Rutland High School
Rutland, Vermont

Public hearing held at the Rutland High School, 22 Stratton Road, Rutland, Vermont, on September 29, 2011, beginning at 7 p.m.

PRESENT

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Commissioner, Department of Public Service

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COMM. MILLER: So I think we should get started to reward everyone who came on time and showed up despite the rain. Thank you for doing so. What I thought we would do tonight -- this is our third public hearing for the energy plan draft. Hi there. Just starting. Come on in.

So this is our third public meeting, and we were down in Middlebury two nights ago and in Brattleboro last night. Tonight Rutland, and then next week we are going to be in Colchester and Danville conducting our five public hearings on the draft. And we are accepting public comments through mid October, trying to get it finalized for the Governor to take a look at the draft later in October and get the final out the door in November in time for the legislature to consider it next term. And thank you, Representative Canfield, for coming tonight. I appreciate it.

So what I thought I would do is start first with just an overview for those of you who haven't had a chance, or even if you have had a chance, this gives you a little
summary of what we considered when we put
the draft together and the big themes that
the draft contains. It's a difficult thing
to summarize, so what we have tried to do in
the presentation is just give you a quick
flavor of the main recommendations in each
energy sector.

But then what I really want to do is
hear from the folks who have come tonight.
We have a reporter here, court reporter, who
can transcribe everything that’s said, so
that we make sure we capture the comments.
We will take notes as well. And probably
what we will do given how few of us there
are, unless we get a real rush at the door,
is just after my presentation hear from
those of you who want to say something
briefly, and then open it up for a bigger
conversation so everyone has a chance to at
least speak first. Hey, how are you?

So with that, Kelly is going to be my
Power Point clicker. Thank you. You all
probably are familiar with why we engaged in
this process but just very briefly, the
legislature has a set of statutes that apply
to the comprehensive energy planning process. And basically, the Department of Public Service, and by the way I apologize, I'm Liz Miller for those of you who came in late and I didn't meet personally. I'm Commissioner of the Department of Public Service. The Department of Public Service runs the process to complete the Comprehensive Energy Plan but we do that with other state agencies and departments. And we do it in order to create comprehensive analysis and projections on usage, cost, supply and environmental effects of all of our energy sectors, not just electricity, which is the thing most people associate the department with. But also transportation, thermal energy, which is home heating and business heating, and the way that that intersects with land use and efficiency.

We have got a dynamic presentation. And we do all of this to make sure that Vermont has some vision, some forward looking thinking on how we can supply our energy needs in a way that's adequate, reliable,
secure, sustainable, environmentally responsible, efficient, affordable. Those are all the words from the statute, and all the things we think about as we are putting the plan together. Okay. So I'm going to give you a little set of facts that were the things we thought of as we put the plan together, then talk about our long-range goal. Why we think the goal's important, how we think the goal can be achieved, and then give you, like I said, highlights by each sector; efficiency, electricity, heating, transportation and land use.

So where are we now? Again, this may be familiar to some of you. So I'll try to be quick, but I do want to lay the groundwork. We use about a third of our total energy in transportation, about a third in our homes, and about a third, just a little over, in our businesses. So and then within each sector different types of energy sources are used. Obviously transportation is nearly one hundred percent, petroleum of some form or another or diesel. Residential is about half electric and about half going to our
home heating, and commercial is more like 2/3 electric and the rest going to industrial processes and heating. Just a little overview.

What we know is that, this is, I know, hard to read from a distance, but from 1980 to present what we know is our energy usage has increased pretty dramatically. It's a pretty big steep rise in Vermont. And this is by energy source. So transportation is the big orange bar that's second down. Electricity is the red bar below that. And you can read down, natural gas and others. Everything has been going up basically, especially in transportation and electricity.

So we use a lot more energy now than we did a generation or two ago.

MR. KEEFE: Commissioner, just a question.

COMM. MILLER: Although I'm not going to take a ton of questions, or else this would last for like an hour.

MR. KEEFE: Electricity, what does that say, before conservation?
COMM. MILLER: Before conversion losses, I think.

MS. LAUNDER: Yes, before conversion losses.

MR. KEEFE: Brian Keefe.

COMM. MILLER: That's the other reason not to ask questions during the presentation. You've got to tell who you are. Kidding.

MR. KEEFE: I'm done.

COMM. MILLER: I'm going to put this on line by the way. Is this on line today? We will upload it tomorrow.

Greenhouse gas emissions shows a little bit different story compared to energy uses, and that's good news. What it tells you is we have had greenhouse gas emissions go up over time. From about 2003 onward we have actually seen a bit of a trend downward which is great news. It means -- what it means is we are being more efficient with our energy use and using cleaner sources overall. We think it's also related to the fact that Vermont has become over time more of a service industry oriented state than a
manufacturing industrial so the energy intensity has gone down a bit. But certainly the legislative policies and the things we have done have helped. Because you see from 2003 down and onward we have had a bit of a drop.

What you also see though is we are not going to hit certain legislative goals. The first yellow line which drop off pretty steeply to 2012 is what we would have to do to meet the first legislative goal for greenhouse gas emissions. We are not going to hit it, bottom line. The other dotted line, orange, going off into the distance to 2028 shows you the path we would have to attain to hit that legislative goal. And there is, if you look at the slope in recent years, at least a way to see that if we continue our progress, continue our policies, continue clean sources, we could hit that goal. But it's not going to happen without some effort.

Okay. And generally speaking, renewable energy most of the sources are far less carbon intensive than other energy sources.
So I like to tell people where we currently are on renewable energy. This first circle is our total energy type, and the way I broke it down is electricity is about 39 percent of our total energy usage, everything else transportation, and heating is 61 percent. Of electricity, we are almost 50 percent renewable right now, sources, and that includes large hydro, Hydro-Quebec, it includes the facilities where our utilities are presently able to sell what are known as renewable energy credits out of state. So this is just by source.

We are about 48 percent renewable. Transportation and heating not so much. We are only five percent renewable right now. And that's primarily because of the wood heat that we are using, biomass heating in our schools and institutions, about five percent of the total. So a lot of room over on that left side. In total, if you add all that up and do the math, you would see that Vermont's current energy usage in total is nearly a quarter renewable. So actually
that's great. But 77 percent, mostly attributable to transportation and heating, not renewable.

Okay. Energy costs just briefly, the chart on the left is the dollars that you actually paid out of pocket every year from 1990 to 2009 for different types of energy. Electricity is the top one, and so what you see is electricity is the most expensive in absolute terms. The ones underneath are gasoline, LPG distillate oil, and then biomass.

On the right we have done an inflation adjusted chart so that what you can see is if you adjust it for inflation, although electricity is the most expensive in absolute terms, it's actually not kept pace with the rate of inflation. So in 1990 dollar comparison terms we are actually doing a bit better than we had been. Not true for the other sources of energy, particularly if you look at LPG and gasoline as you would expect, you know this because you've lived in the last 10 years. It's gone up higher than the rate of inflation.
Okay. Efficiency, just for a moment, what we did in the plan, Vermont had not yet had a chance to do this previously. We asked for an economic impact study of our efficiency programs. Because we hear a lot from consumers, and I understand this, why am I paying the efficiency charge on my electric bill. What am I getting for it? And so rather than just saying we are getting efficiency, we are saving energy, it's good, we thought we would actually do the economic impact study. And what we did is we took a single year, there is lots of ways you could do it. We took a single year of efficiency investment and asked for an economic impact study of that one year. So that we could say, hey, what do we get out of one year of public spending? A couple of facts. We found -- we have found that on average we have been saving about two percent of our electric load a year through our efficiency measures. That's really good. Vermont is one of the leaders nationwide in saving energy through efficiency.
On a cost basis, if you look at -- if you look at the kilowatts saved as if you were having to pay for them instead, as electricity, you would find that the cost is about 4 cents a kilowatthour which is less expensive than most sources of electricity we could buy, so right there you know that it's better to have efficiency if you can get it than to buy the electricity.

What we also found though is that there is an economic benefit to the state beyond just the electricity saved. Because efficiency measures put contractors in your home, bring materials out of the stores, insulation, caulking, you know, et cetera, light bulbs, we spend about one dollar of public money and get nearly 5 dollars, 4 and-a-half dollars of net present value to the state. It's big.

We also get jobs creation. That's detailed in the report that we have included in the plan. We also save a regional charge on our electric bills. It's a little technical, but basically we are saving about two cents a kilowatthour on a regional
charge because we are doing well in efficiency. That's a Vermont benefit. It's actually detrimental to the rest of New England, by the way, but it's good for Vermont. In other words, when we compare ourselves to the other states we are saving money.

Okay. And on thermal efficiency we also asked for the impact study to be done on our thermal programs. We spend far less public dollars on our heating efficiency programs than we do on our electric, but it does still create jobs and leverages the fiscal resources. That's detailed in the plan, and what it shows overall is that we should be investing in efficiency. Okay. And really briefly, efficiency in Vermont has a number of programs. What we see is that there are a mix of programs on the electric side and the thermal side, but over and over again we heard -- next click -- that Vermonter feel that there is no easy path to access the services. They get an energy audit and then what. Or they wonder, wait a second, windows for my thermal, you know, my heating
bill and light bulbs are for my electric, how do I -- I don't really care. All I want to do as a Vermonter is save money on my energy bill in total and have my home more comfortable. So we kept hearing there is no easy path.

We also discovered, and people knew this, but certainly upon investigation we confirmed it, we are behind on our goals. The legislature has asked that we set policies to allow 80,000 homes to be improved, 25 percent in their energy usage by 2020. We are well behind that goal. If we were to actually hit that goal, we would need to pick up the pace and do about 8,200 homes a year between now and 2020. That would be like triple the pace of what we are doing now. So we are way behind on the goal.

Transportation. Gina Campoli from VTrans may come. She was hoping to, and I don't know with the rain and some of the issues they have been having at VTrans that she is going to be able to make it. Let me just say even if she doesn't come, you can
confirm for her later that I said it.

VTrans has been fantastic in this energy planning process. They took the lead on the energy plan section on transportation. It's really something they dug into, and I think it's a great thing and I really -- I really recommend looking at the transportation section. Transportation costs about a fifth of our household expenses on a national basis, but in Vermont we spend more than that. In Vermont it's usually the second largest expense for an average homeowner. It's even more than education, food -- if you keep clicking -- health care. Most Vermonters spend money for housing and then next for transportation.

We also, as you saw from the earlier chart, contribute to our greenhouse gases more through transportation than anything else. So it's a challenge. And why is that? It's because again if we look over time, 1975, a couple generations ago to 2009, we are driving way more than we used to. I mean that's the bottom line. The population -- the population rate in the
state has not nearly gone up as much as this chart shows. We are just driving more. And you know, therefore, we are spending more money, and we are contributing more to greenhouse gases and everything else. So what's the problem there? There is a land use and transportation connection. And what the connection, I think we all know, but the data shows it, we are a more rural, less densely populated state than the rest of the country.

