we can, but I want us to be aware -- one last  
3 thing -- regional -- not regional, but federal  
4 drivers, the federal government and  
5 reliability standards are coming at us, and as  
6 we chart our future with Vermont Yankee still  
7 there or without it, and we're planning  
8 without it right now as required, that's going  
9 to require investments. It's going to require  
10 probably transmission investments, and we're  
11 going to be able to -- we're going to need to  
12 understand how robust we need to build our  
13 system in light of plug-in hybrids, in light  
14 of yes energy usage has gone down, but I'm  
15 here to tell you the peak uses of energy  
16 continue to go up, and we have to plan to be  
17 able to reliable -- reliably deliver energy  
18 every time every hour of everyday.

19           Thank you and we look forward to working  
20 with you.

21           MR. DELHAGEN: Okay. Well we're going  
22 to bring this to a close on this point.  
23 Obviously there are a lot of questions left to  
24 be answered, and one piece that we talked  
25 about before is that we are going to be

1 encouraging more feedback on a variety of  
2 topics. There are many issues that didn't  
3 even come up today. We didn't have much  
4 conversation on the issue around smart meters.  
5 There's questions about power markets, other  
6 questions and topics about supplies and  
7 reliability.

8 We're going to be trying to gather some  
9 more specific feedback on a whole array of  
10 these questions in both regulated and  
11 non-regulated areas. So, again, this is just  
12 the beginning of our process.

13 Before we close I'm going to ask  
14 outgoing director Dave Lamont if you had a  
15 chance to ask one question of this group that  
16 you would like feedback on, what would you ask  
17 of this group?

18 MR. LAMONT: Well I think the common  
19 theme that I heard through both the small  
20 groups and in this group is that people --  
21 everyone wants a cleaner energy supply and to  
22 use less of it and that's a laudable goal, but  
23 I also heard a number of suggestions and  
24 requests of how to pay for it and one  
25 admission that we don't even know how to pay

1 for it.

2 So to me the issue, and I guess the  
3 question I put back to you, is we all want the  
4 same clean future, low energy future, but we  
5 do have to pay for it in some way, and how do  
6 we do that in a way that doesn't disadvantage  
7 certain people that are unable to pay for it  
8 or even those businesses that may be less  
9 competitive as a result of the higher prices.  
10 So how do we balance the costs and benefits  
11 essentially of a clean energy economy going  
12 forward?

13 MR. DELHAGEN: And that's an open  
14 question. That's what we're going to be  
15 looking for a lot more feedback from everybody  
16 on, and I would like to turn it over to  
17 Commissioner Miller for a few closing remarks  
18 and then we will close this chapter. We are  
19 going to be holding the next meeting starting  
20 at 1:30 for those of you who are still full of  
21 energy, and we'll be beginning the  
22 conversation about energy efficiency which  
23 picks up on many of the themes we talked  
24 about, but in closing like to turn it over to  
25 Commissioner Miller.

1           COMMISSIONER MILLER: Sure. Just want  
2 to thank you all again for coming, and boy the  
3 challenges are vast and a conversation like  
4 today really points that out, but it also  
5 points out to me just how great our resources  
6 are for addressing the challenges.

7           We are, as Ed said, going to continue  
8 the process. You should be expecting e-mails  
9 asking for further comments by web. We will  
10 be collecting those comments. One of the  
11 goals that I have in this process is to make  
12 sure that whatever the Comprehensive Energy  
13 Plan adopted this fall is, it incorporates and  
14 respects the comments that were received and  
15 provides a resource for Vermonters to see  
16 those comments and to reflect upon them.

17           So you have that commitment from me and  
18 we'll be asking you to provide those comments  
19 not just today. We've of course recorded  
20 everything that you have said here today, but  
21 also going forward. So look for that and look  
22 for a public hearing process coming up this  
23 summer, and of course feel free to contact not  
24 only me, but anybody on the team at the  
25 Department if you have specific questions or

1 want to make specific input going forward.

2 Thanks again very much.

3 MR. DELHAGEN: One last point. If you  
4 filled out the yellow forms this morning with  
5 points, please put them in the box, and we  
6 also have another yellow sheet with space for  
7 these larger questions. If you would like to  
8 bring that with you, fill it out now and send  
9 it in, or leave it in the box, or bring it  
10 home, please do.

11 So once again thank you very much. If  
12 you're going to stay for the second meeting,  
13 we'll reconvene at 1:30.

14 (Luncheon recess.)

15 COMMISSIONER MILLER: Thanks all of you  
16 for coming. Before I get started how many of  
17 you just by show of hands were here this  
18 morning? Okay. So I'm going to take that as  
19 a majority and shorten my repeat comments  
20 accordingly. I do want for the folks who have  
21 come for just the afternoon meeting to give a  
22 quick introduction to our meeting today and  
23 the process going forward, but I will take  
24 into account that there are a lot of folks who  
25 heard this this morning and edit accordingly

1 as I go along.

2 So welcome everybody. I'm Elizabeth  
3 Miller. I'm the Commissioner of the  
4 Department of Public Service and I'm just very  
5 excited to have so many attendees to our  
6 kickoff meeting regarding the Comprehensive  
7 Energy Plan because frankly we can't do it  
8 without the input from all of you. So I  
9 really appreciate it.

10 Let me just very briefly start by  
11 pointing out the folks on my staff who are  
12 helping the Comprehensive Energy Plan planning  
13 process. They will be individuals that you  
14 can call upon today. You'll see them in our  
15 small group breakout later and I want to point  
16 them out to you briefly.

17 Dave Lamont, our planning director who  
18 is standing over here by the door, long time  
19 state employee. Dave, thanks so much for your  
20 willingness to participate in this process  
21 despite pending state retirement.

22 Kelly Launder, assistant planning  
23 director, over there in the doorway across.

24 Andy Perchlik is not with us this  
25 afternoon because he had another meeting, but

1 he's our executive director of the Clean  
2 Energy Development Fund and was a key  
3 presenter this morning at the renewables  
4 portion of the meeting.

5 TJ Poor, who is our energy efficiency  
6 specialist at the Department and really runs  
7 point for the Department on energy efficiency  
8 issues. He had a family emergency and so he's  
9 not able to be with us this afternoon, but we  
10 have his presentation and Dave has volunteered  
11 to make it for all of us in a few minutes  
12 here.

13 Ed Delhagen who is our facilitator over  
14 here at the window. Ed is an energy program  
15 specialist at the Department and is one of the  
16 folks who came forward when we were  
17 revitalizing this comprehensive energy  
18 planning process and said to me I want to be  
19 involved and here's why I want to be involved.  
20 I think this is such an important process for  
21 the state. Ed has been a facilitator on  
22 environmental and energy issues both here at  
23 the state level as well as nationally and in  
24 fact internationally. So he has a wealth of  
25 experience and we're drawing it out of him in

1 this process and very grateful that he's  
2 willing to facilitate today going forward.

3 George Nagle who is a member of our  
4 utility planning division and is a planner  
5 himself over here in the corner, and finally  
6 Karin McNeil, a grant specialist with the  
7 Department over by the doorway. Karin is  
8 another individual at the Department who came  
9 despite the job category and said regardless  
10 of that I want to be involved in this process  
11 because I think it's very important, and I  
12 have the background to help and I want to  
13 help. So these folks at the Department will  
14 be very key going forward and you'll see them  
15 today as we have some small group discussions.

16 It's not just the Department of Public  
17 Service, however, but many parts of state  
18 government that allow this planning process to  
19 go forward, and some of the folks from other  
20 departments and agencies are here today and I  
21 just want to point them out.

22 Agency of Natural Resources, including  
23 the Department of Environmental Conservation,  
24 of course is key as we look at the  
25 Comprehensive Energy Plan process. Brian

1 Woods is here somewhere in the back. Thank  
2 you, Brian, for being here for the Agency of  
3 Natural Resources.

4 Agency of Transportation. Also there's  
5 quite a bit of the energy usage in the state  
6 attributable to transportation, and Gina  
7 Campoli from the Agency is here. Thank you,  
8 January.

9 Agency of Agriculture has been very key  
10 of course and will be going forward.  
11 Secretary Ross and I have had a number of  
12 meetings on this topic.

13 Is anyone from Agency of Agriculture  
14 here this afternoon? I didn't see someone  
15 walk in the door, and we will be working with  
16 them closely, especially on the farms to  
17 energy programs going forward in this process.

18 Agency of Commerce and Community  
19 Development of course is helping with respect  
20 to both the jobs aspects of the environmental  
21 -- I'm sorry, the energy plan as well as the  
22 green energy economy and how we can encourage  
23 it in the state.

24 Agency of Human Services particularly  
25 with respect to weatherization and efficiency

1 issues of course is a key partner, and,  
2 finally, Department of Buildings and General  
3 Services, and I did see Deb Baslow here. Deb  
4 in the back. Thank you, Deb, for coming  
5 today. The State really needs to lead by  
6 example, and Buildings and General Services is  
7 really leading that effort to make sure the  
8 state facilities walk the walk in efficiency.  
9 So thank you.

10 Of course it's not just state government  
11 either. It's all of you that are going to be  
12 helping us with this process and it's very  
13 important that we have a cross-section of  
14 Vermonters involved, and I think we really  
15 have that here today; utilities, energy  
16 service companies, and consultants, public  
17 interest organizations and groups, as well as  
18 the business community directly and the town  
19 energy planning committees, and so that's just  
20 incredibly exciting to me you're all able to  
21 come to give us feedback on your planning  
22 process and goals. That's the purpose of  
23 these kickoff meetings.

24 Format very briefly. After we have a  
25 substantive presentation on the state of

1 energy efficiency in Vermont now, we're going  
2 to have an opportunity for breakout groups to  
3 discuss some key questions regarding energy  
4 efficiency issues and how they should play  
5 into the comprehensive energy planning  
6 process, and then we're going to come back  
7 together and Ed will facilitate for us a  
8 larger group discussion so that we can have  
9 framework for our energy future, and I'm  
10 really looking for feedback on the process  
11 going forward in addition to specific ideas  
12 you would like addressed in the Comprehensive  
13 Energy Plan.

14 Today is just the beginning. You've  
15 probably seen in invitations from the  
16 Department that we're having a meeting again  
17 on the 7th of April focused on the topics of  
18 transportation specifically and land use.  
19 There's many cross cutting issues on all of  
20 these topics, but we thought that kicking off  
21 by setting the framework on the four key  
22 sectors, that is renewables and energy supply,  
23 this afternoon efficiency, and then on the 7th  
24 transportation and land use would be a great  
25 way to get the maximum number of stakeholders

1 involved right from the beginning.

2 You'll then get from us a web based  
3 opportunity to provide further comment. We've  
4 been collecting e-mail addresses and we'll  
5 send that out to you following these meetings  
6 in early April. There will be further  
7 opportunity for technical meetings with the  
8 Department on topics of interest. You should  
9 feel free to contact me or anybody else on the  
10 team as we go forward with your ideas in that  
11 regard.

12 We're frankly going to take these  
13 opening meetings and engage in a planning  
14 process at the Department on how best to use  
15 that going forward. We're heading towards a  
16 new draft Comprehensive Energy Plan this  
17 summer. We will be having public hearings for  
18 that draft and the target is early August  
19 2011.

20 The goal is to finish the plan by  
21 October 15th. It's a quick time frame  
22 actually when you start looking at the  
23 process, but the Governor has prioritized this  
24 and has asked the Department to create a  
25 planning process that allows for a final

1 recommended Comprehensive Energy Plan by mid  
2 October.

3 As we just get started today let me  
4 remind you of what the Comprehensive Energy  
5 Plan is to be. The statute requires that it  
6 contain a comprehensive analysis of  
7 projections regarding the use, cost, supply,  
8 environmental effects of all forms of energy  
9 resources in Vermont, and that it contain  
10 recommendations for state implementation  
11 actions.

