Public Hearing held at Brattleboro Union High School, 131 Fairground Road, Brattleboro, Vermont, on September 28, 2011, beginning at 7 p.m.

PRESENT

Elizabeth Miller
Commissioner, Department of Public Service

Chris Recchia
Deputy Secretary, Vermont Agency of Natural Resources

Costas Pappas
Vermont Agency of Transportation

STAFF OF DPS:

Kelly Launder
Andrew Perchlik
George Nagle
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COMMISSIONER MILLER: Let's go ahead and get started so we can reward those of you who came and came on time and have a productive couple hours on the energy plan.

I'm Elizabeth Miller, the Commissioner of the Department of Public Service, and I'm really excited to come down to Brattleboro for our second energy plan draft meeting and hear the comments that you all have.

You know it's funny. When we started this process I let people know that public hearings would be probably late summer or early fall, and my big concern was that if we did them too early kids would still be on summer vacation and families would be out of town, but I forgot about the baseball season.

MR. RECCHIA: Used to be you didn't have to worry about that.

COMMISSIONER MILLER: So I do appreciate those of you who have come, and if anyone wants to shout out a score at some point during the evening, they should feel free.

So what I thought I would do tonight is start off with a presentation. I would call it brief, but honestly it's about 30 minutes.
I'll try to get through it as promptly as I can so that we can turn to comments, but I do want to just set the stage for the plan so that you -- for those of you who haven't had a chance to look in detail at it, you can at least see the format that we've gone through, some of the ideas that we have, and the reasons why we have the ideas in it.

So we're going to do that and then we're going to turn it over to public comments, and I'll use the sign-in sheet first and probably ask folks to give a relatively brief set of comments so that we can make sure to get through everybody, and then we should have, given the number of attendees here, time for a discussion, and I would like to have a discussion, not just hear comments, but I want to at least make sure people have a chance.

So we'll probably do it that way, and I want to thank Chris Recchia, the Deputy Secretary of ANR for coming tonight, thank you, and Costa Pappas from VTrans is here, one of our fantastic planners and very instrumental in all of the transportation portions of the comprehensive energy plan.
That's great. Thank you for coming.

And then I also have three members of my Department here; Kelly Launder, Andy Perchlik, and George Nagle in the back. All three of them have spent lots of time in the last six months working on the draft plan.

Okay. So with that just very briefly, most of you know this, we do a Comprehensive Energy Plan because in essence we have to. There's a statute and it requires us to look at it, all sectors of energy, but more importantly we do it because it's important, if you go to the next slide, to look for energy sources and planning into the future in a manner that is adequate, sustainable, reliable, that looks at affordability, the environmentally sound ways to obtain energy, and efficient ways to obtain energy, and if you don't do that, that comprehensive planning process it's very easy to just focus on one sector of energy or another and not have a vision for where the state should go as a whole in all sectors of energy usage.

So the Comprehensive Energy Plan statutes that the Legislature has put in place
charged the Department to work with other
state agencies and departments to come up with
a Comprehensive Energy Plan on all energy
sectors, and that's the process that we've
engaged in since -- well since Governor
Shumlin came into office in January. He made
very clear that it was a first year priority
for him to have the Department complete this
process.

So very quick overview. You'll see
where we are now, what our goals are, why we
think these goals are worth achieving, how we
can achieve them, and then a very quick
highlight trying to reduce to a slide, which
is very difficult given the length of the
plan, some of the key recommendations in each
energy sector, efficiency, electricity,
thermal energy, transportation, and land use.

So where are we now? About a third of
our energy comes in the transportation sector.
That's where we use it. About a third in our
homes, and just over a third in our businesses
and industrial uses. In each type of energy
end use there's different mixes of actual
energy source. Like in transportation it's
almost all gasoline not surprisingly or diesel, where in residential it's broken down pretty evenly between electricity and home heating.

In commercial and industrial there's more electricity than there is heating, but what you can see here is that it's a mix of energy sources in the different end use sectors, and I should say now we will have this presentation online. So if there's any details in this that you're interested in looking at after the fact, we also brought I think a few printouts so this will be available.

So anyway about a third, a third, a third. If you look at Vermont's energy usage over time, this is a chart, I know it's hard to read, but it's a chart from the 1970's through 2005, and what it tells you, if you just look at the way of chart's trending, we use a lot more energy now than we used to a couple generations ago. It's not a surprise given the way life has developed, but it's proven by the data, and there's quite a bit of increased usage in transportation which is the
orange bar, the second one down, and in
electricity which is the red bar, the third
one down, but frankly all of them, if you
look, have trended up.

Next slide. Greenhouse gas emissions,
which can be tied to energy usage depending on
the source, have also over time -- this goes
from 1990 to present and then projects
forward, have over time trended up. If you
look from 1990 to about -- if you look from
1990 until about 2002 or 2003, you see a trend
upward, and then good news from 2003 close to
the present you see a relatively gentle slope
trending in the other direction down.

So that's good news. However, the
Legislature has set goals for greenhouse gas
emissions that are aggressive and will help
Vermont reduce its total greenhouse gas
emissions footprint and environmental impact.
The two goals that are most immediate is a
2012 goal which we frankly will not hit. We
would have to be on this path to get to it in
a year, and this goal represented by the
dotted line here leading us to 2028, and I
think there's some good news here. We have
some work to do, but there is a trajectory you can kind of see based upon recent progress. If we can just get that line going down, we can head towards 2028 and the goal that's been set.

So greenhouse gas emissions are influenced of course by the type of energy we use. Renewable energy by and large is a better contributor, a lesser contributor that is, to greenhouse gas emissions depending upon the type and the way it's used. So I like to tell people where we are with renewable energy.

The first pie -- that's okay. The first pie gives total energy type. In other words, we use 39 percent of our total energy in electricity, 61 percent in transportation fuels and home heating fuels and industrial and commercial heating and processes. So 40 percent electricity, 60 percent everything else.

Of the electricity we're doing fantastic frankly with regard to renewable energy. Nearly 50 percent of it is from a renewable source right now, and that includes...
Hydro-Quebec. It also includes renewable projects where renewable energy credits are sold out of state. So that's a source-based number, almost 50 percent, but on the other side when you look at transportation and home heating and industrial we're only five percent renewable, and that's mostly biomass for heating, and so there's quite a bit of white space still on that side of the graph.

Next slide. So in total if you do all the math that's implied by that last slide, you would find that 23 percent of our energy usage right now total is renewable.

Next slide. Costs for a second. This chart on the left shows the dollars out of your pocket for using various energy sources, and electricity is the first bar. It's the most expensive in absolute dollar terms compared to other sources of energy such as LPG, oil, and gasoline. If you adjust for inflation, which is what this right graph shows, what you see is that while electricity is the most expensive in absolute terms, it's actually flat from an inflation point of view. In fact, it's a little bit down. In other
words, it has not kept pace with inflation which is good news from a pocketbook point of view. The other types of fuels have exceeded the rate of inflation. So they are going up 2 to 3 percent more than inflation.

This is just another way of showing you electricity rates because people often ask. The orange bar is Vermont. The green is the rest of New England, and this is actual dollars out of your pocket you were paying. This is now inflation adjusted to 1991 dollars on the right so that you can see what those dollars mean over time.

So what you see is that Vermont has been less volatile I guess is the word. It has less up and down compared to the rest of New England, although it has had a rise, not as great as the rest of New England, but it has risen. On an inflation adjusted basis it's risen, but not nearly as dramatically. It's not quite flat.

Okay. So just touching upon some facts in each energy sector other than electricity, efficiency, one of the things we did in the plan, you'll find in the appendices, we asked
for an economic impact study of our efficiency programs in the State of Vermont, and there's a lot of different ways one could do that.

What we decided to do because we thought it would be the simplest, easiest approach is we took a single year of electric and thermal efficiency budgets, 2012, which has just been approved, and we applied an economic impact model, and when I say we, our consultants I should say. I reviewed, but I did not crunch the numbers, but George helped, and what we found is that we've made great progress with electric efficiency. We've used less energy in the last several years because of it. It's not cost as much as buying energy, electricity on the market would cost. It's saved us money in that respect.

It's also saved us -- it's also brought to us, rather, money in other ways. We've been able to leverage about four and a half dollars in net present value to the state for every one dollar of public spending we've made, and that's because efficiency requires contractors, materials, work in your home, and that benefit is real when you start to look at
the numbers. So that's very good news.

It also -- we also found that, this is pretty in the weeds stuff, but we end up paying about two cents per kilowatt less on our electric bills because we're more efficient than other New England states. So we save in the regional charges that otherwise would be borne by Vermonters.

Thermal efficiency we also looked at, and in short it's the same story. It creates jobs and leverages resources by doing that. We don't spend as much public money on thermal efficiency, heating efficiency. Right now we spend only about a tenth as much as we spend in public money on electric efficiency.

Real quick there's a mix of programs. I've talked about that a little bit already. We have electric efficiency programs, we have home heating, thermal efficiency programs, but a comment that we've received in this planning process is that Vermonters don't feel there's a real easy way to get those efficiency services in a way that they can understand, implement, finance, get put in place.

We're also we found, we knew this but
crunching the numbers is another thing, we're behind the legislative goal. The Legislature has a goal of improving the energy efficiency of 80,000 homes by 2020 in a way that would save at least a quarter of energy costs for those homes. 25 percent. We're behind. We would need to rapidly increase our rate of efficiency projects in order to reach this legislative goal.

There's some good news. I think it's pretty good news. A recent study done this summer by the High Meadows Foundation and the Regulatory Assistance Project found that the average cost to improve that 25 percent savings in a home is about $7500 of upfront energy efficiency project. So that just kind of gives you a sense of the scale. $7500 per home. We're behind on the goal. You know we can do the math and see what the need is for folks to be able to finance projects.