The red line is Vermont in terms of density. The blue line's the United States. We all know this. 30 percent of our citizens live in our designated downtown and growth center districts. So they live in compact areas. However -- next click -- if you look at the -- sorry about the screen by the way. If you look at the 2010 census, what you would find is that those 21 designated areas grew at a slower pace than the rest of the state. So that's just a way of saying we are seeing sprawl in our population growth. And that's related to transportation. That's one of the reasons
we are driving more, because -- next slide
-- there is -- this is probably obvious, but
there is data for this. People travel fewer
miles in their car if they have services,
work, home, closer together. So how we grow
matters.

The downtown picture on the top has a
different energy profile than the suburb
here or the edge community on the right. It
matters for our energy usage, not just our
quality of life and other things.

Okay. So that was the factual setting
for some of our goals. Our long-range goal,
if you've looked at the plan, you'll know
that we are recommending that by mid century
Vermont can be nearly free of fossil fuel
usage in all energy sectors. 90 percent
renewable by 2050 is what we are suggesting
the state shoot for. Again, just to remind
you we are at about a quarter now. So we
are suggesting that we go all the way to 90
percent by 2050. It's a big, big change.
Graphically it looks like if you hit the --
next slide -- going from what you saw before
all the way to the right. 90 percent
renewable. Why should we do this?

The plan outlines the benefits. There are four key benefits. First, economic security and independence. If we transition to a more renewable future, we will be less dependent on the types of fuels that are volatile in cost, unreliable in source, and intensive on our environment. And it will bring Vermont greater economic security independence. It also safeguards our environment because it does help, it will help our greenhouse gas profile for the future generations. We expect it also will drive innovation and job creation because the renewable energy future that we are calling for will have a large part right here in the state. It's not going to be all in state.

Right now we take some of our renewable energy from out of state and we expect that will continue, and we talk about that in the plan. A lot of it will be here, and it's going to drive innovation. And fourth, if we do all of this, and we tie it, you know, we move to it in our transportation sector,
we intentionally move towards it in land use as well, we believe we will increase community involvement in the investment. So it will be good for our community as a whole.

How will the goal be achieved? I get this question a lot. It's a big goal. I like to illustrate it this way. This is just my graph. The red line is what's known as an acceleration curve. It starts off with little progress. And the progress builds over time. It's just like rolling your car down hill as it were. You get more progress as you keep going. It's not a linear progression. If you were to take the 2050 goal and divide it up yearly between now and then and try to achieve that progress year over year over year, starting next year, that's not what the plan calls for. That's not what we believe can be achieved. And the reason for that is because we have big, big, big changes that are needed, especially in transportation and to a lesser extent in home heating, but a big change there too. And those changes are
not going to happen overnight.

    We have made a lot of progress on the electric side. We believe we can make substantially more. But even with those -- even with that progress, we need to set policies now that set us on the right path to increase our progress as we go forward.

    Okay. And if you're going to do that, what sort of policy should you put in place? We heard a lot of comments that it shouldn't just be, hey, let's just tinker with this law here or put a little outreach in education over here. That instead you can put up all four, that instead with any program you're going to look at, you need to address all four of these areas. Outreach and education, making sure people know what the program is, what the benefit is, and how they can get it. Two, finance and funding. How can people access the ability to pay for it. What can the public sector do to support it? Three, innovation and expertise. Do we have right here in Vermont the things that we need, the contractors, the service companies, to address the
policy? And then four, regulatory policies and structures. What can we do as a state, what can the legislature do to make sure that the policies are supportive? You can't just do number four. You have to address all of these or you're not going to get progress.

Okay. So strategies by energy sector. This is -- I think of this next section as inherently sort of unsatisfying because it's a big plan, and what I want to do is walk you through all of it, but I can't possibly do that and then have comments, which is what I really want to get to. I'm going to do a slide or two for each section. Energy efficiency. We call on the plan for the efficiency to be the first thing that's thought of in any sector because it saves us the most money in any sector, and the easiest way to avoid using energy. So the biggest recommendation in the efficiency realm that I think we make is intentional decision to look at all of the different programs we have, come together around a table and say how are we going to
rationalize these programs. Right now Vermont, like I said, Vermonters don't care if they are accessing a program for their electricity efficiency or their thermal efficiency. What they want is their home to be more comfortable. And our programs right now are not designed for consumer delivery. Or they are not designed as well as they could be for consumer delivery is the way I should say that.

However, we don't want to just simply say okay, legislature, fix it this year. We want to actually get people around the table from Agency of Human Services, from the utilities, from Efficiency Vermont, from the Department of Public Service, from our energy service providers, from our fuel dealers, and say what are we going to do to address this? And where are the gaps? Including on the funding and financing side PACE is being rolled out. That's great.

Another thing the plan calls for with efficiency is moving toward on utility bill payment systems. I would be happy to talk about this more. It's essentially another
mechanism that consumers could use if they wanted to finance improvements in their home, using something that they already do which is paying their utility bill.

Electricity. We do call to continue not just the two percent progress we have made in the past, but to ramp that up in the coming years to three percent. We have already advocated for that at the Public Service Board and had a budget for that passed for 2012 through 2015. Why just three percent when we have got these big goals? There are two reasons. Number one, we need programs in place to actually support -- if you're going to go for more you have to have bigger programs in place to do it, and we can't stress the programs that we have now by trying to achieve you know, 5 or 10 percent in one year. It's not going to happen. But we do think we can get to three percent. And thermal, we have some specific goals. We are about 30 percent of all new homes right now are Energy Star rated. It's actually a good percentage. We should be happy about that. We think we can
double that percentage by 2020. We already have in place residential building energy standards, commercial building energy standards are coming.

But the only reason -- not the only reason -- but a good reason to do that interim step is to get us to what will really be a big energy saver and that is to encourage a path for new construction to be what's known as net zero energy by 2030. And that's where you build the building tight enough, and then you put in ancillary energy systems on the site so that the home in total can be net zero. We have a number of homes in Vermont already at net zero, but we could definitely put a path in place to get us there if we put our minds to it.

Okay. Electricity. First you've already seen big renewable goal. Electricity is certainly a part of that. We need to set policies to not just maintain the existing progress but also dramatically increase the progress. As I said, renewable electricity is now about 48 percent. There are proceedings going on at the Public
Service Board right now looking at what's known as a Renewable Portfolio Standard. I don't want to hit you with a lot of technical stuff, but the bottom line is the PSB will come out with a plan probably in October, I believe it's October, the draft plan is for a 75 percent goal by 2032. And the department modeled that as a part of this Comprehensive Energy Plan. You can see that in our plan. We believe that's both achievable, affordable, realistic. We believe that's something that can be put in place. So that's the sort of progress we are talking about on electricity.

That needs to come with some process improvements. When you look at renewable energy projects we have had, if you think about 10 years ago versus today, we have had an enormous amount of renewable energy projects in that last 10 years that we really didn't see in the 10 years prior to that. So we have some experience now, and we can look at how the siting process at the Public Service Board works and look to improve it. There is a couple specific
recommendations we make. One is the department is going to bring on board a renewable energy project manager, somebody who can work with different state agencies and departments, with developers, with utilities, with stakeholders, and say this is where the process is now. Here's the next step. Here's, you know, they can essentially be the ambassador for getting the projects that come in the door out to the public and the stakeholders and then in the Board process. It doesn't exist right now, and we hear often that one of the problems both interested parties have and developers have is that the process is not transparent enough.

Second, mediation. I come from a law background. The court system in Vermont has had mandatory mediation in civil cases, in family law cases. It really works. We don't have it in renewable energy siting cases. I personally believe it could be very helpful if the Board put in process a developer-funded mediation process.

And then finally review of recent siting
permitting. Again, I said we have some experience now. Are some of the smaller projects able to be simplified or not? I think we can start to look at that. We have had some solar projects in particular, some on Route 7 you are probably familiar with. What's the experience there, and can we actually help those projects get through the permitting process in a way that's more simple and shorter in the future?

Okay. Finally, finance and funding. There is two main things that are going on. First the on-bill financing I already mentioned. Again, I can talk more about that if you like when we break for comments. And second the CEDF, Clean Energy Development Fund. The legislature changed the structure of the CEDF this past term. We appointed or the new Board was appointed in -- I think it was in June. They are engaging in a strategic planning process right now after their first meeting in July. It will be completed by the end of their first year. It's looking at funding and programs for the CEDF. So that's coming.
It's not solved in the plan, but it is coming.

Okay. Thermal energy. Sustainable heating. First efficiency. I already talked about that. The best way to help our home heating bills is to improve our efficiency programs. That's first. Second, natural gas. The plan does call for an increased access to natural gas. I have certainly been asked the question, you have this big renewable goal. Why are you calling for expansion of a fossil fuel? And my answer is -- my answer is choice for Vermonters.

We right now have an infrastructure in natural gas that extends just through Franklin and Chittenden County. If you look at the cost profile of natural gas in recent years and project it quite a bit into the future, if you look at the type of system that it is, in other words, a regulated system, and you look at the way it's delivered which is hard pipe transmission rather than trucks on our roads, I believe there is a reason to expand that choice to
other Vermonters, and that bringing the
transmission system south is a good thing
for Vermont's energy future.

We only have about five percent natural
gas right now, so there is some head room
there to allow this. I recognize there are
trade-offs and that we have to be very
vigilant on the environmental side and
understand those trade-offs. Increased use
of biomass and biofuels, though, is how you
actually move that five percent which is
currently renewable to a much bigger
percentage. And the plan talks about that.
Both for woody biomass as well as crop
grass, which is a developing technology.

And then also biofuels. Liquid
biofuels. There is a focus on combined heat
and power projects because they are the ones
that use the resource the most efficiently
for more than one purpose, both electric and
heat. And in addition, advocacy for low
sulfur and low carbon fuel standards that
would apply even to the portion of the
portfolio that's not yet fossil free. And
then that has to go hand in hand with
thinking about how our economy currently works and how it might work in 2050. So we need to have plans in place to let our local fuel dealers, who after all come to our homes, deliver the fuel, now transition to the new economy whether it's delivery of the biomass or delivery of the services such as efficiency services to the homes.

Okay. Transportation. Making sure Gina didn't come. I would otherwise let Gina do this because she certainly deserves the credit. It's obviously, as I said before, largest cost. We spent a billion dollars on transportation. 700,000 or so, I'm sorry 700 million or so is fuel that goes mostly out of state cost. Greatest use of fossil fuels, highest contributor of greenhouse gases, so what are we going to do to address it.