12 We are also going to use this process to  
13 update the Department's electric plan which is  
14 a separate statute requiring us to do that  
15 electric plan as a segment. We, for the first  
16 time, are using it as a part of the  
17 comprehensive energy planning process rather  
18 than as a stand alone document.

19 We're creating a Comprehensive Energy  
20 Plan because as the statute states we need to  
21 assure to the greatest extent practicable that  
22 Vermont can meet its energy service needs in a  
23 manner that's adequate, reliable, secure, and  
24 sustainable, that assures affordability and  
25 encourages the state's economic vitality and

1 the efficient use of energy resources and cost  
2 effective demandside management. Those last  
3 two, of course, being a specific topic at  
4 issue this afternoon in a way that is  
5 environmentally sound.

6 The recommendations and the  
7 Comprehensive Energy Plan must take into  
8 account state law on the subject and already  
9 enacted state goals such as the greenhouse gas  
10 reduction goals, the SPEED goals, the standard  
11 offer program. Those are just a few examples.  
12 The Department needs to create a state energy  
13 plan with those in mind.

14 Just very briefly the Comprehensive  
15 Energy Plan is forward looking. It's not  
16 designed to do a couple of things; first, to  
17 prescribe specific outcomes on pending  
18 projects. We have a Board process for that as  
19 I'm sure many of you are aware, and so  
20 projects that are in the pipeline as it were  
21 in front of the Board the energy plan will not  
22 be a place to weigh in on the position.  
23 Rather the Board is the proper forum for that.  
24 For example, on the Lowell project which is  
25 pending at the Board. I very much expect that

1 the energy plan will discuss renewable energy  
2 in Vermont, what the recommended mix could be,  
3 what the strategies are for getting there, but  
4 it will not revisit the specific pending  
5 project in front of the Board at the moment.  
6 Obviously by the time the plan comes out there  
7 may be a decision on Lowell and we'll take  
8 that at whatever procedural point it is at the  
9 time. This document is forward looking.

10 Similarly Yankee. It comes up quite  
11 often so I just want to put it out there right  
12 upfront. The Comprehensive Energy Plan is not  
13 a place to analyze again the pros or the cons  
14 of Yankee continuing beyond its present  
15 license. The Governor has been very clear  
16 that what he is seeking in the comprehensive  
17 planning process is a plan that addresses  
18 Vermont's post-Vermont Yankee future, and I'm  
19 committed to making sure that the plan does  
20 that because as we all know the base case the  
21 present situation is Vermont Yankee running.  
22 We know what that electricity future looks  
23 like because we're in it right now.

24 What we need to do is plan for what  
25 Vermont's future will look like at the point

1 that the plant is not running. So that's what  
2 the Comprehensive Energy Plan will do.

3 The overarching goals of the  
4 Comprehensive Energy Plan we need to address  
5 all energy sectors. As I said, that includes  
6 transportation and land use in addition to  
7 electricity issues specifically because of the  
8 state goals and global warming issues ought to  
9 strive for a lower carbon footprint,  
10 greenhouse gas footprint, generally towards  
11 our state goal targets, and we need to do it  
12 at a cost that keeps in mind Vermont's  
13 regionally competitive framework.

14 So the stakeholder draft is very briefly  
15 we sent out a link in the invitation to the  
16 prior draft. I thought -- it was my judgment  
17 that it was important to put that back out  
18 there in the public so that you could see the  
19 work that had already gone into the process  
20 even though it was never completed. The  
21 Department has not adopted a plan since 1998.  
22 There was, however, quite a bit of work that  
23 went into a 2008 process, including public  
24 hearings and obviously quite a bit of work.

25 The staff actually had worked on updates

1 since 2008 and even into this year. None of  
2 that had been out in the public because there  
3 wasn't yet a forum for it. So, again, we  
4 thought it was important to put it there as a  
5 starting point. It's an engagement draft. It  
6 is not the Comprehensive Energy Plan that we  
7 will come up with and present to you at public  
8 hearings this summer or present to the  
9 Governor this fall, but it is a starting  
10 point, and frankly as a part of this process  
11 any feedback that you all have how we should  
12 be using that document and what we should be  
13 doing with it going forward would be very much  
14 appreciated.

15 I'll just very quickly, since it's up  
16 here on the slide, there's a number of other  
17 state activities going on. We're very much  
18 aware of the need to coordinate with other  
19 state actions including, for example, the  
20 cabinet level actions on climate, the climate  
21 neutral working group is an example of that,  
22 the state agency energy plan, VTrans planning  
23 process which is going on right now, et  
24 cetera, and we will be doing that.

25 The Legislature, in particular, I wanted

1 to mention I know that the Natural Resources  
2 Committees in both the House and Senate will  
3 be holding a joint hearing on the 31st, and I  
4 expect the Legislature will have other  
5 processes going forward, and certainly we'll  
6 take those into account as we engage in our  
7 process.

8 Many of you have been involved in very  
9 good detailed important work here in Vermont  
10 on these topics. We're inventorying and  
11 reviewing all of those and frankly are happy  
12 to not reinvent the wheel and to use the very  
13 good work that's already been done and to  
14 recognize and utilize that expertise.

15 So as we discuss things today or even in  
16 the coming weeks and months please do feel  
17 free to bring us the plans and work that you  
18 have done and ask for our help in  
19 incorporating them in our process.

20 So thank you very much for coming. I  
21 want to ask Dave Lamont or Ed are you going to  
22 go next? Okay. Good. We're going to ask Ed  
23 to come up next and tell us more about the day  
24 and we'll hear more about energy efficiency in  
25 Vermont. Thank you for coming.

1 MR. DELHAGEN: George is getting my  
2 slides up. How many folks are new here for  
3 this afternoon's session, not been here this  
4 morning? Okay.

5 So we do have quite a number of folks  
6 here that were here this morning. Okay. Just  
7 briefly the structure for the day for the  
8 afternoon meeting will model after what we did  
9 this morning. In essence we're going to begin  
10 with a presentation that will provide some  
11 background information. It will help set the  
12 framework for some of the conversation about  
13 energy efficiency.

14 The structure of the four stakeholder  
15 groups by its nature has -- we can't get  
16 everything in all spaces, and we realize that  
17 there may be people here who have only one  
18 opportunity to attend one of these meetings.  
19 So although the particular focus on this  
20 afternoon's meeting is energy efficiency, if  
21 you feel that you have other comments that you  
22 need to make, this would be an opportunity to  
23 do that. We do have other times to talk about  
24 the transportation and land use questions and  
25 efficiency does come up in those spaces as

1 well.

2 Liz pretty much covered all of these  
3 already. I'm going to spend just a minute  
4 going over the agenda. Again this is a  
5 microfiche. If you did not pick up a copy,  
6 there was a paper copy over on the table, but  
7 in essence we're going to move from this front  
8 matter piece into our conversation on energy  
9 efficiency with Dave Lamont, and unfortunately  
10 TJ is not able to be here, but Dave will carry  
11 out that piece.

12 Then we're going to break into small  
13 group discussion, and because we got such good  
14 feedback this morning we're going to try to  
15 extend that a little bit and provide more  
16 opportunity in the small group time for people  
17 to provide their comments. After that we'll  
18 circle about around 3 o'clock, 3:15 or so,  
19 regroup and have a large group conversation.  
20 This is your opportunity to share your  
21 thoughts and introductory comments both on the  
22 process and goals, and then specific elements  
23 that you think are important for us to  
24 consider as we go forward. We'll try to bring  
25 it to a close around 4:15 and then be finished

1 by 4:30.

2 This morning we had a set of working  
3 agreements and I would like to just repeat  
4 these again and suggest them for new folks to  
5 help us with our conversation. As I said  
6 before, the focus this afternoon is on energy  
7 efficiency. We're going to ask folks to try  
8 and stay focused on that topic. There is  
9 opportunity, if you're not going to be here  
10 and you feel it's important to bring those  
11 other pieces in please do so, but again we're  
12 going to try to stay focused on the broad  
13 topic of energy efficiency.

14 Try to the extent you can to keep your  
15 comments and points relatively brief because  
16 we did have a lot of people here and we want  
17 to hear from as many people as we can.  
18 We'll do that one person at a time using a  
19 microphone so everyone has a chance to be  
20 heard. We do have a court reporter taking  
21 notes as well and it's important for us to be  
22 all heard, and our commitment to you is we'll  
23 try to be finished on time around 4:30 or so.

24 Again, this is the beginning of the  
25 process. There will be many more

1 opportunities for comments. We will have some  
2 written forms that you can use to submit input  
3 today on the questions and discussion topics  
4 that we put out. So, again, as we move  
5 forward please feel free to use those recorded  
6 points and submit the information in written  
7 form as well as verbally during our breakout  
8 sessions.

9 Okay, and with that I plan to turn it  
10 over to Dave Lamont, and Dave is going to  
11 provide a short presentation for us on energy  
12 efficiency.

13 MR. LAMONT: Again thank you all for  
14 coming, and the topic this afternoon is energy  
15 efficiency, but I'm going to do two things.  
16 I'm going to kind of go over the broad Vermont  
17 energy picture and where we're at in terms of  
18 energy use, a little bit about the future and  
19 what the future looks like through my crystal  
20 ball, which is probably as hazy as it is  
21 anyone's, and then I'm going to talk more  
22 specifically about energy efficiency and the  
23 efforts that are going on there just so we can  
24 all get a background in that.

25 Okay. So first this is our energy pie,

1 and this is kind -- if there's one picture  
2 that says it all or says at least a thousand  
3 words this is it, and if you look at the break  
4 out of residential, commercial and industrial,  
5 and transportation energy use it's pretty well  
6 evenly split a third, a third, and a third,  
7 and this morning Andy had slides that kind of  
8 went along with this showing how renewables  
9 fit into this, but there's quite a bit of  
10 renewables in here, especially within the  
11 electric sector which don't really show up in  
12 this graph, but it's fairly diverse, although  
13 you can see the commercial and industrial is  
14 pretty heavily dependent on electricity, and  
15 obviously transportation is very dependent on  
16 fossil fuels, motor oil, and oil in general  
17 and we're kind of at the end of the pipeline.

18 If you look at Vermont's energy  
19 consumption over the years it's increasing,  
20 and I say this despite our conservation ethic,  
21 and I think everyone thinks that Vermonters  
22 are a frugal society and make all the right  
23 decisions and are really smart about these  
24 things, but for whatever reason we seem to be  
25 not unlike the rest of the world in terms of

1 using more energy. This only goes up to 2005  
2 and I think that it's probably turned around a  
3 little bit both in terms of the efficiency  
4 efforts that we have done, especially in the  
5 electric sector, and the economy. The economy  
6 is a big driver of energy use, and I apologize  
7 for using the same jokes this afternoon as I  
8 did this morning, but there are some new  
9 people here that would appreciate this, but --

10 AUDIENCE: We'll still laugh.

11 MR. LAMONT: Where did they get this  
12 guy, right, but I kind of draw a parallel to a  
13 George Carlin joke which was -- which was if  
14 you think about how much energy the average  
15 person uses, it's really scary because half  
16 the people use even more than that, and his  
17 point was more how stupid people are half the  
18 people are stupider. It goes for energy too.

19 We're not unlike other sectors of  
20 society and other states for that matter in  
21 terms of our energy use. You can see both  
22 electric and transportation are showing  
23 tremendous increases going forward in time.  
24 So, again, we're not totally unlike everybody  
25 else, and if you look at this was -- I think

1 someone mentioned the Governor's Commission on  
2 Climate Change earlier, but this is from their  
3 report, and this is a projection of kind of a  
4 business as usual case, and they called it the  
5 electric supply high emission scenario, and  
6 this was essentially when our two kind of  
7 non-emitting contracts with Hydro-Quebec and  
8 Vermont Yankee were replaced essentially with  
9 emitting resources what would that do to our  
10 carbon profile, and that's this area down here  
11 where we look at a significant increase in  
12 carbon output in business as usual scenario.