Okay. Transportation. Interestingly most Vermonters spend more than the national average on transportation. For most Vermonters it's closer to a third of total household expenses right after housing. So if
you think about it, most Vermonters spend more
on driving, and that's vehicle, insurance,
everything else than things like health care,
education, and food.

It's also, as you can see from the
earlier chart, our single largest greenhouse
gas contributor. Why is that? Well in short
it's because, just like you saw the energy
usage going up over time, that's partly
because we've been traveling a lot more over
time. In 1975 this is how much Vermonters
drove. This is in millions, and as we head up
in the generations you'll see it's almost
triple -- I'm sorry, it's almost double the
usage in the last 30 years of vehicle miles.

You can see a dip though and, you know,
the dip frankly corresponds with the spike in
gas prices and then the economic recession.
So economics appears at any rate to change the
way Vermonters move, but over time clearly
we've driven a lot more than we have in the
past.

Why does that matter? Well it matters
because it integrates with where we live and
how we work and use services. From a land use
point of view what's really interesting is, you probably all know this, Vermont is a relatively sparsely populated state, right? We're not as dense as the rest of the country. That shows you our density compared to the US average, but 30 percent of Vermonters live in what the state calls our 21 designated downtown areas. Live in relatively compact downtowns.

Interestingly, though, next little stat the 2010 census showed that those 21 communities are growing at a slower pace than the rest of the state. So what does that mean? It means that -- it means that we're growing in areas that aren't compact and that affects how much we drive, how much energy we use in transportation.

Next slide. It's obvious I think, but there is actually data that supports the idea that people travel fewer miles if they have accessibility to service closer to work, you know, and where they live. In other words, a mixed use of buildings in an area so that they can get services closer to home. So how we grow matters. The energy usage of a village
is different than the energy usage of a suburb
or a community on the edge of a more dense
area.

Okay. So that's the fact setting.
There's a lot of facts I could have given you,
but that's a little highlight for you of the
facts in the plan.

What is our long range goal? For those
of you who have viewed the draft plan, you'll
see our long range goal is that by mid century
we should be nearly fossil fuel free here in
Vermont in all energy sectors, and we've
called in the draft plan to strive for 90
percent renewable energy by 2050. We're
currently 23 percent. Remember the chart.
We're striving for 90 percent.

So what does that look like just
graphically? Next slide really quick. 23
percent, that's what you saw before. 90
percent all sectors. So if you think about
it, just pause for one second, think about it
when we said that transportation is about a
third of our energy, residential is about a
third, and commercial is about a third. We
will need significant, significant switching
toward renewable energy in the transportation
sectors and in the home heating and business
heating sector if we're going to reach this
goal because we're already at 50 percent in
electricity. Even if we went to a hundred
percent electricity, we'll not hit this goal
without significant movement in transportation
and heating.

Okay. So why is it worthwhile to do
this? Again, the plan outlines this in
greater detail, but in short it's worthwhile
because it will foster Vermont's energy
independence and economic security. It will
help safeguard our environment. It will make
more progress on greenhouse gas reductions.
We can also drive innovation and jobs creation
as the economic impact study showed with
efficiency. It really does work, and all of
this in our view helps increase community
involvement.

How will the goal be achieved? This is
my version of it in graphical terms. It
should be and needs to be an acceleration
curve over time rather than a straight line
progress. Why is that? Well simple reason is
transportation -- we're at the edge of a change in transportation. We now have Ford, Chevy, Nissan coming out with plug-in vehicles for consumers. I have no illusion that's going to all of a sudden mean that we have volts on the road in Vermont, but it will over time change the way we drive. It will change our options for the fuels we use, and that's just one little example.

Biofuels are another. If any of you have heard some of the reports on NPR recently about what the military is doing with their fueling programs for their jets and vehicles, they are moving aggressively toward biofuels, and what we know about that is it will help the market. It will drive the change that we need to see.

So we shouldn't despair by saying okay, guys, 90 percent by 2050, how much do we need to do this year to hit that. What we need to do is set the policies now to achieve this progress over time because if you don't set the policies to support the goal, you won't see the acceleration curve.

Next slide. You also need, in doing
that, to address all areas of policy that can affect change. Outreach and education, letting people know what the goal is, why the goal's important, what the services are that can support the goal, finance and funding. What are the programs that folks can use, for example, for efficiency such as the PACE program. It's just an example, but I think supports that.

Innovation and expertise, what can we do in Vermont, what expertise can we bring to the table to support whatever the goal is; and then, finally, making sure our regulatory policies and legal structures are right.

If you only do one of these, like, for example, on efficiency, if you are simply to set a program for thermal efficiency by putting in a regulatory policy without addressing funding, it's not going to work. If people don't know about it, it's probably not going to work, or at least it won't get you the progress that you need. So we really did in the plan attempt to view a policy through the lens of these four items.

Next. Okay. So this is inevitably an
unsatisfactory exercise because the plan is long. There's a lot of recommendations, but I'm going to try just to give you a highlight of what we recommend in each sector so that we can prompt some discussion.

Okay. So efficiency. Efficiency should be the first thing to do in any energy sector because frankly it's the best way to save money. It's the bottom line. So we call on in the plan for a group with the Department of Public Service, the Agency of Health and Human Services that does efficiency programs for low income Vermonters, and stakeholders which would include utilities, community action groups, Efficiency Vermont, and others, and our energy service providers to develop a roadmap to figure out how to make our efficiency programs whole building approach programs.

Right now if you did an efficiency measure, windows help with thermal efficiency, light bulbs help with electric efficiency, those are two different programs. It's confusing for homeowners. It's hard to put in place. We need to figure out how to make consumer delivery easy and more accessible.
We also need to look at the funding and finance mechanism before just concluding that a certain amount of money is needed. We need to look at what the mechanisms are in place, how consumers can access those financing mechanisms, including on utility bill payment which is something we believe would help, and then have the discussion about how to fill in the gap.

Measurement and tracking is also very important. We learned that when we looked at the 8000 home goal and realized nobody was really tracking that. So I think in that case we said the Department would track that and that was our recommendation going forward.

Okay. Electricity. Efficiency, specifically we have called for a three percent annual savings. You'll remember quickly on a slide before I showed you that we've been achieving about two percent. We think we can ramp that up. I know three percent doesn't seem like a big ramp up, but it's based upon a couple things. First, the ability of the programs to actually spend the dollars and achieve the savings, and then,
secondly, a recognition of the balance necessary for affordability because electric efficiency does require upfront investment. We spend, you know, money every year. So we think we should achieve three percent savings greater than in past years because the economic case for electric efficiency is compelling. We need to keep doing it. We need to do it more robustly.

Thermal efficiency. So specifically with regard to buttoning up our homes for heating purposes we believe that Vermont can set a goal to double the percentage of new Energy Star homes by 2020. That's currently 30 percent and we think by 2020 we can set policies that encourage new builds to go to 60 percent to be Energy Star homes. That will put us on a path to support net zero energy usage, which is both efficiency and renewable energy, and in a home by 2030, and that's an ambitious goal, but we have residential building energy standards, commercial building energy standards, and the Department is right now engaging in a process for code compliance for those programs that will also help support
this goal. So there are things already
happening with regard to that item.

Okay. Electricity. See I've got -- I'm
going for five more minutes. Electricity.
Okay. On renewable electricity I've already
given you the big goal. We want to see 90
percent in all energy sectors by 2050. That's
going to require further progress on
electricity which is already very renewable,
but we can make it more so. Our Public
Service Board is right now in a process of
looking at the renewable energy policy for the
state and will have a plan out in October. A
draft has been issued. So I've seen that and
we looked at it for our planning purposes.

We believe that the state can achieve in
a realistic and affordable way a 75 percent
electricity goal by the end of our 20-year
planning cycle. We need to do that, though,
in a way that's supportive also of in-state
local generation. So we suggest that the
Legislature take up the challenge of expanding
the standard offer program, and we ask that
market based pricing mechanisms be put in
place specifically looking at auction
mechanisms that can be used to set the price for that type of renewable energy project.

Process improvements also are called for in the plan. Little things, in the big scheme of things it may seem, such as the Department putting in place a renewable energy project manager. Someone at the state charged with actually helping the agencies involved coordinate on energy projects, working with the communities, working with the stakeholders and the developers. I think that will be helpful and we're going to do that.

We also suggest that the Public Service Board put in place a mediation process for energy siting of all types because it has been very successful in the civil and family courts. I believe as a lawyer who used to practice in those courts that it can work at the PSB and should be put in place because it would give people a voice and path for resolution that they don't currently have.

Also, just looking at the lessons that we've learned in the last few siting cases on small solar and the small wind projects to determine whether there's any simplification
that can be done on those smaller projects.

And then finance and funding. There are some things happening right now. The Department has received a grant to work with Efficiency Vermont to help deploy what are known as qualified energy conservation bonds federally allocated to Vermont to help support efficiency and clean energy projects. So we're looking at doing that right now.

The new Clean Energy Development Fund Board is now in place. They came in in July and they are going to engage in a strategic planning process this year about how best to fund the Clean Energy Development Fund, and as I mentioned earlier we're going to -- we're actually already in the process of investigating and working with utilities on developing the availability of on-bill financing, and that's just a way, if done correctly, would give homeowners a choice, a place to potentially finance their efficiency and energy projects in their homes and pay for it through a mechanism you already use which is your utility bill.

Transmission and regional markets.
Again a little bit in the weeds, but I just wanted to mention it. Vermont is not an island. We all know that I think, but we participate in a regional market, and that regional market involves states largely that have restructured their electricity markets to become fully competitive. Vermont hasn't done that. I think one consequence of that is we haven't focused as much as we could be on participating in this regional market, letting Vermont's voice be heard, and making sure that our issues are brought to ISO-New England and advocated for more effectively. So we talk about that in the plan and make suggestions for having that happen.