The plan calls for setting policies now to help the state transition to renewable electricity in our transportation sector. This is not easy. There are things that have to be addressed. Financing vehicle charging infrastructure, the technology and
cost, this is not easy but it is possible if we start now. We are not alone. Massachusetts just had a big announcement about what they are doing to improve their transition and start their charging stations. But Vermont does have to start.

And VTrans has set a metric -- VTrans is great at planning, by the way. They have set an actual metrics saying look if we are really going to hit 90 percent by 2050, we need to think about how we get to 25 percent of our passenger vehicle fleet renewable within -- by the end of 20 years. And you think, is that possible? And the answer is it's going to be hard, but it is possible.

Cars transition about every 7 to 8 years. Think about our own buying patterns and think about whether you're on average or not, but we can by 20 years have about a three times transition. Ford, Nissan, Chevy, other car dealers already have electric vehicles in the show room. By the end of next year we are told by VTrans 14 different car manufacturers will have passenger vehicles that are electric plug-
in. It's going to increase.

There is also a lot of technology going
on right now in the light-duty vehicle fleet
as well on electric. So it's an ambitious
goal, but it is possible. We can't just do
that though. VTrans has a number of
recommendations in the plan for advocating
for better fuel standards, greater access to
commuter facilities and transportation
options to help reduce the need to use the
fossil fuels in transportation by helping
the efficiency of our system. VTrans wants
to actually measure for the first time the
combined average fuel economy of the Vermont
registered fleet. And then say, okay,
what's that. And how does that compare to
the national average. Now let's set goals
to beat it by five percent by 2025. So they
are actually thinking in short-term steps
which is a great way of going and a way that
we can get to our eventual goal in the plan.

Another example which I think is near
and dear to many of us, I know it is to me
since I commute from Burlington to
Montpelier, tripling the park and ride
spaces. Having specific places to do that within the planning period and doing those things should reduce single occupant trips by 20 percent in 20 years. Right there you've got a lot of energy savings, but the big numbers are only going to happen if we get to renewable energy sources for transportation.

I just want to plug this really quickly. If VTrans were here I would give them credit. Connectingcommuters.org website if you haven't gone there. It's a great site. It's not just about bus schedules and public transportation. It's about ride share, alternative transportation options, walking, biking, et cetera, and it's very accessible. It's a really good model and I want folks to know about it.

Okay. Finally land use. We usually think of our land use choices as ones that help preserve our rural character, conserve our resources, develop our downtowns, keep our village centers, and therefore invest efficiently in our infrastructure. That's all good and it helps Vermont stay Vermont.
It also helps our energy usage. So Agency of Commerce and Community Development worked very closely with us on the planning document. They want to foster better coordination with the regional planning commissions and the town energy committees. They want to specifically review with the RPC and the town energy committees the recommendations in this plan and the RPCs and town energy committees conform their own energy policies toward the state goals.

They also want to improve the designation program so downtown and village center designations I talked about, they are working on recommendations right now in order to give them to the legislature this coming January. And they want them implemented. They are going to measure the success of that effort by seeing that increased density. In other words, the population going up in those designated downtowns by the next census. That's a good way to measure it.

We need to also coordinate and align our state incentives. We sometimes have a
transportation program on an intersection, for example, that conflicts with our desire to keep things compact. We sometimes have a waste water program or goal that conflicts with our desire to keep things compact. So ACCD is looking at those things and making recommendations of how we can align them better.

They are also developing specific training programs for the recently adopted Complete Streets initiative as well as transit-oriented design, and they are going to hold three workshops in 2012. These are pretty detailed. But if you're in these areas, you would see them as pretty good, concrete land use steps that would help support our land use energy policy.

A couple other highlighted actions in the plan. Again, it's a large plan. I understand that, so I want to pull a couple things out. One idea that is presented in the plan that we are going to recommend the legislature take a look at and allow us to study is something known as a total energy standard. We often focus, and frankly CVPS,
one of your representatives has brought this up quite a bit at public hearings. We often look at renewable electricity without really thinking about how are we going to move the, you know, move ahead on the other areas of energy usage. One way to move ahead on those other areas is to start measuring them against each other. So if we change all of our energy usage into a single unit such as a BTU and say, okay, we have got 23 percent renewable right now total. How can we move that to 24, 25, 26? What incentives can we put in place to do that? How can we measure it? We believe that would be a way to get to our eventual holistic goal without just focusing on renewable electricity in a little box, and then just looking at transportation in a separate box. So we suggest it.

Second, this is across different sectors, so I pull it out separately. There is a number of strategies in the plan having to do with biomass, including crops and grass and renewable energy systems on farm sites and methane digesters, all having to
do with farm energy programs. How we have
our farmers produce more of their energy for
their own use on their working landscape, as
well as using that working landscape for a
separate income source and to help the rest
of us obtain energy.

And then finally, State of Vermont
energy leadership, Deb Baslow and
Commissioner Obuchowski have been very, very
helpful in this planning process. The state
is attempting to lead by example. Shap
Smith and the Governor called for a five
percent reduction in state energy usage.
The Department of Buildings and General
Services is leading that charge putting
programs in place to do it, looking at our
fleet, looking at our buildings. Post Irene
they are really looking at our buildings.
And last month the energy usage issues have
been particularly brought up.

I have had a lot of conversations with
BGS as they are entering into leases and
looking at new sites. So the state is
committed to leading by example, and we have
things in the plan set forth in order to do
that. So that's really it. We are here to have public hearings, to hear your comments tonight. We would love to receive any written comments you would like to separately submit by October 10. We are going to revise the plan and present it to the Governor in mid October. He wants it on his desk October 15. I keep hoping that's a weekend day, but I'm not sure. Look at the calendar.

MR. CANFIELD: It is. It's a Saturday.

COMM. MILLER: Good. I've got a day or two. We are then going to get any feedback he has directly and put revisions out for copy, editing so we can get it to the legislature well ahead of January. Our plan is to have the published version done in November.

Okay. There is a couple other things to know. One is that the Governor has asked that we actually formalize this recognition of all the energy sectors being intertwined by having the Climate Cabinet rather than just the Department of Public Service be in charge of implementing the plan from the
executive level. Climate Cabinet involves
the secretaries and commissioners across
agencies and departments that have to do
with these areas, so it makes a lot of
sense. Again presenting it to the
legislature.

I want to have -- I think if you click
down one more -- you know, it's a big
document. I'm sure you have it. Yeah,
right. That's actually my copy by the way.
I want to take that document and make sure
that it has a list of possible legislative
actions so the folks in the State House
aren't flipping through it wondering what
they need to do. And then the RPC and town
energy committees are a key part of this.
The department will work with them to roll
this plan out. We are going to just have a
series of meetings and workshops across the
state with the RPCs and the town energy
committees once this is finalized. Then we
are going to review, revise, repeat.

The legislation currently calls for us
to do this every five years, although we
haven't had an adopted plan since 1998. I
think one of the barriers, one of the reasons that happened is five years is kind of a long time. Even since we started this planning process things have changed. Every week we have meetings and we think oh my gosh, what are we doing to do about this new program or new thing that is happening. We suggest having annual reviews headed by the Climate Cabinet and revising the actual document every three years. We think that would align better with the state energy plan which is on a six-year cycle. Five years doesn't make a lot of sense with that right now. We think it would be helpful.

Thank you for coming. I'm sorry for the length but I hope you found that helpful and informative. We will put it on line. Nobody else -- VTrans didn't come -- I was going to let them say something. Let's just, if you wouldn't mind, do we have the list there?

MS. LAUNDER: Yeah.

COMM. MILLER: Okay great. So what we will do is Kelly will let us know who is signed up actually to speak. We will call
those folks first. And I would love it if you could give us, I don't know, three to five minutes, something short, on what you're here to talk about. And then we will see if others want to talk. And then after we are done let's have a conversation, because there is not too many of us to do that. So who is first?

MS. LAUNDER: Neil Robinson.

MR. ROBINSON: Me. I took the time to at least look at your document that I just put on there. I've got to tell you it's terribly frustrating from someone who lives in an area that really is looking at biomass. I feel that biomass has been shortchanged all along. I feel very strongly that no where in that document do you talk about the creation of employment. Jobs is a big thing. I don't know whether the legislature is in a cave or what, but jobs are very important.

This is not to say that biomass is not important, but it also has the added benefit. You've already got the pellet aspect of it going in. Now you've got a
hydroponic nursery that's being looked at
going in. Who else in your energy profile
that you're looking at can give you job
creation and hence forth a tax base? And
while we are at it, who else in your profile
-- you keep reading toward everything -- I
see you keep talking about solar. Who is
sitting in the city that's supposedly going
to be solar city?

Well I'm sorry folks. I was born in
this area. And the sun doesn't shine that
much in Rutland, Vermont. If you go to the
national weather service, you'll find out.
I'm not knocking anybody that wants that.
You're talking about a system that will be
24/7 except for shutdown. Neither solar nor
wind can claim that.

So that's where I'm coming from. I
don't have any problem with the other two.
But I just cannot understand, and by the
way, one of the things that's never talked
about is just think about what utilizing the
tree tops, et cetera, literally waste in the
forest to create electricity. Think about
what it will do for the habitat of the deer
and turkeys. They are literally talking about a great program for the hunter. So there is a side effect on this whole thing. And they are talking about private funding. These people wouldn't step forward and say, hey, we have got the financing and siting. That was another thing that came up. There is no problem. People in Fair Haven and surrounding areas want this. So I can't think of any reason why you really aren't looking at biomass for electricity. Because we have got the product, we have got the investor, we have got the site, we have got the financing, we have got everything in place. And frankly the bottleneck, we are looking at it.

I'm sorry, but I don't have good feelings about what I'm hearing. The other thing I will say, I understand -- in reading about the series of meetings that we had, apparently the comments that came out from most folks was they didn't like the idea of using wood for electricity.

COMM. MILLER: Electricity only.

MR. ROBINSON: Only. Well they aren't
using it for electricity only.

COMM. MILLER: Right, I understand.

MR. ROBINSON: And this never was responded to. Number two, the emissions. You said in your own report it's carbon neutral. Yes, you did. I read the report. So again, I'm not here to be abrasive, but you know, we have been working on this thing and God love, these people have been working a lot longer than us, and we are just terribly frustrated.

We need the jobs. We need actually to utilize our assets we happen to have, tremendous forest down here, that aren't being used.

COMM. MILLER: So I would be very happy to respond to some of that, but I really want to make sure other people --

MR. ROBINSON: That's fine.

COMM. MILLER: -- have a chance. So I'm going to let people speak and then talk.

MR. ROBINSON: Thank you for the time.

MS. LAUNDER: Okay. Bill, and I'm not sure how to say the last name.