13 Again, I think that's another issue we  
14 hope to tackle within the plan. We have taken  
15 care of some of that with the new Hydro-Quebec  
16 contract assuming that gets approved, but  
17 there's still a fair amount. I'll show you a  
18 slide a little bit later. A fair amount of  
19 uncommitted resources where we can make the  
20 choices.

21 I think the other interesting thing  
22 about this is if you look at the green, which  
23 is transportation, that is showing a decrease  
24 even in the business as usual case, and I  
25 think that's because cars are getting more

1 efficient and they are much shorter-lived  
2 assets than houses or buildings or industries,  
3 and so we can see that natural progression of  
4 efficiency that will occur even in the base  
5 case, whereas it doesn't happen so much in the  
6 residential, commercial and industrial fuel  
7 sector because houses last a long time.  
8 People -- it takes an effort to make them more  
9 efficient. There's just not a lot -- there's  
10 some, but not a lot of replacement of  
11 structures going on in the state.

12 So there's a lot of uncertainty and it  
13 was interesting. A lot of things we talked  
14 about at this morning's breakout sessions, I'm  
15 sure the things we'll talk about this  
16 afternoon, have to do with uncertainty, and I  
17 think one of the advantages of energy  
18 efficiency that even if you're wrong, even if  
19 you're wrong about the future, you're still  
20 accomplishing the same services with  
21 essentially less energy, and so it's kind of a  
22 win/win proposition, and I think there's a lot  
23 of robustness built into an energy efficiency  
24 solution. I think that's a huge advantage.

25 There is, however, a perpetual game

1 changer within the -- even that affects energy  
2 efficiency and that is the discovery of shale  
3 gas in the Pennsylvania area, and what this  
4 means for energy efficiency is that electric  
5 prices are forecasted to be much lower going  
6 forward than they had been in the past. I  
7 think we're looking at about a 30 percent --  
8 these are wholesale prices, a 30 percent  
9 reduction in forecasted electric prices going  
10 forward. Doesn't mean your rates are going to  
11 go down 30 percent. It just means the  
12 wholesale components -- the power cost  
13 component of future electric costs are 30  
14 percent lower, and so when we look at energy  
15 efficiency it makes it much more difficult to  
16 create a cost justification or to have  
17 measures what we call screen, and I'll talk a  
18 little bit about that later, with these lower  
19 costs, and so it's really something I think  
20 that we need to keep in mind as we move  
21 forward how more traditional fuels can fit in  
22 and what role they should be and how we should  
23 conduct our -- essentially our cost  
24 effectiveness screening.

25 So, again, a lot of uncertainty to think

1 about, and as we're planning for the future,  
2 which is really what we're doing, we really  
3 have to weigh that because you can make --  
4 again you can make decisions today based on a  
5 certain set of futures, and I think we've all  
6 been around long enough to know that anybody's  
7 forecast -- we used to have forecasts up on  
8 the wall that we laughed at two years down the  
9 road because they were so far off, but at the  
10 time this is what people thought, and the  
11 energy world as we all know is a tough spot to  
12 be in terms of what the future is going to  
13 look like.

14           If we look at our electric resources,  
15 we're actually in pretty good shape relative  
16 even to other states in New England, other  
17 utilities in New England where we have a  
18 substantial amount of our resources committed  
19 well into the future into 2020, and of course  
20 the benefit here is that there's some price  
21 certainty. There are certain attributes that  
22 are associated with these resources that give  
23 us certainty about attributes and other values  
24 going forward, but the disadvantage is should  
25 the environment change we may be caught on the

1 short end or good end of the stick in terms of  
2 price competitiveness with the rest of the  
3 region, but this is where we are.

4 There's a substantial amount of space to  
5 fill in there and I think that represents  
6 opportunities to do some of the things that  
7 we're talking about, and if we go to -- and  
8 certainly energy efficiency has a role in  
9 terms of filling in that uncommitted area of  
10 resources within our future power mix.

11 So I think once again if we look at  
12 creating a thoughtful energy future, which  
13 again is what we're trying to do here and  
14 trying to -- given the tools and the vision  
15 that we all possess together, try to look at  
16 our energy future within the context of the  
17 plan and get ideas and thoughts what other  
18 people see as opportunities for the future.

19 So with that I'm going to switch to TJ's  
20 energy efficiency presentation, and I'll just  
21 say TJ -- many of you probably know TJ. He's  
22 definitely the expert on energy efficiency. I  
23 should know as much as he does, but I don't.  
24 So that may become obvious as I talk through  
25 his slides. And also since I didn't put the

1 slides together I'm not quite sure some of the  
2 points he wanted to make but --

3 COMMISSIONER MILLER: You can disagree  
4 with him.

5 MR. LAMONT: If anybody has any ideas,  
6 if they see the slides -- so I was looking at  
7 a publication and many of you are probably  
8 aware of this, at least in the electric sector  
9 Vermont was number one in terms of efficiency  
10 spending per capita. So -- and I assume  
11 savings per capita as well as a result of  
12 that.

13 So we're doing quite well on a national  
14 scale in terms of the effort that the state  
15 has chosen through various policies to direct  
16 towards energy efficiency.

17 AUDIENCE: Electric energy efficiency.

18 MR. LAMONT: Electric energy efficiency.  
19 Thank you. Although the number may have  
20 included everything. I'm not sure because I  
21 don't think a lot of other places are doing  
22 that too.

23 So anyway we're going to talk about  
24 energy efficiency in the context of the  
25 Comprehensive Energy Plan. The current

1 statutes, I'll breeze through those. The  
2 potential -- we do potential studies to look  
3 at what -- how much energy efficiency is out  
4 there, what's the resource, how best can we  
5 mine that resource, and what's the potential.  
6 Our current programs and some other policy  
7 choices at the end.

8 So energy efficiency, using less energy  
9 to perform the same services. We want light  
10 we don't necessarily want a light bulb, and it  
11 encompasses all forms of energy use, both  
12 utility fuels which is what we tend to think  
13 about most often, but also heating and process  
14 fuels, home heating, and also motor fuel as  
15 well.

16 So when we think about energy efficiency  
17 we think about not only are there the direct  
18 cash benefits associated with saving energy  
19 and how we evaluate those into these programs,  
20 but there are also societal benefits, and as  
21 we get to the statutes a little further on  
22 we're mandated to use what's called a societal  
23 test, which when we're weighing the costs and  
24 benefits of doing an energy efficiency measure  
25 or not, the calculation, the cost benefit

1 ratio includes some but not -- currently  
2 includes some but possibly not all of these  
3 things. It includes some measure of  
4 externalities, emissions associated with  
5 production of electricity. It includes some  
6 of the potential to eliminate transmission and  
7 distribution constraints. So to the extent  
8 the load is less as a result of energy  
9 efficiency you may not have to build a  
10 transmission project. There's less risk which  
11 is also included in our cost benefit test.

12 So if you were -- the risk associated  
13 with building a power plant or engaging in  
14 energy efficiency is much less, but there's  
15 several barriers to energy efficiency. The  
16 first and most obvious is the first cost  
17 barrier. A lot of people don't want to or  
18 can't afford or don't feel it's a good  
19 investment to invest in the upfront capital of  
20 energy efficiency so this is why we have the  
21 programs. There's an awareness issue where  
22 people don't know what to do. They want to do  
23 something. They don't know what to do. So I  
24 think our programs assist that. So as a whole  
25 energy efficiency has a huge potential to meet

1 some of our Comprehensive Energy Plan  
2 objectives which, as Liz pointed out, were  
3 safe, assured, reliable, low environmental  
4 impact supply, energy supply for the state.

5 So some of our legislative goals are to  
6 reach 20 percent of the units by 2017 and 25  
7 percent by 2020. Ambitious goals. Reduce  
8 annual fuel bills in those houses that were  
9 assisted by 25 percent and reduce total fuel  
10 usage by those amounts in 2017 and by 2025.  
11 So these are pretty lofty goals, and increase  
12 weatherization services to low income  
13 participants and either by a percentage or the  
14 amount of services to the homes.

15 So the electric planning statutes  
16 require us to do least cost integrated  
17 planning which from -- which as I talked about  
18 the terms of the cost effectiveness criteria  
19 that's used to evaluate energy efficiency and  
20 energy efficiency programs and the lowest  
21 present value life cycle cost, taking those  
22 other factors into account, which I'll broadly  
23 call externalities, and this other section  
24 requires us to do all -- chart a path to  
25 achieve all reasonably cost effective energy

1 efficiency savings, and that's what we do, and  
2 I'll talk a little bit about the potential  
3 studies and what we're doing in that area as  
4 well.

5 So if we look at the potential, there's  
6 kind of three different levels of potential  
7 for energy efficiency. The first is what's  
8 called the technical potential, and that is  
9 just if you were to replace every energy using  
10 appliance in the state with the most efficient  
11 energy using appliance, so every light bulb  
12 was replaced with a LED light, every  
13 refrigerator was replaced with the most  
14 efficient refrigerator, this is the kind of  
15 savings, those first three graphs in terms of  
16 energy and kW, that one could achieve by doing  
17 that.

18 So it's around 30 percent, 32 percent of  
19 energy. So we can use 30 percent of  
20 electricity, this is the electric sector only,  
21 32 percent electricity by replacing all the  
22 inefficient end uses with the most efficient  
23 ones. However, there's an economic potential  
24 which is the next level of potential which is  
25 that that would pass the cost effectiveness

1 test. So certain of those would be in the  
2 first column might be technologies that are  
3 not cost effective. So there's some of that  
4 potential is reduced a couple of percent in  
5 terms of economic potential.

6 So most -- the interesting thing is most  
7 of these measures are economically cost  
8 effective given the screens that we use, and  
9 then there's the achievable potential which  
10 includes kind of the -- sometimes you can't  
11 always replace a compact with a compact  
12 fluorescent or LED light, and sometimes there  
13 are people who just no matter what will not  
14 adopt the energy efficiency technology, but if  
15 you take all this into account, we still have  
16 26 percent of savings -- of energy savings  
17 that could be achieved in the electric sector,  
18 which is about a quarter, as a matter of fact  
19 a little more than a quarter, of our energy  
20 use.

21 AUDIENCE: So if I read this right, the  
22 difference between technical and economic  
23 potential is only 2.4 percent?

24 MR. LAMONT: Correct. Well I assume  
25 you've done the math right.

1 MR. BUCKLEY: Dave, is this from the  
2 current work or from a few years ago?

3 MR. LAMONT: I'm assuming this is from  
4 current work. TJ put these together so -- I'm  
5 sorry. As a matter of fact I'm sure it is  
6 because we were more down around 15 percent.

7 MR. BUCKLEY: 19 was the number.

8 COMMISSIONER MILLER: Do you know if  
9 this is current versus -- just because TJ is  
10 not here.

11 MR. LAMONT: I think this is the  
12 current.

13 MR. BUCKLEY: The last one says 19 where  
14 it says 26 if I'm not mistaken.

15 COMMISSIONER MILLER: We can all agree  
16 it's a big number. There's a lot of savings  
17 to be had from energy efficiency.

18 MR. LAMONT: I think that's exactly  
19 right. If we look at the cost effectiveness,  
20 achievable cost effective potential, so this  
21 is counting technical potential and the  
22 economic potential, but what's achievable  
23 there's a fair amount of -- this is from 2007.  
24 There's an equivalent amount or certainly a  
25 significant amount of cost effective potential

1 to be achieved in the other fuels area as  
2 well.