Thermal. Again, the efficiency programs we've talked about, that's the best way to help our heating bills is to actually use less of it. We called for an increase in natural gas, and, you know, frankly we've been asked you're calling for so much renewable energy why would you call for an increase in natural gas.

My short response is providing Vermonters choice. Vermont has very little
gas infrastructure right now compared to many other states. We are, as a consequence, very dependent, if you look at us compared to other states, on home heating oil and LPG. In my view expanding the gas infrastructure provides choice for Vermonters on a type of fossil fuel, yes, but it's a fossil fuel that has a defined infrastructure, is regulated, has an effective price forecast right now based upon the supplies that are available, and does offer fewer greenhouse gas emissions than other forms of fossil fuel.

It's about five percent of our current energy profile right now just to kind of give you a sense where that fits in the plan. We have about five percent natural gas now, so there's headroom as it were. Even with the expansion that Vermont Gas is looking at pursuing right now to Middlebury, that would only raise this number less than a percent. So we have some room to grow there if we can get it done.

There are trade-offs. We've all heard about the problems that can exist if it's not extracted properly and transmitted properly.
It's absolutely critical to keep those in mind. However, there's trade-offs with everything. I would argue that natural gas is worth expanding to provide Vermonters the choice.

We also call in the plan for increased use of biomass, particularly for heating, because it's a more efficient way to use the resource and that's not just woody biomass. The plan also focuses on the fact that there are technologies right now developing for grasses and other crop based biomass which we should absolutely expand because they provide different ways for farmers to participate in the energy market.

Combined heat and power projects are particularly attractive because they allow us to use the product both for heating as well as for electricity, and as a part of all this we don't want to strand our local fuel dealers in the old economy as it were. We want to make sure we provide a way to transition them through our efficiency programs and in other ways to a new economy so that they can be the ones who deliver the biomass, for example, or
provide the energy services in our homes.

Okay. Transportation. Turn it over.

Transportation is our largest cost, greatest use of fossil fuel, and highest contributor to greenhouse gas emissions. Keep clicking. Those will just drop right out of there. So we aren't going to hit the goal, as I said before, unless we actually crack the transportation nut and make sure that renewable energy is available for transportation, which short -- the short way of saying that is we have to start planning for electric vehicles that can be used with renewable sources. There's lots of things to do; financing, vehicle charging, infrastructure, addressing the technology and cost issue. That's part of the acceleration curve. Those costs will drop over time. Am I right on this?

MR. PAPPAS: Yes.

COMMISSIONER MILLER: Okay. VTrans used a metric to achieve this really ambitious goal and figured out that in order to reach the goal by 2050 we really should be looking in the next 20-year planning cycle to try to get
25 percent renewable energy in our transportation sector by the end of that 20 years. So how often does a car turn over? How often do Vermonters buy cars?

MR. PAPPAS: 7, 8 years.

COMMISSIONER MILLER: So Vermonters typically buy cars every 7 or 8 years. In the 20-year planning cycle you've got three whole turnovers basically almost. So it's a really ambitious goal, but it's not just electricity. Biofuels are also a part of it, and we believe it's worthwhile to set the policies to achieve it.

At the same time, though, you got to do other things; better fuel standards, greater access to commuter facilities, transportation options, making sure we reduce the single occupant commute trips to the extent possible. So they have some plans for that too. VTrans wants to actually calculate, which I don't think has yet ever been done, right, the CAFE standard for Vermont. Do we have that number already?

MR. PAPPAS: No.

COMMISSIONER MILLER: So VTrans is going
to look at the combined average fuel economy of the Vermont registered vehicles, figure out what that is, figure out whether it's better or worse than the national average, and either way set a goal to beat it by five percent. 

They are also going to put plans in place to triple park and ride spaces, that's an often heard comment we need more park and ride, in 20 years. These should help reduce single occupant commute trips, which is just a fancy way of saying us driving to work in our cars by ourselves by 20 percent in 20 years. Ambiguous goals, but specific metrics.

I just want to give a plug really quickly to Go Vermont. If you go to connectingcommuters.org, VTrans has a fantastic site to give people right now a lot of great information on alternative transportation, and it's not just about the bus schedule, although that's in here too. You can also find out things about biking, walking, and ride sharing.

Okay. Finally land use. We look at land use first and foremost as a way to preserve the character of Vermont that we have
to conserve our resources and support
development in the appropriate places, but all
of those things have a benefit for our energy
usage as I described earlier. So ACCD has
been working on this part of the plan and has
a few specific recommendations.

ACCD recommends that the regional
planning commissions and town energy
committees work with ACCD to review their
energy plans and policies for conformance with
the state energy plan by July 2012. We also
want to improve the state designation
programs, which is the designation of the
downtown districts. ACCD, Agency of Commerce
and Community Development, sorry for lingo, is
finishing right now its recommendations on
that and will have it ready for the
Legislature by January. They want to measure
the success of their recommendations on
implementation by the next census so that the
next census doesn't show those downtowns are
shrinking, but instead shows they are growing.

And also we're going to work on
coordinating state incentives and programs.
There's a lot of different areas, but just as
an example if you have a waste water permitting process that doesn't encourage closer development, that's in conflict with downtown growth. Similarly there's some transportation policies that, if not properly aligned, may not -- may frankly promote sprawl if we're not careful. So we want to look at those things and make sure they align.

And then ACCD has a plan to develop specific training programs thinking about outreach and education to make sure people know about and understand and participate in complete streets programs and transit oriented design partnerships, and they are going to hold I think it's three -- three workshops in 2012 to do that.

So those are short term steps, but again they are measurable and that's part of what this plan tries to do is set forth short term steps that will help get us on that acceleration curve.

Okay. There's a few longer term things that we also talk about in the plan or in areas that aren't specific to just one area of energy. One is we suggest, the Department
suggests, that the Legislature charge us and
others with looking at developing what's known
as a total energy standard so that rather than
just focusing on renewable electricity or
looking at how we might transform
transportation towards electric, we actually
look at our total energy usage. Say okay 23
percent renewable right now. How can we make
that 25 percent or 26 percent, 27 percent, and
what plan can we put in place to measure it.
It would require us to change all units of
energy to a common unit such as a British
thermal unit, but we believe it's worth doing
because it would help our progress.

We also have in the plan a number of
highlighted farm energy programs. They cut
across different areas of energy usage so I
just wanted to highlight that for you. And,
finally, another one that cuts across many
different areas State of Vermont energy
leadership, the Department of Buildings and
General Services has taken the lead on this.
Governor Shumlin and Speaker Smith set a five
percent state agency energy reduction goal
last spring. Buildings and General Services
is right now developing a road map for
achieving that, and believe me post Irene this
is hugely on the mind of the state, and as BGS
has been putting workers -- displaced workers
in buildings I have had conversations with
them. They are really thinking hard about how
can we frankly find a silver lining here and
reduce our energy usage. So it's on our minds
right now.

Okay. That's it. We're conducting
public hearings. We would love to have your
written comments by mid October. We're going
to present it to the Governor shortly
thereafter, and review feedback and finalize
it with comments we received, and so we can
have it done we hope in November of 2011
certainly well ahead of Legislature coming
back. And, by the way, thank you, Sarah, for
coming tonight, Representative Edwards.
Appreciate it.

So implementing it. Just very briefly
the Governor has asked that the climate
cabinet actually have some oversight on this
once it's finalized because it can't just be
the Department of Public Service. We don't do
all of these energy areas. As we've discussed
tonight we're working with these folks in
transportation and ANR and agriculture and
community development to work on this, and all
of those folks are part of the climate
cabinet. So that's oversight.

We're going to present it to the
Legislature in January. We want to by then
have a specific list to hand to Representative
Edwards and others on legislative actions that
are suggested by the plan.

The Department wants to have regional
planning commission and town energy committee
forums so that we can review all of this along
with plans that they already have and call for
the local action that would result, and we've
got to review, revise, and repeat. That
hasn't happened as well as it should have in
the past. We've looked at that and said one
problem is the statute currently calls for a
five-year revision. Personal opinion that's
too long. I think we need to review it more
often. It needs to be a more dynamic
document. We're calling for a three-year
revision process, and frankly with climate
cabinet oversight we're hoping it can be very quick.

Okay. Thank you for coming. I'm really sorry that went on. I hope you found it informative, but I would love to turn it over to public comments. One of the comments could be anything you think I could cut honestly because I've got three more public hearings.

MS. LAUNDER: Okay. We'll go through the list, and like Liz said, afterwards I'm sure there will be time for others if you're not on the list.

COMMISSIONER MILLER: We have got about an hour 15 minutes. So given the folks here, I don't want to do the math, but if you could limit your initial comments to kind of that -- I don't know -- three to five minutes, something like that, tell us what you're most interested in, and then we can discuss it. That would be great.

MS. LAUNDER: And I apologize ahead of time for not pronouncing these names right. So Richard Stafursky. Can you say where you're from?

COMMISSIONER MILLER: Actually and spell
your name also.

MR. STAFURSKY: S-T-A-F-U-R-S-K-Y.

First name Richard. I live at 15 Belmont Avenue in Brattleboro. I'm here because I am very concerned about the forest as you can see from my shirt. I haven't detected anybody here so far concerned with the forest. I'm not a good speaker. First let me read a few things here about biomass.

Biomass originally is a measure of living tissue found in a specific place, for example, a forest, a prairie, or an ocean. In fact, in 1934 that's where it was coined because they were studying the mass of living things in the oceans.

It is living tissue. It is living tissue. Biomass is living tissue. The way it's measure is by drying it out, turning it into a powder or to a dehydrated state, and then measuring it. The reason they do that is then you can weigh it without the water content.