MR. STANNARD: Stannard,
S-T-A-N-N-A-R-D. Sorry to continue on biomass, but that's my main focus. And I'm from Fair Haven, so obviously I'm interested in the Beaver Wood project specifically, but overall I'm interested in the efficient use of biomass statewide. Professionally I'm a forester which makes me even more interested in the outcome of your study regarding recommendations on biomass.

And I would say one of my interests would be in working towards a goal of making existing biomass electrical producers more efficient. And in a leadership role Beaver Wood energy can do that by setting an example, which is what we like to do, set an example for improvement in any sector. And they are proposing to build the most efficient, perhaps biomass electrical production plant in the United States, one that can be assumed to be a model for the rest of the country and certainly for the State of Vermont. And something we can be proud of as it produces jobs and other benefits to the economy.

It also strengthens the argument towards
efficient use of our forest. When we utilize biomass in more ways and more efficient ways, it gives us in the forestry community a better way to prescribe better forestry methods that improve the forest overall which is a benefit to all of us, as Neil mentioned, for wildlife, recreation or otherwise, they use -- the smart use of biomass is, I believe, under considered in this study for whatever reason. I don't know. But I think it should be focused on much more so and specifically in the recommendations towards working with an outfit like Beaver Wood that is proposing to set an example.

I think it's a good thing for the State of Vermont, and I don't think it's mentioned in any particular way good or bad in your report as I understand it. And I don't know why. I think it's the only base load energy that's being proposed in renewables that I'm aware of, solar and wind are not, either one.

COMM. MILLER: Hydro.

MR. STANNARD: And we need to explore
some base load, whether it's natural gas, biomass, and combinations of those types of things, considered renewables or efficient sources. And I don't think we are focusing on that. It just doesn't seem that we are. It seems like it's being left out for some reason that I don't understand.

COMM. MILLER: Just since two folks have brought up Beaver Wood, I just want to say one thing, that is the plan is specifically and frankly by requirement forward looking. It does not take a position on any pending project.

MR. STANNARD: I understand that.

COMM. MILLER: So that part is purposeful, and I think, important frankly. So I just wanted to make sure that you knew that the specific lack of treatment of Beaver Wood is purposeful.

MR. STANNARD: Specifically my concern is to the lack of mention of biomass.

COMM. MILLER: The policy --

MR. STANNARD: For base load power generation. It's not specific to Beaver Wood.
COMM. MILLER: Fair enough.

MR. STANNARD: Beaver Wood just happens to be the benefit we can achieve by considering this in a way that I'm suggesting.

COMM. MILLER: Yeah. The other -- are there other folks here who have similar comments? Should I address it now? Okay. Well then --

MS. STANLEY: Just ditto. I'm Claire Stanley. C-L-A-I-R-E. I'm selectman, Fair Haven. They said it much better than I could, but -- and I keep thinking if we are planning, and I guess it's going to happen, we are going to close Vermont Yankee. All our energy after that is coming from away, out of state, out of the country. Wood fired biomass can be in Vermont, by Vermonters employing Vermonters, paying taxes to Vermont and so on and so and so on.

COMM. MILLER: No. I understand. So let me just say a couple of things. I should have mentioned this already. So I'm sorry. There is appendices, you know, parts of the report at the back. One of them ANR
drafted for us on forest management practices. It is their vision of how the biomass resource should be thought of from a forest management point of view. So if you haven't seen that, it's stuck -- I think it's appendix 5. I just want you to know it's there.

Unfortunately ANR --

MR. STANNARD: Can I ask you a question in that regard?

COMM. MILLER: Let me finish one other thing. And biomass is treated in two different places in the report itself through collaboration. You know, the department worked together with Ag and ANR. It's treated in both the electric section, and it does say that biomass can be used for multiple purposes including electric so long as the resource is managed properly. So it sounds a lot frankly like what you just said.

It also in the renewable section says that one of the metrics that should be used when looking at the benefits of renewable energy is total economic impact. Jobs
creation is a part of that. So I do think there are parts of this plan. You said that it was absent altogether, and I do feel I have to defend the plan a little bit and say it is in there.

   It's also in the thermal section which is heating. And it does there talk about combined heat and power, and heat, but it is in the electric section, and I do want -- if you haven't had a chance to read that specifically -- ask you to do so because it is in there.

   Then finally there is the -- one of the reasons that the report, the draft plan, does not have an even fuller discussion on the topic is because there is a legislative process, and that might be the report you were talking about before, it might not have been the department's report. I'm not sure. It's called the Bioenergy Working Group. I think if I remember correctly.


    COMM. MILLER:  We call it Bio E for short. It's coming out with a report later this fall, and they are working right now on
some of their recommendations. So it didn't seem to us productive to work at cross purposes with the process the legislature had already put in place to address these very issues. So it is in there. It's not in there as much as you would probably like to see.

MR. STANNARD: Are you talking about the rework of the BERC study? Is that what you're referring to?

COMM. MILLER: This is a cross legislative, I think Senator Ginny Lyons is in charge of it. Deputy secretary of ANR Chris Recchia is the Co-chair. There is a number of other stakeholders who have participated.

STANNARD: Can I ask my question?

COMM. MILLER: Sure.

MR. STANNARD: I have been confused right along by the fact that ANR is taking the lead in testimony regarding forestry practices when we have a forestry department.

COMM. MILLER: I think it's under ANR.

MS. LAUNDER: Yeah.
MR. STANNARD: But it hasn't been the Forest Service, as I understand it, I could be corrected there.

COMM. MILLER: I can't answer that question.

MR. STANNARD: That's taking the lead and giving testimony to groups like the House Energy Committee and so forth. That's been other representatives of ANR, and that confuses me, because I think it is strictly a forestry issue, that that should strictly be the source of information that feeds your study.

COMM. MILLER: Yeah. I can't speak to that specifically other than to say that Department of Forests and Parks --

MS. LAUNDER: Parks and Rec.

COMM. MILLER: Parks and Rec is part of ANR umbrella. We are an independent department. You know, we are just the Department of Public Service, but ANR has many departments under it.

MR. STANNARD: It's my understanding last legislative session that ANR gave testimony to the energy committee. And it
was a deputy secretary or somebody from ANR that gave that testimony.

COMM. MILLER: That's quite likely.

MR. STANNARD: Not a person with forestry background. And that concerned me. I think the forestry background is important to this study.

COMM. MILLER: We will pass it on.

Okay. I am going to move on because I want others to have a chance to comment. Who is next?

MS. LAUNDER: Richard Dahm; is that right?

MR. DAHM: Yeah, I'm Rick Dahm. D-A-H-M, from Sandgate. It wasn't brought up in the presentation, but it was in the book there, electric efficiency. And it mentioned access to the smart grid, the smart meters, and the 68 million that came from the Department of Energy possibly half of the cost of the meter.

COMM. MILLER: Right.

MR. DAHM: And my concern specifically about that was options to have a smart meter, as I understand it, and not have a
smart meter. And as I understand it today it's in the process according to the Board of Civil Authority if I don't want a smart meter I would pay a surcharge of 10 dollars a month not to have my smart meter send my results to the state or to the --

COMM. MILLER: Or actually just not to have a smart meter.

MR. DAHM: Right. An opt-out decision.

COMM. MILLER: Yeah.

MR. DAHM: And that particularly offends me. I don't think I should have to pay for something that I don't want since my meter, I assume, is working well. My bill comes monthly. So I thought that was offensive that I should have to pay for it.

And then there are other concerns, health issues with the transmission of the radio waves or however they play on the wires, technology used to transmit that data. And I spoke at the Service Board as well mentioning that.

COMM. MILLER: At the hearing recently?

MR. DAHM: Yeah. In Bennington about two weeks ago.
COMM. MILLER: Good. I was there. I was on the other end of the camera. Okay. Thank you.

MR. DAHM: That's mainly what my comments are.

COMM. MILLER: Okay. I'm going to let others respond, and then we can talk. Okay.

MS. VICTOR: Martine Victor. I too feel like the health issues connected with smart meters and the kind of wifi, you know, wireless radiation, electromagnetic radiation is the elephant in the living room of this whole topic that no one has addressed; the health implications of this huge, you know, extension and plan and expansion of this kind of technology throughout the state. You know, which I guess will depend on a new infrastructure that I understand is now being implemented, you know, these cell towers.

All of this is going to be transmitting the information in a wireless fashion. And scientists have known for decades, and more and more research is coming out, that there is no free ride with wifi. There are health
implications from it. And approximately
three percent of the population has overt
symptoms, you know, physically or
neurologically. They actually -- they
suffer and feel unwell around that kind of
technology. And then everyone else actually
is impacted on a cellular level.

You may not know it, but it actually
erodes and breaks DNA strands. It sets the
stage for disease for cancer, for many other
things are linked to this technology, but
it's so new, you know, really in the scope
of, you know, the development of technology,
that people, you know, are gung ho and
jumping into something without, you know,
fully knowing. Although more information
comes out about it, you know, the potential
health consequences.

So to roll out this technology and sort
of force it on everyone, because it's a form
of arm twisting to make people pay 10
dollars, you know, for something that they
don't want. And I think it should be
actually an opt-in measure. People should
be -- no one is addressing the health
issues, and that's what I'm concerned about. That it just seems like, okay, if we don't acknowledge it, no one will know about it, therefore.

And also I guess you're presenting this as environmentally friendly. But it's not. Because it's a form of pollution. When you're polluting the air waves, you know, with this kind of radiation, microwave radiation, it's affecting everyone. I mean people, animals, you know, presumably plant life as well. It's a harmful forum of transmission. And it's one thing to choose it yourself. If you want to have wifi in your house, okay. Use your cell phones, fine. I have a cell phone. I tend to text with it. I don't have wifi. I have my computer hard wired, and apparently I heard at that meeting that was two weeks ago, that you could install these meters in a hard wired fashion, so that they would not transmit wirelessly, but you're not choosing to do that. Maybe -- I don't know if it's an expense issue. But I just -- I'm really concerned that it's -- like this technology
is being implemented with no regards to safety and also the impact on, you know, studies have come out connecting this with Autism, with Alzheimers, with many, many conditions. Because especially, you know, pregnant women and developing, you know, children, are a lot more susceptible to this kind of radiation.

And that's why in many countries in Europe, for example, I think in France, they had wifi in their national library. They removed it. It was making people ill. More information comes out and people are stepping back and trying to apply caution. You know, to this, what it seems like a runaway train.

And the thing that really concerns me is that meeting was so poorly attended, the one that I had gone to in Bennington. I'm from Manchester. He's from Sandgate. We are the only two people in Bennington. Nobody knew about it. When I talk to the people on a day-to-day basis, I don't know, do you know anything about smart meters, they are like what? No one has even heard of it. They
can't make an informed decision about whether they would choose to have this technology or not.