3 This doesn't include natural gas, and I  
4 guess I would say two things. This was done  
5 in 2007. So if you remember 2007 prices were  
6 up, prices were expected to be higher so more  
7 things might screen under a cost effectiveness  
8 test for these other fuels, but we also use a  
9 50 percent incentive level to determine the  
10 achievable potential. In the electric sector  
11 we use a hundred percent incentive level to  
12 determine that. So that would tend to  
13 increase the potential -- the fuel prices  
14 going forward and increase the potential.

15 So, in any case, there's a significant  
16 amount of, not surprising, significant  
17 efficiency potential out there in the all  
18 fuels sector as well. James.

19 MR. MOORE: Dave, can I just ask why  
20 wood? Is that driven by inefficient outdoor  
21 boilers being in the mix or -- just shocked  
22 that's that much higher than some of the  
23 others.

24 MR. LAMONT: I saw that myself and I  
25 don't know. It might be just efficient --

1 more efficient systems. It would have to be.  
2 I assume the insulation and things would be  
3 probably less. I don't know. Sorry.

4 So in order to -- in the electric sector  
5 or those programs that are administered under  
6 regulated fuels, which would be natural gas  
7 and electricity, there's specific screening  
8 criterias that are used by the energy  
9 efficiency utilities and by Vermont Gas to  
10 determine cost effectiveness test, and  
11 basically if a measure screens, in other  
12 words, if it passes the cost benefit test  
13 which includes these particular adjustments  
14 through the strict cash avoided cost, then  
15 it's an eligible measure and it's up to the  
16 efficiency utility to determine a way to  
17 achieve that measure being installed.

18 So in terms of incentives. So if -- I'm  
19 sure you've all seen light bulbs, compact  
20 fluorescent light bulbs that are 99 cents. I  
21 don't know what those cost the suppliers, but  
22 that's a subsidized price, and there's a  
23 calculation in there somewhere that says they  
24 could have been 50 cents, they could have been  
25 \$2, but there's a calculation that says 99

1 cents is the price that will achieve the most  
2 potential kind of at the lowest cost.

3 So in that particular measure once the  
4 light bulb screens it's eligible, and then the  
5 idea is to define an incentive that would get  
6 people to install it.

7 So this cost benefit analysis includes  
8 obviously the -- for the electric and gas  
9 obviously the energy supply cost, that's a  
10 principal component, but it also includes O&M  
11 changes. If you install a compact fluorescent  
12 bulb, you only have to replace it every 10  
13 years instead of two years, avoided  
14 externality amounts, and there is principally  
15 emissions from the alternative resource, in  
16 this case electric or that would be used to  
17 supply the electricity or in the case of  
18 natural gas your natural gas boiler or  
19 whatever you use.

20 T&D adder, which is avoided transmission  
21 and distribution, which would be another value  
22 to consumers, and risk adjustment on the  
23 electric side. I would think that would be on  
24 the gas side as well, but I'm not a hundred  
25 percent sure of that, but I know on the

1 electric side, again, it's less risky to  
2 install a series of efficiency measures than  
3 it is to build one power plant that may or may  
4 not come online.

5 That's based on lifetime. So it's not  
6 just a short term life. It's based on the  
7 life of the measure. If over the life of this  
8 measure on a discounted cash flow basis it  
9 pays for itself or it passes based on these  
10 screening measures, then it's eligible to be  
11 included.

12 So there are a number, and again those  
13 are only for the regulated. That screening  
14 methodology only applies to the regulated  
15 utilities. Others on this list are engaged  
16 and energy efficiency utilities have their own  
17 screening methodology which is similar but not  
18 the same, but may not include all the factors  
19 that I talked about before. It may include  
20 other factors.

21 So I'm not going to go through all of  
22 these, but there are a number of energy  
23 efficiency programs currently available in the  
24 state both through electric -- through  
25 regulated utilities and through other agencies

1 that are able that offer these types of  
2 services to their customers or their  
3 clientele.

4           There are some heating and process fuels  
5 which are essentially non-regulated fuel  
6 services offered by electric utilities as a  
7 part of their operations as well. The 2011  
8 budgets are about 38 and a half million for  
9 electric efficiency programs. That would be  
10 the energy efficiency charge, and again this  
11 is strictly focused on utility programs and  
12 about 5.75 million dollars for heating and  
13 process fuel programs that are also  
14 administered by Efficiency Vermont. And these  
15 are for revenues from both the forward  
16 capacity market, which is an electric market  
17 feature into which the efficiency savings in  
18 the electric sector are bid into and receive  
19 money in terms of value for that from the  
20 ISO-New England power pool and also from RGGI,  
21 which is the Regional Greenhouse Initiative,  
22 which is essentially a permit system in which  
23 Vermont receives some of the revenues of  
24 permits sold to the electric sector to  
25 essentially emit carbon.

1           Not quite sure what those examples are.  
2           There's other methods. Building codes we  
3           talked about that a little bit this morning.  
4           We've just updated our building codes. They  
5           are voluntary codes. We talked a little bit  
6           this morning about green codes and other ways  
7           to encourage energy efficient building and Act  
8           250 which requires a maximum available  
9           technology. I think there's some words there  
10          that they require -- in other words, requires  
11          you to build a building that is efficient.  
12          The Public Service Department participates,  
13          and the Commissioner is doing a great job of  
14          doing energy efficiency in their permitting  
15          process.

16                 So those are more mandatory. There are  
17                 some other ideas. We talked about some of  
18                 these this morning. I said we'll talk about  
19                 some of these this afternoon. The property  
20                 assessed clean energy district the Legislature  
21                 is working on now and seems to have great  
22                 promise. We talked about -- our group this  
23                 morning talked about a utility kind of  
24                 property assessed clean energy district. Not  
25                 quite sure how that would work. Time of sale

1 disclosure where realtors would be responsible  
2 for disclosing energy use to potential  
3 customers of new homes, and some behavior  
4 measures which may be enabled by the smart  
5 meter which many of you may have heard about,  
6 but the smart meter would, among the many  
7 features that is touted as providing, would be  
8 some sort of a real time indication of your  
9 energy use and the price and which would allow  
10 consumers to react in some way to the kind of  
11 the current conditions in the electricity  
12 market.

13 So there we go. Our next thing is I  
14 guess -- where is Ed -- is to try to answer  
15 some of these questions and to break into --  
16 get your opinions about our -- the whole  
17 reason for us is to try to get feedback from  
18 you folks. So I guess we're ready for that  
19 portion of the program. So thanks.

20 MR. DELHAGEN: Thank you, Dave. Good  
21 switch hitter. Can we bring up the next set  
22 of slides? We're going to break into small  
23 groups and scatter out into the lower part of  
24 the building over here, and as we did this  
25 morning this would be an opportunity for each

1 of you to provide more depth in some of these  
2 questions.

3 This morning we started off with a  
4 fairly general set of questions and we're  
5 going to do that as well, but we heard from  
6 some folks during the break that there might  
7 be some interest going a little bit deeper.  
8 So we would encourage you as we go through  
9 both the small group conversations and then we  
10 come back for the large group to probe a  
11 little bit deeper, and we are interested in  
12 what your thoughts are.

13 The questions that we're going to  
14 explore in our small group are right here.  
15 Again, these -- for those of you from this  
16 morning it's fairly similar, but we'll have  
17 facilitators and recorders who will capture  
18 your ideas.

19 The first question deals with -- it's an  
20 overarching question primarily to help us get  
21 started to look at the top concerns you have  
22 or thoughts you have about energy efficiency  
23 and what are some of the options that the  
24 state's looking at to address some of those  
25 concerns.

1           And the last question deals with  
2 additional goals or targets, and we saw the  
3 laundry list that already exists in statute.  
4 Are there any additional ones? Are there  
5 other targets that might be appropriate in the  
6 context of energy efficiency?

7           So from that conversation there are many  
8 pieces that start to draw down and you can go  
9 as deep as your group would like to go. We're  
10 going to spend about -- it's about 2:30 right  
11 now. We're scheduled to get back together  
12 here at 3 o'clock for our large group. I  
13 think we're going to move that back to 3:15,  
14 give each group plenty of time to have its  
15 conversation. If you need to have a break in  
16 between, do it during the travel time as we're  
17 going back and forth.

18           A few other pieces before we break out.  
19 One of them is that we do have some pieces of  
20 paper around with the link to where you can  
21 download the draft of the Comprehensive Energy  
22 Plan. Some of these are on the front table.  
23 So if you don't know where -- how to find it,  
24 this is the place where you can go to get it,  
25 and in your small groups we will also have a

1 set of blue sheets, this morning was yellow  
2 this afternoon is blue, where you can capture  
3 some additional thoughts and we're going to  
4 have recorders trying to put stuff down, but  
5 we found the conversation was also moving very  
6 quickly.

7 This is your place where you could put  
8 your own thoughts down on paper, and again you  
9 can either fill it out and leave it here.  
10 Place it in the box by the door on your way  
11 out, and either way we very much want your  
12 feedback on those.

13 Any questions? Okay. So we're now  
14 going to break into small groups and this time  
15 we're going to have fewer groups, hopefully a  
16 couple more facilitators for each one to try  
17 to improve the note taking. Okay. We're  
18 going to do four groups and facilitators over  
19 here by the door please so we don't get all  
20 lost.

21 The first group is going to go with  
22 Karin and we're going to do this. This is  
23 going to be kind of rough. I'll ask you when  
24 you get to your room if it looks like there's  
25 more than about 15 people in your room maybe

1 try one of the other groups. We're not going  
2 to be too picky about how to balance these.  
3 We would like to try to have a relative  
4 balance of about 12 or 13 people per group to  
5 keep it relatively even, and there are a  
6 number of rooms down there.

7 So the first group is going to be this  
8 contingent right here in this quadrant and  
9 they will be going with Karin. Karin, can you  
10 raise your hand?

11 The second -- and George is also going  
12 to be going with that group. The second  
13 contingent is going to be going with Dave and  
14 that's going to be this set right here. Okay.  
15 So this quadrant will go with Dave. Then the  
16 next will go with Kelly. Kelly, where are  
17 you? Kelly is over here, and we'll have this  
18 quadrant go with Kelly starting with this row  
19 to the back; and then this front row and this  
20 collection will be group number four and  
21 you'll go with me. Okay. And everything is  
22 downstairs. We'll meet back here at 3:15.

23 (Recess.)

24 MR. DELHAGEN: From what it looked like  
25 we had a lot of good conversations with

1 engaged groups. As we mentioned before if you  
2 had hard comments that you would like to put  
3 on your blue sheets, small group forms, please  
4 fill them out. There's a box on the  
5 registration table by the exit and we would  
6 very much like you to leave those behind.  
7 Again, if you would like to leave your name on  
8 them, that's welcome but not necessary.  
9 Please give us those responses. Again there  
10 are opportunities via web.

11 We're going to move into a large group  
12 conversation right now. We provided a couple  
13 of focal questions and the Department has  
14 asked a couple people who have been deeply  
15 involved in some of these aspects to provide  
16 some comments at the front end to try and help  
17 get us going.

18 The three questions that we're kind of  
19 looking at for general conversation right now  
20 are suggestions. There's a lot of other  
21 places, especially what I heard potential  
22 things that came up in the small group, a lot  
23 of other places where we could go with this  
24 conversation this afternoon. Again, we're  
25 going to try to download deeper than we did

1 from this morning's session, but we have a  
2 couple of overarching points. I want to go  
3 through them very quickly.

4 When valuing energy efficiency  
5 investments what should the state emphasize;  
6 for example, carbon reduction, economic  
7 development, energy independence,  
8 affordability. Those are all possibilities  
9 and questions we could look at.