Now that same dried biomass is now called biofuel and it is burned. It is burned so we are burning our forests. Biomass,
biofuel are not green. You had mentioned that one of your goals was to get off fossil fuel. That's semantics because it should be you should get off dirty fuel. Now that's semantics as the use of fossil fuels category was intended, so that other fuels that are dirty are not included in that such as natural gas, biomass, and when you talk about renewable you cannot use biomass either because you're destroying the forest. How is that renewable? Or you're preventing the forest from returning. How is that renewable? When you log an area for lumber every 20 or 30 years, that's not renewable. Renewable is when you return the forest to its natural state. Then it is renewed.

So we have a problem here of semantics. Renewable is -- that word is being distorted and efficiency is being distorted. I think we're in denial. I think the State of Vermont officials are in denial. The rest -- many other states are not in denial. They know biomass is dirty. They know burning wood is dirty. They know that.

The forests have been coming back for
over a hundred years since the Civil War time, and I think we should allow them to continue to come back instead of looking at the forest as a resource. It's not renewable. It's destroying these things. There are other renewable and conservation sources. We have had many described here today.

Biomass. District energy heating with biomass is not one of them. It should be dismissed instantly. It is not a renewable, efficient, clean alternative for Vermont, and, like I say, it destroys our forests. That's about it.

COMMISSIONER MILLER: Thank you.

MR. STAFURSKY: I have here something for the record.

COMMISSIONER MILLER: Thank you.

MS. LAUNDER: Okay. So W and J Schwarz.

MR. SCHWARZ: I'm the W. Schwarz. I wish to express my enthusiasm for the plan. It's professionally written, but I wish to emphasize how important speed is.

Global warming is coming quickly, and I think that a 2050 date was given for the reduction in energy, in fossil fuel use. I
think -- I really think we only have 10 years. The next 10 years. When I was -- when I was a boy I was 15 and the Japanese bombed Pearl Harbor, and I saw the automobile industry shut down or change over to war production in three months. They stopped building passenger cars. I think we should do that now, and of course Vermont can't do that on its own. That's a federal possibility, but it's insane to be building millions of fossil fuel automobiles at the present time. We must electrify every way we can as soon as we can. That about does it.

COMMISSIONER MILLER: Thank you.

MS. LAUNDER: Were you going to speak as well? It said W and --

MRS. SCHWARZ: No.

MS. LAUNDER: Okay. Nicholas Bartenhagen.

MR. BARTENHAGEN: Rhymes with Copenhagen. First I have to say --

COMMISSIONER MILLER: Could you just for the court reporter repeat your name and spell it?

MR. BARTENHAGEN: Bartenhagen
B-A-R-T-E-N-H-A-G-E-N. I have to commend the people who wrote this for its lucidity, very carefully done, very easy to read with a few lapses into jargon here and there.

COMMISSIONER MILLER: Really hard.

MR. BARTENHAGEN: Alphabet soup, but I'm looking forward to reading all 380 some odd pages of it having seen a preview. So I have to be thankful for all the people who worked on this.

One area that I'm interested in, this is more tactical than strategic, I'm very curious to know a little bit more about, and this may not need to be addressed right now, but I would be very curious to know how it would work, that electric bill payment method. That sounds very intriguing, and I think would be very helpful to allow people to pay over time rather than having to come upfront with the cash. So I would think that would be a very positive methodology to get these documents done. That's all I had to say.

MS. LAUNER: Thank you.

MR. BARTENHAGEN: My wife, Margaret.

MRS. BARTENHAGEN: Thank you. Margaret
Bartenhagen. I would agree with Walter Schwarz that I think there's an urgency here that -- and I understand this huge task that's ahead of us, and I know that it takes time, but I also feel that we may not have 39 years, and that, you know, from 2011 to 2050, especially as one of your charts showed that we had a goal that we did not reach, my concern is that that could continue to happen, although I will join my husband in expressing my appreciation for this total shift in emphasis and sincerity and willingness to hear public -- I won't cast aspersions on any prior, you know, Administrations -- but I will say that it's very exciting to me living in this state to have a sense that there's a seriousness here, and having just experienced this incredible hurricane and being a member of the Windham Regional Commission, just newly elected to the Executive Board of that body, and being very involved in communicating the emergency e-mails to my Town of Halifax, it's very clear that we're going to be continually faced perhaps with these dramatic and extreme events, and if we do not prepare seriously the
way this suggests, presentation suggests, and the way it appears that the Administration is now looking at all aspects of this, I think, you know, it's forward thinking. We definitely need to go there as quickly as possible. So I'm excited about that possibility.

A couple of things in addition to the urgency. Biomass also concerns me, and I know that you had mentioned -- I believe I heard that it was crops that could possibly -- and I'm not sure if crops means corn or food crops, and I would be concerned about that emphasis versus like a switch grass or some other biofuel, and again it's just going to be probably a small piece of the whole picture because there's no way we can go where we need to go with biomass being a huge piece of this.

Having recently done an energy audit on our property and actually incorporated some of the suggestions, I would also say that yes I think education and, you know, getting the word out to Vermonters in general how do you access. It was not easy trying to figure out where to go to get this information, and I
think in order to encourage that, that should really be one of the first things that are done because it's fairly easy to do, get the word out how people access information, but I will say it's really exciting what's happening, and I think Vermonter's, my experience having lived here for a while, are ready and willing and really want to move this forward, and so I think just given the opportunity it's a big yes.

MS. LAUNDER: Sarah Edwards.

REP. EDWARDS: I am the Representative from District 3 in Brattleboro representing downtown. So the downtown didn't actually experience all the devastation that the other two districts did, District 2 near the high school here and the hospital and the District 1 which is out in West Brattleboro. So I'm glad to hear reference to the opportunity to take a look at what infrastructure we do have and how we can again jump on that acceleration curve, but I came here tonight, number one, to get a preview of what we're going to be dealing with in January.

I do serve on the Natural Resources and
Energy Committee, and I am so looking forward to reviewing and partnering with the Department and other stakeholders to do what Vermonters want, and we know that through massive polling and interviews and surveys. We've got this data quite a while ago. It's great to see it being acted upon.

The two issues that I wanted to bring forward are the ones that I've been hearing from constituents, and that is one regarding natural gas, making sure that we understand the extraction method. There's a lot of fervor right now on the infrastructure. I'm sure people know about it. I think we have to be very, very careful about that, and how we support our neighbors regionally, as well with some of the potential damage that can occur through that technology and method. We really need to be concerned about that.

The other one is biomass concerns. I have been getting lots and lots of e-mails about biomass. Not so much that we should have biomass from what I've been hearing from the constituents, but that its primary use should not be for electricity. It's an
inferior way to generate. It's fine if you use it through a CHP, which is combined heat and power.

MR. RECCHIA: Combined heat and power.

REP. EDWARDS: Thank you. Combined heat and power. If it's an added value, that's fine, but it should never be the primary use of biomass, and so I know that there's a heavy duty study coming out, maybe it's already out and I missed it, around biomass, and as the Committee in the House we held off on making any decisions about that until we had some of the research available to us.

So personally I agree with the getting on that acceleration curve as quickly as we can. We do not live on the same planet that we did before. There's a -- pretty much in Vermont people are talking about that. We have to move forward as quickly as we can, and I think Irene actually as devastating as it is with the half full attitude is getting us the opportunity to accelerate.

MS. LAUNDER: Guy Page. Thank you for having an easy name.

MR. PAGE: Thank my parents. Guy Page,
Vermont Energy Partnership. Is now an okay
time for a question or two or should I wait
for questions afterwards?

COMMISSIONER MILLER: We may answer it
after.

MR. PAGE: That's fine. Just to get it
out. Reading through the report I saw some
pretty direct addressing of costs specifically
in efficiency, but I'm still sort of looking
for a general sense of -- you know we have 90
members in the partnership. A lot of them are
businesses and they want to know what's it
going to cost, you know, to them and statewide
and the whole enchilada. So that obviously
would be a -- I'm not sure if that's so much a
concern about the report as just a question.

And another thing is you mentioned a
possible revision of the plan. Right now
Vermont Yankee is in the federal court. If
the resolution of the whole federal court
thing is that the plant is allowed to operate,
how will that affect this plan? Would you --
if it turns out that it is -- it does get a go
ahead from the courts, is the state open to
revising the plan to include that, whereas,
right now it's just sort of a -- it's not part of the plan as I read it.

Are you open to considering that and putting that back in as an option and why or why not?

COMMISSIONER MILLER: Thank you. If you don't mind, we'll just let others comment.

MR. PAGE: Sure.

MS. LAUNDER: Okay. Michael Bosworth.

MR. BOSWORTH: Thank you and thanks very much for planning this far. It's really sort of exciting to see.

I do have just a couple of comments on the structure of the plan. I think obviously it's such a large plan and kind of hard to get your hands around. How do you enter into it? How do you, you know, learn what the real stuff is? So just a couple of suggestions.

Each of the major sections could have its own sort of summary. I think electric supply and demand is 140 pages, but there was no sort of summary of it. Same thing for some of the others, and also just sort of consistency of structure. I notice the transportation one had a pretty nice section
on conclusions and recommendations tied to
goals. Some of the others did not. So I
think that would be a good thing to have.

I didn't get time to read too much of it
because it's pretty large. I am a person who
is part of a Vermont non-profit called
Brattleboro Utility, and obviously we do try
to work toward heat -- producing heat from
biomass. We want to do it responsibly. Only
do it, you know, if we think that the forestry
practices are good practices. Also, we do it
in such a way it doesn't -- any pollutants
don't affect people's health.