Let's see. And then also, you know, you talk about making jobs, creating jobs, but you're putting all the meter readers out of work. So that's a little counter productive. And I just feel too that all that money, the millions and millions of dollars going into this could have gone into developing, you know, solar power or, you know, other alternatives or other, you know, hydro. I mean I'm not well versed in that. But it just seems like a ton of money that's going into something that's just, you know, tweaking consumption a little bit.

It's only behavior modification by individuals that would actually reduce consumption. Not the meters themselves aren't going to save anything, and my understanding too is if there is a power outage, the meter is out as well. The meter is connected to the power grid so everything goes black and you have to report an outage, you know, the old fashioned way by telephone
unless you're saying there is maybe some
central office that is aware of when things,
you know, when people lose power.

But I believe you said at the last
meeting that it runs almost a hundred
percent efficient as it currently is. So
what big difference can the meters make as
far as reporting outages? Let see. That's
really my concern, is that nobody has said,
you know, a word about the health
implications, and I know that in, for
example, Bath, Maine, they have just
declared a moratorium, you know, on this
smart meter project there because they feel
it should be a matter of individual choice.
People should opt in. There is no fee to
not have the meter. And I think that's what
we want in this state.

You know, I mean the irony is here we
are in the green State of Vermont, you know,
where people come to really have a rural
life. And you're introducing a really toxic
high-tech kind of technology, you know, that
affects human health and the environment.
And I just feel like I want to hear more
about it because if you guys don't know about it, then you shouldn't be doing this, if you're not informed about the health consequences. Then you shouldn't be blindly, you know, introducing this technology.

COMM. MILLER: Thank you. Can I ask whether we can move on to others? Just because I am now actually concerned that we everybody has a chance to speak.

MS. VICTOR: Sure.

COMM. MILLER: I appreciate the point, and if we have time at the end, I'll be happy to talk a little bit about it.

MS. LAUNDER: So the next person is Ina Smith.

MS. SMITH: I'm from East Poultney. And it's interesting that you talk about smart meters, as you know, and with health implications, and kind of a run away train. I feel the same way about utility-scale wind. And I don't see that the public has had much involvement in decision making process that the Public Service Board has been undertaking; that there hasn't been a
single wind project denied a permit.

There are people now in Lowell camping out on the border of blasting that's about to take place on the Lowell ridgelines. This is an incredibly divisive technology. There are health implications that are fairly well documented that I can't speak to as an expert, but I have read, and about low frequency vibrations. I think we are pursuing a tragic, tragic development of -- in terms of utility-scale wind along our ridgelines.

I don't approach this as simply from a visual perspective. I think that because it is so divisive to communities and watersheds that especially since Irene, what we ought to be looking at is the preservation of our high ridgelines and the source of our water, not the destruction of it, not blasting ridgelines like mountain top removal. I mean it's crazy what we are doing. And it seems like Montpelier is just kind of blindly going ahead and doing this, you know. And I include Public Service, the PSB in that as well, without really -- without
much regard for the thousands of people in
the state who are very determined not to see
what makes Vermont Vermont. What makes it
-- what makes people spend billions of
dollars here every year in tourism to
destroy that, for a 30 percent capacity
return is appalling.

You say in here "Vermont should continue
to facilitate development of in-state wind
projects in order to achieve renewable
energy goals with particular focus on
community and small-scale projects," which
there are relatively none. "For utility
scale projects development should be
permitted if there are significant economic
and social benefits to Vermonters and all
other CPG criteria are fulfilled."

So the significant economic benefit has
not been shown except for some jobs during
construction. After construction point 6
jobs per turbine. Societal benefits, except
for the destruction of community
cohesiveness, and there is very little
benefit from utility-scale wind. That's all
I'm talking about is utility-scale wind. If
somebody wants to put up a hundred-foot
turbine at a school, which some communities
have done, great. But you start blasting
ridgelines and destroying the watershed, I
think -- I was just going to read the last
paragraph that was in today's New York Times
or yesterday's New York Times.

COMM. MILLER: Today's I think.

MS. SMITH: "Pursuit of large scale
ridgeline wind power in Vermont represents a
terrible error of vision and planning, and a
misunderstanding of what a responsible
society must do to slow the warming of our
planet. It also represents a profound
failure to understand the value of our
landscape to our souls and our economic
future in Vermont."

And if this is not already in the public
record, I would like to enter this New York
Times Op Ed piece.

COMM. MILLER: Absolutely. Sure.

MEMBER OF AUDIENCE: Who is the author?

COMM. MILLER: Steven Wright.

MS. SMITH: The author is Steve Wright.

He is a former Commissioner of the Vermont
Fish & Wildlife Department.

MR. PAGE: So is the climate change person -- Guy Page.

COMM. MILLER: The answer was?

MS. SMITH: Steve Wright. Former Director of Vermont Fish & Wildlife and also Climate Change Advocate National Wildlife.

COMM. MILLER: So that's it for the folks who actually had a chance to sign up when they came in, but I'm sure others of you would like to speak.

Who else is here would like to speak? Annette?

MS. A. SMITH: Thank you, Commissioner. Appreciated the presentation with all updated information.

COMM. MILLER: Thanks, you saw the early version.

MS. A. SMITH: It's really -- Annette Smith, Vermonters for a Clean Environment. And I live in Danby. And I'm going to make comments first as Vermonters for a Clean Environment and then some personal comments. We will be submitting further comments.

I have not had a chance to really digest
the plan and offer you substantive comments tonight. I want to speak to a specific issue, and that is the public process. And while I appreciate the addition of mediation, I am gravely concerned about our public process and frankly what a joke it has become. And the comments I'm going to offer I do not say lightly.

COMM. MILLER: Just to clarify for others, you're talking about renewable energy siting projects at the PSB? I mean --

MS. A. SMITH: It actually goes beyond that. I think that it's the Public Service Board process in general. I have been watching the Public Service Board process deal with specifically utility-scale wind projects for the last two and-a-half years, and have studied the process in that prior to that. It's since about 2005.

I'm also concerned about the tower siting and how that is being done. And with the potential merger of CVPS and Green Mountain Power and the majority ownership of VELCO, it really feels like a steam roller
coming through our communities. And Vermonters for a Clean Environment works with communities to assist people to participate effectively in the regulatory process. I often find myself in the position of advising individual groups of people and towns about how to participate effectively.

At this time, I cannot in good conscience advocate or advise anyone to participate in the Public Service Board process on any issue that I have been watching to hire lawyers, to hire experts and to raise money. It is extremely expensive and a complete waste of money. People would be better off buying cardboard and signs and staples and ink guns and picketing in front of the Public Service Board or just opening up their checkbooks and writing checks and getting a lot of cash and pouring it down the drain. Because as I have observed, I have not seen a single expert's opinions by any other -- any other than developers put into action through Public Service Board Certificates of Public
Good. It's astonishing.

We have set some of the lowest setbacks from property lines in the country, the Public Service Board has, for large-scale utility projects. Every single project that's been approved have setbacks less than 200 feet from neighboring property lines for machines that are more than 400 feet tall. The average throughout the country is 1.1 to 1.5 times the total height. We have seen the Public Service Board in every case set a standard noise at 45 decibels which is the well documented level at which harm is known to happen to people, case after case after case.

And in particular in this most recent Lowell Green Mountain Power case, where credible experts came in, two noise experts, a doctor -- even the applicant's expert who said that he would want 35 near his house. The Public Service Board was told you are setting the standard at the level at which it will cause harm. And it is extremely well documented, and more and more studies are coming out even since March. And we are
not protecting the public.

So while that is specific to wind, I have the same concerns for biomass. I have the same concerns for any large-scale project, and I certainly see it in the towers where there is very little public input and it is rushed, a lot of it fueled by federal stimulus money coming into our communities, giving our communities no tools to deal with the process that does not listen, absolutely does not listen.

If you were an attorney, Commissioner Miller, practicing before the Public Service Board, representing citizens or towns in any recent wind cases, you would be saying I can't do this any more. Many lawyers have told me they do not want to do it. They will not do it, and they will never do it again. This is something that you must take seriously because our process is broken. And having mediation before the Public Service Board process, that won't help. And we recommend community-based stakeholder process where the community works with the developer to agree on the expert to hire,
and then you don't have the dueling experts, you don't have the community bankrupted putting money into testimony that is going to be ignored.

It is -- if you want evidence, I would provide you with the evidence that it is a complete joke now. And I'm very sorry to have to make these comments. But if you wanted to deploy renewable energy, this is new energy, we must do it in a new way. We cannot continue this path where community after community is divided, and we should stop right now, and Sheffield Wind Farm come on line. They will be on line in the next month or two. We will find out. We have already had an oil leak. Everything the opponents are saying, it's coming true, and it's time for us to pay attention.

On a personal note, I live off solar and I have for 23 years in Vermont. I currently get about 95 percent of my electricity from solar. Solar does work in Vermont. I also have solar thermals for hot water, not only for my hot water, but for heating my office. It works. And I'm probably closer to
getting off fossil fuels than just about anybody I know. I drive a hybrid. I was just told by the garage that my battery is about to go at 120,000 miles, and I need to spend 6 thousand dollars on a battery, which actually is what my car is worth. I could get a Chevy Volt for 42 thousand dollars.

So while this dream of electric vehicles is something I want to believe in, I'm not a rich person. I've managed to make the choices in my life to get to this point. But I think that we have to be realistic about what's happening. And until the cost of batteries come down and until the cost of electric vehicles come down, I don't see this transition happening.

It's great that you say there are going to be all these electric vehicles, but we have options now to make smart choices. One of the deficiencies that I see in this plan around solar is that I think that we must prepare for the massive deployment of solar in Vermont once the price comes down, which it's projected to do, to be at grid parity in 2015, and we needing siting standards.
Because if we just continue with this helter skelter build out of the solar without any standards, I think that we are going to see a landscape in Vermont that Vermonters don't want.

I'm already hearing complaints about it, and it's absolutely not necessary to do solar in a way that is objectionable in terms of aesthetics. But if you follow what's happened in the Shelburne planning commission, they have said Public Service Board is not listening to us. And that if -- what's going to happen to our town if things keep going this way? The town of Waitsfield is revising their town plan, and their town plan has language in it that discourages large solar installations in visible areas especially along scenic highways. That encourages it in areas where it's not visible, for instance, at Shelburne Farms is a great model for how to do it right.

But we really need to take a look at siting standards both for wind and solar and get ahead of this rather than this
continuing helter skelter without any plan. Those are my comments.

COMM. MILLER: Thank you. Others?

Yeah.