10 The second one is given the existing  
11 state goals and targets to reduce energy  
12 demand for both electricity and heat or  
13 process fuels how can Vermont best achieve  
14 these goals? What is working now that needs  
15 more support? What's not working and what new  
16 initiatives are needed? And some of these  
17 types of things have already come up in the  
18 sessions, and if you would like to bring them  
19 up in this session here that would be welcome,  
20 and the last question is cost effectiveness.  
21 If cost effectiveness is an important  
22 criterion, what should be included by  
23 identifying the costs and benefits? For  
24 example, externalities like carbon, non-energy  
25 benefits like comfort, are there others we

1 should think of as well and who should bear  
2 these costs? Should they be ratepayers, tax  
3 base or those individuals or businesses or  
4 geographic areas that benefit.

5 So these are a couple of overarching  
6 questions. They are a little more specific  
7 and we would welcome your thoughts on these.  
8 Again if you have other comments you would  
9 like to share, we welcome those.

10 I would like to get started with George  
11 Twigg from Efficiency Vermont. We've asked  
12 him to share a couple minutes, keep it  
13 relatively short and get us started. George.

14 MR. TWIGG: Thanks. George Twigg and  
15 actually for clarification today wearing my  
16 Vermont Energy Investment Corporation hat,  
17 VEIC being a private non-profit, that as I've  
18 been fortunate enough to run Efficiency  
19 Vermont for the last ten years, but here  
20 representing VEIC today, and I'll sort of  
21 speak to these questions but just have a  
22 couple points to make.

23 One is I think from our perspective, and  
24 actually answer the first question, we really  
25 focused on carbon as being kind of a centrally

1 organizing goal, and a lot of these other  
2 pieces I think fall out from that because  
3 there are energy independence implications and  
4 economic development implications,  
5 affordability implications for taking steps  
6 that address our need for carbon reduction.

7 The organizing principle that we see,  
8 and I do have this planning process seeing the  
9 state rationalize and relook at sort of the  
10 potpourri of different goals that we have in  
11 the state right now. The 25 by '25 goal. We  
12 have the state building and energy efficiency  
13 goals which were mentioned earlier. There are  
14 renewable goals. There are transportation  
15 goals. Trying to rationalize those into an  
16 integrated portfolio of where the state should  
17 go is important.

18 I think developing deep level  
19 partnership with state government and to look  
20 at if there are structural changes that can be  
21 made. For instance, Connecticut has either  
22 proposed or actually has put into place now a  
23 Department of Energy and Climate Change where  
24 they have integrated those pieces because they  
25 recognize how closely linked they are.

1           United Kingdom has a similar governance  
2           structure, and so I think to look at what's  
3           the role that DPS is playing, ANR is playing,  
4           and some of the other partners, and trying to  
5           see if there's a way that that can be  
6           addressed in a coordinated way so that there  
7           are, you know, the climate cabinet is one way  
8           to look at it. The other way is here's  
9           someone who has ownership of this issue and is  
10          responsible.

11           I think there's also -- to one of the  
12          questions that was asked in the small groups  
13          looking at in terms of the current format of  
14          the state plan as it is now look at some of  
15          the great work that's been done in other  
16          states. California comes to mind. They just  
17          put in place a fantastic energy efficiency  
18          plan. It has things that are very specific  
19          like for each of the areas where it's new  
20          construction, business, market transformation,  
21          there are very specific goals that really  
22          drill down year by year into this is what  
23          we're going to accomplish short, medium, and  
24          long term, and implementation strategies to  
25          actually go out and do all of that. Very

1 detailed. Massachusetts similarly has a good  
2 plan which they just adopted in December.

3 And then just briefly in terms of the,  
4 you know, electric and non-electric efficiency  
5 specifically, I think, you know, in the  
6 non-electric side you really need to look at  
7 what we can do to raise that level of  
8 investment to something which is comparable to  
9 electric efficiency.

10 Vermont's been very fortunate in our  
11 ability to invest in efficiency on the  
12 electric side of the state. We're actually  
13 number one in the nation per capita on that  
14 side, but we lag far behind on the  
15 non-electric side, and for people who are  
16 concerned with their heating bills for which  
17 their costs are typically quite a bit higher  
18 than their electric bills, the carbon  
19 implications of that energy use we really need  
20 to look at both some sort of public subsidies,  
21 whether it's gross receipts tax or some other  
22 mechanism, especially for those moderate  
23 income families who are just above low income  
24 weatherization eligibility, plus really  
25 aggressive and easy to use financing because I

1 think we know with the level of investment  
2 needed there will never be enough purely  
3 public money. So how do we make financings as  
4 easy as possible to access.

5 On the electric side then continued  
6 investment and innovation in where Efficiency  
7 Vermont has been one of the leading programs  
8 in the nation, and really looking at --  
9 especially if we're looking at our power  
10 portfolio where we have to start planning for  
11 our future which doesn't necessarily include  
12 VY, looking at if we were investing in energy  
13 efficiency at a steady two and a half, three  
14 percent a year, how can that really form an  
15 important part of a clean energy power  
16 portfolio in the future for many years to  
17 come.

18 And, finally, I'll just say I think we  
19 need to look on the electric side at using  
20 technology to innovate. Smart grid is one  
21 example I think where especially on the  
22 behavioral side there is a lot of savings in  
23 terms of conservation in smart grid technology  
24 could enable, if people are able to be given  
25 feedback from their energy usage not on a

1 monthly basis on their bill but on more of a  
2 real time basis, they can understand oh wow  
3 that's my hot water heater that just popped up  
4 to 4,000 watts, maybe you should be taking a  
5 shorter shower or washing my clothes on cold.

6 There's all kinds of information that  
7 can help to provide changed behavior. One of  
8 the challenges we have is being able to  
9 quantify what that behavior is resulting in.  
10 You know, we know when we change a light bulb  
11 we can do the engineering easily on going from  
12 an incandescent to a compact fluorescent it's  
13 going to save you a certain amount of energy.  
14 Quantifying savings is much more difficult,  
15 but it's important in order to be responsible.  
16 If we're going to spend money to promote say  
17 savings through smart grid, we have to be able  
18 to show what the savings and what the benefit  
19 to the state is.

20 So I think sort of push the envelope  
21 more on the behavioral side will enable us to  
22 open up new doors to keep Vermont in the  
23 forefront. Thanks.

24 MR. DELHAGEN: Great. Thank you,  
25 George, for those comments. Okay. We would

1 also like to get an energy efficiency  
2 perspective from David Martin of Green  
3 Mountain Power.

4 MR. MARTIN: David Martin, Green  
5 Mountain Power. I didn't know I was going to  
6 speak today so I'll probably keep my comments  
7 kind of brief.

8 What we strive for at Green Mountain  
9 Power is to get a balance between cost  
10 effective energy efficiency and the capacity  
11 of our ratepayers to pay for energy  
12 efficiency. Right now it's at about five  
13 percent, and as George mentioned we are  
14 extremely interested in the transportation  
15 industry and in the non-electric industry and  
16 how to get that funded, and that also came up  
17 in our small group and I imagine it may have  
18 come up in all the small groups, and what we  
19 also are struggling with with Efficiency  
20 Vermont is the fact that the future, as Dave  
21 Lamont mentioned, has expected energy costs of  
22 being quite low, and in my opinion the  
23 connection between oil prices and natural gas  
24 prices has fundamentally been broken with the  
25 map that David showed on the shale gas, and so

1 what we expect to see is we expect to see oil  
2 increase and natural gas to remain pretty much  
3 flat lined or go down in New England, and  
4 which is what we're beholden to, the price of  
5 marginal electricity is natural gas related  
6 because that's the generation source.

7 So we're struggling with some of the  
8 screening measures that I know Efficiency  
9 Vermont has and what to do with that, and I  
10 would be welcome and open to any questions  
11 that anybody has after this, but that's all I  
12 have for now.

13 MR. DELHAGEN: Okay.

14 MR. MARTIN: One more thing. I would  
15 like, and thank you, Liz, for having this  
16 forum. I would really love to see something  
17 similar when it comes to smart metering and  
18 specifically rates, and I would like to see a  
19 lot of public input into that because  
20 everything's conjecture right now and  
21 everything is, you know, do you have real time  
22 rates where you may have individual customers  
23 saving a lot more energy, but not many people  
24 participating because it's a confusing rate  
25 design or a lot of time input into it, or

1 should you have a static time of use rate  
2 where maybe each individual customer doesn't  
3 save as much, but they can do something once  
4 and forget about it and you get more people  
5 participating.

6 So just for future, Liz. Thank you.

7 MR. DELHAGEN: Okay. Great. Dave,  
8 thank you for those opening comments, and one  
9 other thing. We would like to hear from Jeff  
10 Wilcox who works with the weatherization  
11 program for the State of Vermont.

12 MR. WILCOX: Hi. I'll be brief. I'm  
13 surprised too. So I work for the Agency of  
14 Human Services Department of Children and  
15 Families in the Office of Economic  
16 Opportunities. So basically we're a social  
17 program and we provide energy savings -- we  
18 provide -- basically we improve people's lives  
19 through energy efficiency and save them fuel  
20 and electricity which saves them money that  
21 they can, you know, put food on their plate  
22 and clothe their kids.

23 So we've been doing this for many years.  
24 Things we've, you know, a lot of it applies to  
25 what's going on here. We have limited

1 funding. In recent years we have had ARRA  
2 funding so it jumped up a little bit. We  
3 weatherized 1800 homes a year the last couple  
4 years, but, like I said, we're limited  
5 funding. So we use a cost benefit ratio where  
6 we analyze every measure we do and get a cost  
7 effectiveness and go after the big bang for  
8 the buck. That doesn't mean we're skimping on  
9 what we do. We insulate and air seal and we  
10 never leave an uninsulated surface or a leaky  
11 surface, but also importantly, and I think I  
12 heard this much today, is health and safety.

13 We don't -- we leave a home safer.  
14 Every home just about safer than it was when  
15 we start doing this work. We got to think  
16 about the health and safety. The type of  
17 building affects a lot of people. So we  
18 improve people's lives that way as well.

19 Another key thing we need to train  
20 properly. You just can't expect people to go  
21 out and do this work and do it properly. It's  
22 new to most people unless you have been in  
23 weatherization or worked with Efficiency  
24 Vermont, and we can't just put people in a  
25 two-week class on-the-job training.

1           The other important thing is quality  
2 control. Our office we inspect 10 percent of  
3 the jobs and I think you need to go to at  
4 least to 10 percent. You need to be out there  
5 monitoring, you know, not just once a year  
6 thing. You got to be making sure things are  
7 being done correctly because this type of work  
8 once it's done it's done.

9           So, yeah, we're welcome to have more  
10 money. Give us more funding. This era we  
11 have had some growing pains, but we have a  
12 training facility at VTC. We can ramp up  
13 quickly and efficiently. Thanks.

14           MR. DELHAGEN: Okay. Thank you very  
15 much. Okay. We're going to ask for general  
16 comments and follow-ups. We have some  
17 questions up here in front. I would ask you  
18 to just stand up if you want to talk or raise  
19 your hand. Kelly will bring the microphone to  
20 you, and please say your name clearly, and if  
21 you represent an organization, let us know  
22 what that organization is so we can capture  
23 that for the record. It's -- try to make sure  
24 the microphone is up pretty close, not too  
25 close, but close enough so everyone can hear

1           you.

2                   MR. LIDDY: My name is Dennis Liddy. I  
3           live in Westfield, Vermont, and one of the  
4           things I was -- more a question I guess to  
5           you, but someone brought it up. In talking  
6           about all the agencies you have listed there  
7           part of the groups working on this why isn't  
8           there anybody from the Department of Health?  
9           I mean you get into renovating, that's  
10          asbestos abatement. Also developing these  
11          wind turbine farms or the industrial wind  
12          projects not knowing what the health impacts  
13          are for the people that are living near those,  
14          you know, and I know some of those guidelines  
15          they are not set anywhere, but somebody needs  
16          to be doing them and keeping up on the latest  
17          research, and to not have somebody from the  
18          Department of Health there when I saw that  
19          this morning to me that was a glaring  
20          omission.