I think I did see one or two
recommendations here I kind of liked. As far
as the incentive program that has been applied
to things like solar, if it can be applied to
more directly to biomass projects, I think
that would be a good thing. We first tried to
look at a very large district energy which is
-- for Brattleboro which is a pretty complex
thing to do because you got multiple owners of
land, you have streets to cross. Now we're
sort of more focused on what are sort of
smaller projects that could involve two or
three or four adjacent buildings, and so
incentive programs might help that type of
project along might be a good thing to have.
Thank you.

COMMISSIONER MILLER: Thank you.

MS. LAUNDER: Bill Jewell.

MR. JEWELL: I'm Bill Jewell. I'm an
environmental consultant and that means
whatever you want it to mean. I'm having a
little bit of trouble with the idea that this
is a paradigm shift. I taught a course at
Windham College in 1973 that covered all this
stuff. The only difference is the technology
has changed quite a bit since then.

The paradigm shift you guys should be
thinking about is we now have kind of point
sources of electricity, of fuel, and so on,
and it all gets kind of shipped here. I think
the nation should be thinking in terms of each
individual home and business and building is a
power source, and how do you deal with too
much energy when you don't really need to use
it. Electricity you have to use pretty much
as it comes off the generator. So you need to
be thinking about how do we collect that and
store it; batteries, hydrogen, fuel cells, however you want to do that. That needs to be local collection and distribution towards the state.

When you're talking about home efficiency, when you're giving out money to make the house more efficient it ought to be how do you make this house generate power, energy.

The other thing no one seems to be talking about these days and was actually part of my discussion in '73 was fuel cells. At that time they pretty much only worked on hydrogen. Nowadays you can use natural gas into electricity. You can power your car. You are power a whole industry. In eastern Connecticut right now there's isn't enough power from the grid so they have -- there's a lot of natural gas, they are making -- each of the industrial complexes are making their own power with natural gas through a fuel cell. We should be thinking about how that works.

Natural gas I think we should be really considering that. I agree wholeheartedly we need to get natural gas here. There are some
problems with hydrofracking. Probably what can be done with that is you need to do -- with the mix of the stuff they are putting down there now is you need to treat that with a separate specialized treatment plant. The other thing they could use dry ice like they do for wells hydrofracking, and that gets rid of CO2. That would be a good thing to do two things at once.

The other part about natural gas that I like is that it could be the basis for an infrastructure for collecting and moving hydrogen thermal. Right now we bring natural gas in from somewhere else, but if we're making hydrogen with these reverse fuel cells they have got at MIT, we could be storing hydrogen at your house or down the block or something like that and then shipping it out to wherever you need it, run it to a fuel cell, get it back to electricity again.

That's enough.

MS. LAUNDER: Thank you. And Becky Jones.

MS. JONES: Hi. I'm Becky Jones, Brattleboro. I'm very excited to be here.
don't know how many of you knew about the moving planning event in Montpelier. I was there. 1500 people. It was very exciting. So I'm sort of representing 350 Vermont. We've sort of been gaining steam since the spring.

You probably already assumed there was a 350 Vermont, but there wasn't. There was just 350. Now there's 350 Vermont too. So there's all kinds of people getting more and more excited about being part of the solution and you'll be hearing from us. We'll give you some information. So it's pretty exciting.

So I wanted to mention that, and then just the excitement about people being part of this process. I think decentralization, like you mentioned, focusing on homes rather than, you know, electric companies getting a whole bunch of solar panels that they can put in a field and then sell the electricity to us instead of us having it for ourselves, that's pretty exciting.

I wanted to mention, and I will be sending some information to you, that I've been working on I guess a project to link
health care solutions with energy solutions
and I'll send you more. It's a little bit
lengthy so I don't want to say too much. You
know all about it.

REP. EDWARDS: Yes. It's good.

MS. JONES: But the other thing I wanted
to mention is this Saturday we're having a
tour in town. Paul Cameron is leading it and
my office is going to be on the tour and a few
others.

Someone had mentioned the difficulty in
finding information on energy efficiency stuff
for lack of a better term, and I have like
eight pages of resources that were sent to me
by -- is it the NEAC? There's an -- I guess
it's a national group. I'm feeling very
unknowing here.

COMMISSIONER MILLER: NEEP, the National
Energy Efficiency Partnerships.

MS. JONES: Yes. I think that's exactly
what it is. Anyway this tour is I believe a
nationwide or at least region-wide effort to
educate people, and so my office on Lake
Street is going to be on it and a few other
buildings that are green, and there's just
incredible amounts of resources, and if anyone
wants a copy of that, I can get that to you.

REP. EDWARDS:  Just a suggestion. Post
it on IBrattleboro. A lot of people use that
as a resource, and it's also NESA, New England
Solar Association.

MS. JONES:  So that's this Saturday.
There are four buildings on the tour. It's
going to be pretty exciting. I think that's
all I have to say. I'll get in touch with
you.

COMMISSIONER MILLER:  Thank you for
coming today.

MS. LAUNDER:  Thank you. So that's all
that we have for who signed up. Is there
anyone else that hasn't signed up that wants
to --

COMMISSIONER MILLER:  We can all chat as
a group too but -- that was exactly what I was
going to do. Actually let me turn it over for
a couple minutes, if it's okay, to Chris
Recchia. Just any comments you want in terms
of the energy planning process and then maybe
Costas Pappas can do the same thing from
VTrans if that would be possible, and then
chat about some of the questions that are
raised.

MR. RECCHIA: Hello. I'm Chris Recchia, Deputy Secretary of the Agency of Natural Resources, and I guess the main thing I want to say is just that I'm delighted about the vision of this. I think it was described as a paradigm shift and I appreciate your point, but it is dramatic for the government to basically say we're changing the way we're looking at this. We're no longer going to rely on energy coming in and money going out to pay for it.

You know Vermont is in a unique position with the resources we have and instate and in immediate neighbors to make this work and to really provide some stability, and what I really want to say is besides that paradigm shift, the dramatic cooperation among your state agencies is astounding to me. I've always hoped for it. This is the first time we've actually been able to be part of it and implement it, and working with Liz and the DPS, staff at the Department of Public Service, actually when they came and said
we're going to be do a Comprehensive Energy Plan and we're including land use I was like oh my God, what have you done to your department. I was just very excited because, you know, that's -- I think this is the first time that's been included, is it not?

COMMISSIONER MILLER: Certainly with ACCD's direct participation.

MR. RECCHIA: Agency of Commerce and Community Development, VTrans really are thinking creatively about the electric car and electrification and other changes we can make to try to get there. So I'm just delighted, glad you're all here, and I'll stop talking so that we can have a conversation.

MR. PAPPAS: Hello. The transportation part of this plan, you know, for us to put together was quite challenging because unlike electricity or the thermal side, we really don't have a lot of control in how cars are manufactured, how fuel efficient they are, and that's one of the reasons why, you know, you're looking at a date of 2050. It seems like it's really far off, but when we considered the pace of technology and its
evolution and the transportation sector it's very clear that's going to continue to be a challenge; but that said, our portion of the plan was broken up into two different sections because we feel like there is an economic security component to the plan and an energy reduction component.

Economic security. Prior to working for the state I was in the private sector, logistics, and you can imagine having fuel prices double or even go higher how that affects businesses. It's even more pronounced for smaller businesses that are highly dependent on shipping products out of state. You know our major markets are not just our neighbors, but they are also down in Florida, they are in Texas, and that kind of instability is really problematic when we're trying to ship things. But that said, even within those sectors we're trying to do our best to improve, you know, energy reductions in the field as a whole.

One example that's not in the plan because we've been working on this just, you know, past couple of weeks, you may have heard
that there is a bill in the U.S. Senate allowing heavy trucks to use the interstates. That's been an issue throughout the state, yeah, and we're about an inch away. They are voting tomorrow and so far all indications are that that provision will be left intact. You know that's an example, a concrete example of how we can become more energy efficient in the transportation sector with an action that's relatively simple. It's one piece of legislation that's expected to result in significant fuel economy, not to mention the safety benefits of not having heavy trucks passing through our village centers.

So that's the lens through which we view one part of this equation. The other, of course, is energy reduction, and the future there from our perspective is clearly electricity. You know plug-in vehicles, not just for small compact vehicles, but even to small trucks and midsize trucks, that's where the research is, that's where the technology is evolving, and you know people have different ways of viewing it.

When we were asked to put our section
together I took a look at my phone, and I've
got a four-year-old phone and it's really
fascinating because this is just a telephone.
There's no internet on it. There's no fancy
gadgets associated with it, but it's only
down the line to four years old. Think of
the phones we have today in a three-year
period what's happened. You know you can do
anything your computer does over a small
portable phone, and we think that vehicle
technology will evolve at that pace. That
it's going to be much more rapid than it has
been in the past. That we're -- three or four
car manufacturers were mentioned. You know by
next year there's going to be 14 of them
working on fully electric vehicles.

So the pace is accelerating rapidly and
that's the direction we think, you know, going
forward we'll get to that target. You know
it's not going to be easy because we mentioned
three, four different turnovers of vehicle
purchases. There's no way all these vehicles
in 20 years will be fully electric, but as
technology evolves an increasingly larger
percentage will -- by 2050 I think will come
close to that goal.

COMMISSIONER MILLER: Thank you. Let's just open it up for some discussion, and maybe I'll start with just thinking of some of the questions that were specifically asked, and one of the things that came up with regard to biomass, it reminded me of something I forgot to do so let me do that first, and that is just point out for folks what the various sections of the plan are. I never actually said that, right? I told you about the different areas of energy, but I didn't tell you what was in the appendices that we actually had commissioned, and I would love to just go over that so if something catches your ear you can go back online and look.