MR. HANSEN: Thanks for coming. My name is Jerry Hansen. I live here in Rutland. And I'm just going to speak in general terms right now. There is something that is missing, and I'm working currently with the power companies, both power companies. We have a committee, and we are looking into other alternative energy besides the solar biomass, wind, and so forth.

The one that I think has not come up on radar recently is geothermal. And if you look at national studies and so forth, most everybody will tell you that geothermal is very doable, especially in the northeast where you have the unpredictable winds and sun and so forth, and the infrastructure with the geological structures to support that.

We are also working with a state agency on that aspect of it. I don't want to divulge too much because we have been
working on this for two years now. We keep moving ahead. We have found no obstacles to our investigation. And so we are being very methodical about it. We have talked to the congressional side of things, both federal and local. And we have got a number of people very interested in learning more as we go forward. We are also talking to some of the major labs that are being wooed to come to Vermont.

And I would ask you to take another look at geothermal applications. We have done cost analysis, so we know it can be competitive. We are encouraging people all over the place to do home geothermal systems on a small scale. A lot of these programs as far as what she was saying and the other fellow, is there is a lot of supplemental energy that could be provided on a home level to reduce cost. But you have to get the cost to the systems down so people can afford it.

It's like the electric cars. People would buy a 20 thousand dollar car, but not a $40,000 car if they thought it would be
beneficial. So I would just say that I would ask you to look at some of these other vehicles for alternative energy. We also have a very large river to our east that could be utilized for more hydro.

I go to Europe quite a bit and I see this happening in the Scandinavian countries where they are using the currents and tidal basins and flows, so forth, from the oceans to generate electricity on an ongoing basis. These things are very predictable, very reliable. Okay. Non invasive, the least invasive on the environment. So those are things that might accommodate a lot of people here to know that there are other alternatives out there to the obvious which is the wind turbines. And there is actually vertical turbines, not just horizontal turbines, that are far less invasive that will give you almost equal output. And they are being utilized in a lot of other locations, some in the United States, but predominantly in Europe.

So we take that application and engineering and bring it over here. I think
it would be more conducive to meeting the environmental issues of Vermont. As she said, we are the Green Mountain state. We can lead by example, being green for the lack of a better word.

But I think we need to look at all aspects and all vehicles to get us to where we want to go. You had made a comment that we are falling a little behind in some of the progression of getting from point A to point B. I guess in my mind I would like to know what are the obstacles that are keeping us from getting there. So those are some questions, I guess, I would ask you at some later date.

So that's in summary, Commissioner. I appreciate your time being here and thank you for the opportunity to talk.

COMM. MILLER: Thanks. Guy had his hand up first. Can you just for the court reporter say --

MR. PAGE: Guy Page. Vermont Energy Partnership. I hadn't planned to say anything because I know I had my say last night in Brattleboro, but I'm just
wondering, I'm hearing concerns that more research is needed on the frequency stuff. And let's wait and see what happens with Sheffield once its built as far as the noise impact.

From my own perspective there is this big uncertainty of Vermont Yankee, what's going to happen with that. No one really knows. And so the theme I'm sort of seeing here is I'm wondering if the state has any sort of contingency plan to gather this information, even if it means waiting, so that the final product will have important questions answered.

COMM. MILLER: If others have comments, I'll do those first, and then I'm writing down questions as I go.

MR. PAGE: Okay.

COMM. MILLER: Thank you. Brian, did you have something?

MR. KEEFE: Yes, thank you Commissioner. Brian Keefe. And I wanted partly to identify myself -- I work for Central Vermont Public Service, but also a comment to commend you, Commissioner, and your
department for looking broadly at all fuels. I think that is the most refreshing part of this energy plan relative to past efforts.

As two of your slides point out, one points out that electricity as a -- is almost 50 percent renewable depending on different measurements and such. There is a large renewable component in electricity. There is no reason to think we can't at least hold that going forward in the future and do better.

COMM. MILLER: We can do better.

MR. KEEFE: We can do better. Assuming we even hold that at 50 percent, and another slide pointed to the cost and how electricity is cost competitive today with fossil fuels and home heating oils and such. So technology such as heat pumps, geothermal, heat pump technology and as Annette says, electric vehicles. I realize those technologies are not quite there yet, but they are closing fast. And going back to another one of your slides, they are going to close in on that. And I just --

COMM. MILLER: Pause for one second.
I'm sorry that I didn't have a chance to address what you said before. You're leaving. I know you know how to get in touch with me, Annette.

MS. A. SMITH: I want dinner. Thank you very much. It's been a long day.

COMM. MILLER: Thank you for coming. Sorry about that.

MR. KEEFE: Just to sum up, looking at all fuels the way you have in this plan I think is very constructive. If we can maintain that cost competitiveness of electricity that's very important to moving electricity into these other sectors. So that we can, I think, in a nearer term get a better penetration of renewable energy and other low carbon fuels into those other sectors and really start to displace some of the fuel oil, gasoline, and other things that you've pointed out. There is many reasons why we want to displace those.

COMM. MILLER: Right.

MR. KEEFE: So using more electricity rather than less. But I'll just repeat, it relies on maintaining a cost competitive
electricity supply. And that's the challenge we all face.

COMM. MILLER: Right.

MR. KEEFE: Thank you.

COMM. MILLER: Can you for the court reporter --

MR. DEWEY: Keith Dewey from Weston. D-E-W-E-Y. I submitted some earlier comments, they are in the preliminary stage of energy plan look. And one of my suggestions was to actually change the name of the plan from the Vermont Comprehensive Energy Plan to the Vermont Comprehensive Energy and Environmental Plan.

COMM. MILLER: Right.

MR. DEWEY: Purpose for that comment is that so that it becomes clear throughout the state and beyond, that the issues of energy and environmental quality are now for the first time recognized, although they have always been the case, but they are now joined at the hip, and the problem has to be solved simultaneously.

Just to cite one quick study, the University of Leeds probably a decade ago
now cited that if we stay on our present path of CO2 levels in the atmosphere, that the year 2050, 37 percent of all species on earth will be extinct because of ecosystem changes and so forth. At that point the biodiversity of our planet threatens all of us and all of the other species, and it becomes the potential tipping point of downward spiral of life on the planet as we know it.

I ask myself in relation to this preliminary plan, given the fact that we are setting a gallant goal of 90 percent renewables by 2050, which incidentally is the same year as the species extinction number, what grade would mother nature give this plan. And although I think there is lots of wonderful things, I'm supportive of you and Governor Shumlin and all the efforts to even start thinking about renewables for the first time, I'm afraid mother nature would give this plan an F. And sadly, it's not that there is not effort. It's that the efforts we are making do not address the real problem with the real solution. Tough
as it is, we got, you know, we are at 396 parts per million of CO2 in the atmosphere right now growing at 2.2 parts per million per year. A lot of you probably heard of the 350.org organization who advocates we need to get back to 350 to balance our ecosystems. Many people think we need to get back to 300, including myself. So we are near 400 parts per million. We do not -- what I'm saying is, if we follow this plan, we do not have time to save the ecosystems of the earth that we need to by setting a course for 90 percent renewables by 2050. It's too little too late.

And I understand how daunting a comment that is, and it's ridiculous, we could never meet that, but I'm saying we have to. And we have to stop kidding ourselves that we are setting these plans and goals that don't get us 60, 70 percent to the goal. We have got to get all the way there. That's my concern.

And I think we are not being aggressive enough. There is comments about biomass. Absolutely we have got to go into biomass.
Emissions is a concern. You know, biomass in my mind is stored solar energy. It all comes down to, you know, using CHP systems, district heating strategies for our community so we can share these heat systems with, you know, town halls and schools and churches and libraries that are all centristic to the towns we live in and start thinking about mass transit. I didn't hear anything about that. It sounds like a crazy idea for nice, sleepy, rural Vermont to have maglift monorail train from one end of the state to the other. But if you think about the fact we travel 91.7 percent of all our trips in automobiles in this country, with one person, with no cargo, you know, those kinds of things are -- we could start to strategize, to consolidate our energies for this needy transportation sector by thinking more about mass transit systems and moving in that direction much more boldly and much more quickly.

You know, I guess my basic comment is let's be careful not to set a plan that doesn't get us to the finish line. And we
have to have the courage to define what the problem really is. Do the math. You know, there is lots of comments about sound decibel levels with turbines and setbacks and all those kinds of things. I think we need to do the homework of all those things and do them well too. But if you look at the reality of how much clean green electricity, which would be the common denominator of our energy in the 21st century, we need a massively greater amount of clean electricity, and it all has to be green. Because we can't break apart the environmental solution from the energy solution, part of the same.

And so that tells me that my concern should not be gee, I don't want to look at the wind turbines on the hillside or, you know, whatever, you know, solar panels that are in my view and all that kind of stuff. That changes my priority thinking to oh my God, we have got to get going. We have got to do all of this and then some. And there is very, very few people that have done the math of how much clean, green electricity we
are going to need to solve mother nature's
demands. We have got to start with that.

COMM. MILLER: Thank you. Others? It's
about 8:35, 8:40, and I do want some time to
address some of the questions, if possible.
But anything you would like to add? Others?

Okay. Well let me just open it up for
some conversation then to address some of
the questions. Keith, I appreciate the
comments. I remember the comment that you
made before, we have gotten at every public
meeting, I think, and this is good, it means
Vermonters have the same, you know, across
the state we are hearing similar comments.

On the one hand, how could you set goals
so far out. It's not quick enough. And
frankly, on the other hand, we are hearing
what I think some others here lean more
toward which is how are you going to ever
achieve this in an affordable manner given
all of the other challenges, particularly
that transportation is not something we
directly affect given its interstate nature,
et cetera. So we are hearing those
comments.
And what I can tell you is the Governor understands the environmental choices and the connectivity between the energy and the environment. That's one of the reasons why he's asked for a Climate Cabinet oversight of this plan as opposed to simply a department that's in charge of electricity for the most part. We do call on the plan for things that aren't going to satisfy ultimately your comment, but they do get us toward that.

We call for the legislature to look at the structure of how energy issues are addressed in our state government. Some states have specifically combined environment and energy departments, for example, just in recent years. One thing this planning process has allowed us is a much closer connection to some of our agencies and departments that touch on these issues.

This has been a collaborative process. We expect it to be a collaborative process going forward. That answers at least the connection issue. We do understand the
connection.

Some of the other comments that were made, Guy, you asked about contingency planning and waiting. I view this entire process as dynamic. You can't have a plan and then put it on a shelf, nor can you have a plan and then execute it like this without looking at what's happening in the world around you. So the plan attempts to recognize that by asking for a dynamic process of annual review, more frequent updates of the formal plan itself, specifically because things change. That does not mean in my view and the plan does not call for specifically waiting. Because there is a need both because there is a current process in place for projects that are pending, and because there is a need to move forward now.