21                   COMMISSIONER MILLER: Good. I  
22          appreciate that comment because actually the  
23          Department of Health works closely with us on  
24          several issues, and you're right. What we  
25          should be thinking of them as a part of this

1 team as well, but, for example, we've worked  
2 with the Department of Health on smart meter  
3 issues. As people have brought concerns to us  
4 they have looked at it for us and they will  
5 continue to do that.

6 So it's a very good comment and it's not  
7 the Department of Health isn't looped in  
8 closely with us, and you're absolutely right  
9 we should be thinking of the planning process  
10 more broadly.

11 MR. LIDDY: Also I'm a member of the  
12 Lowell Mountains Group. I should say that  
13 too.

14 MR. DELHAGEN: Okay. Who is next?  
15 Raise your hand. Okay.

16 MR. WUERTELE: Yes. Jim Wuertele,  
17 Energy Committee of St. Johnsbury.

18 A couple of concerns. One is that on  
19 the first item in valuing energy efficiency  
20 investments what should the state emphasize, I  
21 think what's not appropriate in all of the  
22 little projects that I've seen where people  
23 have made plans is they are planning for only  
24 a little bit of an increase in the value of  
25 the dollar or they are only planning for a

1 little bit of an increase in the value of  
2 fuel.

3 Fuel has gone up 14 percent per year  
4 since 1999 and the value of the dollar has  
5 dropped much more than 5.3 percent that I see  
6 in the VPIRG report. So we're really talking  
7 about let's make some realistic estimates  
8 here. It will be a lot more encouraging.

9 So I don't know how to make this  
10 official, but it might be worth doing if you  
11 have a couple of sample calculations in the  
12 report or something like that, and I think  
13 that I fear, since I see things not as a  
14 professional as many of you are in this  
15 business, I see this strictly as a consumer of  
16 energy and representing people who are on the  
17 consumption end, and when they look at my  
18 house and it's now got 11 and a half inch  
19 thick walls and all the other things that go  
20 with it; the mechanical ventilation, special  
21 air system for the furnace that had to go in,  
22 all those things that had to convert that  
23 1850's house to a modern house, many of the  
24 people just feel that they have to say  
25 something to me to give the reason why they

1 are not doing it.

2 So I think the guilt factor is there.  
3 It's just the other steps that are not there.  
4 They feel they have to give me an excuse that  
5 I'll buy, and when I put in my solar hot water  
6 system the fella said well it only, you know,  
7 pays back in eight years, and I said well  
8 actually it will probably pay back a lot  
9 sooner than that, but I'll tell you what.  
10 I'll take you out to dinner in eight years if  
11 you're still my neighbor.

12 The thing is there's a lot of thinking  
13 in my neighbors' minds and friends' mind and  
14 people who know about my house and the systems  
15 they just don't know that we're entering as a  
16 nation a time of pretty bad stress on our own  
17 dollar, and we're realizing now that taking  
18 five times the normal amount of resources from  
19 the earth is not going to be tolerated too  
20 much longer by our other national neighbors.

21 So there's a lot of worry that I have  
22 for too little too late, and so if we can make  
23 this comprehensive energy policy short, sweet  
24 and really, really strong, that's what I want.

25 MR. DELHAGEN: Okay. Thank you.

1 MR. GRANDA: Chris Granda of Richmond.  
2 Addressing a second bullet with the existing  
3 stakeholders, I guess the one I wanted to  
4 specifically speak to was the one with  
5 reaching 8,000 homes and saving 25 percent of  
6 the energy used by those 80,000 homes. It's a  
7 great goal. It's technically achievable, and  
8 none of the programs that we have currently in  
9 place in Vermont can do that.

10 We that's -- at the cost that the  
11 current programs run it would be about 400  
12 million dollars and that's a good investment,  
13 but it's not a reasonable amount of money to  
14 collect and put to the government. So I guess  
15 the challenge that I have is the state  
16 emphasizes where can the state take some risks  
17 and innovate and look for the innovative  
18 solutions that will create the demand for  
19 these services in the private sector and  
20 inspire private investment, cost effective  
21 investment in residential energy retrofit.

22 COMMISSIONER MILLER: Do you have ideas?

23 MR. GRANDA: I do but --

24 COMMISSIONER MILLER: Give me your best.

25 MR. DELHAGEN: You had a couple of very

1 interesting ideas. Give us at least one of  
2 them.

3 MR. GRANDA: Well I'll pull out the Gold  
4 Star Home ideas, and we had a really  
5 interesting conversation sort of focusing on  
6 the real estate community that H.57 is a first  
7 step in the right direction towards providing  
8 information, this is a home performance  
9 labeling bill, and that provides information  
10 into the system, but that's what I would call  
11 a necessary but not sufficient input.

12 You also need to educate people, drive  
13 them in, have a high score be something that  
14 is desirable. Sometimes just having the  
15 information can have that impact. In Europe  
16 the way they did their equivalent of Energy  
17 Star where there's actually a grade on every  
18 product that you buy had that impact. It took  
19 20 years. If you want to accelerate that you  
20 educate people about what this rating means,  
21 where they can find it, and why they should  
22 look at it in MLS when they buy a house or  
23 list their own, but there's a lot we can do  
24 with the professional communities as well.

25 I think if we look at the trades as

1 communities in and of themselves who can  
2 compete; inside the plumbers, inside the  
3 carpenters for qualifications to be high  
4 quality providers of these services, we can  
5 increase the overall level of service  
6 provision and have that feed into a  
7 recognition system like the Gold Star system  
8 where you get a Gold Star contractor to do  
9 your Gold Star home and then you can have a  
10 high level of confidence about the performance  
11 you're going to get at the end.

12 So these are structures that it is  
13 practically possible for the state to play a  
14 role in, but it's more of standing on the  
15 bully pulpit and applying small amounts of  
16 money in judicious ways, but organizing and  
17 organizing the existing communities of  
18 practice in the state.

19 MR. DELHAGEN: Okay. Very good. Thank  
20 you. There's opportunity, if you feel like  
21 commenting off of something that's been said  
22 before, please feel free. Don't just -- it  
23 doesn't necessarily have to be a clean stand  
24 alone thought if you want to reflect on  
25 someone else's idea.

1 MS. LAUNDER: I want everyone to know  
2 it's a kids' exercise class, and again it's a  
3 good thing. But sorry about the disruption.  
4 We can join after this.

5 MR. UNGER MURPHY: John Unger Murphy  
6 from St. Johnsbury. Picking up on what you  
7 just talked about, an idea would be incentive  
8 monies being changed into loan guarantee  
9 monies where incentive monies to try and get  
10 more private dollars or banking dollars,  
11 normal business way of doing business into the  
12 system.

13 Economic development and the effects of  
14 efficiency, energy efficiency investments is  
15 tremendous. Every dollar that we spend on oil  
16 or on electricity that's manufactured by  
17 burning oil or natural gas, what is it, 60  
18 percent leaves our state, and/or more, and  
19 then how much of that leaves the country?

20 And when you think in terms of doing the  
21 energy efficiency work, if the loan guarantee  
22 is done and that money is coming from the bank  
23 which is in your community, it's being used to  
24 pay for the work that's being done and the  
25 products that are being purchased which are

1 quite often much more likely a higher  
2 percentage of insulation is manufactured here  
3 in the United States. So windows, and then  
4 when that home is done and you've got a whole  
5 town of maybe 50 percent of the homes are done  
6 and they are using very little energy to heat,  
7 every year that's more money within the  
8 community to be spent on other things besides  
9 oil or gas where those dollars now cycle out  
10 way, way far away from the home.

11 So very, very quickly that economic  
12 development the cycle of those dollars is  
13 immediate right in the neighborhood year after  
14 year circling around in the neighborhood in  
15 the community, whereas, when you're buying oil  
16 and whatever that percent was that someone  
17 said actually leaves the country it's going to  
18 be couple hundred years before it comes back  
19 to your pocket.

20 So I think the impact on -- economic  
21 development impact is just wonderfully  
22 positive.

23 MR. DELHAGEN: Okay. Thank you. Try to  
24 keep your comments short so we have  
25 opportunity for lots of folks.

1 MR. FAESY: Richard Faesy with Energy  
2 Futures Group. So just support what John  
3 said. The policy priorities and the current  
4 draft plan don't mention economic development,  
5 and so I think that makes sense, and I want to  
6 fill in a couple holes that haven't been  
7 talked about and two other points.

8 One is that we have no current goals for  
9 new construction, and this is a great  
10 opportunity to put a stake in the ground and  
11 say that we will build all new homes and  
12 non-residential buildings to net zero energy  
13 by 2030. We've got the 80,000 homes goals for  
14 existing. There's nothing there that puts us  
15 on a trajectory for codes and for new  
16 construction. So that would be one item to  
17 add for the second bullet there.

18 The last point in the last question has  
19 to do with cost effectiveness test. Right now  
20 we determine what's cost effective based on  
21 the societal cost test which does not fully  
22 capture all of the benefits. It captures all  
23 the costs of what it takes to invest in  
24 programs, but it does not capture the benefits  
25 of health, comfort, durability, the list goes

1 on, and I think it's probably time -- there  
2 are a number of other states that are  
3 reexamining the test. That's really the  
4 foundation of how we decide where to invest  
5 our funds and efficiency. It's probably time  
6 to look at that societal cost test and  
7 question whether we might be wanting to look  
8 at another test like what has traditionally  
9 been called the utility cost test and some are  
10 now calling the energy and water test, for  
11 instance, but I think we should -- this is an  
12 opportunity to look at that and since it is  
13 the foundation for a lot of the decisions  
14 here.

15 MR. DELHAGEN: Go ahead.

16 MR. BUCKLEY: I'm Tom Buckley with  
17 Burlington Electric Department. We are the  
18 state's other efficiency utility.

19 First of all, I wanted to lend support  
20 for the comments that George Twigg made  
21 earlier. I think that he did a good job of  
22 summarizing the list of issues that efficiency  
23 utilities are carrying forward, but I also  
24 wanted to mention there was a lot of  
25 discussion in our breakout group about this

1 time of sale concept, or I think necessary or  
2 not sufficient was how Chris Granda described  
3 it.

4 In Burlington we do actually have  
5 another step and that's compliance in  
6 multi-family with sort of basic energy  
7 efficiency standard. So at least that concept  
8 has been tried and it's one that I would  
9 encourage the state to consider. It's one of  
10 those difficult ones in the Legislature  
11 sometimes.

12 I think I heard another idea and I want  
13 to give credit to Norm that I had never heard  
14 before. This idea of a time of lease  
15 disclosure where I think what it would  
16 essentially require property owners to give  
17 prospective tenants information on the energy  
18 performance of those apartments, and I think  
19 that's just ingenuous, and I know there's a  
20 lot of wrinkles in implementing something like  
21 that, but I just wanted to encourage us all to  
22 think more about that and put it out there for  
23 discussion.

24 MR. DELHAGEN: Great. Thank you.

25 MR. COOK: Brad Cook, Building

1 Performance Services, home performance  
2 contractor in Warren. I'm also the Chapter  
3 Chair of Efficiency First in Vermont which is  
4 a trade organization for home contractors, and  
5 couple things that I would like to comment on.

6 One is the state and municipal  
7 governments and energy efficiency. I  
8 mentioned in our small group about the state  
9 and the huge ice dams that I see coming off of  
10 state buildings in Montpelier that a lot of  
11 that can be cut down by a small investment.  
12 There's some huge holes in some of those  
13 buildings. I see lights that are left on all  
14 day long. There's no reason for it.