The first thing we did was we asked Vermont Law School to -- and this gets to Guy's question in part as well on cost. The first thing we did is we asked Vermont Law School to do what they have termed a conceptual map of current state law and regulation, and it also looked down at the municipal regional level, although frankly it focused on statewide laws and regulations, and
the reason we asked them to do that is because it hadn't been done before, and coming in as a new Commissioner and getting familiar with what my Department does it became clear to me pretty quickly there were some conflicts here and there in state laws and regulations, and it would be really great to have somebody look at that comprehensively. We can identify where those conflicts exist and use it in our planning process going forward to fix it and align it going forward. So that's the first appendix is from law -- Vermont Law School on a legal conceptual map of energy law.

We also included the climate cabinet executive order because it specifically shows you that Governor Shumlin's executive order requires charges to climate cabinet which Secretary Markowitz chairs, with energy issues, very specifically renewable energy and efficiency goals in the climate cabinet.

We then engaged for our electric planning purposes a consultant to look at different scenarios for electric planning for the next 20 years, and those do include in partial answer to Guy Page's question economic
impact scenarios as well. They also include carbon or greenhouse gas impact. We did that in consultation with a bunch of folks, including many business groups. We met with GBIC, which is the Greater Burlington Industrial Corporation, and others who asked for some additional costing information.

What I'll say on costs, and this is true of models in general, someone once said all models are wrong, but some are useful.

MS. LAUNDER: Is that Dave Lamont?

COMMISSIONER MILLER: It may have been Dave Lamont, our former planning director, but we can't know exactly what the cost will be 10 or 20 years out when it's not a fixed price contract, but we can make educated guesses based upon that data and facts, and set planning and policies based upon that data, and so we engaged a consultant to help us do that on the electric side, and that is in the appendix.

And then after that just really quickly, sorry, there's a couple more. Believe it or not ANR did a very interesting and extensive piece on forest management for bioenergy

Capitol Court Reporters, Inc. (800/802-863-6067)
because the biomass question was raised so
frequently in the public planning process
before this draft was issued. We worked with
ANR and said will you help us on the biomass
portions of this plan, and in addition to
helping us on the substantive recommendations
and data in the front part of the plan, they
also wrote I think it's an eight page -- it's
a quite -- single spaced. It's a quite
comprehensive actually forest management
report on bioenergy that's worth a read for
sure.

We then, as I mentioned briefly, asked
for an economic model of efficiency programs.
I've already described that. It's in the
appendix, and we also included in the appendix
the state agency energy plan which is what
Buildings and General Services has come up
with.

So the point is it's lengthy, but the
point was to really put the relevant set of
documents altogether so that folks can take a
look at that, including work we had done
behind the scenes, so that you could see where
did that come from.
So that was that, and then I think the other specific question -- there was a couple. Let me look. Oh, Nicholas, you had asked about financing.

MR. BARTENHAGEN: Yes.

COMMISSIONER MILLER: In very brief form it's a way to use utilities and the economic power that they have to help their customers finance efficiency and energy projects in their home and pay it over time. So it certainly requires utility willingness, cooperation, and good programs.

It has a lot of design issues that have to be addressed. Like, for example, if you do an efficiency project and pay for it through a utility bill financing, you certainly don't want that to affect whether your lights stay on, you know. So there are some issues that have to be addressed, but it's been successfully used in other areas of the country.

I was on the phone a few weeks ago with Oregon's Energy Department. They have done a program in Portland. They have done one program in Portland and one program in a rural
area in Oregon down near Grants Pass looking at how on bill financing could work, and they have implemented a pretty good program actually and they have data on default rates, very low default rates. Banks who are willing to make these -- back the financing because after all utilities, one good thing about them is their regular rate of return and their guaranteed profit because of their monopoly territory.

So I think it can work is the short version. I mean we can talk about a lot of details, but it will take some planning. It will also take some legislative support. Yes.

MR. BARTENHAGEN: I think there is also somewhere the concept of leasing solar installers, another way to start to gradually pay for it.

COMMISSIONER MILLER: Right. Yes. There are some companies up in our neck of the woods. All Earth Renewables leases solar trackers. There are some other companies that are doing that. Encore Redevelopment has done some projects. Actually Green Mountain Power and Northern Power, which is a manufacturer of
small scale wind turbines in Barre, I think they are 120-foot turbines.

MR. RECCHIA: I just heard Google is going to do that today.

COMMISSIONER MILLER: And Google is going to do that as well. So there are private companies entering into the same idea. Having our utilities do it I think is a good thing if we can get the policy right because it's available to all Vermonters. That would be the key. It will be challenge for some of the smaller utilities so it's got to be designed carefully, and what we might do is start with the larger, more mature, financially mature utilities, and not go right to the munies, for example. So that's what we're looking at.

And then the other specific question, Guy, you had asked about Vermont Yankee. Honestly we haven't crossed that bridge because we're waiting for the results of the lawsuit. From a practical point of view the electric plan in the state needs to look at all resources that are present in the state. So if Vermont Yankee is operating, then by
statute the Department will have to inventory
that as it were as a part of the electric
plan, but that doesn't answer your real
question which is what does that do to the
energy plan, and I don't have an answer for
you while the lawsuit is pending.

MR. RECCHIA: Can I say a couple words
about biomass?

COMMISSIONER MILLER: Yes.

MR. RECCHIA: So just to give some more
context to the biomass discussion because I
think this is really important, you know one
of our departments is the Department of
Forest, Parks and Recreation, emphasis on
forest, and as was pointed out, you know, we
have our forest resources. Vermont looked
very different 150 years ago, and we have
gained a substantial amount of reforestation
in that time period, but in the last 10 years
or so it's started to decline again. That
decline is not due to trees not growing. The
decline is due to land conversion, and this is
really key is that 76 percent of our forest
resource is privately owned. So you have to
ask yourself the question, if you wish the
trees to grow, what's the value. How do we maintain a value, an economic value, and appreciate the ecological value, but how do you maintain the economic value so that the only return to the landowner is not just waiting until population pressures increase enough that you can subdivide and develop it. That is not sustainable. We will lose. We will lose big time if that occurs, and again with 76 percent privately owned you have to think about that.

The way my Agency has looked at this is to focus on forest sustainability and on the ecological values of the forest resource. What are you trying to achieve in a given area. Same for recreation. Same for, you know, wildlife, but, you know, all of it is for water quality, air quality, travel and tourism.

There's a lot of ecosystem values with our forest resources and we should manage them for those. In that context there is some available biomass resource on a sustainable basis that is available. Unfortunately the typical practice has been to high grade forest
resources and to take the best trees out and leave the low grade wood because there was no market for low grade wood. As a result, our forests, although there are more of our forests that are -- we have more acreage in tree cover than we had 150 years ago, the quality of the trees is much lower. We need to get back to the point where somebody in a generation can actually see an adult tree and know what one looks like. We don't have any of those right now to be honest.

MR. JEWELL: Windham County does.

MR. RECCHIA: Windham County does in terms of quality of trees, there you go, and you know why? You guys are a little bit out of reach of the pulp and paper folks.

MR. JEWELL: Also they have been planning the forests since the early 40's.

MR. RECCHIA: Yup. So I think the point is that this is a very complicated subject, and when you start talking about carbon management in those forests it gets even more complicated about what is renewable, what is carbon sequestration.

I may be pollyanna-ish about this, but I
think there's a carbon value to having trees as trees and that we should be paying landowners for that and having that be a value that is recognized, and so that there's an incentive to keep those trees there. At the same time to manage those, if you have a garden, you need to weed it. There are going to be things that happen. Irene, the amount of wood that has unfortunately been destroyed in this process should not end up in our landfills. It shouldn't -- a lot of it should be left probably where it is, but where it shouldn't be left is like on Route 100.

So to the extent that you have to take trees out because of this we ought to make good use of them. Right now we have about 750,000 tons of wood being used by homeowners in wood stoves. Michael talked about the district energy projects. If you can -- you know, the bigger you get, like it or not, the bigger you get in terms of a facility, the better air quality controls you can put on those wood resources. A power plant has exceptional air pollution controls. Unfortunately it's not using the wood
particularly efficiently, but that's a
different aspect of it.

Your home wood stove is about 80 percent
efficient. Very nice, but your exposure to
indoor air pollution is the worst that it
could be. So is there a sweet spot in between
to look at where you get health benefits and
the biomass benefits and the efficiency
benefits. So those are all complicating
components to this equation, but the main one
I want to leave you with is, you know, we are
76 percent privately owned forest land and
farmland. We have to be able to sustainably
keep that through an economic return of some
kind to those private landowners.

Alternatively, over time as our
population increases there will be pressure on
those resources to simply subdivide and
develop them, and that's where we're losing
our forests.

COMMISSIONER MILLER: What other
comments would people like to either make or
--

MS. LAUNDER: When you make a comment or
have a question, if you can just repeat your
name for the court reporter.

MR. STAFURSKY: Nick Stafursky. Another thing I mentioned about forest health is invasives. We are battling with our conservation area right across the border in Massachusetts half a dozen or more invasives that are coming in there because of past logging. They followed the logging roads in. If you have a natural forest, there are plants and animals that like clearings, but this is usually done when a single tree, and I've seen it, huge tree falls, you have a clearing, but there's no way for the invasives to come in there except by birds.

With a logging road goes right through and they follow, and we're still -- 50 years after we're still battling horrible invasive plants. This is what any kind of wood harvesting does. Now we didn't have that invasive problem when I was like growing up in the 50's, but we sure do now. So if we want a healthy forest, we've got to cut back on the logging absolutely private land, state land, federal land.

I forgot the other point I was going to
make. I'll think of it, but -- oh, I know what it was. In Europe the district energy people, give an example, a place in northern Italy where there was district energy in valleys, in mountainous areas, in foothills of the alps. What they are doing is taking the remaining trees from the alps. That's what they are doing. They are putting these plants where the remaining trees are. The historical European forest is all gone. If you drive through Europe, I've been to Germany, you rarely, rarely, rarely drive on a road where there's a forest on both sides. In Vermont you do that all the time. It's wonderful. Forest on both sides of the road. In Europe if you're lucky you have forest only on one side.