The world always changes, and Vermont needs to react to the situation on the ground now. Right now, and then also be prepared to change and modify as we go forward. I just believe that's how we have to proceed, and I think if we were to -- on
any issue -- put a hold, we would risk
losing ground in a way that I don't believe
is productive for the state as a whole. So
that's the purpose of the planning document,
not calling for a halt in any particular
area.

By the way, if folks want to break in
feel free, but I'm just going to click
through some of the questions otherwise.

Brian, you addressed the issue of
electricity affordability. I very much hope
we have addressed that in the plan. I just
want to point out to folks that one of the
pieces of the plan that I didn't mention
earlier, I did mention the economic impact
study for efficiency. But I didn't mention
that as a part of our electricity modeling,

We also looked at the carbon impact of
each of those profiles. The recommendations
that we are making are based upon an understanding that you have to look at the cost. Electricity -- renewable electricity has an advantage now if you were to compare it to the cost of gasoline. And we very much believe that when you look at transportation as something that you mentioned looking forward, electricity will be cost competitive in the future.

Transportation Research Center just came out with a study that -- if you want to find it online you could Google Transportation Research Center, and I'm sure you would find it. It compared the cost of fueling your car with gasoline versus fueling your car with electricity right now. And if we were to all magically change to electric vehicles we'd be saving a lot of money is the bottom line. And if we can keep our electric profile renewable, move it to more renewable, then we are going to start addressing the issue of getting to the goal. And I understand some feel the goal is not fast enough. But one of the things we really struggled with is how can we move
transportation, and what is realistic with transportation given the challenges that we have in the state. So we understand the affordability issue.

Yeah, Keith.

MR. DEWEY: I was just going to add one thing that may help become a vehicle to move more quickly, is that as a society up to this point our bottom lines of financial analysis are all these trade-offs, is all based on, you know, the cost per gallon at the pump, for example. Well I read something recently the true societal cost of a gallon of gasoline is actually about 17 dollars and 50 cents. And we all saw firsthand recently, although you cannot attribute the single severe storm to climate change, the general trend of frequency and severity of severe storms on the planet and shifting of the earth's crust causing tsunamis and earthquakes, et cetera, is all definitely accelerating as a consequence of our climate change. Those costs need to actually be added at a governmental level to the bottom line of the true societal cost of
doing business as usual.

COMM. MILLER: So we received that comment. And there is a couple of places in the plan that address that issue, life-cycle cost, essentially is one quick way people say it. Governor Shumlin at the cabinet level is having us investigate what are known as alternative progress indicators kind of generally speaking. It's another way of looking at economic progress. And it wouldn't be as if you would just change the current metric or throw the current metric out. Instead you would measure alongside to say, okay, here's the traditional way of measuring progress. If you take life-cycle cost, here's what it looks like. Some states have done that. More states are looking to adopt it. Vermont is investigating it right now. We recommend it. So that helps that issue.

Also if we were to get authority to start looking at a total energy standard, it's not an easy thing to do. No state in the country has done that. But if we did look at that, it would help address what
you're talking about. You would say, okay, what's really the comparative costs. So that's one benefit of moving to that system.

MR. DEWEY: And Vermont being the type of people we are, the size we are, we could set the standard for not only the nation but the world. We should do that.

MR. STANNARD: Can I ask a question?

COMM. MILLER: Yeah, of course.

MR. STANNARD: In our quest to move more towards electric vehicles, I guess particularly with personal vehicles, don't -- do we take into account the increased demand for electricity to power them?

COMM. MILLER: Absolutely. That's one of the big --

MR. STANNARD: Is that considered in the plan?

COMM. MILLER: Yeah. The answer is it is considered. One problem we have is that we are at this moment in time as electric vehicles are really becoming possible, this is going to get you in the weeds, the dispatch modeling -- the type of modeling that we do in the electric world to forecast
well into the future, doesn't have a model right now. At least we couldn't find one. It doesn't exist, that can account for all of the societal changes, all of the infrastructure changes, all of the transmission changes, all of the distributed energy changes including, for example, the fact your batteries may become a power source, you know, two-way street.

So we can't exactly model, you know, it's not like you can have a crystal ball and exactly model it into the future. But what we do call for in the plan is a recognition that's exactly the sort of thing that we need to start accounting for. And if you had everything change to an electric vehicle in Vermont, poof, this is how much the load would be, this is how much we would need to account for it. So we are aware of the issue. It's not specifically modeled in the plan because frankly, that type of dispatch modeling doesn't exist.

MR. STANNARD: And then with the increased efficiency or the savings and the dollars would have to account for the
increased use of the electrical vehicles.

COMM. MILLER: Yeah.

MR. STANNARD: So forth, so on.

COMM. MILLER: It's really complicated.

MR. STANNARD: It's a never-ending, complicated equation, and that's why you have to deal basically with what you're dealing with today and separately with the future. Which goes back to his point which was a very good one. You're not going to cure the problem without mass transit.

COMM. MILLER: Yeah. And thank you for saying that. Again, it's hard to capture everything in the slides. And the VTrans' strategies in the plan do include public transportation strategies. Obviously there are issues in a rural state, as you mentioned, but we can do better. And there are calls specifically for how to reduce individual single occupancy vehicle commute trips. Ride sharing, you know, strategies that can work in a more rural setting.

So, and I think, you know, you probably saw in my spring presentation, I like to tell Vermonters all you've got to do to save
a bunch of energy is put one other person in your passenger car. You don't necessarily have to take a bus anywhere. It's obvious once you start thinking about it. It saves half the energy.

We did a good job tonight, those of you who put someone in your vehicle tonight. You did a good thing.

Okay. So we don't have a lot of time, but I want to address some of the other issues that came up. On the smart grid issues let me just say very broadly without getting first to the meter and the RF issue, the smart grid system is a multi-faceted program that's being rolled out. It's not only the meters. So thinking just more broadly for a second, what the smart grid system as a whole is going to allow us to do is have a more responsive, more adaptable transmission system which will help with things like getting electric vehicles managed on load in our state.

It will help with things like outage. There is data on outages and how the smart meters that communicate with the whole
distribution system can help with outages. That is, it's hard data. It exists, that will be a good thing. So it's not just the meters. That's the first thing I want to say. The smart grid will help us do some of the things folks have talked about here tonight, have more distributed generation, more diffuse areas throughout the state rather than the old model which was a really big power plant in one state with big transmission lines going out from it. So there are benefits to improving our transmission system by using that technology.

When it comes to the meter systems, as you mentioned, there is a process going on at the Public Service Board. I hope you heard -- I hope you were there for my comment that despite the fact that we sent the -- department sent out a press release, we tried to publicize it. I was sorry to see that there wasn't more public participation. That process is, however, ongoing. We are addressing at the department customer choice, giving people
the choice to opt out.

We heard the comments on cost. The Hearing Officer heard the comments on cost. There are -- and again this isn't so much the energy plan. But I'm addressing the comments that were made. There are costs to all of the other ratepayers when some folks choose not to have the new infrastructure. There are costs to that. And the question is whether the individual who chooses not to take the meter bears the cost or everybody else bears the cost. Those are the two choices. Traditionally, and I'm just telling you what the law has been, traditionally the Public Service Board here, and frankly in other states, has had a rule that's called cost causer pays, that's just shorthand. In other words, the person who is causing the cost bears the cost rather than the rest of us. So that's the model that was in mind when the opt-out program was put in place.

I don't know if you're CVPS customers, that's probably the tariff you were referring to. But I do want to let folks
here who might not be aware of this know,
Vermont is in the forefront of offering that
choice in the first place. And someone said
that the Maine system was cost free. I
don't actually believe that's correct. I
believe the charge is higher in Maine. We
don't have all the answers right now. But I
am very aware that consumers in Vermont do
want a choice. I understand that. My
belief is that the opt out rather than opt
in, as someone had mentioned, is appropriate
because we are talking about new
infrastructure and the infrastructure will
work. And I'm not just talking about the
meters here. I'm talking about the whole
system, if we roll out the whole system to
as many Vermonters as possible.

In terms of the RF issues, I'm sure
you're aware of FCC guidelines and the FCC
overlay on this, and I don't want to get
into a discussion on issues that I'm not
personally expert on. But the federal
government has guidelines. In fact, the
federal government --

MS. VICTOR: Just to jump in I think
most scientists that really, really are
experts that really know this believe those
guidelines are completely, you know, fooey.

COMM. MILLER: I'm not an expert. I'm
just telling you that from a state law point
of view there are federal laws we have to
look at too.

MS. VICTOR: That's the run around,
that's not the moral answer to this.
Because if you really honestly were
concerned about health, you would really
find out about the truth.

COMM. MILLER: My approach to this has
been one of giving customers choice.
Because we get comments on all sides of this
issue.

MS. VICTOR: I'm sure you do.

COMM. MILLER: Similar to other issues,
I feel that there ought to be customer
choice. And I've pushed hard, and Brian
will nod his head, I've pushed the utilities
hard to offer opt out to customers. Because
I understand folks have that concern. Many
folks have a privacy concern, separate and
apart, or even without regard to any health
concern. They might be someone with a wireless network in their house and they still don't want the meter because of privacy issues.

So I guess that there are concerns, and the department is pursuing a policy of allowing customer choice. Again it's not particularly -- that's a current proceeding, so it's not specifically addressed in the energy plan. But that's what we are doing there.

MS. VICTOR: Which is great. I'm glad that you're doing that, but I just feel it's still maybe not enough.

COMM. MILLER: I understand the concern. We will have it in the other proceeding. I just wanted to address it at least briefly again tonight.

Addressed biomass a little bit earlier letting you know where else to look in the plan. I'm certainly in contact with Beaver Wood on the project itself. And I know -- I think I know at least, I think I know the most recent update on where you are with the project.
MR. BOISQUET: Yes.

COMM. MILLER: And you certainly know how to get in touch with me to discuss it. What else have I missed?

MR. STANNARD: Can you give us a quick opinion on the correlation between the in-state base load power generation example by things like Beaver Wood in comparison to sending our money out of the country to Canada on both a short-term and a long-term basis? For which I would assume there is a different prediction.

COMM. MILLER: Short term and long term you mean?

MR. STANNARD: A-hum.

COMM. MILLER: Your base load comment earlier, one thing that came to my mind is I didn't -- and Guy and others who have been to other presentations, I tried to shorten it tonight frankly. But I did have a slide earlier in presentations that kind of laid out where electricity comes from. We are about 11 or 12 percent in-state hydro right now, for example. That's a base load -- considered a base load resource. About 30
percent out-of-state hydro, primarily Hydro-Quebec, although we also get some power from New York, so in terms of other base load resources besides Yankee which is about a third of our power right now, taken by four of the utilities in the state, we do have other base load including in-state base load.