15 I see towns -- I've been involved in  
16 doing energy audits and working with several  
17 towns in Central Vermont and a lot of them  
18 don't want to spend their own money to improve  
19 energy efficiency. They are looking for  
20 handouts, state and federal handouts, and one  
21 of the biggest handouts happens to be for  
22 solar. So we've got local schools that have  
23 put solar panels on the roof, but are not  
24 improving their energy efficiency that really  
25 should be setting an example.

1           A local elementary school I know of,  
2           instead of fixing the problem of heat loss,  
3           they have installed electric heating cables on  
4           their roof to solve an ice problem. Wrong  
5           solution poor example, and I think that's all  
6           I'm going to say for right now.

7           MR. CERALDI: Ted Ceraldi. I think,  
8           Commissioner, you should get the Health  
9           Department involved in this.

10          MR. DELHAGEN: Louder.

11          MR. CERALDI: As we button up our homes  
12          and our buildings in the State of Vermont the  
13          downside is environmental quality. We're  
14          talking right here in this room in CFMs per  
15          person, we're not getting it, okay, and we're  
16          entitled to a certain number of particulates  
17          in the air, no more, and it goes on from  
18          there, and the Health Department this is their  
19          purview. You have children with asthma  
20          because they are not outside enough or they  
21          are indoors they don't have a good  
22          environment. You have offgassing of  
23          materials.

24                 When we put in a geothermal system and  
25                 put in a radiant floor we went out and bought

1 a hundred percent wool rug for an area rug and  
2 the guy wanted to sell us a backing for the  
3 rug. I said no we can't have that. What do  
4 you mean, the rug is going to wear out. I  
5 said well with the heated floor and the  
6 backing that throws an offgas, and I said I  
7 just don't want to be in that situation.

8 So the Health Department must get  
9 involved and that may be the way. Thank you.

10 MR. BULLIS: I'm Allan Bullis. Energy  
11 auditor by day and South Burlington Energy  
12 Committee by night, but in any case one of the  
13 things we've tried to be an advocate for  
14 energy, and one of the things is that you  
15 cannot look at, you know, the carbon side.  
16 There's so many carbon naysayers. I think  
17 it's critical we deal with the carbon on the  
18 left and the people on the right so we can  
19 agree on economic development and energy  
20 independence and affordability, but try to  
21 keep carbon out of the picture.

22 One of the things as far as the goals, I  
23 understand what Richard said about looking at  
24 the additional benefits and doing  
25 weatherization and energy reduction, but

1 appealing to this wide range of people their  
2 common denominator is the dollar. So I think  
3 really we ought to be just looking at dollars  
4 out of pocket so that it's pure economics.

5 We all are talking to the choir here.  
6 We all know there's tons of extra benefits.  
7 That's part of reason why we're here, but for  
8 the general public I believe we really got to  
9 look at the dollars bottom line so -- and then  
10 in doing that I think we're really -- it's  
11 important to focus on what the return on  
12 investment or in doing that we're not putting  
13 solar panels and subsidizing solar panels.  
14 We've got these egregious one year pay back or  
15 less items that are all over the state of  
16 ours.

17 I'm an auditor. There's tons of horror  
18 stories, commercial more than residential.  
19 What's above a dropped ceiling will make an  
20 energy auditor puke sometimes, but in any case  
21 -- so bottom line is, you know, let's invest  
22 on where it makes sense.

23 Norm's got a great program. He gets  
24 only one-third of his energy savings from the  
25 schools comes under the purview of what

1 Efficiency Vermont has to offer as far as  
2 incentives. Why? Because Efficiency Vermont  
3 can't go after behavioral changes. Norm can  
4 and that's where he's getting a lot of energy  
5 savings.

6 So I think that we need to loosen the  
7 reins up on reporting, and I know you got to  
8 be accountable for every dollar spent to kWh  
9 saved or BTU saved, but ease off on the people  
10 crunching numbers and let's be more precisely  
11 right than precisely wrong.

12 MR. GUYER: I'll come down to the  
13 center. I have two things that I would just  
14 would like to say. I'm Frank Guyer, hopefully  
15 your energy coach for the State of Vermont.

16 I would also like to thank Commissioner  
17 Miller for allowing me to change the lighting  
18 in this room. As you notice we have lights  
19 down the center. Other lights are shut off.  
20 Now we didn't save a whole lot of money here  
21 this morning, but if everybody did that in  
22 every meeting place across the state today, it  
23 would have been a lot of money and that's what  
24 I want to tell you about is that when I go  
25 into a school and try and teach people to shut

1 off energy, what am I looking at? I am  
2 looking at the monitor that's got the little  
3 green light on the right-hand corner. If that  
4 monitor is off, the teacher is on the Guyer  
5 energy team, she's saving energy.

6 What's a monitor? Geez. \$2.50 to have  
7 that monitor on for the whole year. If you  
8 shut it off every night, halftime during the  
9 year, I save \$1.25. Big deal. Guess what?  
10 South Burlington school has over a thousand of  
11 those monitors. If they are all on using  
12 energy, money down the electric faucet down  
13 the drain.

14 What do I get? I have a savings of  
15 \$1,500 a year just by that little green light  
16 on your computer monitor. So every night when  
17 you guys want to be on my team, if I come to  
18 your office and see the lights off in the  
19 room, that monitor off if it's not being used,  
20 I know you're saving energy and that you're  
21 serious about saving energy. Everybody can  
22 tell me they want to save energy, but they  
23 don't want to shut off the lights. Well guess  
24 what? I'm an old man. I'm the old dad and  
25 I'm going to come around to your offices and

1 I'm going to check to see whether you have too  
2 many lights on or you're using just the proper  
3 amount of lights.

4 So that's where I'm going to leave it at  
5 the lighting thing, but I just would ask you  
6 to go into the legislative dining room and  
7 make sure that those legislators start  
8 shutting off some of those lights on a sunny  
9 day because that is money down the drain, and  
10 they will tell you there's no money for poor  
11 people, but they are wasting your money and  
12 you guys are the leaders. You guys are the  
13 people who everybody looks up to. If you  
14 don't do it in your office, they are not going  
15 to do it in their home.

16 The custodian will tell me why should I  
17 do it, my boss never shuts off her or his  
18 light. So that's what I'm asking. You get  
19 off on Shap Smith. You get on the Governor.  
20 When you walk in that office you can look  
21 around and say oh I notice we've got the  
22 energy faucet running. So that's the first  
23 thing. The second thing --

24 MR. DELHAGEN: Okay. Let's keep it  
25 short here.

1           MR. GUYER: The second thing will be  
2 shorter. I've been a realtor for 40 years.  
3 The energy audit is the best way to help  
4 weatherize buildings. Why? Because at the  
5 time of sale that's when there's money on the  
6 table to do it, and you have 30 years of  
7 financing to do that change; windows, weather  
8 insulation, all those things that you might  
9 only get for a five-year credit you can get  
10 for 30 years.

11           Now I'm a realtor. They are going to  
12 fight you tooth and nail because what? Money  
13 out of their pocket or time like guess what?  
14 Act 250 was the best thing that came down for  
15 this state and they fought it all the way and  
16 they complained about it, but it still has  
17 helped them all out because what it did was  
18 take out those deep ups and downs that  
19 everybody else suffered throughout the country  
20 and Vermont had little levels.

21           So that's the two things. Shut off the  
22 lights because I'm going to be on your butt,  
23 and the other thing is the energy tax credit.

24           MR. DELHAGEN: Okay. Thank you.

25           MR. GUYER: You're welcome. Sorry to be

1 so emotional about it.

2 MS. LAUNDER: You will be happy to know  
3 Commissioner Miller is a fanatic shutter  
4 offer, but if you want to check on her, she  
5 stays very late.

6 MS. MILLER: Johanna Miller, Vermont  
7 Natural Resources Council. I would say that  
8 building off what Chris was saying some  
9 specific implementation strategies right now  
10 there is an effort afoot in the Legislature to  
11 make some strategic fixes to property assessed  
12 clean energy program.

13 I think financing is one of the biggest  
14 obstacles to energy efficiency investments and  
15 people are looking for handouts. Energy  
16 efficiency is not particularly all that sexy  
17 and people don't understand it well enough to  
18 want to make those investments so they are  
19 looking for incentives. Programs like the  
20 PACE program will help homeowners, you know,  
21 and a lot of homeowners want to do this. A  
22 lot of homeowners are educated enough to  
23 understand the benefits of efficiency want to  
24 couple that with renewable investments on  
25 their homes.

1           So there's a huge opportunity to have  
2           the state put their shoulder behind the PACE  
3           program now as it moves out of the  
4           Legislature, and it hopefully will, and in its  
5           ongoing implementation. I think you can look  
6           at Boulder, Colorado where when they first  
7           moved forward with the PACE program, you know,  
8           a segment of the population signed up and then  
9           another segment signed up and then another  
10          segment, and it's because people there, the  
11          early adopters and those that understand and  
12          see what the benefits of those kinds of  
13          programs do.

14                 So I think the state and they can look  
15                 to partners like my organization, VEIC, VPIRG,  
16                 and others who are really eager to help  
17                 communities implement that kind of program,  
18                 and I think PACE will take some of the burden  
19                 off of the state and the Feds for folks that  
20                 are looking for handouts and help to make it  
21                 easier for homeowners to make those kinds of  
22                 investments. So that's one strategic  
23                 suggestion I would offer.

24                         Communities are going to need some help  
25                         to implement that program, and I think the

1 state has an opportunity to help them.

2 MR. DELHAGEN: Okay. In the back.

3 MR. BELLIVEAU: Eric Belliveau, Optical  
4 Energy. I just wanted to talk about two small  
5 things that are subcomponents of financing;  
6 One being that a lot of energy efficiency  
7 opportunities happen when a piece of equipment  
8 has failed. A lot of things we've talked  
9 about today are when you have time to plan for  
10 PACE financing and other things you have time  
11 to plan. So looking at energy efficiency  
12 opportunities to lend at that time of failure  
13 so a good thing.

14 And then another one is to look at  
15 financing in a much broader term potentially  
16 statewide where you're backstopping fifty to a  
17 hundred million dollars worth of loans and  
18 then securitizing them into the market, having  
19 that money come back to the state through the  
20 entities that lent it to begin with. So those  
21 are two options on the financing end.

22 MR. FORWARD: I'm Jeff Forward. I'm a  
23 renewable energy and energy efficiency  
24 consultant. I'm also Richmond Town Energy  
25 Coordinator. I had a couple suggestions.

1           One is that efficiency generally pays  
2           for itself, but where the challenge is that  
3           people don't have -- necessarily have access  
4           to credible third-party information, and I  
5           think that's where the state can help a lot  
6           is, you know, you'll never find a builder that  
7           will say he doesn't build an energy efficient  
8           home. They are all highly efficient, but, you  
9           know, you ask anybody else who is in the field  
10          and you'll find there are places where they  
11          aren't quite what they say they are.

12                 So I think that the third party place  
13                 where we have right now in the state is  
14                 Efficiency Vermont, but they don't have the  
15                 mandate to do fossil fuels like they do  
16                 electricity. So that would be one suggestion  
17                 is to increase Efficiency Vermont's mandate,  
18                 find a funding source for them so that they  
19                 can credibly and effectively do what they have  
20                 done for electrical efficiency through fossil  
21                 fuels.

22                         COMMISSIONER MILLER: It's really a  
23                         funding issue. The mandate exists. It's  
24                         expanding --

25                         MR. FORWARD: They don't have the

1 funding they can't put the resources towards.

2 COMMISSIONER MILLER: The earlier slide,  
3 I can't quite remember the numbers, you guys  
4 know them cold, but it's a fifth of the fund  
5 approximately in all fuels compared to  
6 electricity, even though electricity usage is  
7 a third of the picture.