MR. JEWELL: They are planted and that's because where they cut all the trees in the first place the soil changed so the trees couldn't regenerate naturally.

MR. STAFURSKY: Right. It's an insidious thing once you go down that path, the deforestation.

The other thing is we have a perfect
opportunity in Vermont, talk about goals, of having our forest as a goal. If you look on a Google map of the earth, there's the New England forest and the Appalachians. It's this little. I mean we're in it so we think it's big, but it's really not very big, and it is a marvel of the entire world that why can't we promote that. Why can't we give homestead credits for having a forest, homestead forest.

COMMISSIONER MILLER: Thanks.

MR. JEWELL: Bill Jewell again. One of the things -- I was thinking about transportation. Over -- up until about five years ago there was a company over there that retrofitted cars with fuel cells and batteries and they did it with Honda fuel cell systems which is really, really a good thing. You can put the fuel cell in your house, charge up your car, charge up your batteries, you can put natural gas in the car or any kind of hydrogen. I think even alcohol, but I'm not sure about that.

At any rate, Honda took it away from this Guy in Sunapee because they were going to make their own multi-fuel car out on the road.
Well they have never done that, but my thought the opportunity was to have something like that happen in Vermont. Retrofit the trucks, retrofit cars, whatever, to get that -- jump start that whole process.

MR. SCHWARZ: Thank you. I forgot to introduce myself when I was up here before. I'm Walter Schwarz. I live in Brattleboro, and there's a very quick way we can save 10 percent of our driving fuel, a new 55 mile an hour speed limit, and I had one small suggestion on your report. I don't see why we have to go -- how many years was it before we get to zero net energy?

COMMISSIONER MILLER: 2030 for new construction.

MR. SCHWARZ: I don't see why we have to spend any more time than a year and a half.

COMMISSIONER MILLER: I can talk just about what we learned and explain why we have the goal that is in the draft.

We attended a number of meetings and also then heard many comments from folks about net zero energy, which just to be clear for those of you who haven't heard about it, it's
new construction that accounts for all of its energy usage through either efficiency measures or on-site generation, and what we learned was there's a number of homes that have been successfully built with net zero in Vermont. Those homes are for the most part fairly new. In other words, they have been built in recent years.

One concern we heard, and we heard this from the Department of Health and others, is that we would like some time to study what's been done to make sure that the building standards that are used in net zero are like they are for Energy Star and other homes appropriate for the indoor air quality environment. That's a minor issue, but that was something that was raised as a caution.

The other caution is cost. The data that we saw in meetings that we attended indicated to us that there is a significant cost right now to the developers and homeowners for net zero homes, and while it certainly can be argued that the cost is appropriate given the need, the reality on the ground is Vermonter need to be able to afford
their housing, and so the path that we have suggested is a more gradual one. The call that we received from many people was to support net zero by 2020, but not a year and a half, but much more quickly than we had proposed in the draft, and a lot of internal debate about that, but landing on the 2030 for a couple of reasons made sense to us. Affordability was one.

We also have residential building energy standards and commercial building energy standards in place right now that have a ramp up, and from a kind of regulatory certainty point of view jumping all the way to net zero by 2020 also seemed like it would be more than some of the building trades and homeowners would want to bear. So that's the justification.

I understand, because we received the comment, that some don't think it's fast enough. So I appreciate the comment, but that's the rationale behind it.

MR. JEWELL: Did you talk to Jordan Institute?

MR. RECCHIA: Yeah, I know they have
been doing this for over 10 years so they have got lots of houses.

COMMISSIONER MILLER: Yes. There are a number of houses both in Vermont as well. So anyway. Sorry.

MS. FRYE: My name is Betty Frye. I live in the Town of Guilford and I really appreciate you coming down. It's always a treat to have people from the state come down and talk to us.

I thought it was a great presentation, but I'm one of those people that have paid attention to an idea of district energy in our community. I'm not saying we were thorough, but we were sure enthusiastic about it, and if it isn't biomass, is there other forms of district energy; and if it's true, is that something we can look into. So that's one question.

A second question I would have is so I'm one of those people that watched that movie Gasland, and I couldn't get it out of my mind and it freaks me out what I saw, and so I do have concerns that we don't have natural gas here, but neighbors in upstate New York do.
Easy to get to, but how are we really harming their environment even though it's so abundant from what I understand.

Another sense of absurdity, and I'm really excited to hear that there will be more partnering between all the agencies. I'm pleased that you're pleased because that must make your work all better.

MR. RECCHIA: It did until last month. My work is very different now.

MS. FRYE: I think it's great, but sometimes I feel that we're down in Siberia here when it comes to the state. That's why it's a thrill when you all come down and see real faces to names and all that, and I just think that we have to work harder to figure out how we do outreach in a very rural state with over 600,000 people. I think we really have to pay attention to how people receive their information.

COMMISSIONER MILLER: Meeting with the attendance we had tonight illustrates that point.

MS. FRYE: So that would be my final question to you. I am curious about how you
put the information out for tonight. I know how I received it, but I am curious about the effort that was put into it, but still thanks for coming.

MR. RECCHIA: Since I have the microphone, I'm not going to answer that question, I'll let these guys do that.

First I'll have to say that a while back, 36 years ago, I was sitting in this room studying something. So I'm glad to come to Brattleboro. I grew up here.

AUDIENCE: You weren't in this room. This is new.

MR. RECCHIA: In the cinderblock style, right. It's a little different, right, and having just gone to the men's room I noticed they upgraded to the non-handle flush things, but other than that it looks pretty much like the same place. So I'm really from Brattleboro and actually glad to be back here.

I forgot that the court reporter is here. Sorry.

Secondly, just in terms of dealing with the ability to communicate all of this and the district energy piece, to answer that, the
only other option that kind of comes to mind is being a base load heating option would be geothermal, which you could make use of as well. So that's another option.

Natural gas could be used and it has been used around the country in district energy systems, but as you point out the natural gas problems, and in terms of the hydrofracking, you know, shortly after I became Deputy Secretary Deb Markowitz and I met with Vermont Gas to talk about their plans for Rutland, Middlebury, and there was one -- that was one of the questions we raised.

Now all their gas comes from traditional gas wells that are associated with petroleum refining up in Canada, but there's probably some hydrofracking involved in that, but clearly the connection of a little loop, if you will, to the New York/Pennsylvania area would cause much more of that, and we raised that with them and said, you know, just like we talked about forest and sustainability, you've got to talk about sustainability and life cycle costs of doing anything, and clearly the hydrofracking has some challenges
associated with it that maybe could be overcome with dry ice. We had that suggestion. That was great. Maybe not.

So, you know, we need to look at that, and it really needs to be, you know -- I think there's opportunity for transition there particularly on like heavy fleet vehicles could use it now, a variety of things like that. So it has a benefit to consider, but it isn't a silver bullet either. Now I'll pass over for how we advertised the meeting.

COMMISSIONER MILLER: And just a couple comments on that to followup. Crop biomass, including grasses, just to be very clear is another area where, again maybe not today, but looking forward we can look at that and should, and absolutely keeping the food issue in mind and not trading food crops, but there is a company down in Pennsylvania who is using a grass pellet system to heat schools and hospitals and it works, and that's a much more, you know, it's a twice a year harvest, and it harvests off season with the birds, and there's some really good water quality benefits to growing grass as well as a buffer...
plant. So, you know, these are things we should look at.

Natural gas the one kind of fact on the ground right now is that regardless of the environmental issues, the natural gas discoveries have hugely affected the pricing. You saw the graph where you saw the New England rates versus our rates, and you might have noticed how they are getting a little closer together now because the rest of the region has dipped. It's dipped because of natural gas prices, and so it's affecting the cost of energy. It's not available to most Vermonters to affect our energy costs, and I know that's not the environmental and -- it's not an environmentally focused answer. It's an economically focused answer, but it's driving some of my thinking about increasing infrastructure in Vermont.

And then finally on advertising this, we have really talked about this at the Department because we advertised it in the papers. The statute has a very formal way of doing that and we did that. We also sent it out as a news media release twice, and I sent
out a proposed editorial to all the papers. I've spoken with the Caledonian Record, the Rutland Herald, the Times Argus, the Free Press, Addison Independent called me. So traditional media sources.

We've also have a web site dedicated to the energy plan. I've used every comment that we've received and every person whose given us e-mail throughout this process on a big e-mail list and sent out the plan that way with all the hearing dates. It's probably how some of you got this. I don't have a twitter account for the Department. Maybe we should get one.

So we did what we thought we could to promote it, and frankly I'm hoping that after having the meeting last night and tonight, the meetings last night and tonight, the media begins to pick it up a little bit more and maybe we'll have better attendance at the upcoming meetings, and I'm happy to take comments.

MS. BARTENHAGEN: How have your attendance last night?

COMMISSIONER MILLER: About like this.

MS. BARTENHAGEN: Where were you?
COMMISSIONER MILLER: Middlebury.

MS. BARTENHAGEN: Just a followup. You didn't mention radio, and I don't know if you put it on Vermont Public Radio or even public radio in New Hampshire, which down here we get almost better than we get Vermont Public Radio.

COMMISSIONER MILLER: Yeah. That's a good point. I did speak with John Dillon. I heard it was on the radio last night before Middlebury, but that's a very good point. We didn't actively aggressively do it.

MS. BARTENHAGEN: We don't get newspaper. We don't get print, but we listen to the radio almost all day. So for folks like us, you know, who live kind of rural a radio might be a good way to advertise. Again, Margaret Bartenhagen.