We also have the McNeil generator, the Ryegate generator, both biomass electric; probably missing some others.

MR. KEEFE: Farm methane. Cow Power.

COMM. MILLER: Cow Power. Thank you. Of course.

MR. STANNARD: I'm aware of that, but I think I'm a little concerned about our projection to rely --

COMM. MILLER: Landfill.

MR. STANNARD: -- to rely more and more on Hydro-Quebec. Because at the moment it seems to be for less money at a lower rate. Whereas I don't know that anybody can predict that to be true in the long-range future.

COMM. MILLER: No. It's a concern we
have heard. You know, how much we keep in state versus allowing to be more regional. The Hydro-Quebec contracts, the new ones, are long-term contracts with known kind of bands of pricing, so they are not flat. But they are more stable than I think your bigger concern which is, you know, what could happen in any given year. We actually do have some protection from that with the long-term contracts we have, which is good.

The plan is about a 20-year plan.

MR. STANNARD: My bigger concern is also to consider all of the effects of the in-state base load as opposed to the out of country --

COMM. MILLER: Right.

MR. STANNARD: -- base load, which sends jobs out of the country as opposed to creating and keeping jobs in state, which I think is a very important factor, and we don't hear much about it.

COMM. MILLER: Right. And we do, again I think I said this earlier, but I'll say it again. We do suggest that for renewable energy projects the total economic impact be
considered so that if there is —

   MR. STANNARD: Okay.

   COMM. MILLER: If there is a benefit, we
also suggest that other benefits be
considered. Locational benefits is one we
often talk about. If you put a resource in
a particular location, sometimes it has a
better benefit to the grid and a better
cost. So those are things we suggest get
looked at.

   There was one other point though that
you had made earlier that I wanted to make
sure I mentioned. Can't remember what it is
now, of course, so I apologize.

   MR. STANNARD: It's all right.

   COMM. MILLER: No, that's okay. I'm
sorry I can't remember it.

   MR. STANNARD: Done a good job.

   MR. HANSEN: Talking about job creation
and so forth, the reason we are looking at
geothermal is it's all internal, it's in
state.

   COMM. MILLER: Yeah, geothermal. That's
what I forgot. Thank you for saying that.

   MR. HANSEN: It's very important. As I
said, it's the least invasive of all the alternative energies on the environment. Okay. It's also the most predictable, most reliable, and the most resourceful.

COMM. MILLER: Right. Mr. Hansen, right?


COMM. MILLER: I actually wrote it down. Thank you. Sorry. Thank you for reminding me. If you have information on geothermal becoming more cost competitive, if you could share it, that would be great. We do talk about geothermal in the plan. And we would be very supportive of that expanding. The problem, you know, the challenge I guess, with geothermal has been similar to what the problem mentioned with transportation, and you know, the reason why we see the progress going like this with transportation (indicating), the costs have to come down first. Same with geothermal.

MR. HANSEN: Absolutely.

COMM. MILLER: If you have information, that would be something to share with us. It would be great to have.
MR. HANSEN: We have got some financial analysis and so forth. We have involved just the right amount of people to this point. That's why I didn't want to discuss too much in an open forum. Okay. And glad to share that with you.

COMM. MILLER: Great.

MR. HANSEN: We are being very methodical about how we do this. Gary may know a little bit more about it. His company is involved. Green Mountain Power. We are trying to be very methodical about this. Right now we are kind of letting the dust settle because of the M&A. The acquisition between the parties. We are trying to be careful how to move ahead, keep the ball rolling. As you said, this is dynamic. So we had need to look at all the vehicles.

COMM. MILLER: That's one of the great things about the planning process is it's been very collaborative. Personally I feel it's been collaborative, and we try to hit kind of all sources. But the frustrating thing is just that things change. So we do
talk about geothermal, but we recognize in the plan that it would be fantastic to expand that resource, but that scale and cost competitiveness have been the issue.

And then the other thing we talk about that's a little bit related, and some others have mentioned, is storage. We didn't talk about it tonight. But energy storage. The most kind of known one to folks is the idea that with the two-way grid communication we can actually use our vehicles in the future as a potential balancing source of power. But energy storage generally there is work in hydro, and there is work in solar.

MR. HANSEN: As I said earlier, we are also looking at some other hydro aspects, but we have already sited five sites, geologically formations, that would support that, and four of them are in proximity to the existing grid to keep costs down.

COMM. MILLER: Interesting. What else did I forget? I don't want people to feel I hadn't given them a little address.

MR. DEWEY: I was just going to suggest that Honda is banking on hydrogen and fuel
cells that their strategies --

COMM. MILLER: Fuel cells, right.

MR. DEWEY: Hydrogen creation through electrolysis, which is all electric based, but that will be a real part of our future as well.

What I wanted to say was in terms of incentives you mentioned that the Efficiency Vermont success story, one dollar invested versus $4.6 --

COMM. MILLER: Of net present value.

MR. DEWEY: -- to the state. We should use that as a model. I'm a firm believer in carrots, not sticks. Especially when it comes to the green building movement and energy efficiency and all the renewable industries, that we can create and sustain a positive attitude toward that movement, by creating large state-sponsored carrots which we see from an Efficiency Vermont model as big dividends. That we should not be afraid to offer healthy incentives to jump start this entire movement and get this moving so we can get there faster than we thought.

MR. HANSEN: We would bring the
technology to Vermont. That's what we are
working on. That creates jobs too.

COMM. MILLER: Right. I didn't have a
chance when Annette and the other individual
was here who talked about siting and the PSB
process to respond, and for those of you who
heard that and want to know what the plan
suggests with regard to the PSB, I
highlighted the mediation process. I do
feel that that would be helpful, but we have
gotten a number of comments similar to what
was raised here tonight. So I do understand
the concern.

And from the PSB, you know, from my seat
at the department, working with the PSB,
it's always difficult in a contested case to
let everybody feel that they have been
heard. And I think the public hearing you
mentioned from a couple weeks ago is an
example of that. And the Hearing Officer
that night, I don't know if you heard, asked
me, I don't know if it was while the cameras
were rolling or not, but he asked me how can
we get the word out better.

So I do think there is an awareness that
there needs to be better outreach. So again it's not directly related to the plan. But I just wanted to let you know that we are aware of the issue. I believe the Board is as well. There is no immediate silver bullet, but we are aware of the issue.

Any other comments? It's about 9 o'clock.

MS. STANLEY: Very quickly. It's a digression. Something that leads to efficiency is a matter of education. And I'm just looking at us here, there is four of us from Fair Haven. We all know each other very well, and I believe we probably came here in four different cars.

COMM. MILLER: Well --

MS. STANLEY: And so we don't think first of, gee, we are all going to the same place, let's see if we can take one car.

COMM. MILLER: Right.

MS. STANLEY: Never occurred to me to ask these three gentlemen to get in my Jeep and come with me, and I apologize.

COMM. MILLER: Well next time.

MR. KEEFE: You were thinking these
gentlemen would think of you.

COMM. MILLER: No. That is -- it's interesting. I now work in Montpelier and live in Burlington. I have become much more aware of my travel habits since having that commute. It's really --

MR. STANNARD: It's almost ludicrous if you sit and watch traffic and count what you're talking about. The gentleman was absolutely right on his count.

COMM. MILLER: Right. Well thank you. Yeah. I'm sorry. Go ahead.

MR. ROBINSON: I just want to say at a couple of your meetings I have been struck with the different people coming from different areas that have expertise on different topics. And yet we don't have a clue as an audience who they are. I think it would be beneficial if you could do it without invading privacy and perhaps somewhere you could post such and such --

COMM. MILLER: Comments.

MR. ROBINSON: -- came, you know, and this is their particular level. I know at the last one I went to we had a couple of
gentlemen from down in Bennington, and we
were just biomass. And they were -- I
didn't have a clue who they are, yet they
wanted to be involved in conversations,
could be a conduit for that. Because you're
the only one that has that information --

COMM. MILLER: Right.

MR. ROBINSON: -- as far as
participants.

COMM. MILLER: You know, last night in
Brattleboro we received a comment about,
again it wasn't directly plan-related, but
it was a good idea about setting up some
sort of clearinghouse, information
clearinghouse, similar -- that's an
interesting idea. Because we have a lot of
information, you're right. And we have
posted summaries of comments, but we haven't
done what you're suggesting.

MR. ROBINSON: Yeah.

COMM. MILLER: Okay. Thank you. Yeah.

MR. DEWEY: I was just going to say
probably the most important thing you can do
to make your plan successful is education.

This lady here made mention that she talks
to people about smart grid, and some people
don't even know what that term means. Well
that's true across the state, and people get
busy with their day-to-day lives. They
don't understand the issues that -- the big
picture what they are facing, so they get
easily swayed by politicians, and they twist
their priorities around and decide one thing
is more important than another.

The way to cut through all that is for
your department, and I congratulate you,
you've made better outreach effort as a
Commissioner than anyone I've ever seen.

COMM. MILLER: Thank you.

MR. DEWEY: But that is the key to
having success is to educate the general
public in the state, whatever vehicle or
effort that takes on your office to do that.

COMM. MILLER: Right.

MR. STANNARD: You can't educate them
through the media.

COMM. MILLER: No.

MR. STANNARD: The media doesn't get it
right for whatever reason.

COMM. MILLER: I appreciate the comment.
And we have talked a lot about that internally. I didn't mention it tonight, and it's a minor thing comparatively, but I do want to mention it in closing.

Vermont Renewable Energy Atlas is a great resource for folks who are here and just wondering about what Vermont has in terms of renewable resources currently deployed and potential for solar and other things. If you put in Vermont Renewable Energy Atlas it will come up. It's a minor piece. But that's the sort of thing that I wish more people knew about.

And so thank you.

MS. STANLEY: What did you say it was? Vermont Energy?


MS. STANLEY: Atlas?

COMM. MILLER: Yeah. It will come up. Do you know the URL?

MS. LAUNDER: I don't know the direct URL, but it's on the Vermont sustainable jobs funds Web site which is www.vsjf.org.

COMM. MILLER: Well thank you for coming
out on a rainy night. I really appreciate it.

(Whereupon, the proceeding was adjourned at 9:05 p.m.)
CERTIFICATE

I, Kim U. Sears, do hereby certify that I recorded by stenographic means the public hearing re: Vermont Energy Plan, at the Rutland High School, 22 Stratton Road, Rutland, Vermont, on September 29, 2011, beginning at 7 p.m.

I further certify that the foregoing testimony was taken by me stenographically and thereafter reduced to typewriting and the foregoing 116 pages are a transcript of the stenograph notes taken by me of the evidence and the proceedings to the best of my ability.

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

Dated at Williston, Vermont, this 3d day of October, 2011.

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Kim U. Sears, RPR