8 MR. FORWARD: Exactly. So tying their  
9 resources to the particular fuel type by  
10 getting some contribution from fossil fuels to  
11 their implementation would be -- would make  
12 logical sense to me.

13 As far as financing goes I agree with  
14 everybody who talks about financing that's the  
15 key, and so the time of sale is a good  
16 opportunity and at the time of sale for  
17 existing homes I think that's where you can  
18 tie that in. The PACE program I think is, you  
19 know, a way to finance long term efficiency  
20 that goes with the building rather than with  
21 the homeowner and that's a good opportunity.

22 For municipalities there's a mechanism  
23 that hasn't been well understood or used very  
24 well in Vermont and I think I'm having a fair  
25 amount of success with schools now called

1 municipal leasing, and it's a lease purchase  
2 arrangement. So it allows schools to buy  
3 efficiency improvements by leasing them rather  
4 than paying for them upfront as a capital  
5 cost. So they don't have to bond for it.  
6 It's acts as a loan, but it lives on the  
7 operating side of the budget rather than the  
8 debt service side of the budget.

9 So I think where you could think, you  
10 know, a place for the policymakers to think is  
11 where can I get good information to, you know,  
12 to people so that they act in their own best  
13 interest and so that they know how to do that,  
14 and how can I -- how can the state support  
15 that technical assistance in an effective way.

16 MR. DELHAGEN: Okay. We're going to  
17 start paring it to closing, but we have a half  
18 dozen people we'll try to get to.

19 AUDIENCE: This might be rather  
20 embarrassing. I focused a lot on the  
21 greenhouse gas emissions because having read  
22 for years and years about the problem with the  
23 increasing temperature of the climate I'm  
24 really scared about that. We're talking about  
25 survival of the earth's ecosystem in some form

1 and there's nothing more important. So I see  
2 from time to time the word carbon reduction,  
3 but there's something about equating and value  
4 like the first thing carbon reduction,  
5 economic development, energy independence,  
6 affordability, et cetera, they are not equal.  
7 So what could we do? I think we're kind of  
8 helpless, but let's not forget that these are  
9 not equal.

10 AUDIENCE: So I agree with my friend  
11 here John. Yes, so energy efficiency is great  
12 and -- but that's kind of separate from the  
13 issue of carbon reduction because if you're,  
14 you know, living in an efficient house but  
15 you're still using an oil boiler, it's not  
16 really solving the problem of the carbon. So  
17 going in the wrong direction and you're going  
18 50 miles an hour and then you slow down to 30  
19 you're still going in the wrong direction.

20 So really the issue carbon neutral  
21 carbon zero society is where we want to go I  
22 think. I have been researching a little bit  
23 on the smart grid and problems with the  
24 wireless technology. So I think that's not as  
25 clear-cut an issue as we might like to think.

1 So smart grid problems and that's it for me.  
2 Thank you. It's been a great day.

3 MR. DELHAGEN: We have several up here  
4 in the front too.

5 MR. FRANCIS: Great. Thank you. I'm  
6 Clay Francis with the Vermont Public Interest  
7 Research Group.

8 Just want to touch on a few of the  
9 comments that were made about the linking  
10 energy efficiency and to the carbon reduction.  
11 I would argue that they are related, and I  
12 think that I've crunched the numbers and I've  
13 looked at what we have available in Vermont  
14 talking about renewable heating technologies.  
15 We can't get there unless we do efficiency.  
16 So I think it has to be both.

17 I think that we can combine efficiency  
18 and renewable heating technology in a way that  
19 makes sense for Vermont, and again I made this  
20 announcement this morning and I won't  
21 apologize for making it again because I'm  
22 really excited about the information that I  
23 have in this report titled Clean Heat. I've  
24 got copies at the front and I would hope that  
25 we can use that as a starting point for moving

1 forward, finding a way to find that common  
2 ground with renewable heating technologies and  
3 energy efficiency. Thanks.

4 MR. COOK: Brad Cook again. Two things.  
5 We keep talking about energy audit and energy  
6 rating. The Legislature was confused about  
7 these two. I just want to clarify.

8 An energy rating is you go with the  
9 checklist, you look at -- count how many  
10 lights you have, are they compact fluorescent,  
11 are they incandescent, how many watts, what's  
12 the efficiency and the size of your heating  
13 system, how many square feet do you have of  
14 different R-values and so forth, and you come  
15 up with score. That's a rating.

16 An energy audit is where you go through  
17 the house and you also assess how much  
18 insulation do we have, how leaky is the house  
19 by testing with the blower door, how efficient  
20 is the heating system, and how can we improve  
21 it. The audit comes up with recommendations  
22 to improve the comfort and efficiency of the  
23 home. Two completely separate issues.

24 And next I would also like to tell you  
25 about my four rules that I come across these

1 everyday. One is look at the whole picture.  
2 When we go in and do an energy audit on a  
3 house and make recommendations, if we're going  
4 to tighten up a house, we have to consider  
5 things like moisture, are we going to now  
6 cause mildew problems; radon, if you have  
7 radon, it's going to increase the  
8 concentrations. You could have a problem.  
9 The boiler, if the boiler is oversized now and  
10 we're going to make the house tighter, now we  
11 have a really oversized boiler, what are you  
12 going to do about it. So look at the whole  
13 picture.

14 Number two, the more you look the more  
15 you see. This hits me everyday and the first  
16 corollary is if you don't look, you don't see.

17 Rule number three. You can never take  
18 enough pictures, especially if you have kids,  
19 but this goes to an energy audit, infrared  
20 scan. If you don't take -- never take enough  
21 pictures; and, number four, another biggie, if  
22 you don't test you guess. So if you're  
23 improving energy efficiency of your home and  
24 you're not really testing it, how do you know  
25 if you have improved it and how much you've

1 improved it.

2 MR. DELHAGEN: Okay. We have time for  
3 two more questions and then I'm going to ask  
4 both Dave and Liz to make some closing  
5 comments. There will be more opportunities  
6 for feedback following Dave.

7 MR. MOORE: Thanks. I'm James Moore,  
8 Clean Energy Director of VPIRG, and I guess  
9 what I would like to do is take a step back  
10 and ask the Department to really focus on some  
11 big picture goals for the state. I think that  
12 the rising cost of heating fuels is  
13 potentially one of the most severe economic  
14 challenges we face, and that's for not just  
15 low income Vermonters, but really impacts the  
16 moderate and business community across the  
17 board.

18 So I think we need to take a step back  
19 and look at where do we actually need to get  
20 to, and I think that's elimination of our  
21 reliance on fossil fuels for heating over the  
22 next 20, 25 years, and we start there we start  
23 looking at very different solutions.

24 Most of this conversation is nibbling at  
25 the edges. Good nibbles, but nibbling at the

1 edges. We need to be talking about serious  
2 goals and programs that will actually allow us  
3 to achieve those goals rather than what we've  
4 seen so far in Vermont I think is a  
5 conversation about efficiency that is overly  
6 burdened with -- it's almost like religion and  
7 virtue. You know it's religion for people,  
8 and we need to move beyond that if we're  
9 actually going to move the state to where we  
10 need to go.

11 So I would like to see some strong codes  
12 with strict enforcement, strategic use of  
13 market development, state dollars to move the  
14 market development for the private sector in  
15 this area. I think the gentleman back there  
16 talking about how do we actually talk with  
17 middle income Vermonters, it's all about the  
18 dollars and cents and that, you know, is  
19 absolutely right.

20 There are also other values that will  
21 drive Vermonters to act and our energy  
22 security and the rising price of oil are right  
23 up there at the top.

24 MR. DELHAGEN: Okay. Time for one more.

25 MR. BULLIS: Allan Bullis again. Make

1 it quick. I'm not going to be here for the  
2 transportation meeting, but ever since I got  
3 my license I put the car in neutral and coast  
4 down the hill so my rpm's went down. Kind of  
5 energy nazi from time to time. So I'm pretty  
6 fanatic about it.

7 One of the things that kills me is these  
8 stoplights, traffic lights that are installed  
9 and they are needed like an hour or two in the  
10 morning and an hour or two at night and the  
11 rest of the time they can be flashing yellow  
12 or red. It would reduce our -- the biggest  
13 problem we have, we beat ourselves on energy  
14 committees how do we attack the transportation  
15 components. Well putting in some simple  
16 counters on these lights, maybe make them  
17 reduce the vehicle stops and reduce the amount  
18 of time that people sit there. I mean next  
19 time you're driving around, go out on a Sunday  
20 morning and you're sitting at a light and  
21 there's nobody for a quarter mile either way  
22 you can safely go. You're sitting there  
23 because the light it is programmed. It's not  
24 conforming to the way we can do it, and I've  
25 crunched the numbers and it would save

1 Vermonters millions of dollars in fuel and one  
2 stop a day adds up.

3 COMMISSIONER MILLER: Good segue to the  
4 next meeting.

5 MR. DELHAGEN: Well clearly there's a  
6 lot more to be said on this topic. Again, it  
7 just blows me away the depth and range of  
8 ideas just from this small group.

9 Please take a moment to fill out the  
10 small group questions. We're also going to  
11 leave a similar looking sheet in the back with  
12 the large group questions. If you want to  
13 bring one of those home and fill it out and  
14 send it back in or take a few minutes and  
15 complete it here and drop it off in the box by  
16 the door, we very much would like those ideas.

17 I would like in closing to turn it over  
18 to both Dave and Liz and you guys can decide  
19 based on your schedule, Commissioner, who goes  
20 first.

21 COMMISSIONER MILLER: I have to be down  
22 at the Legislature so I'm going to go just  
23 real quickly here and thank you again all so  
24 much for coming. I really appreciated this  
25 afternoon getting a little bit more in the

1 weeds with some of the ideas and bringing a  
2 bit more detail to the conversation. For me  
3 that was really important and I appreciate it  
4 very much. So thank you so much.

5 I hope many of you will come, if  
6 possible, on April 7th to the transportation  
7 and land use sessions, and please get the word  
8 out to others who you know are expert or  
9 interested in those fields as well. We would  
10 love to have good attendance. We're going to  
11 have it here just like today's meetings rather  
12 than down at the Department. So that will be  
13 fantastic, and as we go forward, as we said,  
14 we'll have opportunity both for some web  
15 interaction, e-mail comments, as well as  
16 future meetings. Feel free to call me or  
17 anybody on the team if you have further  
18 thoughts or questions after today.

19 Thanks so much and I'll give it to Dave  
20 while I pack up here.

21 MR. LAMONT: I don't know if I have much  
22 more to add. We have had a long day and a lot  
23 of ideas and I'm pretty full of ideas. So I  
24 think we'll just leave it to what Liz said and  
25 thank you all again for coming.

1 MR. DELHAGEN: Okay. Thank you  
2 everybody and have a safe drive home.

3 (The meeting adjourned at 4:30 p.m.)  
4

5  
6 C E R T I F I C A T E  
7

8 I, JoAnn Q. Carson, do hereby certify that  
9 I recorded by stenographic means the meeting re:  
10 Comprehensive Energy Plan at Noble Hall, College Street,  
11 Montpelier, Vermont, on March 22, 2011, beginning at 9  
12 a.m..

13 I further certify that the foregoing  
14 testimony was taken by me stenographically and thereafter  
15 reduced to typewriting, and the foregoing 191 pages are a  
16 transcript of the stenograph notes taken by me of the  
17 evidence and the proceedings, to the best of my ability.

18 I further certify that I am not related to  
19 any of the parties thereto or their Counsel, and I am in  
20 no way interested in the outcome of said cause.

21 Dated at Burlington, Vermont, this 25th day  
22 of March, 2011.

23 \_\_\_\_\_  
24 JoAnn Q. Carson

25 Registered Merit Reporter