I guess just revisiting the natural gas I think, you know, the one message that I would like to convey to whoever is looking at this is the concern that I think we all have about the method. It's not that it's not cheap. It's not that it's not abundant. It's not that it would help our bottom line. It's
how do we get it, and how do we get it in a way that doesn't add to the CO2 burden and that we're dealing with, and also, you know, that doesn't affect our environment at large, whether it's Vermont soil or New York State soil or Canadian soil. I think we have to be concerned if we're going to be consistent in how we acquire these fuels.

One of the questions I had, and this relates to an earlier question that I had and that Rebecca Jones addressed a little bit about information out to Vermonters about resources. I know that Efficiency Vermont web site lists, for instance, home energy audit purveyors. There's no suggestion on there, any approval like an Energy Star rating particular purveyors. It's just a list, and I'm wondering -- at least I haven't noticed that there is when we looked. You know, in fact I talked to Efficiency Vermont, somebody there at the office, who said we can't recommend anybody, but, you know, they are all sort of there because they have done work and we get recommendations.

I'm wondering if either Efficiency
Vermont or the individual you mentioned that might be sort of an energy -- I don't know exactly the term.

COMMISSIONER MILLER: Project manager.

MS. BARTENHAGEN: Yeah. Project manager, if there would be a source that people knew to go to that would offer information about wind, solar, you know. Who in the State of Vermont is doing these things and who has a track record and who does the state, you know, consider viable and, you know, where would we go to find this information out.

I think that some sort of clearinghouse would be a really great idea.

COMMISSIONER MILLER: I'm so glad you said that, and so before I forget I failed to mention tonight the Vermont Renewable Energy Atlas. It's an online resource the Vermont Sustainable Jobs Funds has created with support from the Department and other sources. It's fantastic and we ask in the plan for better usage and support. More data could be added to it.

It right now has information on both the
potential for as well as the actual deployed projects, renewable projects in different communities. So you could click your town and you would see little icons showing you solar deployment, wind deployment, hydro, et cetera, and you would also be able to go through and say what's the potential in this area. It's frankly one of the best sites of its type in the country, and there's very -- you know it's leading edge and we could use it even more.

MR. RECCHIA: You can easily see adding something like solar vendors to the list.

COMMISSIONER MILLER: It lists who did specific projects in part. So you can get -- it doesn't have a rating, but it does have some of that information.

MS. LAUNDER: I'll just add, I don't know why Efficiency Vermont didn't mention it, but everyone who is listed on their web site is actually BPI certified, Building Professional Institute I think it is. So they have some kind of certification qualification to be on their web site, and for our small scale incentive program there's also a process that those installers who are listed for that
program go through kind of not a certification process, but they have to do so many jobs and those jobs have to be inspected. So there is some of that already happening,

COMMISSIONER MILLER: But the point is they don't know that exists -- that those resources exist. Okay. Good.

MS. JONES: Is that something you could put on a link on the web page?

COMMISSIONER MILLER: Yeah. We have, yeah, because it's buried on our pages. Right. That's a very good idea. We should put it on the Governor's page. That's the best place. That's where everyone goes frankly. Okay.

MR. BARTENHAGEN: Two comments. Now actually to follow through on the last comment it would also be helpful to get feedback from the individuals who used these services; how were they handled, how efficient were they, how helpful were they, were they hard to get hold of, did they follow through on their promises, et cetera, et cetera, just like you would grade a physician, for instance. So I think that would be helpful for me if I were
looking through a list.

   I think it would be reasonable to make this public information. First of all, it would make those individuals more likely to compete for their business, and if I could find someone who is rated 4 plus as opposed to 3 plus, I would probably choose that person. So it would be a good idea if you could do that.

   My second comment is I followed through a while ago, and this will be distributed to the transportation folks, check my math on this, okay, if you travel -- I need my glasses -- if you're traveling 300 miles say north to south coming up from Connecticut or New York to go to your place in Stowe or whatever, the minute you cross the state line if you saw a 55 mile an hour sign that was followed by a state trooper, okay, it would take you at 55 miles an hour 5.4 hours to get where you're going. At 65 miles an hour it would be 4.6 hours. That's 1.2 hours difference.

   Now you take it down to the commute level using those numbers and check me on these, if you go down to 75 miles, it's a 15
minute difference. If you go down to an average commute of about 38 miles or even less, it's 7 minutes. Think of the revenues we could generate from state troopers for all those Connecticut and New York drivers coming up our highway or even Walter if you are really strictly enforcing it.

Number one, you would have a smaller carbon imprint. Number two, you would save lives. Three, win win win. I can't see how we can lose. We would have some disgruntled people, but sooner or later if we really enforced this, this would tell us we're really interested in getting the job done. I think Walt's idea is great.


MS. McCARTHY: Thank you. My name is Kate McCarthy. I work for the Windham Regional Commission with the Bartenhagens. So I just want to follow up on Maggie's comment about the accessibility of the services. It's true there are lots of great resources out there, but a clearinghouse is a
great idea, and one model for that that has been used, I forget exactly where so anyone chime in, it's called the heat squad model. It was funded through ARRA and it's a centralized go-to place full of resources to help consumers homeowners walk through the process from audit to actual retrofit, and I think they may even do some followup and evaluation as well as user education because it's great to have a thermostat -- programmable thermostat put in, but if you don't know quite how to use it, the benefits won't be realized, and so it's been a successful approach, the heat squad.

I'll just clarify on the Efficiency Vermont web site any contractors who are listed as home performance with Energy Star through the Vermont's home performance with Energy Star program. They have to sign up and be Building Performance Institute certified as well as some additional training to help them to take of advantage of retrofits. That's probably more than you wanted to know perhaps, but thumbs up to the idea of a clearinghouse and check out the heat squad.
COMMISSIONER MILLER: And actually just on the heat squad, it is Rutland, right?

MR. PERCHLIK: Yes. Neighbor works.

COMMISSIONER MILLER: Yeah, and one of the reasons, I'm sensitive to the idea that another study is another delay. So when we suggested studying further the efficiency programs to try to make them more whole building approach and realistic, I'm aware of the potential criticism there like why aren't you just doing it, you know, what do you have to study, but one of the reasons we suggest that and really want to do it is because of that project actually.

That project has been very successful. It's also very small. How do you scale that without just kind of throwing money at it before you figure it out?

MR. JEWELL: Just quickly back on the natural gas thing, within 60 miles south of here there are 28 gas pipelines. Some of them originate in Mexico. So you can pretty much choose what kind of gas you like.

Oh, the other thing about the natural gas it has a much lower carbon footprint that
most of the other fuel choices.

    MS. FRYE: Betty Frye again. I just want to make the comment again that I really think we're information rich and resource poor. You know, just we're not clever about how we reach our people, and I think there's a lot of great ways that we can. Natural ways, but one of them is here you are in Windham County and we're one of most underserved, can't believe how close we are to the markets we are, and yet when it comes to telecommunications we're the most underserved.

    So you can do all the great web sites you want to and all that information is up there, but when you can't access that what's the point.

    COMMISSIONER MILLER: We've got a plan for that one too, but that's a different night. I know you're right.

    MS. FRYE: So I have a serious recommendation that I have had for years in this state. There really should be an information resource centers in all the hubs. We know what the hubs are and they are not necessarily the 21 designated downtowns, okay,
but they are hubs, and, for instance, Windham County, Brattleboro is the hub, and you put all the state information in there and people who go in there, it's real people and it's not volunteers. It's paid people who know how to get proper information to people, and say basically I don't have an answer to that. That's a good question. I'll get back to you and they do, and if it was more implemented like that or you worked with the electrical, you know -- that when you got a bill, you know, everybody gets that pretty much unless you're off the grid, you know, you could partner with them and they get real basic information from that.

And I'll just say that for meetings that are going to happen in the community, I'm a supervisor at our solid waste district, and that's 19 towns that come together, and chair of the planning and we've worked a lot on how do we let the town know -- these towns know. So we've paid a lot of money for hazardous waste days and stuff for people to come and we've really realized that postcard that goes to every house the snail mail is guaranteed
and sandwich boards that are out there for this thing is coming. Sandwich boards. People driving by in those carbon cars.

MR. PAPPAS: So on the issue of speed limits, and I actually think we're closer to 55 than people think when you combine winter driving and non-winter driving, we're somewhere there, but the way the speed limits are set, and again that's one of these federal responsibilities, is that in the northeast the interstate speed limits are 65 miles an hour. They are 70 and 75 down south, but the exceptions 65 are urban areas, complicated interchanges or some geometric aspect of the rule that doesn't allow it to go that quickly.

On the state highways we actually have the lowest speed limit, 50 miles an hour. It's typically 55 up here, 60 down south. So that's where the speed limits come from. So if we're going to be collecting, we need to do it summer and spring because come wintertime --

COMMISSIONER MILLER: Thank you. Well it's 9 o'clock. Are there any comments people feel that they would like to make before we
wrap up or -- I really appreciate everybody coming and I appreciate the involvement from have VTrans and ANR, and I thank you again for coming. Obviously we recorded everything you said tonight, but if you do have specific written comments, please get those in to us. You can contact us at the Department, you can mail them in, you can send them by e-mail or submit them electronically on our web site. Any of those are great. Thank you very much. (Whereupon, the proceeding was adjourned at 9:15 p.m..)
CERTIFICATE

I, JoAnn Q. Carson, do hereby certify that I recorded by stenographic means the public hearing re: Draft Vermont Energy Plan at the Brattleboro Union High School, Brattleboro, Vermont, on September 28, 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 100 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 Burlington, Vermont, this 4th day of October, 2011.

__________________________
JoAnn Q. Carson
Registered Merit Reporter
Certified Real Time Reporter